UNIVERSITY OF SOUTHAMPTON

The Web of Community Trust

Amateur Fiction Online: A Case Study in Community Focused Design for the Semantic Web

by

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ABSTRACT

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This thesis describes a case study online community: online amateur authors. Taking this case study community as a base, this thesis considers how the concept of community is applied within the Semantic Web domain. Considering the community structures that can be demonstrated through the case study, this thesis makes the case for the recognition of a specific type of social network structure, one that fulfils the traditional definitions of 'community'. We argue that this sub-type occupies an important position within social networks and our understanding of them due to the structures required for them to be so defined and that there are assumptions and inferences which can be made about nodes within this type of community group but not others.

Having detailed our case study community and the type of network it represents, this thesis goes on to consider how the community could be supported beyond the mailing lists and journalling sites upon which it currently relies. Through our investigation of the community's issues and requirements, we focus on identity and explore this concept within the context of community membership. Further we analyse the community practice of metadata annotation, in comparison to other metadata systems such as tagging, and as it related to the development of the community. We propose a number of ontological models which we argue could assist the community and, finally, consider ways in which these models could be made available to the community in keeping with current practice and level of technical knowledge as evidenced by the community.

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To Dr Pierson whose inspiration is evident throughout this work.

Also his compatriots, Drs Grissom, House, Jackson, McKay, Wilson and Zelenka, Misters Brocklehurst, Callahan, Clifford, Dawson, Giles, Jones, Krycek, Rayne, Sandburg, Strachey and Wyndam-Pryce, Brigadier General O'Neill, Captains Harkness and Pierce, Const. Fraser, Special Agent Mulder, Detectives Ellison, Hutchinson, Kowalski and Starsky and all persons associated with them. They may have slowed progress occasionally, but without them this thesis would never have been written.

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Part I

Introduction

Chapter 1

Introduction

This thesis considers the question of community within online, metadata-linked groups (see Section 2.2). Using online amateur authors as a case study (see Section 2.2.2 and 3.1.1), this thesis looks at the addition of metadata to online communities, both in terms of the description of identity (see Section 5) and the links between users, i.e. social networks, (see Section 5) and the description of the information and objects being exchanged by members of the community (see Section 6). In doing so we argue for the recognition of the additional computer-processing assumptions and inferences that the social rules of community allow us to make within those social networks that can be defined as such, and propose a set of rules which can be used for that definition (see Section 2.2 and 4.3).

1.1 Synopsis

Consider the following two scenarios:

> The moderator, or controller, of an online community created an area for writers to take the part of characters in a collaborative universe and advertised for people to take part. One of the applicants had information about her date of birth publicly displayed. This information indicated she was under eighteen. Since the moderator did not wish to restrict what the writers taking part were allowed to write about and therefore knew that there was likely to be adult content, they responded to the applicant to ask for either a statement that they would avoid inappropriate material or some indication that they had parental permission to take part. The next day the moderator was sent a short video, taken on a mobile phone, which showed the phone owner asking for and receiving permission from a parental figure to

> take part in the community despite the potential availability adult content. (Personal Communication to Author, 26/01/2006)

> A fan posts to their personal electronic journal about the possibility of a social network, an online collection of users and the links that connect them, targeted at fans and how the identity of users is described online. In the post the existence of a new social network, ConHeaven[1], aimed at fans who go to conventions is mentioned. Two hours later the fan received a response from a person, previously unknown to them, who was involved in the ConHeaven project. When questioned about this response, it was discovered that the initial post had been flagged by an a tool designed to spot journal posts which might be of interest to the ConHeaven project members and one of them had decided to get in touch. (Personal Communication to Author, 29/09/2006)

These two real life examples illustrate a number of factors, from identity and trust to information availability and access control, which we consider in this thesis. While these issues are in no way exclusive to the environment in which they occurred, the online media fan community (see Section 2.2.2), they are typical of the types of interactions that have been occurring with increasing frequency within that community.

If we consider the issues raised by these examples:

Identity and Privacy:

In our first example, we have two levels of identity to consider - the identity of the user and the identity they are projecting online. In the online environment in which this example took place, LiveJournal[2], an electronic journalling site, users are automatically created a public profile page which contains information about themselves. This information can be as little as the name under which the user registered at the site or can include a full personal profile including age, gender, biography, interests and contact details. There is no requirement as to the amount of the information that must be made public as part of this profile, beyond the default information of registered name and user number. While the terms of service for LiveJournal require accurate personal information, notably date of birth and email address, to be provided (LiveJournal Team, 2006, 2000), there is no way to guarantee the accuracy of the publicly available data as it relates to the user and it is not unknown, as intended in the example case, for users to create fictional characters for the purpose of collaborative storytelling.

When considering the question of how identity is portrayed online (see Sections 2.1 and 5), the issue is not just what information should be revealed and how to describe it,

[1] `http://conheaven.com/`
[2] `http://www.livejournal.com/`

but to whom that information should be revealed (Cameron, 2005; Adams and Sasse, 2001; Friedman and Resnick, 1999; Mackinnon, 1995). This question of data privacy is considered especially important when it relates to minors and an ongoing tension can be seen between revealing data for a user's protection (for example, that the user is not an adult) and hiding it for the same reason. In this thesis we consider the question of identity as it relates to the user as a part of a community as opposed to the user as an individual. We argue that by placing a user's identity within context, we can use the links that exist between the user and the context to draw inferences about the user and their actions. We consider how this can be achieved from a technological perspective but also the social requirements which would part of such a system.

Information Availability:

In our examples there are a number of occurrences of information being made available: the existence of the collaborative universe, the date of birth of the user, the potential presence of adult material within the collaborative universe and the existence of the fan's post about social networks. All of these pieces of information were published within public spaces, publicly available webpages, and so were openly available to anyone who knew where to look for them. However, for many users privacy is not only related to who can view the information but also how that information is distributed.

In September 2006 the social networking site Facebook[3] which caters primarily to students, introduced a new newswire feature to their site (EPIC Staff Writer, 2006). This feature gathered information about the activities of a user's 'friends' and presented this information to the user as a news feed. While the information such as changes of status, membership of a group and friendship links, is available on a given user's page it was the aggregation and distribution of this information which caused strong objections among users and, ultimately, privacy options related directly to the news feed and an apology from the creator of Facebook (Zuckerberg, 2006).

The rationale appears to be that the information can be available, but that some effort should be required to find or access that information. This expenditure of effort, even as little as gaining the knowledge of where to look for the information and doing so, acts as a very low level barrier to access. A similar effect can be seen within the fan author community as a whole. When the community was beginning to be profiled and the research published in academic papers there were concerns about publicity and, due to this publicity, the increased awareness of the fan author community, the people and practices within it to and by the wider global community (Bacon-Smith, 1992, P. 244). While the presence of the creative fan community became a known commodity in academic domains such as media studies it was the distribution medium of the Internet which was instrumental in the shift of creative fans from semi-underground communities to counter-culture, to the mixed feelings of many members of the community.

[3] `http://www.facebook.com/`

Where the community had previously been able to change and evolve under its own pressure, now the pressures created by the Internet as a distribution environment are forcing that change through the intrusion of outside factors such as people not involved in the community. As this thesis is being written, examples of unwanted, and in some cases negative, publicity are appearing on an increasingly regular basis. From articles in the Wall Street Journal (Jurgensen, 2006) and other news sources (BBC Online Staff Writer, 2005; Writer, 2003; Helmore, 2006; House, 2003) to fan-made videos suddenly being featured on websites outside those of the fan community (Jenkins, 2006d), individuals and communities are losing the choice of whether or not to be revealed (or distributed) within a public context. Like the Facebook users, their privacy concern was not in the availability of the data but in the distribution. It is perhaps ironic that a community which exists through the appropriation and reuse of content is now facing problems because their creative works are being taken and redistributed by others, who either do not know or understand the community practices within which the material is made available, or are wilfully ignoring it. Reaction is divided, with some retreating into password protected areas or even offline out of fear of legal, or other, attention while others enjoy the increased availability of resources.

In this thesis we propose metadata schemas to aid user interaction with each other and the data that is produced within the community (see Section 3.2.6 and IV). In addition, we consider the effect that addition of machine-processable data will have on the distribution of information within the community and the wider public context and how the negative aspects, such as unwanted publicity, can be addressed.

Trust and Access Control:

In our example, the question of access revolves around that of adult content. While not the only reason why access might be restricted, it is the one that we are focusing on in this thesis. The issue is not one with a simple solution, either technical or social. The issue of access to material with adult content online by those under the legal age of majority in their country or state (or even at all) is a subject of much debate (see Section 3.2.3). In the example given above the applicant, who is a minor, is given parental permission to take part in the collaborative universe despite the presence of adult content, clearly illustrating that the issue is not one of strict delineation even were it possible for age of the owner of an online identity to be reliably provable in a proportional manner.

Having recognised that our case study community has reached the point where keeping a low profile is a unsustainable method of access control, we consider the concepts of trust within the context of community groups (see Sections 2.2.1 and 5.3) and how community trust can be used to create an access control system (see Section 5.3).

1.2 Hypothesis

The Semantic Web is a "web of data" (Berners-Lee, 1999). That this is a desirable thing presupposes that there are data which not only can be shared but which it would be advantageous to share. This advantage needs to be to the creators of the data or to those with whom they desire to share that information. If this is not the case then there are a number of data privacy issues in addition to the lack of incentive for the data to be created. In selecting our case study community we intend to focus on those where there would be a direct benefit to the community through the application of Semantic Web technologies.

The word 'amateur' is derived from the French verb meaning 'to love'. There is an increased recognition of the power of the amateur (BBC Online Staff Writer, 2005), that they can (and often will) spend more time and effort on their interests because of the love that drew them to the interest than they would from a purely professional interest. Humans were motivated by love long before they were motivated by money. By working with such communities we have the opportunity to work in an enthusiastic, data rich environment.

Through study of amateur online communities (see Chapter 3) and the social networks that exist within them (see Chapter 4) we gain greater understanding of how issues such as online identity and trust are regarded by average users. By modelling the practices such as fan networks (see Chapter 5) and media labelling (see Chapter 6) that are used by these communities we can ascertain how best to improve community services and support the computer-mediated aspects of online community interaction.

The current concerns being raised about social networking sites, as evidenced by legislation such as *Deleting Online Predators Act* (United States Government, 2006), demonstrate the level of misunderstanding as to how such sites work. While one of the proposed uses for an implementation of the system is to allow the restriction of material to younger users, this relies upon the information provided in the user profile. In the case of younger community members, it is contended that by providing clear and simple information to the user's parent/guardian(s) about the claims that the user is making and their local friend network, it will be possible for parent/guardian(s) who are so inclined to monitor both the limits placed on requested media items and attempts to spoof the system. This is an extension of the social aspect of the system previously mentioned. By making both the options and the system limitations transparent, not only to direct users but to the parents or guardians of younger users, a greater feeling of control can be achieved. With this control available to both parent/guardian(s) and to content producers and access granted after negotiation between the two, it is believed that the two groups will be able to work together to prevent minors acquiring material which their parent/guardian(s) do not believe is appropriate for them. In order to achieve this, we propose the investigation of the following issues:

- The construction of online identity through membership and association with a community to allow those who want to remain anonymous to do so while still maintaining a persistent identity.

- The use of metadata to describe community involvement and community resources using a social network model and, through the processing of this data, create an access control system that allows for the possibility of slow(er) initiation into the community, thus allowing time for newcomers to learn the community rules, helps prevent accidental exposure of non-members to more adult or controversial areas of a given online community in those cases where community members prefer to keep a lower profile and allows easier identification of materials which might be considered inappropriate for a given user.

- The expanding of the trust system described in the previous point to provide an alternative to resources being withdrawn from the Internet or walled away behind passwords so that those requesting the community resources are not required to register or otherwise provide offline personal data to gain access to these resources.

Having established the concept of identity (see Section 5) within a community social network, in our investigation of our case study community we will show that the exchange of resources is an important part of the community process (see Section 3.1.1) and further that human-readable metadata is routinely associated with these objects. We investigate the association of human-readable metadata to resources within online communities and compare this with the relatively recent association of machine-readable labels, or tags, and the argument that this labelling, or tagging, creates communities. By studying the community interaction we can investigate how the practice of data sharing becomes not just good practice but expected behaviour. Further than by working with the users of the current human-readable metadata system, a machine-readable equivalent can be created which will have the benefit of:

- Allowing users to search across multiple websites and personalise their search criteria so that they can find the type of resources, such as media items, which the user wants on any given day and avoid the type of resource that they are not partial to or which it is deemed inappropriate for them to access.

- Allowing users to personalise what metadata they receive in a human-readable manner about any given resource or media object, thus allowing the receipt of information about the content resource to be dealt with at an individual level.

Beyond the investigation of the previously mentioned technical issues, this thesis also investigates how to bring the proposed solutions to the user in a clear and user-friendly manner.

1.3 Methodology

Throughout the research described in this thesis, we have taken a community-centred approach to the design of both the schema and related applications. The choices made throughout this thesis have been informed by the information gathered through interaction with the community. This approach has also lead to the promotion of the social aspects of user interaction with both the technology and each other through the medium of the technology.

There are ethical issues related to the study of people or groups without their knowledge and consent. This is one area where those of us who bridge the academic/fan communities have to take care not to overstep the boundaries. Often acceptance and assistance is more forthcoming from community members when they are dealing with 'one of their own'. However, just as the personal blurs the academic line so the academic can intrude on the personal. It is not possible to warn all the people with whom interaction has shaped the theories and thought processes described in this thesis, not least since many of these interactions predated this study. As a result the following actions were taken:

- Effort was made so that members of the community with whom personal contact occurred were made aware of the direction of the research being undertaken even if they were not part of intentional observation.
- Pseudonyms have been used throughout and direct mention of individuals is only made with permission.

Beyond the personal level, there are also a number of considerations which must be taken into account when using texts from this community. Many mailing lists specify that any posts are considered private and the contents of such cannot be reposted without the author's permission. This restriction is not aimed at academic study specifically, but in an effort to prevent comments being repeated elsewhere in fandom without the history and context that are associated with the post, in an effort to prevent the spread of discord. There is no suggestion that we should disregard these restrictions; they are mentioned to illustrate the atmosphere in which the community operates.

There is a (mostly) unwritten assumption that posts within the community, even ones made in public areas, remain in that context unless explicit permission is given otherwise. While such assumptions are not enforceable, a statement made in a public forum is just that; working closely with the community brings with it certain responsibilities to not, as they would see it, break the community's trust. Honouring this understanding can be seen as both a response to the support and disclosure that the community provided and also to keep the way clear for further studies in this area which would be disadvantaged if the community lost trust in the honesty of researchers. Bury (2005, P. 29) mentions

"several participants told me in follow up e-interviews that they had joined the list because they wanted to keep tabs on me and the work I produced. They had felt betrayed by journalists who had interviewed them and then produced stories which denigrated the DDEBs [David Duchovny Estrogen Brigade]". To create a feeling of betrayal by not recognising community as well as academic standards risks further distrust.

Given the issues of identity and the separation between online persona and offline individual and occasionally the numbers of respondents, it is not always possible or appropriate to contact the source of a particular statement. Taking into account the community understandings as described above, the following decisions were made to reach a position which was both fair and ethical:

- Following Jenkins (2006d), no links to any fan-created media will be given without permission of the creator of that material.
- No material posted to a private mailing list or within a locked post will be quoted without permission of the original author.
- Material posted to an unlocked/public community journal or similar, where the posters have the expectation that the post will remain within the context of the fan community, will not be quoted without permission but may be referenced or described with a link given to the resource.
- Material such as essays posted to community analysis sites, fan journals and other aca/fan repositories such as Slayage: The Online International Journal of Buffy Studies[4], Whoosh! The Journal of the International Association of Xenoid Studies [5], Ulternate Universes: Fan Fiction Studies [6] and the The Fanfic Symposium [7] will be regarded as academic texts and treated accordingly.

1.4 Thesis Overview

In this section we have described the social and community context within which this research is situated. The remainder of the thesis is divided into the chapters as described below.

The first part of the thesis focuses on the human aspects of this research including the social ties that exist between uses and the implication of community onto the way technology is used.

[4] `http://www.slayage.tv/`
[5] `http://whoosh.org/`
[6] `http://www.alternateuniverses.com/`
[7] `http://www.trickster.org/symposium/`

- **Chapter 2: Literature Survey**: In this chapter we undertake a survey of online identity, online communities and social networks and trust within the context of communities. In each of these we consider the theoretical basis upon which the work in this thesis is based. Having done so we identify those areas in which further research would be valuable, specifically the areas of community identity and semantic community networks. Following on from this we overview the work done on online creative communities, with special emphasis on the fan community due to their active response to the investigation of online communities as described in chapter 4.

- **Chapter 3: Amateur Writing Online - A Case Study Online Community**: In this chapter, we introduce our case study online community. We describe the methodology used to investigate this community and the quantative and qualitative analysis that was carried out to inform the research related to the community's members and current practices. The results of this analysis are detailed in this chapter. We consider how the information described in this chapter serves as a basis for and informs the design of the metadata schemas and technical systems described in the remainder of the thesis.

- **Chapter 4: Visualizing Online Social Networks and Our Case Study Community**: In this chapter, we present a visualization of the community structure that exists within our case study community and neighbouring networks. We identify a number of different types of network structure and consider the differences between them. We argue that the types of structures we see typifying the social networks within our case study and other similar, communities represents a specific type of online social structure. We compare this to our definitions of community to present a new subtype of online community and consider the implications that this type of community carries within it.

Having considered the case study user, and the community within which the user is situated, this thesis goes on to investigate the way in which the user and the technology interact. This part of the thesis draws strongly on the social aspects that were previously discussed, while introducing the technology that underlies the community interaction.

- **Chapter 5: Describing Identity within the Online Fan Community**: Having identified our case study community as representing a specific subtype, we expand on this theme to consider how technological systems might be derived to take advantage of the assumptions that are inherent in this type of social structure. In this chapter, we consider the concept of identity as a community construct. In doing so we draw directly on the information gained in the research described in the previous chapter, in particular what information community members currently share about themselves. Using this information, we propose a system to model

a user's identity as a construct of their community involvement. In doing so, we consider how the issues of privacy and anonymity can work with the concept of context driven identities and how these identities can be used to establish social standing within those contexts. Taking the idea of community identity we propose how the community structure can be used in the creation of a trust system for community-driven access control.

- **Chapter 6: Ontology, Tagging and Something in Between**: Expanding from personal identity, we consider the way in which non-user objects are described within the community. In this chapter, we investigate the data and metadata being routinely exchanged by members of the case study community, an aspect we have previously shown to be an important aspect of community identification. We present an analysis into current methods of data labelling and the vocabulary of labels used by the community.

Having concidered the user component of the network, the final part of this thesis focuses on the technological aspects of the systems proposed, specifically the way in which narrative can be described in a machine processable manner through ontology, and the software created to this end.

- **Chapter 7: Describing the Narrative Content of Media**: Having concluded in the previous chapter that the current system used by our case study community does not fully meet all the needs that were highlighted in our analysis of the case study community, this chapter proposes alternative methods to better meet those needs. Due to the nature of the community, we focus of the description of narrative since this represents the most commonly shared type of data. This chapter presents an ontology, working name OntoMedia, designed to describe narrative content within media items, and the related contribution made by the author to this collaborative project. Further, this chapter provides examples of how the ontology can be used, and discusses the issues that arise through the design decisions made regarding the ontology.
- **Chapter 8.1: Creating a User Interface for the OntoMedia Ontology**: This chapter describes the design and implementation of software designed to allow for the easy creation of OntoMedia defined metadata. In it, we present our methodology for this design process and provide a illustration of the way that the metadata creation process is presented to the user through the user interface.
- **Chapter 9: Testing the Meditate Application**: Having created the Meditate application, this chapter details the initial user testing that was undertaken to validate the design and purpose of the software. We describe the early informal exposure that the software had to its intended user group and conclude with details and results of the usability experimant that was carried out with the software.

We conclude this thesis by drawing together the conclusions reached within this thesis and consider the issues of community identity and semantic community networks and the description of media content; describing how mechanisms such as those we have theorised could be integrated into current user practice and how the relative benefits could be tested. Further we describe a number of experiments which, due to the restrictions on the current work, fell outside the scope of this thesis. These proposed experiments continue the arguments made in this thesis and open the way for more in-depth research into a number of the areas under investigation.

Part II

Methodology

Chapter 2

Literature Survey

2.1 Personal Identity in the Age of the Internet

This thesis is about people.

It is about how people interact, how they present themselves both individually and as a group and how this affects the way that applications and systems need to be designed to support them. The question of how people present themselves online, and whether they need to present themselves at all is one that is being seen as increasingly important. With recent efforts such as the Net-ID-me scheme which touts itself as "the world's first Internet Age and Identity Verification System that enables Internet users to exchange real-time electronic ID cards before chatting online."[1] and South Korea enacting a law which will come in place next year and will require portals to collect the user's real name and national identity number before they can participate, the whole issue of anonymity online (Simmons, 2006) is one of the big questions facing the future of the Internet.

The answer is not clear cut; giving out personal information, especially real life identity information, is deeply controversial. On the one hand we warn people not to give out such information, on the other we want to demand that strangers give that information to us. The main argument for removing anonymity is to associate responsibility with any given user and their actions. There are two aspects to the concept of associating responsibility. The first is associating the online identity with the offline individual. The second is associating actions with an individual. Related to the idea of responsibility is the idea of punishment. With the dichotomy between on- and offline identity there is, therefore, the idea of on- and offline punishment depending whether the user has acted against the strictures of the offline community i.e. broken the law, or the online community (Mackinnon, 1997). In this thesis, we are primarily concerned with the users as they interact online and therefore only transgressions against virtual community

[1] `http://www.netidme.net/`

standards and virtual punishments fall within our scope.

One of the problems with the disconnect between offline identities, which may have many facets but which reside in one physical entity, and online identities, is the ease with which it is possible to create a new virtual identity. However evidence suggests that over time users "felt a growing awareness of social pressures to maintain the accountability afforded by a single primary identity" (Schiano and White, 1998). Without the link between this primary identity and the physical user, a veneer of anonymity is maintained while still allowing for actions to have consequences. "While anonymity prima facie looks like a threat to the building of reputation, it may indeed enhance its relevance. For the sake of reputation, and because of its presence, changing identities has a cost" (Conte and Paolucci, 2002, P. 179). Since the identity only matters for occasions when reputation is needed, there is a definite advantage to both building up a reputation by being involved in the community and to maintaining the identity with which that reputation is built. The cost of creating a new identity, whether it is in time, money, reputation or some other commodity, is known as identity cost. "Identity cost can take any positive finite value, and users decide whether to white-wash depending on how the identity cost compares to the penalty imposed on free-riders and newcomers" (Feldman et al., 2004, P. 232). In this case, there is little point in creating an identity unless it is desired to build up a reputation and to become known as that identity. While the persistence of an identity cannot be guaranteed, the advantages related to reputation in a community situation ensure that there is a greater continuity of identities than might be otherwise expected in a non-community based system.

Fernandes et al. (2004) considers the permanency of identity in different situations: peer-to-peer systems, online auctions and public computing systems. They differentiate between the three in part through the strength of the tie between on- and offline identities. In peer-to-peer systems, participants are regarded as "anonymous or pseudonymous, and in any case not tied to a real-world identity" (Fernandes et al., 2004, P. 74). In the auction sites identities are described as "semi-permanent identities, as they are usually somehow tied to real-world identity, for instance, a credit card" (Fernandes et al., 2004, P. 75) while in public computing systems real world identities are known and used. Using those definitions, a social network could be classed as a peer-to-peer system since the intention is to create a split between on- and offline identities which must be deliberately breached by the user. While a social network is clearly not necessarily a peer-to-peer system in architecture, this similarity in identity structure allows us to consider user management in the same way. Fernandes et al. (2004) states that despite trust management systems for peer-to-peer systems being created any such network running on such a basis can expect to see free-riding behaviour, making use of the system without also giving back to it, as has been observed in current systems. While free-riding might be considered a problem, it is not as relevant to the situation under discussion as it is to a peer-to-peer network because the online writing community does not work in the same

way. It is true that if no stories are written and everyone reads, then the amateur writing community will break down because there are no producers, only consumers. However readers are not affecting performance or taking away from other users by not producing themselves. Indeed, depending on how well they write it might cause a greater strain of the system if they are forced to create something when they would otherwise not do so. More important than free-riding is the practice of whitewashing. This is where "users can escape bad reputations by creating new identities" (Fernandes et al., 2004, P. 74).

While reputation is an important aspect of the idea of identity it is not actually part of the identity itself. Just as conventions about behaviour exert pressure to maintain a persistent identity, so "social conventions develop around the theme of producing identity" (Kivimäki et al., 1998). Identity online is situated within two different contexts. The first aspect of identity is that of identity as a impersonal construct, a means by which others can identify a particular person and by which a person identifies themselves as themselves. This aspect is what schraefel (1999) describes as "identity for the system". This form of identity is purely about recognition and authentication and does not necessarily reflect anything about the person being labelled. When discussing identity theft this is the meaning of identity which is most often being referred to.

The other aspect of identity is that related to the more social aspects, by which we mean interaction with others rather than with the system. For an external perspective it is the way a person acts and the beliefs they project; from an internal one it is the way a person views themselves. It is possible that with sufficient advances in technology, computers will be able to analyse behaviour patterns and make an automatic identification of who a given user is from that information[2] but until that point is reached, how we chose to construct our presence online has many implications both for ourselves and for the other people that we encounter within the digital space. For the purposes of this thesis, the term 'person' will be used when referring to the offline entity and 'persona' when referring to the online construct or constructs that represents them.

Studies of computer mediated environments such as UseNet or Massively Multiplayer Online Role Play Games have shown that personae are created by users. Mackinnon (1995, P. 118) credits the creation of such persona on UseNet to a combination of interference by the limitations of the written medium on the "user's personalities and unique qualities", and the control that the user has over the representation that they project. schraefel (1999) differentiates between a 'self-created identity' and a 'form-based identity', seeing the former as a free form, user driven identity and the later as marketing driven. Since that paper was written, the rise in social networks and electronic journalling systems has lead to a related rise in user profiles created through forms. While the marketing opportunities of such sites, especially the social networking sites, are many, it is not their primary purpose. At the same time, even self-created

[2]Whether this would, overall, be a good or bad thing is a question that falls outside the scope of this thesis.

identities can be driven by explicit or implicit expectations from the community the identity is being created in.

Kauppinen et al. (1998) studied identity production in collaborative environments. They found that there was a significant shift in interaction from random comments and words to conversations once identities were established to the satisfaction of both parties. The information that was typically asked for or offered was found to follow a clear pattern and revolved around:

- 'real' rather than virtual gender
- age
- location
- occupation
- personal/life information

One of the important points of this type of information exchange to establish identity is that it is firmly based in the area of social contact. The information about the user is acting, at least partially, as a way of finding some common areas of interest through which the conversation can be continued if desired by both parties. This is not the case in the communities under consideration in this thesis since they involve people coming together through an existing common interest, and the focus being on that interest rather than on the people involved. This is not to suggest that the bond that develops between members of the types of communities under discussion in this thesis should be discounted. However, it must be recognised that in the general case the discussion proceeds and leads to the personal connections, unlike that found in the above examples where discovered personal connection leads to the discussion.

Being prompted for information can be helpful because it provides a structured approach to the data which is often easier to deal with and allows users to know what is required of them. However, by prompting for a specific piece of information there is an implicit suggestion that it is all right to provide that information even when that conflicts with the user's stated beliefs concerning privacy (Acquisti and Gross, 2006; Gross and Acquisti, 2005; Stutzman, 2006). In 2001, the humour site Bunching Shuttlecocks ran a joke form [3] in which the user entered their name, gender, birthday, mother's maiden name and social security number to discover their 'Mr. T Name'[4]. The response was immediate from many people who either failed to get the joke or were concerned about what use the data would be put to. The form was briefly changed to just ask for first and last names before returning but with the social security number option being replaced

[3] `http://www.brunching.com/mrttest.html`

[4] The response was, of course, 'Fool!' and the information entered was not sent anywhere

with the more international 'pet's name'[5] but became infamous for the number of people who, apparently, entered accurate data. While a large part of the Mr T. story may be urban legend it clearly shows the controversy which can exist around the acquisition of personal profiles through forms.

While the division between 'form identity' and 'self-created identity' has changed, the effect that the identity creation process has on the finished identity is still strong. In the following chapters we consider online identity both at a personal level and within the context of interaction with other users. It has been argued that virtual communities can be seen "as an aggregation of virtual identities sharing common interests" (Paniaras, 1997). Therefore, in this thesis, we consider how individual identity and community identity might be linked to benefit both the user and the community that they are part of. We also consider the implications that the design of the identity creation process might have on the way the user and the community interact and how this effects what we perceive as community.

2.2 Online Communities and Social Networks

The idea of an online or virtual community was pushed by early researchers in the field such as Howard Rheingold. He defined such communities as "social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace." (Rheingold, 1993)

In 'Widening the Net', Whittaker et al. (1997) details the definition for community that came out of a workshop on that subject at the Computer Supported Cooperative Work conference in 1996. Rather than coming up with a specific definition they "settled on an approach of defining the concept by 'prototypical attributes', so that communities with more of these attributes were clearer examples of communities than those that had fewer." (Whittaker et al., 1997). The core attributes they identified were as follows:

- Members have some shared goal, interest, need, or activity that provides the primary reason for belonging to the community
- Members engage in repeated active participation and there are often intense interactions, strong emotional ties and shared activities occurring between participants
- Members have access to shared resources and there are policies for determining access to those resources

[5] `http://www.brunching.com/mrtname.html`

- Reciprocity of information, support and services between members. By this, it must be assumed that Whittaker et al. (1997) were referring to members supplying these things to each other as part of their community interaction.
- Shared context (social conventions, language, protocols).

As can be seen this definition is context neutral in that it can be applied to both virtual and offline communities. In comparison, Preece (2000) defines an online community as containing four components:

- Social interaction
- A shared purpose
- A common set of expected behaviours
- Some form of computer system which both mediates and facilitates communication.

If we compare the two definitions, we can see that the first item on the Whittaker list corresponds to Preece's requirement of shared purpose while the second is roughly parallel to Preece's social interaction. What is interesting here is that the Whittaker list does not use the term 'social' instead focusing on active participation leading to shared activities or emotional bonds. In many ways this is a much broader definition than Preece's, which is to be expected given their more inclusive agenda. The final obvious match is between the final item on Whittaker's list of a shared context including social conventions which fits with Preece's commonly expected behaviours. The final two items on Whittaker's list are notable partly for their separation. There is an implicit assumption in the third statement that there are shared resources. In the case of a virtual community, these resources may well be the information, support and services that are mentioned in the fourth statement since if there is a reciprocal arrangement among community members for the provision of these things then they become *de facto* shared resources. Furthermore in online communities the resources mentioned in the third statement and those mentioned in the fourth are tied into the computer-mediated aspect of that community in that the form of computer-mediation determines what resources, including services, are available for sharing and the level of reciprocity is controlled by a combination of this and the social interactions also mentioned by Preece.

A Community of Practice (COP) gains its community application through the inferred links that develop among a group that have a common task: "What is shared by a community of practice – what makes it a community – is its practice. The concept of practice connotes doing, but not just doing in and of itself. It is doing in a historical and social context that gives structure and meaning to what we do. When I talk about practice, I am talking about social practice." (Wenger, 1997). More recently the definition has lost even that much social notation to become "a relatively loose, distributed

Table 2.1: Comparison of Links between Communities of Practice and Social Networks

Community Type	**Links**	**Focus**	**"Community"**
Community of Practice	Inferred	Practice	Social Interaction not required
Social Network	Explicit	People	Shared purpose and behaviours not required
IBSC	Explicit and Implicit	People as community members	

group of people connected by a shared task, problem, job or practice" (O'Hara et al., 2002).

Looking at a semantically based social network such as the Web Based Semantic Networks (WBSN) proposed by Golbeck (2005, P. 13) we are provided with the following requirements:

- Accessible via web browser
- Relationships/Links between users must be stated. Must be direct links as opposed to inferred
- System must support the creation of these relationships/links
- Relationships must be visible and browsable

Comparing these two definitions with those of communities above, we can see (Table 2.1) that while a COP or a social network *may* describe a community, it is not a guaranteed assumption which can be made about the system described by either type of network. For this reason we propose the identification of a third type of group, the Internet Based Semantic Community (IBSC), which might be both a COP and a social network but also fulfils all the definitions for a virtual community. Services can then be designed and run with the assumption that the network it is being run on acts in ways specific to a community. By identifying those attributes and behaviours that are unique to a IBSC we can return to the non-community based networks and consider how other observations seen in IBSCs and seen as beneficial can be applied.

As a case study, this thesis considers the people who write amateur fiction online and contends that a large proportion of these people exist within an online community structure. It could be argued that since some offline activities are known, the online amateur writers should be investigated as a general community but since the majority of communications are computer-mediated it would seem more sensible to compare it to the Preece definition which can be seen to include the elements of the more general definition

while making them more applicable to the electronic environment. I will first show how this group can be considered an online community and then return to the community aspect of the group when considering the issue of trust (see Section 2.2.1).

Amateur writers, especially those writing media-inspired or fan fiction, gather together to share and discuss their works with others. This can be seen by the just over four thousand groups categorised under fan fiction on Yahoo Groups and approximately five thousand under the heading of creative writing[6], the hundreds of LiveJournal communities on such subjects and the popularity of dedicated web spaces such as Squidge.org[7] and Journalfen[8]. From this we can see that writers like talking to other writers, or, to put it another way, they have a shared purpose – the second criterion. Since these interactions occur mostly through a combination of electronic journals, mailing lists and IRC rooms they can be said to be mediated by some form of computer system – the fourth criterion. The question is whether they have a shared set of expected behaviours and whether social interaction takes place.

What is social interaction? Is gathering together to discuss literature and writing a social activity? The members of most book clubs would argue that it is a very social activity. Does it become less social because the interaction is computer-mediated? Or less social because the works under discussion are created by the members of the club? The argument might be made that if the discussion only revolves around the given topic and no further interaction occurs between the individuals involved then it is not really social. This is rarely the case however. Even those lists which exist purely for the posting and discussion of fiction often have a sister list for more general discussion or at least for discussion around the topic. It should be stated at this point that the majority of the study has been focused on media-inspired literature and therefore those under study have been fans of that media thus automatically widening the context of any debates. Since offline activities such as conventions are considered an important part of this group, arranging gatherings and other friendship-building activities are not unusual. It seems safe to conclude that social interaction does occur, to at least a recognisable extent, and therefore the first criterion is also fulfilled.

The final criterion, the second in Preece's list, calls for a shared set of expected behaviours. This is an very important aspect of the community structure because the understanding and acceptance of a such a rule structure implies that such behaviour will in some way be enforced. As is common on most mailing lists and groups, each sets a lists of acceptable behaviour. This includes what details are expected to be included when a work of fiction is posted, what types of fiction and areas of discussion are acceptable for the group and what standards of behaviour are expected. From this we can conclude that each group is an online community as defined by Preece. However

[6]Numbers collected from `http://dir.groups.yahoo.com/dir/` on 6/08/2006
[7]`http://www.squidge.org`
[8]`http://www.journalfen.net`

the question remains whether these individual communities are part of a larger online community.

A web-based social network may not be an online community and vice versa. What is proposed in this thesis is the creation of a Internet Based Semantic Community (IBSC) which combines the attributes of both a WBSN and a virtual community.

2.2.1 Trust, Communities and the Semantic Web

The Semantic Web "provides a common framework that allows data to be shared and reused across application, enterprise, and community boundaries." (Berners-Lee et al., 2001) The concept behind the Semantic Web is to provide machine readable metadata which can then be understood and processed by computers. It "is an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in cooperation." (Berners-Lee et al., 2001) Relationships between data can be explicitly stated or inferred allowing for the information to be integrated, correlated and collected. Trust exists on many levels within this environment. Do we trust the metadata attached to the document? Do we trust the data being returned and the mechanism that returns it? Do we trust the person requesting access to the document?

Trust on the Internet takes many different forms. Commerce, communication, interacting with other people, all the types of actions where trust occurs without much thought in the real world, are replicated in the digital world. The majority of the research that has been done focuses on issues related to trust in electronic commerce, especially authentication and security. This focus is at least partly due to the corporate interests involved and the increased risk that is associated with the involvement of money. The non-commercial nature of the enterprises that are being considered in this project results in the emphasis falling firstly onto lower risk systems and secondly onto the other domains in which trust is a factor.

To consider these problems we have to first consider what is meant by 'trust'. In many respects that is a question for the philosophers. It is certainly one they have been discussing since the discipline first arose and they reluctantly started taking notes (O'Hara, 2004, P. 30 – 36). The dictionary definition is long and contains at least three totally distinct meanings depending on context. Academics who have investigated trust in social, philosophical and security contexts frequently define the term in such a way as to fit in with the point they are making – whether it is to do with fulfilling expectations or acting within a role (O'Hara, 2004). The majority of these definitions are firmly based on the idea of an interaction between two individuals and, while history may be taken into account as an indicator of probably future behaviour, the greater context is not often seen as a part of that equation. Fukuyama's interest is in economics, despite and

possibly because of this, he sees social trust, that is the level of trust in a society, as a contributing factor to economic success (Fukuyama, 1995). Because of this emphasis on society as the context in which trust exists Fukuyama's definition of trust as "the expectations that arise within a community of regular, honest cooperative behaviour, based on commonly shared norms, on the part of the members of the community" (Fukuyama, 1995) is one of the few that is firmly placed within a larger group setting.

Recent work has looked at trust in online social contexts (Abdul-Rahman and Hailes, 2000; Aberer and Despotovic, 2001; Corritore et al., 2003; Feldman et al., 2004; Feng et al., 2004; Fernandes et al., 2004; Friedman and Resnick, 1999; Friedman et al., 2000; Gil and Ratnakar, 2002; Golbeck et al., 2003; Golbeck and Hendler, 2004; Golbeck and Parsia, 2004; Golbeck, 2005; Grabner-Krauter and Kaluscha, 2003; Guha et al., 2004; O'Hara et al., 2004; Zheng et al., 2001; Shneiderman, 2000; Richardson et al., 2003; Preece, 2004). It is this latter domain of trust into which the research described in this thesis falls. The small world concept, that within a social group of any size a short path of acquaintances can be found to link any two nodes, was opened up for study by Milgram (1967) in the 1960s. More recent work has shown that the Internet follows similar patterns and can be considered a small world system (Watts and Strogatz, 1998; Adamic, 1999; Albert et al., 1999; Gray et al., 2003). Barabasi and Albert (1999), in their study of random networks, showed that in expanding networks popular nodes would attract more links than outliers in what they referred to as 'preferential attachment'. This allowed the network to grow with a power-law degree distribution. This is especially relevant to the focus on community in this thesis as it would be assumed that the 'hub' nodes seen in a community network would be on shared community spaces rather than individuals as these are the areas which act as a bonding area for community members.

Research by Golbeck has taken the small world concept and applied it to electronic social networks. Golbeck created a trust ontology that could be integrated into the Friend of a Friend network (Golbeck et al., 2003). This schema allowed people to assign a rating, either in general or within a specific area of expertise, to their friends. This rating equates to a value between one and nine with one being 'distrusts absolutely' and nine being 'trusts absolutely'. The trust network for the system can then be mapped with the further possibility of calculating recommendations about the trust level between any two given people on the network. This system was tested with a mail filtering application and for film recommendation.

These trust ratings allow the build up of a trust network by considering the trust between the individuals that make up a given system. However, if we consider Fukuyama's definition of trust in comparison to this system, then the trust is not just between two individuals but is also between each individual within that community and the combined mass of individuals that make up the community. That bond of trust is a simple one; the individual is trusted to abide by the mores of the community while the community is trusted to include the individual with whatever advantages that may

bring. Inappropriate behaviour on the part of the individual will result in removal of trust in that individual by the community until the point is reached where the individual is no longer considered part of that community. This puts the user in a situation where they either have to regain that trust or rejoin the community with a new identity (and hope no one is able to make the link between the two). Depending on the cost of identity creation (Friedman and Resnick, 1999) and the trust given to new members, this process can be more or less prejudicial both to the individual and the community. Even in the case of the offender rejoining with a new identity the lesson can be learned and the community standards of behaviour adhered to (Mackinnon, 1997) and if not the pattern repeats[9]. Conversely inappropriate behaviour by the community will result in denunciation of that community until the point is reached where the community is changed or a new community is set up either as a replacement or an alternative.

Since we have already shown that part of the definition of online communities involves a shared understanding of appropriate behaviour then it logically follows that this type of trust must be present within that type of community structure.

This would suggest that when the context of trust is related to agreed upon behaviours within the community then the level to which someone is known and trusted within that community might be used as a measure of how unlikely they are to act in a way that goes against the etiquette of the community. Conversely if a person is not known and trusted by the community then it can be seen as a sign that they either cannot be trusted to act in accordance with the community's standards or have not yet been within the community long enough that they can be trusted to know what those standards are.

Membership of a group is often seen as a clear cut division, one is either part of a given set or not. However using the logic described above, community trust can be seen as a function of membership, but as part of a fuzzy rather than an absolute set. We provide an illustration of these two different ways of modelling community membership, binary and gradual, in Figure 2.1.

In his paper on trust strategies for the Semantic Web, (O'Hara et al., 2004) suggest five scenarios that agents might follow: optimistic, pessimistic, centralised, investigation and transitivity. If we consider membership of a group as a binary state then we can compare it to a combination of pessimistic and optimistic strategies. Prior to gaining membership trust between community members is in a pessimistic state, that is interaction is restricted until additional reasons for trust are given. However if the two agents, or users, are both members of the same community then interaction becomes optimistic and trust is assumed as a default state (labelled as 'binary' on Figure. 2.1). This system, while workable, does not take into account the idea of membership of a community as a process with community practices being learned through involvement.

[9]In most cases, until the troublemaker decides that the effort required is not worth the time taken just to cause trouble.

Transitive trust systems (O'Hara et al., 2004) rely on the idea that in some systems, especially social ones, trust can be calculated through opinions gained from a network of interconnected contacts. This conceptualisation allows for both the idea of a gradual absorption of a new user into an existing network and a gradual increase in trust as the user becomes known (labelled as 'gradual' on Figure. 2.1). The necessary component that O'Hara et al. (2004) identifies for this system to work is context. By working with a community network, and having the context relate to knowledge and compliance of community standards these conditions are met.

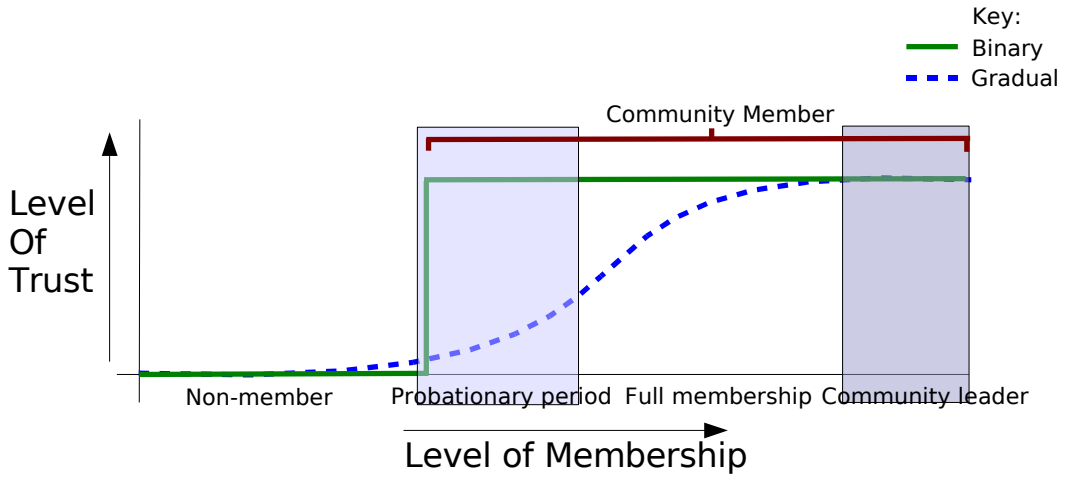

Figure 2.1: Diagram Illustrating Trust as a Component of Community Membership

How would one measure how well someone is known and trusted within a community? The most obvious way would be to consider the number of potential paths between that community member and another. Working on the small world principle just as the previously mentioned web of trust does, it is clear that each person within the community who trusts a member of that community in a specific context represents the first link in a potential chain between that community member and another.

In many respects, if trust is seen a reduction of cognitive complexity in times of uncertainty this is a further reduction since a person is not trusting another person but is instead trusting the community to which they both belong to tell them whether or not trust can be given.

Similar structures can already be seen in use in the buyers and sellers rating schemes on sites such as eBay[10] (LaPlante, 2007; Bhattacharjee and Goel, 2005; Gomes, 2006; Resnick et al., 2000; Resnick and Zeckhauser, 2002). While 'users of eBay' is a very broad and loose-knit community, decisions about whether to trust sellers are made at least partially on the relative number of positive and negative comments that have been

[10] `http://www.ebay.com/`

previously made about that seller by other buyers i.e. other members of that community (Bhattacharjee and Goel, 2005). Considering it as a community trust system, we can see that the community standards are that the goods are as advertised and are dispatched in a timely and appropriate manner in exchange for the money that the buyer sends the seller. The buyer has more trust in the seller the more affidavits they have accumulated since these show that the seller is known to the community and vouched for. This is despite the fact that the buyer does not necessarily know any of the people who are giving these recommendations. If someone does not live up to the community expected standards then the seller receives bad reviews, lowering their reputation and therefore the likelihood that a buyer will choose to do business (i.e. trust) with them. In severe cases the seller's account is suspended – in effect the person is ejected from the community.

The system works on the basis of a 'x number of people can't be wrong'. There are two main immediate problems with this. First, history has repeatedly proved that sometimes all those people can be wrong. Due to the system by which reputation is calculated (Resnick et al., 2000; Resnick and Zeckhauser, 2002) it is possible to build up a good reputation with small items in order to set up a scam on an expensive item. While this may result in the seller being suspended, this does not help the buyer who has been defrauded. There are also cases of faked reviews or groups getting together to bolster each other's rating in return for their own ratings being padded rather than in return for the services offered (Bhattacharjee and Goel, 2005; Gomes, 2006; Mills, 2007). This effect can be seen in other reputation based systems, for example Google's page ranking system which uses the number of links to a page as a gauge for its relative importance. However, due to this use of popularity to indicate reputation, a number of websites working together (either intentionally or unintentionally) can unfairly elevate the popularity of a link in the Google page rankings (Tatum, 2005; Glaser, 2005; Mayer, 2005; Google Blogoscoped Team, 2004).

Second, as we have mentioned, there is the probationary period when a newcomer must build up initial trust to be accepted by the community. In community terms this parallels the introduction of a newcomer into a community. While this period exists to allow the two way process of evaluation, the user evaluating the community and vice versa, the trust evaluation is more biased towards the community needing to assess the potential member. A number of possible strategies have been developed for this and recommendations for which should be used depend on the risk associated with the particular activity.

Reputation can be defined as the social standing of either an individual user or a group, that is, how that party is seen by others. Reputation can be gained through actions seen as positive by the group or lost though actions which are seen as negative such as breaking the community rules. "Reputation causes people to cooperate in the present in order to avoid negative consequences in future interactions with the same people. Reputations spread information about people's behaviour, so that expectations of future

interactions can influence behaviour even if the future interactions may be with different people than those in the present" (Friedman and Resnick, 1999). Reputation and trust are intricately linked in that reputation is often used in the calculation of trust however the two are not interchangeable.

Now consider a tightly-knit community such as a fan or writing group or a gaming clan. The community by definition has codes of acceptable behaviour and those who break these rules will be shunned with the word being spread to related groups by overlapping membership. It has been shown that when reputation is a factor within a community then it can act as part of the social control mechanism. For example "Gossip allows the dominant hierarchy to be kept under the group's control, and illegitimate or dangerous figures to be replaced. Thus, it allows social control while fostering social cohesion and promotes social order while ensuring legitimacy" (Conte and Paolucci, 2002, P. 193). Within the amateur writing community there is no other commodity for exchange except for reputation.

The use of the FOAF network to create a web of trust is founded solidly within the concept of web-based social networks. Having already shown that this project deals with web-based community networks, as defined above, the question is whether the community aspect can be encoded within a similar web of trust system so that the community trust can be taken into account within the trust calculation. This would require the persona declaration to be combined with a community declaration and to that end we consider below an extension to FOAF which addresses this issue.

2.2.2 The Fan Community

While it is less applicable to non-media-inspired writers, Camille Bacon-Smith compares the community organisation of fandom and fan fiction writers to an extended family structure or 'circle' (Bacon-Smith, 1992, P. 26 – 31). These circles, she explains, can be both concentric and interlocking with people belonging to many groups and being introduced to new areas by these contacts. While many changes have been noted in fandom since the book was written, not least due to the influence of the Internet, this conglomeration of small cliques making up the whole is still a valid model (see Section 4). Small may be a relative term but even within the larger circles smaller, more personal sub-divisions coagulate. This can be seen in other contexts as well, for example we talk about the 'scientific community' or the 'research community'. In both cases the super-community is made up of smaller and more tightly-knit groups with ties between those groups being maintained through cross-pollination of people and ideas and through events intended to bring the wider community together. While there may be disagreements within the community there is still an understanding of acceptable behaviours.

In this thesis we detail an investigation (see Section 3) into this community that was undertaken as part of the research described therein. As part of this investigation an online survey (see Section 3.1.1) was used to gain insight into the structure of the community as well as the opinion of those within in. The results of this survey (see Fig. 2.2) showed that less than four percent of those people who belonged to any groups only belonged to one group, list or community. Further, the majority belonged to groups that spanned more than one topic or area of interest. This suggests that there is a strong connection between the numerous smaller communities increasing the likelihood that while there are regional variations there are overarching behaviours that are understood by the larger community. Furthermore there are additional groups and events, both off- and online, that bridge the small communities. This perception of smaller groups making up a larger community is an acceptable one in the offline world so it would seem to be a disservice to the concept to argue that it could not be equally applied to groups on the Internet. If we accept this argument the final criteria has been met and we can consider that the amateur writing community, especially the fan writer community, is just that – an online community according to Preece's definition.

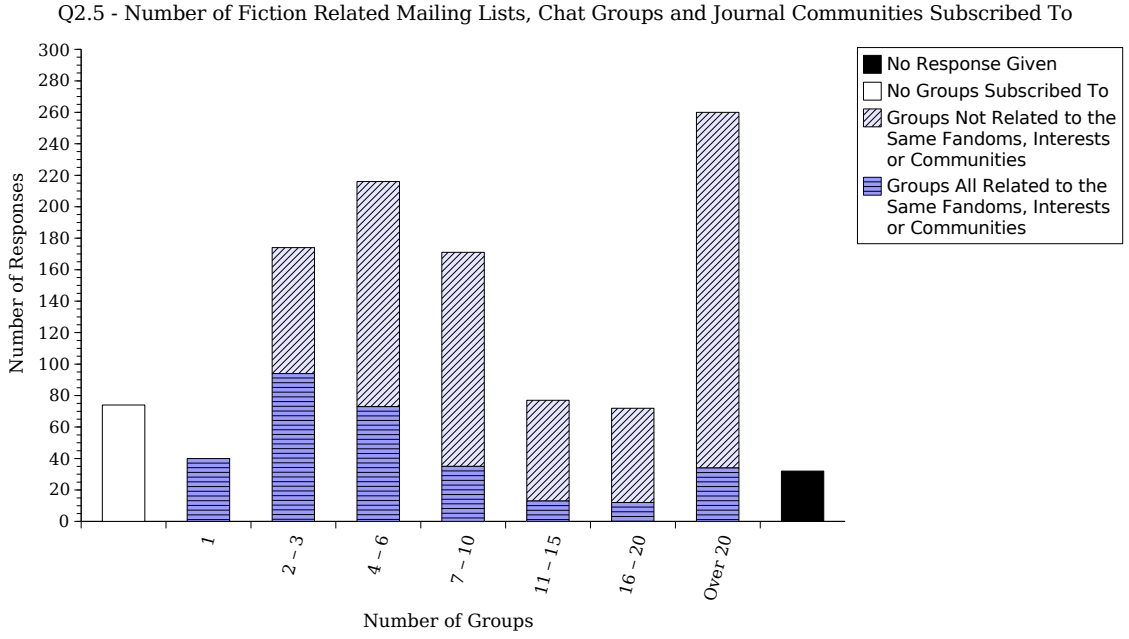

Figure 2.2: Number of Groups Subscribed to by Members of our Case Study Amateur Writing Community (see Section 3)

Having confirmed that we are dealing with a community, indeed a community of communities, and that part of that assessment involves there being a social aspect, the question must be asked: are we, then, dealing with a social network? In common terms it is demonstratively a network of people who are linked to others through their social interactions. Golbeck defines a Web Based Social Network (WBSN) as a social network

accessible through a web browser which explicitly states and supports the relationships between people and allows these relationships to be navigated. (Golbeck, 2005, P. 13). How does this differ from an online community? Both have a social aspect and are computer-mediated. What is missing from the requirements for a WBSN is any requirement, explicit or implicit, for a shared set of behaviours or a shared purpose. It could be argued that wanting to be part of a WBSN is a shared purpose but that seems an indefensibly vague purpose. From the other direction, what is preventing a community being a WBSN is the explicitly stated links and the means to make use of them. Electronic journals such as LiveJournal, an electronic journalling site, and JournalFen, an electronic journalling site for adult media fans, provide some measure of WBSN (see Section 4.2) but for the most part the relationships between fans or writers is not explicitly stated[11]. The question is then: why not? Community fellowship especially mailing-list or group membership are frequently used as a networking tool within the community. Friendships are often carried over between the smaller community groups and often the links between groups, authors and resources are linked in general terms via URLs.

One aspect of the problem of the shared understanding of acceptability of community behaviours is that new or indirect users are not made aware of the environment into which they are becoming involved and therefore might not be aware of even the existence of these standards. We have already mentioned that the proposed system allows for the idea of initiation into the community. However, indirect users such as parent/guardian(s) frequently have little or no interest in the online environment itself or the minutiae of it beyond trying to maintain their authority in a domain that they do not understand and in which that authority has no formal recognition[12]. Up to this point the assumption has been made that people will be or will want to be part of the community. The question exists whether supporting the community and allowing it to become more insular if it wishes will exacerbate the problems that can be already be seen with media creators who are totally ignorant of the community. These people can, and do, re-invent community activities but with no influence or constraint by community ideals. This can be seen in the Washington Post article on video mash-ups (Goo, 2006) and related online interview with a 'mash-up artist' (Goo and McRoberts, 2006). Despite running a fan video site

[11]It would be inaccurate to say that there was no fan presence on any of the social networking sites such as MySpace (`http://www.myspace.com/`) or Facebook. MySpace, especially, has been used effectively as a means for authors and musicians to connect with their fans. However, the focus on the many one–one relationships that exist between users creates a very different social atmosphere to that seen on fora or sites such as LiveJournal which promote community spaces. Communities can and do grow within a social networking environment, but they are working against the one–one essence of the technology in their one–many nature. Even when the social networking sites provide community areas such as the groups on Facebook, the individual links are often strongly promoted over any group links, for example through the types of notifications which users receive which privilege the reporting of actions done by individuals over those which occur within the group setting. What is more often observed is fans as individuals engaging with their interest rather than fans as community members sharing it.

[12]By formal recognition, we do not mean to imply that the authority of a parent is not recognised by the community but that there is no structure currently in place with which to model this relationship within the community domain. Rather, that the authority exists in the real world and is acted upon within that domain.

dedicated to the ABC television series *Lost*, the artist (identified as Molly McRoberts, 18), appears to be totally ignorant of the long tradition of fan videos of which she is now part. The mere openness that Ms McRoberts demonstrates in both providing personal details, such as name and age, and in providing links to the videos, goes against the normal understandings within the fan communities. Jenkins (2006d) notes that when he was researching for *Textual Poachers* the fan vidders were the only fans who requested that they not be named. While fan art has long been accepted, and there is a legal grey area that surrounds written fiction, fans recognise that, with the creation of vids, they are working with and redistributing copyrighted video and music without permission. There is an interesting contradiction in the display of fan videos at some conventions, even those with official presence[13] between the popularity of such videos, especially in anime fandoms, and the understanding within the community of the underground nature of the art due to the legal implications of video creation. It might be suggested that there is, in many cases, a semi-official 'looking the other way' going on, however fans do not see this goodwill as something that can be relied upon. In many sections of the community, a site is more likely to be locked for the presence of music vids than for adult content. Providing links to this material outside the community, especially in such a public fora as a newspaper, is seen as inviting reprisals by the copyright owners not only against individuals but against the community. This concern is not only speculated on by Jenkins (2006d) when he discussed the unintended release of a well-known music video outside the fan community, but confirmed in the comments he received in response.

It was in one of these comments that the Washington Post interview was raised with the contention that neither the writer of the article nor the person being interviewed seemed to be aware of the fan tradition. Support for this idea can be seen in the response to questions such as whether mash-ups were a fad or a lasting form or artistic expression, or whether mash-ups represent a new art form, neither Goo and McRoberts (2006) noted that the endeavour is in no way new. Jenkins (2006d) recalls presenting such fan videos in the early 1990s, at the MIT Media Lab on the basis that by "paying attention to what these amateur media makers were doing when it was hard, nearly impossible, to accomplish so that we might predict affordances that should be built into the next generation of media tools". While artistic merit can be debated, the fact that such material has been produced for over fifteen years and has, in that time, given rise to academic research both in the field of media studies (Jenkins, 1992) and computer science (Shaw, 2005) would seem to argue against it being either a fad or a recent trend[14].

[13]Two observed examples of this 'official' music video presentation: at the official Firefly/Serenity stall at the London Film and Comic Convention had a small screen display with fan made music videos running and at Call to Arms, the seventh Highlander WorldWide convention (March 2006), music videos were played at specific points as illustration or to introduce specific panel discussions. A live action 'music video' was even performed during the cabaret when David Abramowitz, a well known writer and creative consultant on the series and later films, sang the music audio-aspect of the multimedia display.

[14]We are not, at this time, differentiating between music videos based in anime fandoms, known as AMVs (Anime Music Video), and those based in live-action fandoms. AMV creators, like machinima (Jones, 2006, P. 262), are male dominated (Shaw, 2005, P. 6) unlike music videos based in live-action fandoms which draw from a similar pool to fan fiction writers.

Beyond that, there is no mention made of the community aspect of material exchange, nor the illustration of a shared understanding when asked about the purpose of mash-ups. There is a clear difference that can be seen between the 'mash-up artist' and the 'fan vidder' despite the fact that the two do, to all intents and purposes, identical things with identical material.

One concern must be that while strengthening community links and enabling them to remain 'under the radar', people outside the community may still be creating and disseminating similar objects without any concern for the greater effects that such activity might have, on themselves or on the community of which they are unaware.

2.3 Fandom

Tulloch and Jenkins (1995, P. 23) argues that, given over half of Americans identify as being fans of Star Trek, "we need to move beyond a specific focus on fandom as a subcultural community to a consideration of what it means for these more casual audience members to identify themselves as fans". They differentiate between what they term 'fans', that is "active participants within fandom as a social, cultural and interpretive institution" and what they term 'followers', those who enjoy watching a show (or shows) on a regular basis but "claim no larger social identity on the basis of this consumption"(Tulloch and Jenkins, 1995, P. 23). Hills (2002, P. xi – xii) discusses the different terminology used in academic studies and associated implications between the usage of 'enthusiast', 'follower', 'fan' and 'cult fan' (cult as in 'cult movie'). In this thesis, the differentiation between a '*fan*' (followers/enthusiasts) and a '*Fan*' (fans/cult fans) is assumed to be determined by the level of interest shown by an individual in the minutiae of their chosen area (i.e. consume or analyse) and whether their interaction with that subject and other fans can be categorised as active or passive.

Fandom is a general term used to describe fans as a collective group or groups, the "social, cultural and interpretive institution" envisioned by (Tulloch and Jenkins, 1995), with the emphasis often on 'Fans' rather than 'fans'. While some dictionary definitions tend to limit fandom to followers of sport (WordNet 2.0, *The American Heritage Dictionary of the English Language*, Fourth Edition), an activity (The American Heritage Dictionary) or a famous person (WordNet 2.0, *The American Heritage Dictionary*) more common usage also includes any type of fan and the term is often used to refer to fans of a television show, film, book or other representation of a fictional universe as well as fans of the authors or actors related to that depiction. This usage has its roots in the science fiction community in which many of the current fan activities such as conventions and fanzines (amateur publications created by and for fans) have their origins.

The creation of fan fiction and other fan media items is one of the many possible 'active' methods of participation, as is involvement in communities focused on and around this

area. Since it is this specific activity that we are primarily interested in then, for the purpose of this thesis, it is to this group (who take an active, and interactive, interest), that we refer to with the use of the term 'fan', unless explicitly specified otherwise.

2.3.1 Fan Studies

In working with this community it is necessary to look at the research that has already been done within this area. Research into the fans, online fans and fan fiction communities has developed into its own area of study within media and social studies.

Jenkins identifies himself, (Jenkins, 1992), and Camille Bacon-Smith, (Bacon-Smith, 1992), as being part of the second generation of researchers in fan studies (Jenkins, 2006b, P. 11 – 12). He differentiates this second generation as actually interacting with their chosen subjects rather than analysis through distant observation. It is hardly surprising that this generation is the first to be broadly accepted by fans.

In his introduction (Jenkins, 1992, P. 4 – 5) wrote

> "What follows grows not only from conventional forms of field research but also from my own active involvement as a fan within this subcultural community over the past decade and more... When I write about fan culture, then, I write *both* as an academic (who has access to certain theories of popular culture, certain bodies of critical and ethnographic literature) and as a fan (who has access to the particular knowledge and traditions of that community)".

This second generation also represents the first generation of what are often known as aca/fen. The concept of an Aca/Fen (Jenkins, 2006c) or Fan-Scholars/Scholar-Fans (Hills, 2002) recognises that many of the researchers in this field have an involvement in their subjects which goes beyond the academic and, in some cases, that the academic interest has grown directly out of their initial fan status. The idea that some researchers "have one foot in academia and one foot in fandom" (Jenkins, 2006c) immediately causes problems with the idea of impartial observation.

As well as creating the foundation of fan self-analysis, this work paved the way for further work and a third generation researchers such as Baym (1995, 2000); Hills (2002); Pugh (2005); Hellekson and Busse (2006):

"people who are both academics and fans, for whom those identities are not problematic to mix and combine, and who are able then to write in a more open way about their experience of fandom without the 'obligation of defensiveness', without the need to defend the community. Therefore they can take up things like contradictions within

it, disputes within it, re-raise awkward subjects that we papered over in our earlier accounts, and now there's a freedom to have real debate among ourselves about some of these core issues." (Jenkins, 2006c)

In many respects this is less of a problem in human-computer interaction research because we are all computer users and so the division between researcher and subject is already blurred. This is even more true when considering interaction research with emergent technology since, in the initial stages, the researcher and subject are often one and the same. However it is important to note that it is within this tradition of academic-fan produced work that this research is situated.

While the initial research in this area ignored the online aspects of fandom, later work such as Baym (1995, 2000); Costello (1999); Cromer (2002); Bury (2005); Jenkins (2006a); Hellekson and Busse (2006) embraced the computer mediated aspects of the community and concentrated on fandom as an online entity. This thesis represents neither a literary, ethnographic nor media study. In the same way that Pugh states "My primary interest in fan fiction is literary rather than socialogical" (Pugh, 2005) so the primary interest in this thesis is interaction. As a human-computer interaction study, the majority of this interaction is within a computer-mediated environment, however it is important to remember that online interaction is only part of the picture. The Internet has created many opportunities for new experiments in multimedia, however this convergence needs to be seen as multi-model as well as multi-media with the effect of offline interaction being acknowledged and accepted as a part of the online structure. It is too easy to see the off- and online worlds as totally separate when, conversely, there is a constant exchange between the two with the user acting as the conduit for the exchange.

MacDonald (1998) believes that "studying media fandom within computer-mediated spaces provides a unique opportunity to explore how CMC may change our popular culture and our pleasure time activities and gain insights into how a particular group integrates the possibilities of CMC". This thesis takes the opposite approach. By studying active media fandom within computer-mediated spaces we can ask how our popular culture and pleasure time activities may change computer-mediated communication, both in the way it is viewed and how future systems may be design to support the users.

2.4 Community Centred Design

While the research in this thesis touches on many other domains, it is at its heart a project about human-computer interaction and accessibility. This accessibility is important both at the user end and for the creation of the metadata upon which the potential semantic services rely. From the popularity of the FOAF system, we can extrapolate that people will be willing to take the time to complete a short form about themselves.

The option to load in existing FOAF files, such as those created automatically by LiveJournal and JournalFen, would increase ease of use and reduce the time needed for data acquisition, but is unlikely to make a significant difference overall.

Our interaction with the user takes a number of forms. First, to determine the user needs and requirements for the case study community being researched as described in this thesis. The nature of the design is one of community focus and therefore the requirements of the community need to remain the primary focus. This is being undertaken through continual interaction with the community and members who have expressed interest in the project and through questionnaires, and eventually user studies related to specific interaction questions (Andrews et al., 2003; Souza and Preece, 2004; Lazar et al., 2001).

Second, having demonstrated that the addition of metadata is a common activity within our case study community, We consider the user case presented by our community and we engage with the members of the community to investigate ways to facilitate this practice. The addition of metadata going beyond the bibliographic is commonly believed[15], within that community, as gaining influence during the communities partial but major transition from their roots as an offline community publishing and distributing physical matter to their current form as an online community which uses electronic publishing and distribution methods. While initially this consisted of warnings for subjects such as character death or sexual violence which could easily upset readers, the range of 'warned' for content expanded to a rough classification system. From authors adding lists of keywords or short phrases, many of which were developed and evolved within the community, a taxonomy of terms was developed. Since this shared vocabulary was created through a 'bottom-up' and democratic process it could be argued that it represents an early folksonomy, as the vocabularies derived from popular labels, or tags, are often called. These community taxonomies are often shared as glossaries[16] but the meaning and context of individual terms is kept alive through usage.

We argue that the practice of metadata addition demonstrated by our case study community mirrors tagging in both its approach to data description, and in its issues and drawbacks. We consider the addition of metadata to objects shared within the community and the issues of usability that arise as part of this. Our case study community exists within the greater context of the Internet where social bookmarking sites such as del.icio.us[17], Flickr[18] and 43 Things[19] have become the poster children for so-called 'free tagging' movement with its emphasis on simplicity and user-friendly metadata association. Many of these site, including those named above, use white space as a delimiter

[15]This belief appears to be backed up by the comparative dearth of such information within older fanzines or on websites associated with older fandoms

[16]The Fanfiction Glossary: `http://www.subreality.com/glossary.htm` and Ye Olde Jolly Jolly Anal-Retentive General Fandom and Fanfiction Glossary: `http://www.theparapet.net/fanfic/glossary.html` are just two examples

[17]`http://del.icio.us/`

[18]`http://flickr.com/`

[19]`http://www.43things.com/`

between tags. This places restrictions on the format of the tag - that it must by a single keyword. This can be contrasted with systems such as LiveJournal's interest and content tags which are comma separated and can, therefore, be single world, multiple words or phrases. Where tags are restricted to keyword tags users typically find ways around the problem. The use of punctuation, especially hyphens and underscores, in common as is the simple amalgamation of the words into one (Guy and Tonkin, 2006). It is an interesting question whether this requirement for user invention to circumvent technically imposed limitations adds to the synonym problem that is implicit in free tagging.

While eminently usable, tag systems have a number of features which limit their precision and make search and retrieval less accurate (Shirky, 2005; Kroski, 2005; Pind, 2005). The current system of metadata labelling used within our case study community, although not machine-readable, is in essence a tagging system. While being able to link cross-site through tags might be an advantage to users it does not, in itself, address many of the problems that they currently encounter since it would just replace one tagging system with another.

While personal data such as that described by FOAF is comparatively simple, the marking up of the stories, illustrations and videos that are created by the community is anything but. Applications such as SMORE, an editor for the creation of OWL markup for webpages, assist in the association of metadata to online content (Kalyanpur et al., 2004). The intention of such applications is to go beyond this type of tool so that the average user does not need to deal with the base ontology of any level. Due to the reuse of entities and event types it is postulated that one way to aid metadata creation within our case study is with the generation of reusable objects which can then connected with a story or a section of a story through a simple drag and drop interface. While this does require the initial time spent creating these objects, subsequent time will be saved since only the differences from the generic form will be needed to be expressed, all other information can be provided by the central definition. Investigation will need to be undertaken on the relative merits of when and how much of this information should be distributed for optimum performance as well as whether the usability of tags can be combined with the opportunities for machine processing which come with a formal ontology.

The final aspect that we consider is the way that the reader-facing applications present themselves and the community. Misunderstanding and incorrect assumptions can cause problems between communities. If an application is created that serves as a portal to the world of amateur writing, it is important to recognise the responsibility that that creates. Part of that involves making clear to the users what the system can and cannot do and where the points of failure may occur. Problems in this area of misunderstanding between providers and consumers, for example in regard to metadata use, can be seen in current systems.

The Google SafeSearch does not take into account any Platform for Internet Content Selection (PICS) metatags or any other author provided metadata that is attached to a given website, relying instead on their own proprietary classification system. There are many reasons for this, despite being a World Wide Web Consortium (W3C) Standard for marking Internet content since 1996 (Miller et al., 1996; Krauskopf et al., 1996; Evans et al., 1997) PICS was never widely adopted and is largely deprecated[20]. Even were this not the case, there are important issues of trust with author-provided ratings (see Section 5.3). It could be argued that sites claiming to be child-friendly are not necessarily trustworthy in their assertions, but those that claim to contain non-child-friendly content should be trusted in that they are asking to be removed from child-friendly listings. The fact that SafeSurf ignores metadata added by sites with the express purpose of warning for adult content has caused some problems between site owners and parents with the one thinking that they have taken the necessary steps and the other being unhappy with the site still appearing on the supposedly child safe setting[21]. This is understandable, Google is not designing for a specific community where this is a known problem – the difficulty was in the producers believing that the metatags designating their site as containing material that was adult in nature would be understood and respective and the consumers believing that Google SafeSurf, a third party system, would act to filter out such sites. As the applications and designs that come out of this project are aimed at a very specific user group, it is only good design to make such things clear to the user so that the community being opened up by the portal does not suffer as a result.

2.5 Tagging and Extending Tagging

Although tags represent a very user-friendly method of providing annotating metadata, their disadvantages mean that they cannot, in their current state, be used as a direct alternative to current, less-user-friendly systems. One option is to extend the information associated with the tag and thus increase the possible use-cases. A number of different methods are under development, many working on some variation of meta-tagging, by which we refer to the tagging of tags rather than the elements used in HTML headers.

We consider various ways through it has been suggested that the concept of tagging could be extended through meta-tagging. These ways are drawn from both users ('meme_pool', 2006) and academics (schraefel et al., 2006), through thesauri definitions (Miles and Brickley, 2005, 2004) and through the addition of relational elements (Marks et al., 2005). We investigate each these methods with specific relation to our use case and how the presence of community might affect how tags are both used and extended.

When considering usage it is often helpful to differentiate between different users, for

[20] Although it seems unlikely that Google will pay any more attention to the RDF replacement for PICS that is under development by the W3C

[21] `http://www.livejournal.com/community/helpinghands/2818.html`

example on the basis of gender, age, system familiarity or usage level. In this case, I propose a useful distinction is the state of user interaction. Mathes sees the frequent use of the 'me' tag on Flickr and the 'toread' tag on del.icio.us to be indicative of the individualistic nature of much of the tagging (Mathes, 2004). This is echoed by Golder and Huberman's findings in their study of del.icio.us that "a significant amount of tagging, if not all, is done for personal use rather than public benefit" (Golder and Huberman, 2006). While this egocentric usage may provide an explanation as to why expectations in search and retrieval accuracy are comparatively low in tagging systems, it does bring into question the real benefit in correlating tags across users since any cross-meaning is an unintentional side-effect of an individual-centred system.

There are two responses to that. First, the question of benefit also carries the corollary 'benefit to whom'. Even if it were the case that greater precision was an unnecessary development within a tagging environment, that does not preclude it being a benefit elsewhere. However, there are many areas where the unconstrained nature of a given tag's meaning is too much of a disadvantage to offset their usability as a whole. Allowing the addition of semantic meaning to tags might not be useful or desired in those environments where, either it is the ambiguous nature of the meaning which adds benefit, or where cross-compatibility is low priority. However it would open up the simplicity of the tag experience within other areas which currently have or require more term definition that the current tagging systems allow.

Second, just because an effect is not primary, it does not mean it should be dismissed. While current user practice focuses on the individual this does not necessarily indicate that future usage will follow this pattern. Wal (2007) sees a progression in usage occur as sites grow and mature from personal tagging to tagging supporting mature and complex social systems. While many of the social tagging sites fall within the *tagging-others-content-for-my-use* group, Hammond et al. (2005), who classifies sites based on whose content is being tagged and who uses the tags, categorises only one site (Flickr) as being purely individual focused – *tagging-my-content-for-my-use*. On other sites, he identified a notable portion of the tagging as altruistic, since it was done for the benefit of others (HTML meta tags and Technorati).

One of the stated advantages of tagging is that it engenders community (Kroski, 2005; Wal, 2007) through use of shared vocabularies. While individuals may start as tagging for themselves, by coming into contact with others tagging similarly then their perception will shift from seeing themselves as individuals to being members of a group. A parallel shift in behaviour can be expected as the user is no longer 'tagging for one'. This is supported by the fact that Technorati, of all the tagging sites, is one of the few to be based within a strong existing community structure and is also the only one where tags are perceived as being author-tagging to support other users (Hammond et al., 2005).

It is interesting to consider this in comparison with the continued debate on community

fragmentation that has become commonplace inside the fan fiction community, with LiveJournal frequently being represented as the main culprit. Cherry (2006), in her recent presentation at De Montfort University, considered the perceived advantages and disadvantages that were seen to come with this fragmentation. While the advantages are not insignificant, there is a concern becoming more evidenced within the community that too much fragmentation and the increased insular nature of these subdivisions are detrimental to the community as a whole. In this context, therefore, there is a case to be made that forcing people with similar but divergent vocabularies, such as 'film' and 'movie' people (see Section 6.3.3), to interact actually has social benefits beyond making it easier for the user to find what they are looking for.

The analysis of the vocabulary used by the community as described in Chapter 6 strongly suggests that a comparatively stable folksonomy exists within our case study community. Golder and Huberman suggest two explanations for the stable patterns that they found within tag usage. They classify these as 'imitation' and 'shared knowledge' (Golder and Huberman, 2006). While they see imitation, users copying tags that they have seen others using, as providing a possible explanation for this stability, the fact that only the most common tags are shown precludes this being the only factor especially since the same stability was found in both the commonly and uncommonly used tags. The second possibility, that of a shared understanding of meaning, brings us back to the idea of community. While not going so far as to use the term 'community', Golder and Huberman "expect that users... share some background, linguistic, cultural educational, and so on" and in the case of del.icio.us identify this as users sharing a 'strong technical background'. This fits with findings described later in this thesis that there was less variation between vocabulary borrowed from other, known, vocabularies such as legal and literary terms (imitation), and the creation of community specific terminology (shared knowledge).

If we consider the different stages of network cohesion, with single individuals at one end of the spectrum and established communities at the other, we can argue that differences also exist between the interaction between the user and the tags they use, as determined by the level of cohesion that they have with others in the network. We break this down into three periods:

Individuals:

Creating categorisations and taxonomies within data has been used for the organisation and exploration of information for a long time. The increasing popularity of tagging has stemmed from the ability to create custom categorisations of data and from the ease with which it allows users to add this information to both their own work and others. As we have discussed above, tagging is a very personal activity and for many it is also a solitary one. While for many people it is the exchange of information which motivates them, for others the only person with whom they need to interact is their future selves.

Users fitting this description are may explore other people's tags but are unlikely to be concerned about how other people interact with theirs. For this group it is debatable whether extensions to the current system would outweigh any disadvantages that they would gain from related increases in complexity. This group represents the most basic users, what Wal (2007) describes as Group A (Personal) tagging, and it is important that any refinements to the system not impose difficulties upon them in return for services that they have no interest in.

Developing Communities and Social Networks

There are many web services, for example Flickr, del.icio.us and YouTube[22], that offer users the ability to upload information, be it images, videos or other types of documents and tag them with personal categorisations. These categorisations have a personal meaning for the individual user, but also can have a shared meaning within user groups. This group represents the largest of the three we have proposed, as users move beyond the concept of being a single individual to being one of many. The idea that the meeting of minds within tagging communities leads to a shared consensus, as demonstrated by the creation of folksonomies (Guy and Tonkin, 2006), is one of the fundamental pillars of the system. Wal (2007) categorises the tagging by this group as, at the least involved end, Group B (Serendipity) tagging which develops into Group C (Social Powerful) tagging. It could be argued that the 'communities' that develop from this discovery of shared meaning are very loose, indeed, that the lack of deliberate interaction between the taggers beyond the interrelation of their tags precludes a true community developing without additional, and probably external, development. Although connections between the users in this group exist, even if is it only through conforming to social pressure as to tag choice, the diffuse and unregulated nature of those connections suggests that, while they would benefit from the option to associate additional information with their tags, the users would be as well served by an equally informal system.

Established Communities

The third type of users we have identified represent those who are already in a community or are part of a developed community. At the most basic level this can be seen in users agreeing on an obscure tag which they can use to identify themselves or objects that they have tagged. At a more complex level they add their own shared vocabulary meanings to the general mix or may be using the system to support their own purposes rather than using the system in the way it was intended. One of the defining traits of this group is that, in many cases, they have already developed either the equivalent to a folksonomy and are now applying it to tagging rather than the reverse, or have a shared understanding of how they are going to repurpose the technology (or both). This represents what Wal (2007) described as Group D (Mature) Tagging.

In this thesis, I discuss how this information integrates with the systems described

[22] `http://www.youtube.com/`

therein and how it can be used to create a buffering layer between the average user and the metadata. We argue that the relationship that the development of tags, and associated shared vocabularies, has with the concept of community allows the harnessing of community structures to further reduce the effort required by the average community member.

2.5.1 Extending Tags through the Tagging of Tags

This extension goes beyond the idea of probabilistic categorisation (see Section 6.3.3 and Section 9.3.2), that is the association of tags which commonly occur in proximity, to the deliberate linking of the concepts as encapsulated by the tag. Faceted tags allow the addition of dimensionality such as the specification of context. This can be seen in the Mefeedia [23] videolog social bookmarking site which provides a number of dimensions (places, events, people, topics and languages) within which a given tag can be situated. The site also allows for a wiki-style collaborative editing of tag definitions.

The concept of faceted classification predates digital tags by many years, going back to the library and information science communities.

"A faceted classification differs from a traditional one in that it does not assign fixed slots to subjects in sequence, but uses clearly defined, mutually exclusive, and collectively exhaustive aspects, properties, or characteristics of a class or specific subject." (Wynar and Taylor, 1992, P. 320)

The first formal faceted library classification system was the Colon Classification system developed by S. R. Ranganathan (Ranganathan, 2006), so called because of the punctuation used to separate the different facet domains. Since the Colon system, a number of classification systems which include faceting have been developed, for example the Bliss bibliographic and Universal Decimal classifications. While not definitely so, a theme that many of these systems have in common is a defined set of categories within which the facets fall. This may be enhanced or replaced by a defined set of delimiting characters which indicate the type of facet they proceed.

A less constrained system can be seen on social tagging sites such as del.icio.us and on journalling sites such as LiveJournal[24], with the use of a colon-separated prefix providing the perspective or category within which the tag should be viewed. For example the tag 'slash' is used on del.icio.us in the context of tagging fan fiction in the slash genre, slashdot or slashcode (the open source code which drives slashdot and other sites), and bookmarks and links related to the guitarist from the band Guns 'n Roses[25]. Faceted

[23] `http://mefeedia.com/`

[24] The list of tags for the LiveJournal community torch_wood can be seen at `http://community.livejournal.com/torch_wood/tag/` and exemplifies the type of differentiation that can occur in organised journal situations, even though the tags do not extend beyond that journal.

[25] Or possibly combinations of the examples.

tagging can differentiate between these viewpoints by providing the context in which the tag should be taken. Our example 'slash' becomes 'genre:slash', 'tech:slash' and 'person:slash'. This system of chaining tags together depends on social controls rather than technical ones in much the same way that basic tagging does. There are no restrictions or guidance as to what text string is used for the facet or namespace prefix. Even the structure of these tags, *facet*:*tag* is a social construction which has been implicitly agreed on by those using it, its development probably due to the influence of the extant library classification systems.

It can be argued that an emergent hierarchy is being developed through these tag associations (see Figure 2.3). For clarity the term 'chained tags' will be used to describe a tag string which contains a succession of punctuation delimited tags of increasing concept precision. In the following examples, a colon is used although any symbol could be substituted as it carries no significance beyond that of a separating character. A given tag string of this type can have any number of levels beyond the first i.e 'writing:fanfiction:genre:slash:MM' allowing disambiguation, as in the above example, between conceptually different but otherwise closely related terms such as the 'genre:slash' (romance) or 'genre:slash' (horror) subgenres.

The term 'faceted tags' will be used when there is a deliberate relationship specified between a tag and meta-tag or between a tag and the context in which it should be taken. However this relationship may be at a machine-readable level or disconnected from the base tag and does not imply either exhaustiveness or mutual exclusivity within the meta-tags.

A more formal version of this development can be seen in the research being done by the mSpace[26] team on an interface for semantic tags (schraefel et al., 2006; Lawrence et al., 2006b). In this proposed system, a personal hierarchy can be built up and, if the user wishes it, shared. The user is prompted to add disambiguating annotation to their tags and this information is collected together into browsable structures.

In each of these cases the 'bottom-up' philosophy of tagging is clearly visible. To define the tag sense, more tags are employed to build up the meaning. The question is how far this disambiguation should be taken before it is simpler to provide a structured classification rather than an organically created one.

Approaching the issue from another direction, we can consider the combination of free tagging and ontologies by separating out ontology and vocabulary. When individuals add tags to documents they tend to use an individual or personal vocabulary. A user's personal vocabulary rarely changes between documents and users within contexts often share vocabularies at a practical level. These facts suggest that it would be possible to produce a small number of vocabulary lists mapping to an ontology which would satisfy a majority of users.

[26] `http://www.mspace.fm/`

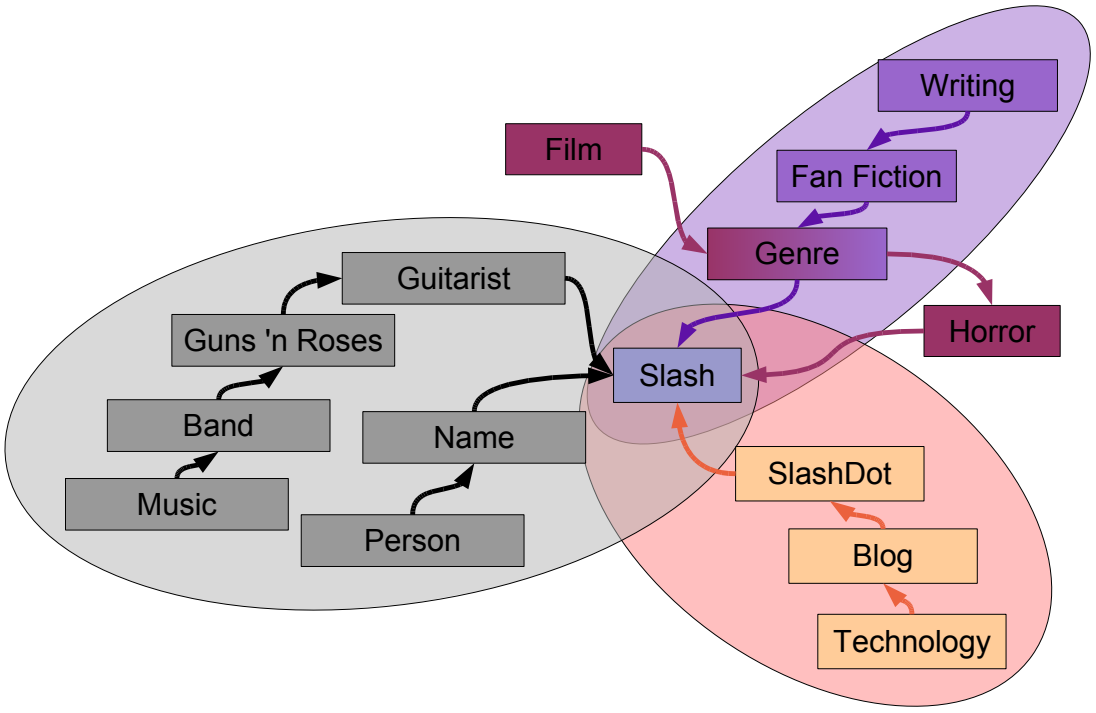

Figure 2.3: Emergent Hierarchies within Tag Disambinuation

By giving users the option to personalise the mapping between the vocabulary they use and the most popular definitions of the ontology's concepts, it is possible to hide the complexity of the ontology from the casual user, yet retain the richness of the description. The disadvantage is that this requires the design of these initial lists through analysis of the community - especially those communities which do not include ontology experts.

One solution is to allow the editing software or portal to be aware of the users' preferences with regards to meaning and, at the point that the keywords are entered, they are immediately converted into a link to the relevant definition. For a combined solution such as this to be effective there are a number of assumptions that have to be made:

- Users have a constant vocabulary within their own usage
- Communities have a shared vocabulary which means for a given domain only a small percentage of terms will have multiple meanings and that many of the terms will be in shared usage since this is in effect a restricted vocabulary. While some users will want to personalise their vocabulary further, working with a restricted vocabulary reduces the number of mappings needed for a given community's needs, thus minimising the work required to initiate the system.

The assumptions above can either occur through natural pressure or through the user being prompted by the interface. These conditions are met within our case study com-

munity, as it is in many others across the Internet. The necessity of allowing for personalisation of vocabulary is demonstrated by the statistically significant increase (p=0.035) in variations within community developed terms (see Section 6) meaning that we cannot totally rely upon context or namespace to provide the meaning of any given term.

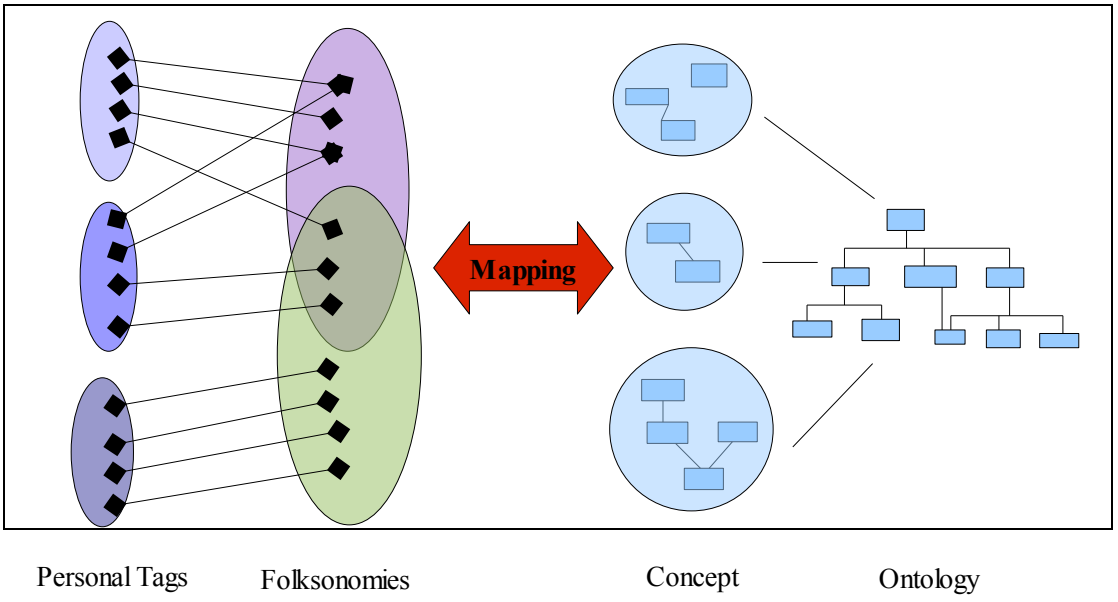

Figure 2.4: Relating Tags to Ontologies through Community Developed Vocabularies

As previously described, the existence of community vocabularies and community portals allows for the possibility of a few fully defined vocabulary lists being distributed throughout the community. We have proposed that by analysing a community and working with it we can use the community system to both inform the design but also inform how the technology is presented to the user.

2.5.2 Extending Tags through Thesauri

The Simple Knowledge Organisation System (SKOS) (Miles and Brickley, 2005) describes itself as "model and an RDF vocabulary for expressing the basic structure and content of concept schemes such as thesauri, classification schemes, subject heading lists, taxonomies, 'folksonomies', other types of controlled vocabulary, and also concept schemes embedded in glossaries and terminologies." (Miles and Brickley, 2005). It offers a simple way of describing the type of community-driven controlled vocabularies which we consider later in this thesis. Taking as our example the tag 'Character Death' (see Listing 2.1), it is possible to specify the scope intended by the tag and how it links to other tags in related categories, for example 'Major Character Death' or 'Canon Character Death Only'.

While this creates a useful tool for structured taxonomy and thesaurus creation, in situations similar to those discussed in the later chapters, the structure that would result has a very strong likelihood of being comparatively flat. The flatter the file the smaller the benefit that can be gained through inference by the addition of such formalisation.

The SKOS vocabulary has a related, if unstable, specification, SKOS:Mapping (Miles and Brickley, 2004), which provides a mapping between concepts defined with the SKOS vocabulary and those defined in other schemas. While SKOS:Mapping (Miles and Brickley, 2004) provides a way of linking between vocabularies, additionally we propose a further schema which specifies a way of mapping between tags, tag clouds, rdf definitions and query results (see Section 10.3.3).

```
<!DOCTYPE rdf [
  <!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY skos "http://www.w3.org/2004/02/skos/core#">
  <!ENTITY tag2 "http://contextus.info/Tag2-schema#">
  <!ENTITY text "http://thesaurus.contextus.info/#">
]>

  <rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:skos="&skos;"
   xmlns:tag2="&tag2;"
   xmlns:text="&text;">

  <skos:Concept rdf:about="&text;char-death">
    <skos:prefLabel>Character Death</skos:prefLabel>
    <skos:scopeNote>
      <rdf:value>
        Indicates the media contains the death of
        one or more of the characters
      </rdf:value>
    </skos:scopeNote>
    <skos:broader rdf:resource="&text;death" />
    <skos:narrower rdf:resource="&text;minor-char-death" />
    <skos:narrower rdf:resource="&text;major-char-death" />
    <skos:narrower rdf:resource="&text;oc-death" />
    <skos:related rdf:resource="&text;canon-death" />
    <skos:inScheme rdf:resource="&text;" />
  </skos:Concept>
</rdf:RDF>
```

Listing 2.1: SKOS definition of the 'Character Death' tag

2.5.3 Extending Tags through Hyperlinks

Having laid out a method by which ontologies and tags can be combined on a machine-readable level, we must also consider the human-readable options. Rel-tags (Marks et al., 2005), tags which include a hyperlink, provide an extension of the tag system. These tags allow users to mark material which is outside the immediate domain of a

free tagging site. The visible string is independent of the URI component which acts as the actual tag (See Listing 2.2). The URI specified in the tag is required by the specification to point to a valid 'tag space' which it defines as "a place that collates or defines tags...where the last segment of the path of the URL is the tag" (Marks et al., 2005).

While this provides a way to extend tagging beyond the social bookmarking sites it is still limited to the tagging mindset. The displayed, user readable tag is not processed in any way, only the final section of the URI and any query parameters or additional fragments attached to the tag are ignored. This imposed limitation may define the scope for the rel-tag but it does not define the scope of the possibilities.

The concept of the triple as defined within RDF (Klyne and Carroll, 2004) requires a subject, predicate and object. If we consider a rel-tag in this space then the following mapping is possible (see Table 2.2):

Table 2.2: Tags to Triples

Triple Component	Tag Component
Subject	Document being tagged
Predicate	URI defined by tag
Object	String value of tag

Given the necessity of processing the Document Object Model to retrieve the tag URI it is logical to consider what other information could be parsed for processing at the same time. If we regard the URI as a link to the definition of the tag rather than a string to be processed then it becomes possible to link directly with more structured and exact definitions. For example the URI could reference an ontology definition which could provide the additional contextual information that a flat, string tag lacks. For example it could link to something as simple as the RDF WordNet definitions[27] which would allow the user to specify which meaning of a word they were intending. The concern with this system would be the effort required on the part of the user to add in the correct link and possibly have to create the ontological definition to which they intend to associate the tag. This brings us back to the idea of a shared vocabulary.

If we agree with the idea that term usage is context based then within a context, for example an online community, there is a shared understanding. This the reverse of the free tagging concept that community will be created by finding people who have a shared worldview as seen by their terminology usage. Given the existence of many online communities such as the one discussed in this paper it is not inconceivable that, at this stage of free tagging community coalescence, the community pre-exists the tagging. It would only require one member of the community to create a taxonomy of definitions for the less technical members of the community to be able to make use of the system. It

[27] `http://xmlns.com/2001/08/wordnet/`

would even be possibly to create one or more distributable lists of vocabulary/mapping which could underpin an automatic completion system, so that the user would not need to see any of the tag beyond the human readable text. Pick-and-mix systems could easily allow users to create a vocabulary system for themselves choosing which definitions of words they wished to use, perhaps with a simple to understand disambiguation system such as Wikipedia uses. Power-users could create new definitions for their own and other's use – a social concept marking system as opposed to a bookmarking one.

This is not about simply providing a link to a definition which can be used by a human to understand what is meant, but a way of linking to machine processable data. (See Figure 2.5). By linking the vocabulary to the more complex structures it becomes possible to carry out processing that requires those structures and their defined relationships. This does restrict the vocabulary available, unless the user is in a position to create their own formal definition and mapping, however it works within the confines of the shared community understanding which also underpins the usability of free tagging. With resources such as WordNet freely available, many of the necessary structures are already in place for usage such as this. For communities such as the fan fiction community which already have large humanly readable glossaries of community terms it is a small step to link to these and the logical companion to creating a machine-readable version.

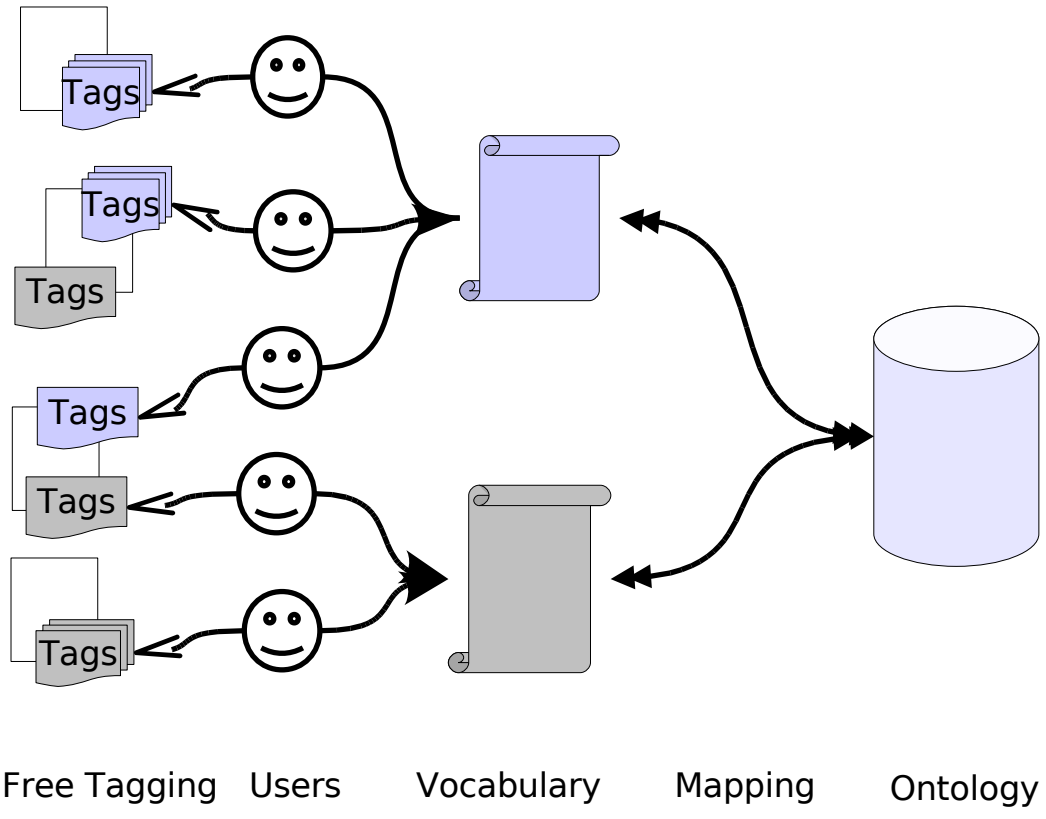

Figure 2.5: From Vocabulary to Ontology and Back Again

```
<a href='http://any.site.tag.space/myTag'  rel='tag'>Displayed Tag</a>
```

Listing 2.2: Rel Tag Composition (General)

As this thesis will show (see Chapters 3 and 4), the case study community presented herein is an established community. As I argued above, backed up by the analysis in Chapter 6, the community is in a position that it can create more formal defintions such as thesauri at central points and then have this knowledge propagate throughout the community. This is only possible because both the community and the related vocabulary have stabilised as we have discussed above. Given this we can combine the methods of tag extension detailed above to create a link between a tag and an RDF description so that rather than adding a normal string tag, the user (either directly or through an automatic intermediary such as an archive) adds a tag which contains a link to a specific RDF definition in a community thesaurus (see Listing 2.3 and Section 10.3.3).

```
<a href='http://thesaurus.contextus.info/#char-death' rel='tag'>
                                                    Character Death</a>
```

Listing 2.3: Rel Tag Composition (Specific)

2.6 Upper Level Ontologies

2.6.1 Ontology and the Philosphy of Fiction

Within philosophy, the significant theory concerning fictional objects and their place in the greater reality were put forward by Meinong in his Theory of Objects (Meinong, 1904). This work was extended by one of his students, Ernst Mally who dealt with the possibly contradictions in fictional objects referring to non-fictional objects (Mally, 1912). Mally dealt with this in in two ways:

1. By distinguishing two kinds of property
2. By distinguishing two types of prediction

The second of these distinctions concerns the semantics of the case, as Mally argued that 'real' objects *exemplify* their properties while 'fictional' objects *encode* their semantics. For example, "Hamlet is not a Prince in the same way Charles [Windsor] is, for whereas Charles exemplifies being a prince, Hamlet merely encodes being a prince." (Thomasson, 1998, P. 101)

This theory allows apparent contradictions to occur within encodings, fictional situations, but not in exemplars. "Nothing could exemplify being round and exemplify being square, although an object my encode being round and being square, and Watson's war wound may encode being in his arm and being in his leg" (Thomasson, 1998, P. 101). Further, the advantage of encoding over exemplifying allows it to deal with the ambiguity of the absence of information: "Hamlet... can fail to encode being of blood type A and fail to encode not being blood type A if neither of these attributes are ascribed to him in the story". This goes beyond the idea of 'we don't know' to that of 'we can never know and we aren't going to worry about it as the concept is meaningless to him'.

Mally's first distinction separates what he calls the 'nuclear' properties such as description from the 'extra-nuclear' properties, where or not the thing exists. This is comparable to the way OntoMedia describes objects. The state of existence for an object is specified by the `State-of-Being` which by default allows for the mutually exclusive states: Alive, Dead, Undead, Non-Existent, Inanimate, Unprovable and Unknown (see Section 7.2.4.5 and Appendix G.5). These states are totally independent of any other trait such as physical description, abilities or employment, or of their participation in events. For example, the 'Tuttle' episode of *M*A*S*H* written by David Ketchum and Bruce Shelly (first aired 14 January 1973 (IMDB Staff, 2006b)) clearly demonstrates that non-existence is no excuse not to lead a full and active life. Going by this theory, Hamlet and Charles are both princes.

Terence Parsons takes this distinction but starts confusing the nuclear/extra-nuclear division by having all extra-nuclear properties also exist as a descriptive nuclear property (Thomasson, 1998, P. 100). OntoMedia differs here in that level of existence is a trait just as physical or other descriptors are and thus something cannot be described as existing without existing (although an entity may exist, or not, in other contexts and it's actual level of existence has no bearing on any beliefs that other entities may have about it's existence or lack thereof).

This theory of two kinds of property espoused by Parsons (Thomasson, 1998, P. 100) deals with contradictions (or continuity errors) existent within fiction by saying there are some types of objects, what it calls 'impossible', the normal rules principles don't apply. As Parson puts it "If we read at one point that Watson's old war wound is in his leg and we read elsewhere that it is in his arm, then Watson may turn out to be an impossible object." (Thomasson, 1998, P. 100).

It could be argued that implicit in OntoMedia is the belief at all objects have the potential to be 'impossible'. It is expected that entities that exist directly within the context 'reality' follow the rules of existence that govern the real world however this restriction is, for the most part, a social one rather than a formalised one. There are a number of ways that OntoMedia might deal with such contradictions – if it is stated in one book that the wound is in his arm and in another that it is in his leg then two contexts may exist, one for each book reality, and in one Watson got shot in the arm and in the other the leg. If it is in the same book, than it maybe that Watson has more than one 'old war wound' and it is correct to assign him both with the related references. Finally, although not relevant in the case of this example, the location of the wounds could have been specified by different entities, one or both of whom could be wrong and we return to the question of the unreliable narrator and whether information exists within a contextual bubble of that characters beliefs or within the general context. In any case, we might differentiate between the context or establish the providence of the information for the sake of information but we cannot worry about the inconsistency if we are to deal with fiction. We are not dealing in 'truth' so much as a permanent case of 'Obi-Wan-ism' where all truth is 'from a certain point of view'.

Priest (1998) follows on from this concept but rejects the nucler/extranuclear idea in favour of the theory that all objects, no matter how they are described, give rise to an object fitting that description through the action of the description occurring (which presumably includes non-existent as we have done in OntoMedia). He also places the objects within their contexts "given an object like Hamlet, we can say that Hamlet is represented by Shakespeare as being a Danish Prince; it follows that Hamlet is indeed a Danish Prince, but only in worlds that really are the way Shakespeare represents things to be in." (Kroon, 2005). Entities, or versions of entities, are allowed to find their truth by being placed in the context in which they are true - "A non-extant object must only have its characterising features in some world or other, possible or impossible" (Nolan, 2006). In this we see a system similar to the OntoMedia contexts: "Arthur is guaranteed to be King of Britain only in the worlds of the Arthur stories" (Nolan, 2006) thus solving the problem of relations between the entities involved.

Priest (1998) put forward a general principle that for any condition of an entity is true somewhere, just not necessarily in this world. Also that for any entity, there exists closed worlds in which it exists in all possible states that are not otherwise logically following from the characterisation or from facts about the entity. In some ways this goes further than OntoMedia and in other ways not as far. OntoMedia allows for any fact or property to be changed in another context but at the same time pays no attention to the potential contexts which might exist. Infinite Diversity in Infinite Combinations (IDIC), one of the long standing by-laws of fan fiction and by extension literature (or alternatively literature and by extension fan fiction). In keeping with this philosophy, OntoMedia does allow for the concept that any variation is possible within it's own

context, but until that variation is expressed then there is no point in describing it.

Parson's allows for the concept of 'surrogate fictional characters' (Thomasson, 1998) for characters who are based on real people. OntoMedia approaches this concept by describing the `shadow-of` relationship between the fictionalised person and the 'real' person. Interestingly, Parson dislikes the idea of dealing with fictional surrogates on a exclusive basis and "maintains that, although we may sometimes in special situations speak of fictional surrogate objects like 'the London of the Holmes stories', it is the real objects that appear in the stories" (Thomasson, 1998, P. 104). This provides an interesting comparison with the rules related to Real Person Slash (RPS) that exist on the RareSlash mailing list[28] and thus the distinctions which OntoMedia would be required to accommodate within it's model. Direct RPS is not allowed to be posted to the list however (RPS based on documentaries is not allowed since it was deemed to be direct), while stories based on a fictionalisations of real persons are allowed as they are seen to be about a fictional character and not about the real person. For example, stories featuring Julius Ceasar are not allowed while stories about Ceasar as portrayed in the television series *Rome* or in 'August' by Neil Gaiman ((Illustration by Bryan Talbot and Stan Woch), 1993) are permitted. Or, more modern, stories concerning real astronauts are disallowed but those inspired by the film 'Apollo 13' are not.

Due to the fact that even documentaries are a fictional version of the 'truth' (some more fictional that others) in both these cases OntoMedia would posit a `shadow-of` relationship between the character that exists within the context expressed by the media and the person who exists in reality – one of Parson's 'surrogate fictional characters'. However, it can be argued that in those cases where there is no difference between the 'fictional' and 'real' entities then the relationship should be described as an `is` relationship rather than a `shadow-of` relationship. This is particularly the case in news or 'actual footage' documentary contexts or across concentric rather than parallel contexts. By designating the relationship an `is` rather than a `shadow-of`, the implication is that the two are identical, just existing in different contexts.

Thomasson (1998) differentiates between two different types of context - the 'fictional context' which is the 'in-universe' view and the 'real contexts' which appear to be the paradigms from which the critic/reader is interrogating the text. OntoMedia approaches this in a number of ways. The ontology is primarily concerned with the fictional context perspective view because that is what the text is portraying. The real context perspective is what reader brings to the text and, thus, is what the reader brings to the text as described through OntoMedia. However, it is necessary to recognise that what is in the text is not always undisputed. Since one of the, often put forward, axioms to write by is as 'show not tell', the reader is required to interpret the text to understand the facts, this means that any description of the textual narrative, for example in OntoMedia, must have gone through a 'real context' interpretative process at the point the encoding from

[28] `http://groups.yahoo.com/group/RareSlash/`

the original text was made. Or, more simply, anything described in OntoMedia is going to be an interpretation. Some things people are going to interpret the same way, except when dealing with unreliable narrators stated facts like a character's name are hard to dispute (see Section 7.3.1.2). Other information may be less clear cut (see Listing 7.11). For this reason OntoMedia allows traits to be differentiated both by the way the trait appears to others within the context and by the way it appears to the audience (see Section 7.2.4.5). It also allows for information regarding the level of evidence for a piece of information to be attached to that information (see Secction 7.2.4.11). The evidence levels include the state 'interpretation' to allow for cases where the belief in the truth of the statement has been filtered through theories of thought such as 'neo-marxist postmodernism', 'femanism' or 'slash goggles'.

Thomasson argues that "we should take seriously the fact that we make reference to the story to explain the sense in which such claims are true, for this suggests that statements such as 'Holmes is a detective' really are shorthand for a longer locution such as 'according to the story Holmes is a detective"' Thomasson (1998, P. 113). However, while the different theories are intended to take into account the fact that a given entity may be fictional, the trait being assigned to them is not. As in the previous example, we may argue whether Holmes is or is not fictional but we do not also ask whether the concept of a detective is a fictional one. The properties of a given entity are meta in that the profession of 'prince' is the same concept no matter what reality we refer to. In this respect we are impressing our context of reality onto all the other concepts because it is within that context that the ontology exists and is defined. This is not seen as problematic because authors are also a product of the real world and so are also impressing the context of their reality onto the expressions they are creating of the fictional universes.

2.6.2 General Ontologies

The idea of creating a top level conceptual model to act as a bridge for ontologies and standards is one that has been addressed many times by those in the Artificial Intelligence and Ontology communities. In this section, I discuss some of the main top level ontologies and how they relate to the description on narrative.

The Descriptive Ontology for Linguistics and Cognitive Engineering (DOLCE) was developed as part of the WonderWeb project. DOLCE was not intended as a candidate for a standard universal ontology but as a "starting point for comparing and elucidation the relationships with other future modules of the [WonderWeb] library" (Masolo et al., 2001).

Within DOLCE the relationship of a concept to time is prioritised with the primary separation of classification being between endurents, entities that are complete during

any periods of existence, and perdurents, an entity which may gain or lose parts over time but which endures as a conceptual entity despite these internal transformation. This contrasts with OntoMedia which regards all entities as potential perdurents (see Section 7.2.4.1) although any given entity may only display the the properties of an endurent.

The Cyc Knowledge Base was aimed at creating a collection of common sense rules which could then be applied and queried. One of the important aspects of Cyc was their recognition that these statements existed within a context of shared rules. This lead to the definition of contexts or microtheories which are rulesets that are true for a given set of statements so that "each context is said to have assumptions and content" (Lenat, 1998). This makes it possible to specify a context, such as a fictional universe, within which the statements are given to be true.

While it is possible to move objects between contexts by changing the statements that define them there is no way to easily describe the links between the contexts or the entities within them. This capability was considered an important aspect of describing narrative since narratives exist not only of themselves but within a tradition of other narratives. Within OntoMedia a context defines a level of comparable reality but, in conjunction with this, OntoMedia models the relationships not just within the context but also between entities within different contexts.

Further, a possible problem arises with the way that Cyc deals with potentially shifting meanings behind media such as film. "Cyc represents video as "information bearing objects with propositional content""(Davis, 1994) but "this approach may break down due to the particular context-dependent and context independent semantics of video data. With video, editing and resequencing may change the given 'propositional content' of any 'information bearing object"'. Davis (1994) proposes the Media Streams a "hierarchally structured semantic space of iconic primitives which are combined to form compound descriptors", a very similar approach to OntoMedia except being focused specifically on the description of video and how the elements relate to the media more than to each other. In contrast to both these approaches, OntoMedia takes a more Jungian approach, seeing media of any type as expressing a narrative drawn from the ontological equivalent of the collective unconscious. It does this because it was felt important to recognise that there may be multiple ways of expressing a concept or narrative and that an sequence of media (either wholly or in part) may be an expression of different concepts or narratives (see Figure 2.6).

(Jenkins, 2006d) describes an example of a 'constructed reality' video, 'Closer', set within the *Star Trek: Original Series* universe. In 'constructed reality' videos, clips are taken from one or more sources and, often in conjunction with a musical audio track, are used to tell a new story rather than to illustrate a point, theme, character or relationship as occurs in most fan produced music videos. In the video that Jenkins (2006d) analyses,

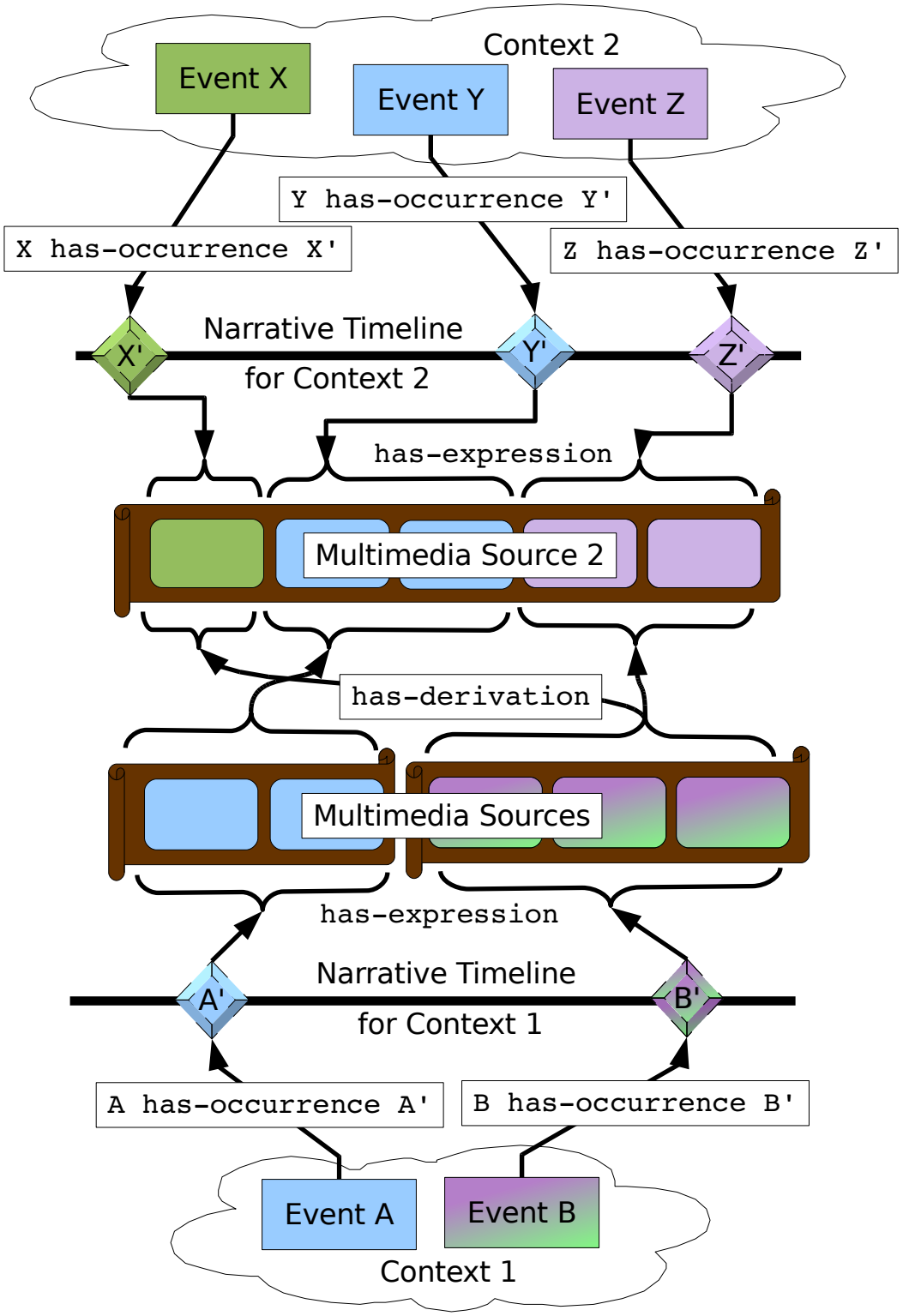

Figure 2.6: Media Reuse and Multiple Interpretations of Source Material in OntoMedia (See Appendix F.1 for RDF)

the narrative presents a 'what if' scenario based around the episode 'Amok Time', written by Theodore Sturgeon (first aired 15 September 1967 (IMDB Staff, 2006c)). The narrative of the episode introduces the concept of 'Pon Farr', the Vulcan mating urge, which requires Spock to return to Vulcan and marry his fiancee or die. The fan video asks the question "What if they hadn't made it to Vulcan on time?" and postulates a scenario in which Spock is driven to attack Kirk. As (Jenkins, 2006d) notes this harks back to a traditional theme in some of the earliest works within this fandom.

The video ends with a sequence in which we see Kirk wounded and trying to deal with the aftermath of events while Spock leaves the Enterprise in horror at his own behaviour. While each of the events containing the two characters occur at some point in the original source media they do not do so together or in the order given in the video. This can lead, in some cases, to very different implied meanings to those they had originally. For example, the scene showing a shocked and wounded Kirk. In the original context from which the clip was drawn, an episode called 'The Enemy Within' (first aired 6 October 1966 (IMDB Staff, 2006d)), the wounds were received when an accident causes Kirk to act abnormally and he attacks a woman on his crew, Yeoman Rand. However, in the video, the clip is proceeded by a montage showing Spock attacking Kirk thus presenting a sequence which gives a totally different impression of how the damage occurred: Kirk has gone from being the aggressor to being the victim and the injuries changed from signs of her defence to signs of his. In both cases the section of media was the same and was even used within a similar narrative (an attack on a crew mate) however the information portrayed to the watcher about Kirk by the clip is inverted.

This difference of process can also be seen in the way in which OntoMedia and Cyc model events and their temporal positioning. While the two models are very similar in that both see events as containing participants and potentially sub-events and as having both absolute and relative temporal positions (Lenat et al., 1990) the OntoMedia model divorces the temporal specifics of the event from the details of the event (see 7.2.4.1) to allow an event to have multiple instances of potentially differing temporal position or length. While, in many ways, following identical patterns to CYC, the OntoMedia ontology builds in the possibility of the description of events that go beyond the 'common sense' reality of human consensus knowledge (Lenat et al., 1990) into the uncommon, non-human and fantastical.

Another proposal is the Suggested Upper Merged Ontologies (SUMO) which provides a way to classify entities and bridge lower-level ontologies and was created through the combining the publicly available ontological content into a "single, comprehensive, and cohesive structure" (Niles and Pease, 2001). Niles and Pease (2001) state one of the advantage of SUMO over Cyc is that "any distinctions of strictly philosophical interest have been removed from the ontology" thus creating a simpler knowledge base.

The top level of the SUMO ontology has the following structure:

- Entity
- Physical
  - Object
  - Process
- Abstract
  - Attributes

The main distinction being made at this level is the differentiation between 'Physical' and 'Abstract' entities. Entities in the physical class are defined as 'everything that has a position in space/time' (Niles and Pease, 2001) while the abstract class covers everything else. This division is an interesting one when it comes to describing the content of a fictional world because a fictional entity does not have a position in space/time unless it is a fictionalisation of a real world object. However from the perspective of others within the abstract space in which the fictional entity resides, then it is a physical object.

The OntoMedia model has a number of close similarities to the SUMO one (see Section 7.2.4.1). While OntoMedia separates events from entities at an earlier stage, it shares the high level separation of physical and abstract. However within OntoMedia this division is based on the potential of existence on space/time rather than the actuality of existence. This potentiality is also analysed on the basis of the context within which it exists. While simpler than many of the other top-level ontologies, SUMO lacks an easy way to differentiate between objects depending on their context and having differentiated them describe any existing links between them. For example: London, London as described in the books of the Sherlock Holmes mysteries and the London see in the televiseation of those books.

2.6.3 Cultural Heritage and Media Ontologies

The ontology described within this thesis is primarily concerned with narrative and the expression of narrative through media of various types. It is only due to the requirements inherent in this goal that the ontology becomes comparable with those ontologies trying to model what might be regarded as reality. In this section, I consider some of the higher level ontologies that exist in the domains of media description and cultural heritage. The ABC ontology designed by Lagoze and Hunter was intended to "integrate information from multiple genres of multimedia content within digital libraries and archives" (Hunter, 2003). This ontology focuses on factual information both within the document and at the level of document creation, provenance and rights management. The strength and weakness of this approach was that it tried to describe everything using the same basic structures and had its roots in factual events. With the OntoMedia model we were

concerned not only with the facts but also the possibilities and concepts that existed behind those facts.

The ABC model includes the 'abstraction category' as a way of expressing ideas which do not exist in the context of a situation, but sees this primarily as a way of binding together various manifestations of the same intellectual expression. Conversely, the OntoMedia structure deals primarily with abstractions that exist behind the content. While, like the ABC model, the OntoMedia structure was based on the concepts of entities and events, OntoMedia specifically focuses on the needs required for best describing content expressed within both mono- and multimedia sources. In this way the OntoMedia ontology can be integrated with the ABC model if required but otherwise provides augmentation and an alternative method of interfacing with the expression of content. Other models can then be used to describe the relationship between that expression and the physical medium that contains it, as well as the bibliographic information that relates to either the expression or the physical medium.

The CIDOC Conceptual Reference Model (CRM) was created as "a semantic approach to integrated access" (Doerr et al., 2003, P. 2) for cultural heritage data. The summarised scope of the CIDOC Conceptual Reference Model (CRM) is "the curated knowledge of museums" (Crofts et al., 2005). In their most recent documentation this is expanded to describe the intended scope of the CRM "as all information required for the exchange and integration of heterogeneous scientific documentation of museum collections" with the practical scope of being able to duplicate all the information stored in the currently used documentation standards without any loss of meaning. The CRM works with an entity–event model that, in many ways, resembles the OntoMedia ontology. The similarity between cultural heritage and fictional content is one of the underlying reasons for this: both are concerned with people and events, the only difference being the type of evidence that exists for those manifestations and where they were believed to have taken place. The fictional aspect of the historical narrative has been commented on by people as diverse as Plato and Churchill. The historical aspect of fictional narrative is more often the aegis of fanatical devotees of a particular work. However, ignoring the fact that it is an imaginary history, works of fiction still tell a history, or as in the CYC ontology model: fictional history is true within its fictional context.

Despite the initial similarities between OntoMedia and the CIDOC Conceptual Reference Model (CRM), the CIDOC CRM is still concerned with the equivalent of bibliographic data for physical objects such as artefacts. As part of this description it will include information about what is depicted in the decoration, but in terms of what is seen rather than the narrative that is being expressed. It would be possible to use the ontology to describe the fictional events that are being shown on a hypothetical artefact in the same way that historical events are modelled, but this introduces many additional complications to the data since it is then necessary to differentiate between real and fictional, something that is not inherently part of the system. Like the ABC ontology,

the CIDOC CRM works best in parallel with a content description ontology, and a collaboration between the two opens the way for the integration of abstract myths, traditions, and concepts (both written and oral) with the material evidence, allowing for any additional relationships to be explored (see Fig. 2.7).

Because of the top-level similarity, mapping between the CIDOC CRM and OntoMedia can be undertaken comparatively easily. It was intended that the two ontologies could work together each within their intended scope. For example, the CIDOC CRM would describe a given artefact such as a pottery item, while the OntoMedia ontology would be used to describe the conceptual content of the decoration. The concepts of narrative, character and context imbued within this object could then be compared with other cultural heritage sources, just as the make, material and style of the artefact could be. This additional layer of metadata allows for the integration of abstract myths, traditions and concepts with the material evidence and the additional relationships that this exhibits to be explored.

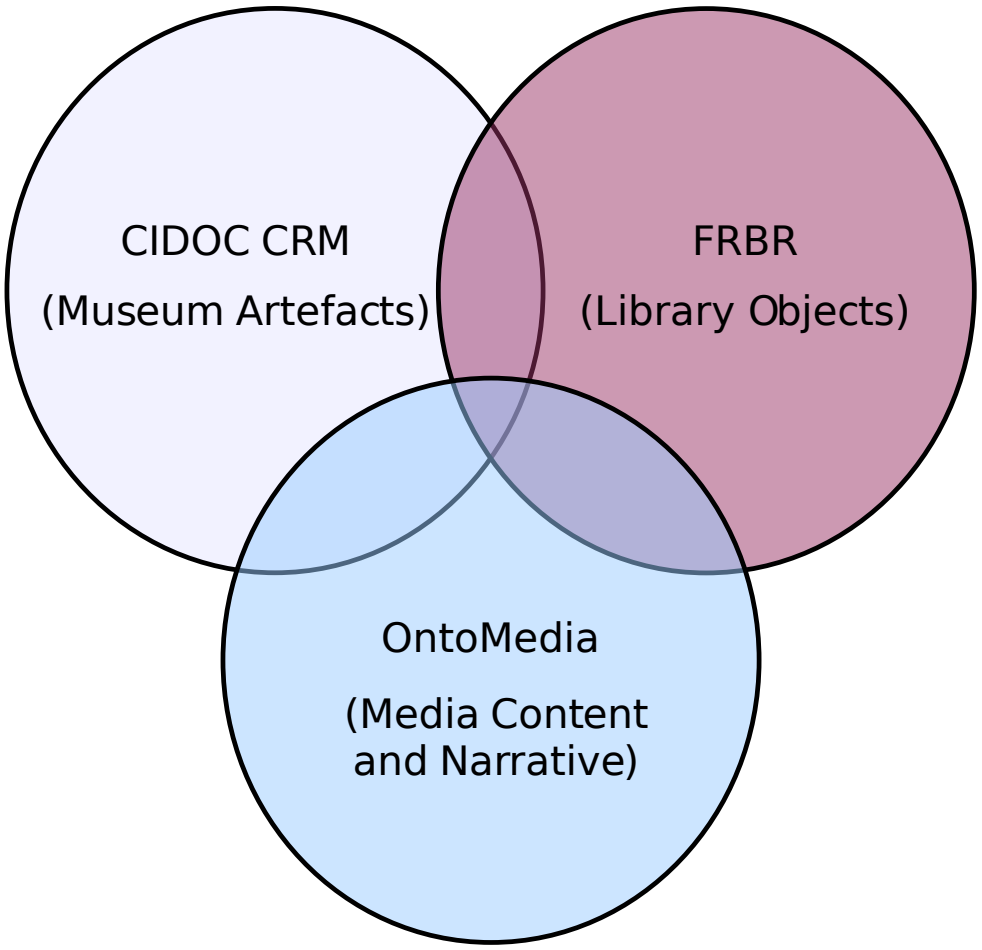

Figure 2.7: Scope of CIDOC CRM, Bibliographical data and OntoMedia

The existence of textual evidence in cultural heritage, among other reasons, has already lead to work on mapping the CIDOC CRM to the Functional Requirements for Bibliographic Records (FRBR) model. The FRBR taxonomy was created by the International Federation of Library Associations and Institutions to "produce a conceptual model that would serve as the basis for relating specific attributes and relationships (reflected in the record as discrete data elements) to the various tasks that users perform when consulting bibliographic records" (Saur, 1998). While moving from a strict 'flat' categorisation system to a conceptual model the FRBR is still solidly based in the bibliographic data sphere.

The addition of the conceptual theme contained by the FRBR into bibliographic data has allowed the introduction of, arguably, content information into the bibliographic data of an item. This usage can be seen in FictionFinder[29], a prototype system which applied the FRBR model to the Online Computer Library Center (OCLC) WorldCat database. Notably FictionFinder allows searching for fictional characters and imaginary places as well as the more common author, setting, genre, summery, title and subject. The Columbus Metropolitan Library Fiction Finder[30] has a similar, although less developed, system where some of the records have metadata about the characters within the described works associated with them.

This information on what might be seen as content rather than bibliography is taken, in the case of the OCLC system, from the section of the FRBR model referred to as the Group 3 Entities. These are `Concept`, `Object`, `Event` and `Place` and relate to the FRBR object Work through the `has-as-subject` relationship. A work may also have as a 'subject' entities from Group 1 (other media objects) and Group 2 (people and corporations). The Group 3 entities defined in the FRBR can be considered equivalent to the top level of the OntoMedia Ontology using the following mapping:

FRBR Group 3 Entities	**OntoMedia Core Classes**
Concept	Abstract-Item
Object	Physical-Item
Event	Event
Place	Space

Expending this mapping, if we consider the FRBR Groups 1 and 2 as if they appeared as subjects in a narrative the mapping could be made as below:

[29] `http://www.oclc.org/research/projects/frbr/fictionfinder.htm`
[30] `http://www.columbuslibrary.org/cmlradv/browse2.cfm`

Group 1 Entities As Subject	**OntoMedia Core Classes**
Work	Context
Expression	Abstract-Item
Manifestation	Collection/Physical Item
Item	Physical-Item
Group 2 Entities As Subject	**OntoMedia Being Classes**
Person	Being/Character
Corporate Body	Organization

Where the FRBR approach differs from OntoMedia, is within the meaning with which these 'subjects' are imbued. The FRBR has no model of time or narrative flow. The attribute for an event is simply the term used for that event, for example 'the Second World War'. It is a identifying label rather than an object with its own meaning. OntoMedia expands on this metadata as it does with the CIDOC CRM to allow exploration of the events and entities which the media object contains within its conceptual framework. From this, the subjects as defined by the FRBR can be directly drawn or inferred. Future research may even allow such bibliographic categorisations such as genre and summery to be suggested if not generated by querying of the OntoMedia data (see Section 10.3.2.1).

Having investigated different models for cultural heritage description, such as the CIDOC CRM and the FRBR, the development team for OntoMedia (see Section 7) found that while they could be used to describe *content* none were ideal. Instead of taking one of the existent models and using it beyond its scope it was decided that we should create an ontology designed to map easily to the current CIDOC and FRBR models, but which was specifically designed to describe media content. It is believed that this work represents a significant contribution to the existing systems because, while overlapping enough to be mappable between, the difference in the scopes and strengths between the CIDOC CRM, FRBR and OntoMedia ontologies logically results in them being best applied to different areas of metadata which can then be linked through mapping, as discussed previously.

Chapter 3

Amateur Writing Online – A Case Study Online Community

The Internet has opened up many opportunities in electronic publishing. While the commercial world is weighed down by formats and digital rights management the amateur world has embraced the new means of distribution. The are two types of amateur writing available online: 'original' fiction and 'fan' fiction. The exact definition of fan fiction has been debated by both academics and those within the fan fiction community (Derecho, 2006). Fan fiction, in its broadest form, is fiction written about characters or set in a world that has been previously created by someone else. It can be argued that both fan fiction and original fiction have been around since the oral tradition held sway and telling the difference between the two is not always obvious. Many professionally published works draw on earlier texts, for example Rosencrantz and Guildenstern are Dead by Tom Stoppard (Stoppard, 1967), The Wind Done Gone by Alice Randall (Randall, 2001), the Cthulhu Mythos collection (e.g. Derleth (1969)), numerous media tie-in novels (e.g. Sherman (1999) and Anghelides (2007)) and the works of authors such as Jasper Fforde (e.g. Fforde (2001)) and Shakespeare (Barkan, 2001). To differentiate from these professionally produced works, the amateur and unauthorised nature of fan fiction is often emphasised.

By use of the term 'original' fiction to differentiate from fan fiction it is not our intention to imply any value judgement or suggest that fan fiction has no originality, merely that the intertextual nature of the work is both clear and openly acknowledged. Fan fiction is not about lacking the originality to create new characters and settings but about exploring existing and loved ones. In its most current and recognised form fan fiction is generally agreed to have been around since the 1960s with credit (or possibly blame) most often being given to Star Trek as the catalyst[1].

[1]Derecho (2006) makes a good argument that the honour actually belongs to The Man from UNCLE rather than Star Trek. However Star Trek is more generally regarded as being the initiating media fandom

Table 3.1: Scale of Archives

Archive	**Authors**	**Fiction**	**(Poetry)**
Fanfiction.net	-	1, 087, 412	
FictionPress	125, 206	214, 536	(489, 620)
AdultFanfiction.net	35, 871	41, 994	
Freedom of Speech	2, 337	4, 900	
SlashFanfiction.net	1, 504	2, 652	
Wonderful World of Make Believe	1, 431	6, 717	
Archive	**Documents**		**(Records)**
CiteSeer.ist		750, 436	
CERN Document Server		360, 000	(868,984)
Southampton ECS EPrints Repository		10, 475	

Table 3.2: Scale of Archives Over Time

	Fiction			**% Inc.**
Archive	**13/06/05**	**19/02/06**	**Increase**	**(1 d.p.)**
AdultFanfiction.net	41, 994	58, 973	16, 943	40.4
Wonderful World of Make Believe	6, 717	10, 746	4, 029	60.0
Freedom of Speech	4, 900	7, 732	2, 832	57.8
SlashFanfiction.net	2, 652	(Re)moved	-	-

The sheer amount of media being produced by this community is considerable especially when one considers the amateur nature of the endeavour. Table 3.1 shows the size of just a few of the large and medium sized fiction archives that were found via Google[2] on 13 June 2005. These archives represent a very small percentage of the whole and were selected as the first returned results which were both multi-fandom and provided easy to access document counts. Returning to the sites approximately eight months later on 19 February 2006 (see Table 3.2) it was discovered that the twinned sites of Fanfiction.net and FictionPress no longer provided these figures. Of the remaining four archives one was no longer in existence while the rest showed significant size increases.

While smaller archives such as the CERN Document Archive (869, 219 bibliographic records, 360,000 full text documents[3]) or the CiteSeer: Scientific Literature Digital Library (750,436 documents[4]) these are both atypical of electronic publishing within academia, being in subjects which have embraced the concept, and populated by work produced for journals, proceedings and technical reports which can be considered professional obligations of research. The fact that fan fiction archives are even comparable with archives such as the Southampton E-Prints Archive (10, 475 records[5]) is a testament to the free time people are willing to devote to their interests.

[2] `http://www.google.com`

[3] Numbers collected from `http://cdsweb.cern.ch/` on 25/08/2006

[4] Numbers collected from `http://citeseer.ist.psu.edu/` on 25/08/2006

[5] Numbers collected from `http://eprints.ecs.soton.ac.uk/` on 25/08/2006

The proportion of original to fan fiction on the Internet is impossible to estimate but, while it still remains widely distributed, taken as a whole it probably represents one of the larger electronic libraries currently in existence - unfortunately, one which doesn't come with a catalogue. It is community practice to include a certain amount of metadata with each story (see Section 6) but this information is neither consistent nor available for cross-site searching beyond general tools such as Google.

While the larger archives are fairly fixed in their position, the smaller archives and personal pages are frequently changing address, going down temporarily for maintenance or due to bandwidth limitations or just vanishing. "Can anyone tell me where to find..?" is a frequent question on many lists as is the popular "Can anyone recommend..?" Part of this ever changing nature is attributable to the subject matter and the very amateur nature of the enterprise. Complaints, witch-hunts and legal threats can force relocation, while lack of resources or loss of interest can remove sites entirely.

3.1 Methodology

3.1.1 A Quantative and Qualitative Survey

Having identified the amateur writing community as one which could benefit from additional semantic data and services a number of methods were identified to garner information about user requirements.

Direct interaction with members of the community through observation, questionnaire and interviews was used to gain understanding of the specific difficulties and issues that community members face. Following initial discussions with community members as part of a preliminary assessment, a questionnaire was used to gain greater insight into the issues that had been highlighted. This method was chosen for the initial data gathering because it allowed us to involve a larger section of the community than would have been possible through alternative methods and it allowed us to retain the most control over the way that the questions were presented and the ways in which they could be answered (Andrews et al., 2003).

Because of the nature of the community and the broad range of people involved it was considered necessary to get the opinions of people outside the community who might have an interest in it. The most obvious group who fit this profile were the parents and guardians of the younger members of the community. The questionnaire sought to cover a number of areas from general information about the respondents to their reading habits, their social involvement within the community and their preferences and opinions on the access and distribution of different types of material within the community.

The questionnaire was deliberately designed to be broad in scope to allow opportunity for

the respondents to identify the issues which were important to them. This was intended to minimise the influence of the researcher's preconceptions of the respondents' relative priorities. The questions themselves were divided into seven groups, with some sections aimed at specific participants. The full questionnaire is available in Appendix A.

No.	Section Description	Respondents
1	Questions related the respondent's familiarity with amateur fiction online, their age and the age of adulthood in their region	Everyone
2	Questions related to preferences for story access and display and level of community involvement	Readers
2b	Questions related to access controls	Under-age Readers
3	Questions related to practice regarding story access and display and publishing methods	Writers
4	Questions related to how people outside the community came into contact with amateur writing online	Interested Others
5	Questions related to specific sub-types of amateur fiction and opinions on the access of "adult" content	Everyone
6	Questions related to technical knowledge and ability	Everyone
7	Questions relating to blocking and filtering amateur fiction and the collection of personal information	Everyone

An eighth section was added shortly after the questionnaire was made public to allow anonymous feedback and comments since while contact details were made clear they were via e-mail and therefore not as anonymous as the questionnaire. 206 responses to the questionnaire were recorded before this section was made available and 912 after. Of those 912 people who had the option, as part of the survey, to leave an anonymous comment, 157 exercised the option to do so. Given the comparatively low rate of response to this option we do not consider that the initial option, additional comment by e-mail only, adversely affected the integrity of the survey.

The draft version of the questionnaire was shown to the members of the Fan Fiction Ontology Yahoo Group[6]. This group was created by the author on 13rd April 2004 to facilitate discussion with and within the community about the creation and use of an ontology for the description of fan fiction and other creative fan endeavours. Members were

[6] `http://groups.yahoo.com/group/onto_fanfic/`

also concerned with defining and comparing the vocabulary used within the community. At that time, 12 November 2004, the group had just over fifty members drawn mainly from the fan writing community. As of 21st September 2007, the group has eighty-nine members. Changes were made to the questionnaire based on feedback received from those members. The survey was announced to a few select people on 3rd December 2004. This small group which consisted of known adults and children responded to the questionnaire over the subsequent weekend. One possible issue was raised as a result of this preliminary trial, however the problem proved to be down to user error rather than a fault of the code running the survey pages. The line numbers relating to this query and resubmission were noted so the superseded result could be removed during analysis.

Having been reassured that the survey was in full working order it was advertised to the public starting on 7th December 2004. Invitations to participate took the form of posts on LiveJournal, e-mails to persons known to have an interest and posts to the mailing lists and bulletin boards of related interest groups. A number of archives and fan sites mostly related to Harry Potter were also contacted with a request that they publicise the survey to their users. Since those contacted directly were mostly adults or adult dominated groups, the general Potter archives and websites were contacted in the hope of getting more younger fans. This last received a limited response, but at least two archives did post notices. Notices were also posted in a number of places both around the university campus and at other locales where it was thought they might be seen. This was done to solicit opinions from those who were not directly involved in the amateur writing community but had some contact with it via friends or relations and therefore wanted to express their views as a outside observer.

Due to the high number of responses, the decision was made to harvest the first set of results after the survey had been running for two weeks so as to ease processing and analysis. It was estimated that by that point there would be in the region of 1000 responses and this was seen as a reasonable dataset to work with. When harvested, this first set of data was found to comprise of 1118 responses, of these one was known to have been superseded and, on investigation of the data, one was shown to be a double. The remaining 1116 responses included 4 from prior to the 7th December 2004 but otherwise spanned the 7th December 2004 till noon on 21st December 2004. Analysis of the IP address logged as part of the duplication identification process suggested that responses had come from over thirty countries. While America, Great Britain, Australia and Canada ranked the highest of the known contributing nations, the international nature of the interest can be seen in the contributions from countries such as Finland, Russia, Brazil, Singapore, Japan, Estonia, Israel, India and Argentina as well as most of the nations in western Europe. The basic analysis of the first wave of results has been completed. The information gained from this has been used to inform the design of the ontologies and hypothesised applications described in the rest of this thesis.

The results were stored in text files. A program was written to correlate the results and

produce an easily readable result (see Appendix B.2 for full, aggregated results).

3.1.2 Bias

The decision was made to offer users a choice of responses from which they could select one rather than to present them with statements about which they were required to agree or disagree. Because the users choices were limited to those offered or not responding to a given question there is the potential for bias due to the assumptions as to what responses should be made available. Effort was made to minimise this bias by trialling both the questions and the answers with members of the community, as described above.

Questionnaires of any type are, by their very nature, biased due to the fact that respondents are limited to those who chose to participate. Despite the range of answers we received, those who did respond represent a very small fraction of the amateur writing community. As well as the self-selecting nature of the survey some of the bias inherent in this study can be seen as coming directly from the way it was marketed. While this method of viral marketing was a success, in that it allowed word of the questionnaire to reach a large number of people, the method of transmission also heavily favoured people who had a community involvement.

Since media-inspired writers are more connected to the larger interlocking community structure than other types of amateur writers there is an immediate bias towards fans and away from original writing groups. As discussed below (see Section 3.2.3), many groups are wary about catering to younger writers. This reduces their chances of being appraised of the questionnaire through the community grapevine thus making it likely that they are under-represented. An effort was made to redress this imbalance by advertising on Harry Potter sites, a subsection commonly believed to have higher percentage of younger readers due to the source material being primarily marketed at children, but there is no way to tell how successful this strategy was.

A noticeable number of respondents self-identified as being 'slashers' (readers/writers of slash fiction , see glossary for definition.) within the spaces provided for comments. It is not clear whether this was due to a genuine bias in the surveyed population, a reflection of the online reality or whether this group is more self-identifying since the information was given without being specifically asked for. The clear differential between those who stated that they only read adult material if it was slash and those who only read it if it was male-female based tends to confirm the existence of this bias. However, since slash stories are often singled out for mention as transgressive, the size of the response from this section of the amateur writing community is unlikely to be problematic since they represent the one of the subgroups most likely to benefit. It follows that a strong response from this section of the community helps us identify problems and issues which

may not be apparent in less potentially controversial content areas[7].

3.2 Analysis of the Results

The survey produced a significant amount of data (see Appendix B) much of which fell outside the scope of the ongoing research and of this thesis. Below, I describe the results from a number of areas that either fed directly into the research detailed in this thesis or which illustrate elements of the case study community which, in the view of the author, makes them an interesting and/or unusual group to focus on. This represents the analysis of the results to date.

3.2.1 Media Inspired Vs 'Original'

The amateur writing community is made up of two mostly separate groups: media inspired or fan authors, and 'original' authors. Of these two, the former are more vocal online because, through necessity, they have eschewed traditional publishing in its official form and thus rely on community published works, or zines, and individual dissemination. While paper based zines still continue to be produced as a means of distribution the ease of electronic publication has lead to a massive migration to the Internet. Equally most fan authors are hobbyist orientated, writing for fun and because of their interest in the source material. They, therefore, are more motivated freely to share their works since that in itself is their main goal. Some 'original' amateur authors have also taken advantage of this alternative means of publication with new sites such as LuLu[8] offering 'free' print-on-demand services. However for many others their presence within online writing groups is about practising with the goal of writing professionally. For this reason this thesis is mostly concerned with media-inspired authors and their creations although it deliberately tries to avoid excluding original-world authors not least because of the crossover between the two (see Figure 3.1).

To understand the media-inspired side of amateur writing, or fan fiction, it is necessary to take it in context with the rest of online fandom (see Section 2.2.2).

3.2.2 Gender

While many computing studies have a male bias this one has, in all probability a female one. The stereotype of the 'Fan' as portrayed in the media tends to be along the line of 'white, male, socially inept virgin'. This image has been frequently contested and

[7]It would be nice to think that the respective gender of the romantic leads was immaterial however evidence suggests that in many countries this is not the case and it is for this reason we must acknowledge that slash has a controversial element.

[8]`http://www.lulu.com/`

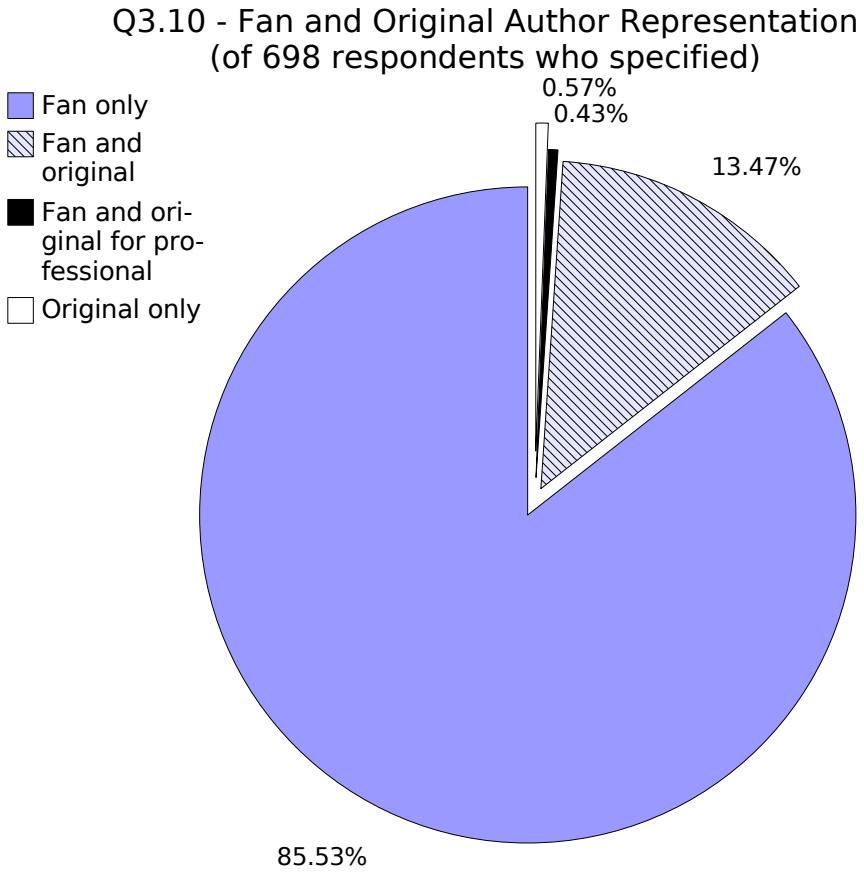

Figure 3.1: Distribution of 'Fan' and 'Original' Authors

discredited and yet it endures. It is perhaps for this reason that a significant proportion of the social studies done on media fans noted the level of female involvement.

> "While a few activities... may be resistant to including women equally, those same women find themselves an overwhelming majority among media fans who create, read and discuss their community's own fiction and art based on the characters and situations in their favorite television, movie and even book series."(Bacon-Smith, 1992, P. 22)

> "This group [media fans] is largely female, largely white, largely middle class, though it welcomes into its ranks many who do not fit this description" (Jenkins, 1992, P. 1)

> "Members of television fan networks are overwhelmingly female; women control the activity and production." (Gillilan, 1998, P. 184)

These findings span both off and online fandom. Traditionally early adopters of new technologies are seen as men, and often young men (incidently the demographic that is most often targeted, both with regards to design and publicity of new technology and as the audience for the various shows and films that inspire the fandoms). However, this is not always the case: Herring et al. (2004) argues that "a historical account of weblogs that accorded a central place to personal journals – as their prevalence merits – would thus identify females as the creators, early adopters, and most characteristic current users of weblogs". Costello goes as far as saying that in terms of gender "the general Internet sample from the most recent GVU survey [1998] is virtually a mirror image of the cyber-fan sample" (Costello, 1999, P. 134 – 135). Despite this majority, MacDonald (1998, P. 151) reports that "cultural conversational norms that denigrate woman's talk appear to be winning out in cyberspace - the female *Quantum Leap* fans have been forced into a private fringe realm". Bury (2005) sees a division along the lines of gender occurring almost immediately in direct contradiction to the early ideals of cyberspace utopia.

> "As quickly as they arrived, groups of female fans turned their backs on public spaces of interaction such as UseNet... Facing varying degrees of harassment and denigration on the male-dominated forums, many female fans chose to stake out and colonize cyberspaces of their own in the form of private mailing lists" (Bury, 2005, P. 1 – 2)

This fits with the experience of online fandom detailed by Janis Cortese in Spender (1995), where the online fan presence was strongly male dominated and unreceptive to female appreciation of the male members of the Star Trek crew. This is not the only such case. The Qui-Gon Jinn Discussion List traces its routes back to a no-longer extant thread 'being a Jedi never looked so good'[9] on TheForce.Net's[10] bulletin board. The initial comment receives both a positive and negative response, the negative focusing on the suggestion that the initial poster is letting her hormones overcome her judgement or derogatory about any thread perceived as focusing on the physical characteristics of the actor/characters. The response to this criticism by the original poster clearly positions the discussion within gender lines. The original poster notes that the critical responses were expected. The comparison with male fans discussing the attractiveness of Natalie Portman is both acknowledged (the male fans can effuse over an actress, why can't the female fans over a male character?) and dismissed as not being a fair comparison (the thread concerning the *character*, of which physical appeal might be a part but that acknowledgement not invalidating the rest of the character discussion). The gender of the detractors is highlighted as the reason they were unlikely to regard the discussion with sympathy, the assumption clearly being made that this sympathy/understanding was

[9] `http://www.qui-gonline.org/began.htm`
[10] `http://www.theforce.net/`

shown to the male dominated threads discussing the attributes of the actresses[11](Various Forum Posters, 1999).

More recently, similar tension can be seen in the discussion on the fifth *Highlander* film, 'The Source', on the official bulletin board[12]. A synopsis of the movie appeared on a publicist's webpage and, having been discovered by fans, caused a large amount of debate and speculation before it was removed. The thread was initiated on the official board on 19 March 2006 and a number of separate discussions also occurred, for example on the highlander_lj community journal[13]. The division between those on the official boards and those within the LiveJournal community is noticeable. The posts on highlander_lj (female-dominated) suggest that many of the members do not feel comfortable in the environment found on the official sites and therefore avoid them. An effort is instigated to make sure that the feelings of the female fans appear on the official site[14].

A change in the thread on the official site can be seen coinciding with this decision. From discussing which version of the script the synopsis might have been drawn from, and its possible accuracy, the discussion was redirected to the relative merits, or lack thereof, within the script and the effect that certain elements to the story might have on the fans. The emotional attachment to some characters and the relative importance of those characters versus the franchise were repeatedly raised in arguments. For some the franchise was more important then any particular characters (or any particular actors), for others the characters were why they were interested in the franchise and if the official sources did not provide for them then they could, and would, leave for 'fanfictionland'. While not exclusively, the division was broadly down gender lines (as far as can be identified). Although some qualifications are used, a good proportion of female fans, especially those attending conventions, were characterised as being interested in the actors rather than plot, characterisation or mythical integrity. To some on the message board they were 'extreme', 'scary' and 'irrational'. Meanwhile the idea that the film, and indeed the franchise, is being aimed at the young, male demographic to the exclusion on the strong female fanbase was raised on a number of separate occasions. While there was actually a consensus on the idea that the death of a specific, well liked character would be unfortunate, especially if done carelessly, the disagreements on the reason for this belief obscured any agreement.

What we see in this case are two spaces: the general space where (female) desires are suspect, and what might be termed the feminine space. Although it may not have been their motivation or intention, this space was created by female fans to allow them

[11]It should be noted that the post comparing the thread to the one on Natalie Portman does appear to be objecting to both as shallow rather than privileging one over the other, however that does not appear to be the spirit in which the comment was taken.

[12]`http://www.highlander-community.com/cgi-bin/messageboard/ultimatebb.cgi?ubb=get_topic;f=17;t=000964`

[13]`http://community.livejournal.com/highlander_lj/108311.html`

[14]While gender is not specifically noted the implication is clear and the language couched in 'us vs them' terms `http://community.livejournal.com/highlander_lj/111296.html`

freedom from disapproving influences. While using the term 'feminine' because of the perceived female dominance of this area (even the language shows a female bias[15]), it is important to mention that, while women may be in the majority, there are few places which have active bars on who can participate. While early lists may have deliberately emphasised the female to deter male interests this separatism is rarely seen on modern lists where anyone is welcome as long as they respect the community. No disrespect is intended to those men, or others who do not choose to identify as female, who chose to participate.

Given the above situation, it might be suggested that, rather than just demonstrating the typical and unequivocal male bias and double standards as suggested by Spender (1995), what we see in Cortese's case, and similar, was misfortune, both in the choice of discussion group and in unknowingly hitting a contentious subject due to the tensions going on in the wider community. The problem here, other than the lack of civility shown by the group she joined, was that as a newcomer Cortese had few clues as to how to navigate the disparate sprawl of related groups and find ones appropriate for her specific interests. Whether this interest would have included the large amount of fan fiction undoubtedly existing and featuring those same Star Trek crew members about whom she posted we have no way of knowing but the principle and the problem of finding the right group for any given user is the same. While perhaps less obvious, there were many communities in existence at that point on the Internet where Cortese's comments would have been welcomed and where she would have found herself among the gender majority.

This fits with what MacDonald (1998, P. 151) describes as 'private fringe realms'. If the female influence has been relegated to such spaces then it might be expected that our interaction with them would be limited. This begs the question, how do we define fringe? Indeed, fringe from whose perspective? While this feminine space exists mostly separate from official sanction or support, in a number of fandoms there is very little or no official space. What happens when those on the fringe become the majority? As Bury (2005, P. 3) admits "Sheer numbers do ensure the female fans today have more options than private lists".

The issue is one of direction. For many newcomers the obvious points of contact are official sites and fora set up by production companies, broadcasters and authorised fan clubs. Just as Bacon-Smith (1992) sees a progression from the initiated masses up the loose hierarchy within fandom, some members will move to more specialised communities. This can either be seen as moving out to the fringes away from the central power as objectified by the inspiring source material and its owner-creators, or moving to a higher level of discussion for those who demonstrate the requisite knowledge and

[15]The controller of a list is traditionally referred to as the 'list mom' and the application 'Mary-Sue' is frequently used to describe characters of both sexes although the male equivalents 'Marty-Sue', 'Marty-Stu' and 'Gary-Stu' were eventually developed to try and bring balance. (see Glossary)

attitude. Where does 'fringe', with its negative connotations, stop and 'elitist', with its positive ones, start?

Having shown that studies identify a high percentage of women in online fandom but that they tend to cluster, it needs to be demonstrated that the specific area we are interested in, fan fiction writers, has a particular gender demographic before we can justify our assumption of female bias. Bury (2005, P. 2 – 3) describes spaces dedicated to fan fiction as examples of 'women-centred spaces'. In his study of the Dark Shadows Fan Culture (Benshoff, 1998, P. 201) notes that, unlike previously studied science fiction fandoms which were predominantly female, Dark Shadows has an almost equal division of genders. However he goes on to note "*The majority of stories are serious in tone and written by women*; conversely, most of the stories with a comedic edge seem to be written by men" [emphasis mine]. Even in this egalitarian fandom the creation of fiction is female dominated. [16]

Costello (1999) showed that female fans were more likely to be involved as active social participants including in information exchange and fan fiction. This not only confirms the dominance of women in this domain but suggests that word of the survey is more likely to spread through female lead social exchanges. Evidence of this network effect was demonstrated by the forwarding of an advertisement for the survey by an unconnected person to a list that was under observation.

From the evidence laid out above it seems clear that the ratio of respondents to any study will clearly be biased towards female input. Since research has already investigated this area the decision was made not to focus specifically on gender or sexuality as factors and therefore questions in this area were not included as part of questionnaire due to sensitivity within the community about revealing such personal data. The extremity of this position in some areas of the fan fiction domain can be seen in the results published by Hinton (2006) in which 96.4% of the 365 people that responded to her survey on slash in the Harry Potter fandom identified themselves as female. While it is unlikely that the survey carried out as part of this thesis' research and hers drew from exactly the same pool of respondents, the imbalance in conjunction with the previously mentioned research makes it extremely unlikely that it would have been possible to get anything close to an equal gender division.

[16] It is also interesting to note that in this fandom there is seen to be less overtly adult material than is seen in other fandoms such as Beauty and the Beast (Benshoff, 1998, P. 207 – 208) and of those stories with adult content those written by men were found to be more sexually explicit and slash was notable in its rarity. One has to wonder both whether these facts are interconnected and whether the perceived community is complete as described. Since Benshoff is dealing with an offline, and therefore harder to track, community and one which appears to be comparatively prudish, the question must be raised as to whether there was a more underground community to which he did not have access. We raise these questions to highlight the difficulty of working with such communities prior to their growth online although the splintering described by (Coppa, 2006, P. 56 – 58) presents its own challenges and requires caution when making assumptions about cross-community expectations.

While in this thesis we are not just dealing with fan authors, there is, as we have already shown, a strong bias towards media-inspired rather than original writers within the respondents of our survey. For this reason it is assumed in this thesis that the majority of those making up our case study usergroup would identify as female. While there is no way to prove this supposition the tone of many of the responses suggested it was in fact correct.

Gender is an issue in that it is important to recognise that different people may feel happier in different environments. This thesis is not about creating a 'feminine' space but about helping people create a space in which they are comfortable and in helping others of similar mind find those spaces. The fact that this study will be dominated by female feedback allows us to compare and contrast with other male-user dominated studies but does not give opportunity within itself for such comparison. For these reasons and those laid out below, age was taken as the primary group division demographic.

3.2.3 Age

The age range of respondents (see Figure 3.2) to our questionnaire went from 10-12 years to over 66 years. Over 50% fell within the 18-35 group and more than 20% were over 35. This is comparable to that age range found in online fandom in general by Costello (1999) although he does not include any under 18s in his data.

If we compare this distribution to data published by Hinton (2006) (see Figure 3.3) we can see that the community she surveyed, Harry Potter fans, have a much faster drop-off in age after the peak in the 18-25 age range but otherwise follow a similar pattern. It is unsurprising that a sub-fandom based upon media aimed at children shows this trend in comparison to a general survey and serves as a reminder that some areas of fandom have a higher percentage of younger users.

In 1992, Camilla Bacon-Smith stated "The woman's fanzine community draws its members from among the adult and late teen population, and it has developed an extensive mentor-apprentice system for training newcomers in the structures and customs of the community... Potential new members may discover the media fan community through conventions or personal acquaintances." (Bacon-Smith, 1992, P. 81). While contemporary with the shift towards electronic distribution this study predates the effects that the Internet had on fan culture and those involved within it. Jenkins (2006a, P. 178), comparing his original studies with more recent work claims "A decade ago, published fan fiction came mostly from women in their twenties, thirties, and beyond. Today, these older writers have been joined by a generation of new contributors who found fan fiction on the Internet and decided to see what they could produce". The structure of apprenticeship can still be seen in a somewhat diluted form. Jenkins describes the practice of older fans often engaging and guiding younger fans, possibly while in ignorance of their

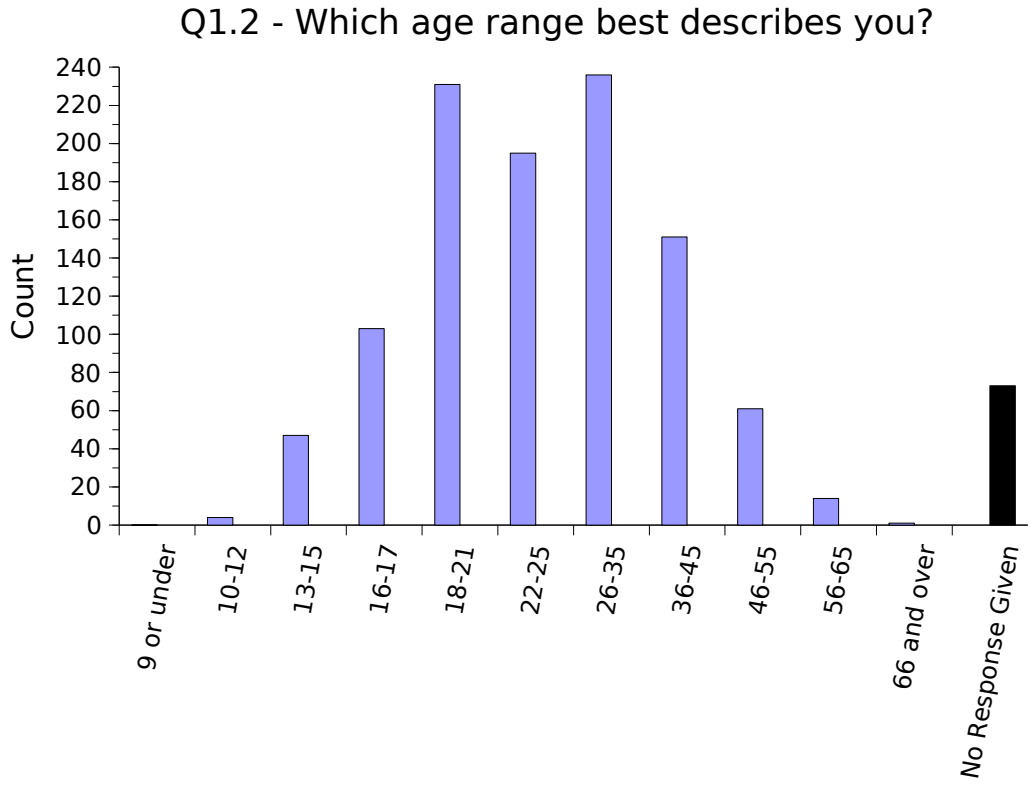

Figure 3.2: Age Distribution

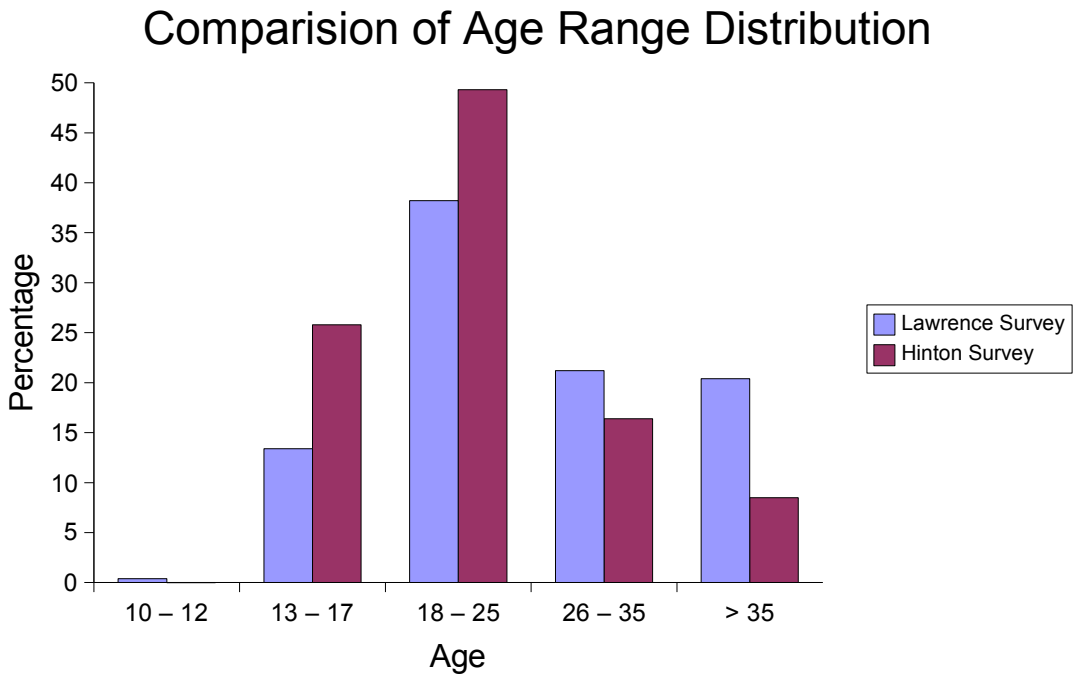

Figure 3.3: Comparison of Age Distribution across Surveys (Hinton, 2006)

age (Jenkins, 2006a, P. 178). While he does not say so explicitly, in Jenkins' examples it is not necessarily age that is the factor but what can be described as 'community capital'. By this phrase we refer to the level of reputation that the user has within the community. Before the default use of the Internet rather than other methods of communication, this capital was gained much more slowly, Bacon-Smith took two years to pass through what she classifies as the 'first phase' of initiation and, while acknowledging that it can be done more quickly, states that the community members with whom she discussed it felt "two years is a reasonable length of time to develop a working knowledge of the forms and social life of the community"(Bacon-Smith, 1992, P. 81).

By default this system discouraged younger participants, both through the length of time required to become an accepted member and by the participation requirements. While not totally fool-proof, the need to meet someone 'in the know' from within the community meant that perspective members had to be present at meet-ups or conventions, unlikely for unaccompanied children, and could also be vetted. Where Bacon-Smith could "chart [her] passage through the community as insiders make known to me conventions of increasingly specialized interests"(Bacon-Smith, 1992, P. 12) the modern initiate can run a two second web search and gain access to comparable levels of information.

This transformation has implications for the community. While offline meetups and conventions are still an important part of fandom they are no longer so connected with the creation and distribution aspects of the community. Of the 1083 who responded to the question 'Have you met any of your fiction friends offline?' over half had had no offline contact with their friends (see Figure 3.4).

While Jenkins mentions the positive side, young writers gaining experience through interaction, he ignores both the tension that exists between the older community members and aforementioned young newcomers, and the pressure that is being exerted from outside the community. The number of archives which disallow adult stories has grown in recent years and this is especially prevalent in areas of media fandom which have a high percentage of underage writers such as the Harry Potter fandom. However, in other sections of media fandom, there is a strong dislike of what is seen as an abridgement of free speech and of being told what they can and can't write about, especially when the restrictions are suddenly imposed after years of self-regulation by the readers. On 12 September 2002, the following announcement appeared on FanFiction.net:

> "NC-17 based entries will no longer be accepted. Though they are very small portion of the site the adult stories have generated almost all of the complaints filed on record in the past year. Moreover, the highest concentrations of them are growing in areas with subjects targeted to younger readers and with increasingly controversial subject matters. However, not all NC-17 based stories fall into the description but as result of their increasing volume a decision has been made to resolve this problem. Inno-

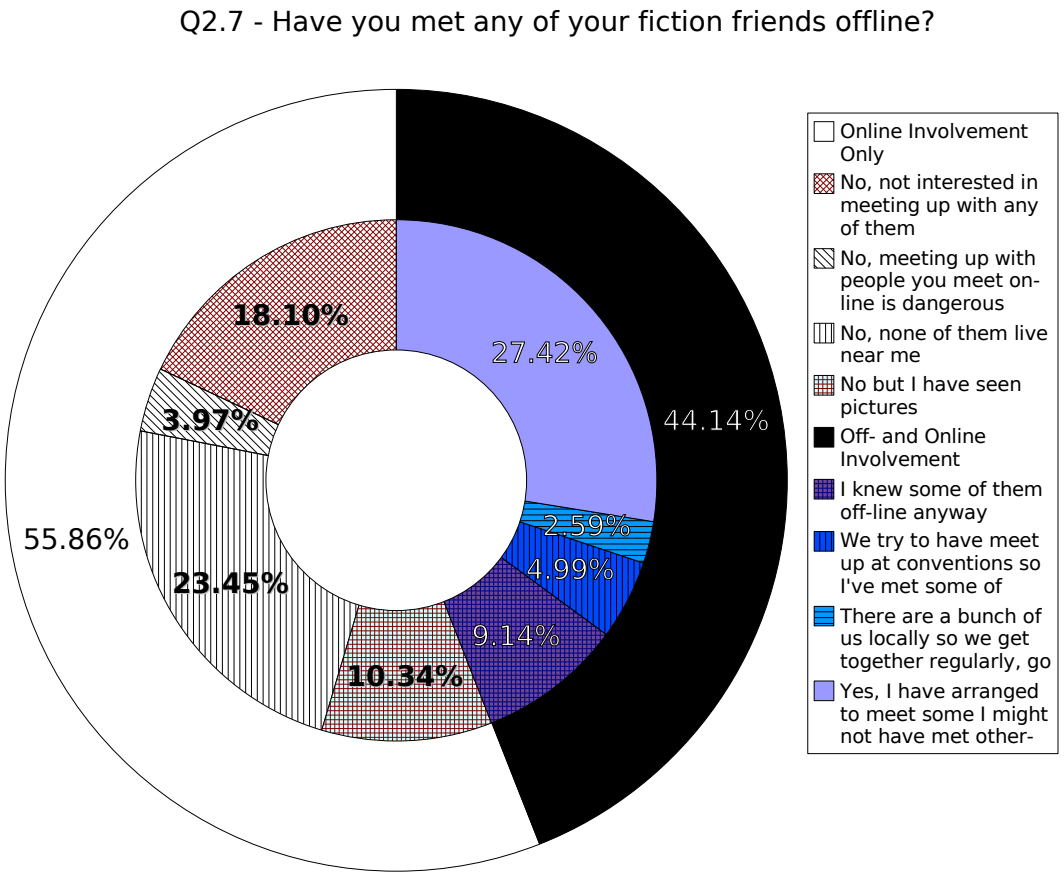

Figure 3.4: Off and Online Contact between Community Members

> cent writers will be affected but this has to be done considering the non-filtering scheme of the site."(Twiss, 2002, Quoting from text that appeared on `http://www.fanfiction.net/` on 12/9/2006)

The reaction (see Section 5.3) was immediate and far-ranging. While it was respected that a site owner could set policy for their site, the suddenness of the change on such a large, pivotal archive, and one which had allowed such works since its inception in 1998, caused a notable amount of bad feeling within the community. The privileging of underage writers over others implied in the statement caused a reaction against the newcomers. Rather than an over-arching community there developed an idea of 'us' and 'them' because evidence suggested that shared sites were no longer viable.

The issue was complicated by the problem that children (i.e. those under the age of legal majority in their country or state of residence) were (and are) also *creating* the material which the blocks are in place to prevent them viewing. Rather than being placed in a situation where an author might have to be prevented from seeing their own work,

many of the archives that do not restrict content instead restrict membership to those who verify they are adult. The choice became restricting the material or restricting the users.

Due to the American Children's Online Privacy Protection Act of 1998 (United States Government, 1998) and similar legislation in other countries, the majority of fan fiction communities, like many on the Internet, do not allow members under the age of thirteen to sign up. Many communities go further and only allow members who are over the age of eighteen, or in some cases twenty-one. In a community which prides itself on its inclusiveness, age is the one demographic upon which explicit restrictions are set.

In his chapter on young authors in the Harry Potter fandom, Jenkins (2006a) does not note any controversy over the type of content written or accessed by underage members of the community. He even mentions as positive the fact that "Some of the stories are sweetly romantic or bitter-sweet coming-of-age stories (where sexual consummation comes when two characters hold hands); others are charged with anger and budding sexual feelings, themes the authors say they would have been reluctant to discuss in a school assignment" (Jenkins, 2006a, P. 183). The reason for this might be due to the defensive stance that Jenkins has previously admitted to taking (Jenkins, 2006c). Alternatively his position might be influenced by the fact that the Sugar Quill and FictionAlley, Jenkins' main sources, have, like FanFiction.net, a ban on adult stories due to concerns about children accessing 'inappropriate' material.

How much is this actually an issue? There has been some concern that research in the area of fan culture has over-emphasised the adult and slash material produced by the community. This is highlighted by the number of ill-informed and sensationalised articles in the popular press which often conflate adult and slash material or present this type of material as the definitive genre within fan fiction (House, 2003; Cadwalladr, 2006). While both adult and slash genres play an important part in the community the related topics of pornography, female sexuality and queer theory provide an additional appeal to researchers that less potentially controversial genres such as 'general' or parody lack.

From the survey we ran (See Section 3.1.1) over 90% of the respondents at least occasionally read fiction with adult content. 56% (0 decimal places (d.p.)) of those gave an unequivocal 'yes' and a further 24% (0 d.p.) specified 'slash only' (for comparison those claiming to read heterosexual romance only garnered a mere 2% (0 d.p.) of the votes). Of those who said they wrote fiction over 60% wrote adult content and a further 25% (0 d.p.) at least occasionally wrote work which might not be considered totally child-safe.

These results show the relative importance of these genres within the community and as such it would be wrong to ignore them. Unlike many of the previous studies in this area we do not ask why this is the case but take it as evident from the survey that it is. The presence of adult material online and access to same has begun to dominate recent

Table 3.3: Reading Habits of Respondents Under Eighteen

Age Group	**Q2.9: Do you read fiction that contains adult content?**	**Count**	**% (2 d.p)**
10-12			
	No - Don't want to	1	25.00
	No response given	3	75.00
	Total	4	
13-15			
	Yes	17	36.17
	Yes, but only slash	9	19.15
	No - Don't want to	2	4.26
	No - I am underage	6	12.77
	Occasionally when the mood takes me or I see something that looks really good	7	14.89
	I never pay attention to ratings	2	4.26
	The works I read do not have ratings but I would count some of them as adult	1	2.13
	Not intentionally but I have a few times by accident	3	6.38
	Total	47	
16-17			
	Yes	40	38.83
	Yes, but only het	1	0.97
	Yes, but only slash	31	30.10
	Yes, but only when the content is not of a sex-related nature	1	0.97
	No - Don't want to	2	1.94
	No - I am underage	3	2.91
	Occasionally when the mood takes me or I see something that looks really good	17	16.50
	I never pay attention to ratings	4	3.88
	Not intentionally but I have a few times by accident	4	3.88
	Total	103	

discussion of the Internet. In any design decisions or recommendations that result from the research undertaken as part of this thesis, it would be impossible not to take this issue into account. The fact that it is also shown to be important, if not within the community itself then in pressures imposed on it from outside, allows us to look at the topic in context rather than as an imposed addition.

3.2.4 Privacy

Anonymity and privacy were highlighted in the questionnaire responses as areas of concern. The illusion of anonymity is a fundamental part of the fan fiction community and as previously mentioned the fan fiction community makes up a large percentage of the amateur writing community. People may choose to give up their anonymity, but the option to keep "real life" and "fan life" separate is very important to those involved. Most

writers in the community write under a pseudonym, some even writing under different names in different areas of interest. This is not just coyness; stories of people losing jobs, friends and family are common enough within the community, especially the slash community, that personal details are guarded closely (Bury, 2005, P. 96). Even those who write under their own names do not tend to put their full name for this reason (P. 200 – 202 Jenkins, 1992; Bacon-Smith, 1992, P. 207 – 208). The same applies, but even more so, to readers. While some details are expected from writers so that feedback can be sent to them, readers see no need why their identities should be required of them.

Over 80% of respondents to the fan and amateur fiction survey gave 'valid e-mail address' as the most personal information that a reader or writer should be asked for, even on an archive that contained adult material. That 80% included 15% who thought no personal information should be asked for from anyone and 28% percent who thought only authors should need to provide an email address. A significant percentage of respondents also mentioned the importance of privacy to them in their comments.

3.2.5 Access

Recently there has been a significant amount of publicity given to concerns, especially parental, about the accessibility of adult content on the Internet. While some concern is reflected from the community the unease is mostly related to younger children being exposed with nearly a third expressing this in conjunction with the belief that it is either a positive way for teenagers to explore adult issues or unlikely to contain anything they are not already aware of. Almost another quarter expressed concern that parents allowed children who could not be trusted to respond to warnings appropriately to use the internet unsupervised.

This suggests that while the community believes in taking some steps with over half agreeing additional precautions should be taken with regard to access to a story containing adult content they also believe that a large amount of responsibility rests with the reader and when the reader is a minor with the reader's parents. When asked what steps would be considered reasonable, precaution metadata attached to the story did not rate nearly as highly as human-readable warnings; however this might be related to the generally low knowledge of them (not knowing what Internet Content Rating Association (ICRA)/PICS (Krauskopf et al., 1996) or equivalent tags were being the most frequently given reason for not including them) despite them being the second most commonly used method after warnings, and the low incidence of filter use within the community. There was also some concern expressed about the level of detail on such metadata systems, possibility of stigma and misuse of the filtering system.

Previous initiatives to have community members add some form of increased access control to sites have almost always ended in bitter disputes. While in-community efforts

have been received with more welcome than those from external sources, anything that suggests possible control or censorship is met with profound suspicion. Misunderstandings at fundamental levels aggravated by indefinite terminology and the existing debate over the depiction of contentious issues, such as underage or extreme relationships, violence, drug use, sexuality and religion, have made it difficult to prevent the debate turning into the exchange of immovable extremes. Such issues would need to be addressed before any semantic web system could be given widespread acceptance by the community. However given the willingness to add human-readable metadata it does not seem beyond the bounds of possibility that machine readable data could also be added if it were presented in the right way. While such information can already be added, and in many cases is, lack of information and understanding of the technology on both sides of the debate confuses the issue.

3.2.6 Metadata Annotation

From the prevalence of the practice of adding metadata (see section 6.1.1) it can be inferred that there is a general agreement within the community that some annotation should be linked to media items created by the community. However, the question of what metadata readers think should and should not be available to them resulted in a very mixed response from the community (see Fig. 3.5).

At one end of the spectrum, some people wanted as much detail as possible before making a decision on whether or not to read a particular story. Typical responses to Question 2.12 (Which of the following would you prefer *NOT to know about the story* before you read a piece of fiction?) illustrating this position included:

> "I prefer to know just about everything, as it helps me decide whether or not I want to read it"

> "There's nothing I WOULD object to knowing in advance. I'm all for spoilers, in any medium"

> "I don't care what information I get – nothing "spoils" the story for me. I frequently read the ending first, so see it it'll leave "a good taste in my mouth" before I read the story itself"

> "I prefer to know as much as available"

At the same time, other respondents wanted to be given minimal information.

> "[Not] Anything that counteracts plot suspense"

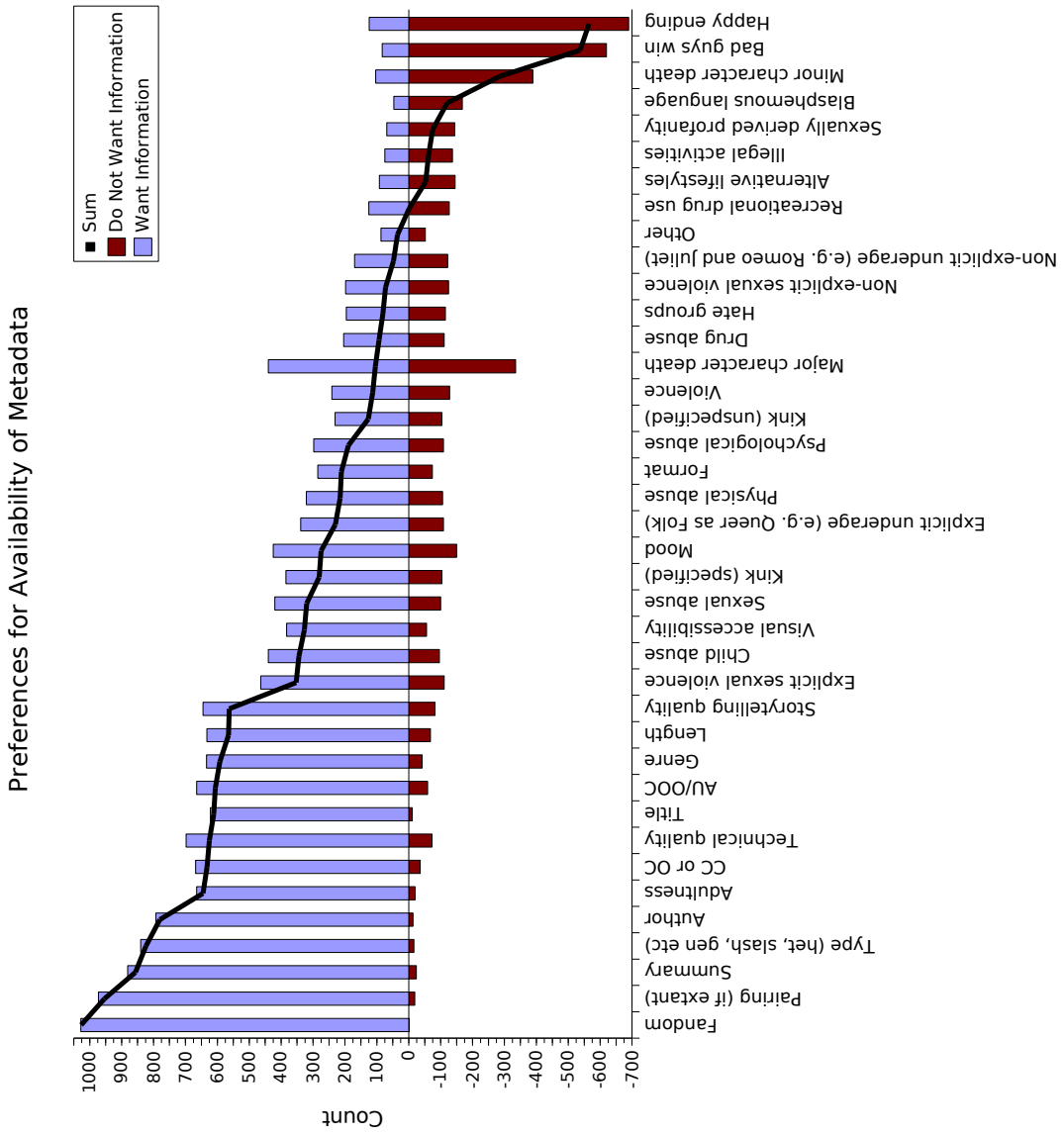

Figure 3.5: Metadata Preferences

"I just don't like to be spoiled, that's all. I can read the darkest, nastiest fic out there if the writer makes it work, but I really don't want to have the punch taken out of stories in warnings"

"In general, I don't want to know anything about the advanced plot (what occurs after the first 25% of the story) or the ending. I'll find out on my own - that's part of the joy of reading"

"[Not] Anything that gives away any part of the plot"

> "If it's going to spoil me for the plot points or the emotional reaction the author is trying to evoke, I don't want to know about it before hand, *period*"

The theme that we see repeated in these responses is the acknowledgement that the non-bibliographic information given in the metadata might spoil the plot. The main difference between the two positions revolves around what the reader considers a spoiler and whether they mind being spoiled. These are not only very personal beliefs but ones which may not necessarily be consistent even within a single user across all occasions and contexts. For example two respondents noted:

> "I don't need to know everything about a fic prior to reading (really?), but I want to know the basics in advance. It's interesting to me that when reading fandom-based work, I do expect to know in advance if there's say, violence or death. In reading a book, I wouldn't expect to know that! But we're talking about character/characters that we know in such a personal (and often loving) fashion, so I feel more strongly about it with fandom-based writing"

> "Tricky question. I don't want to know in advance anything that spoils the story for me. So if the scene containing violence/abuse/drug usage/sexual situation/whatever is close to the climax or to the end of the story, then I don't want to know beforehand. If such scenes are the premise of the story and can be offered in the summary without spoiling the reader's surprise, then I don't mind being given the information beforehand; it might help me choose what I want to read at that particular moment. As for the quality of the writing, I don't think anyone has the right to determine what is good and what is not"

The conclusion that we can draw from this is that there is no universal solution to how much non-bibliographic metadata users like to see attached to any given media item, although there is a definite trend towards some annotation being tolerated if not actively desired. Due to the individual nature of users' metadata preferences there is a strong case for personalisation. This is summed up by one of the respondents:

> "In an ideal world, I want to know beforehand if a story has things that squick me[17], but not if there are things that I like to see. For example, I'd rather not know if a story has spankings beforehand – I enjoy reading

[17]Something that sets off a bad visceral reaction. Possibly related to the noise the reader makes as they hurriedly hits the back button on their browser.

> them, and I want them to be a surprise. But I do want to know if a story has daddy!kink, because I don't want to read those stories. Of course, we can't please everyone that way. I think I'd rather be spoiled for the kinks I enjoy than run into those that squick me. Interestingly, though, it seems that people mostly warn for those I'm squicked by, but often don't for those I enjoy. I guess I'm vanilla enough that the system works for me. :)"

To gain a general level of how positively or negatively the respondents felt about the revealing of the existence of the given theme, we took the 'want to know' value as positive and the 'don't want to know' value as negative and calculated the result. With adjustments made to compensate for the difference in sample size, this value was compared to the responses given by authors as to what metadata they typically revealed (see Fig. 3.6). While there was an overall correspondence between the desired and provided metadata on the basic details, the gap between the two grew on more contentious issues such as character death and non-explicit mention of sexual violence or underage sexual activity.

Due to the aforementioned community practice of adding metadata to objects that they create, the amateur writing community has an advantage over many other online communities in that they already spend a significant amount of time on the annotation of media objects (see Figure 3.8). This is perhaps aided by the strong overlap between the writers who add the metadata and the readers who make use of it (see Figure 3.7) thus reducing the 'markup prisoner's dilemma'[18].

It is encouraging that the majority of those who responded to the question would be willing to consider spending slightly longer if it would raise the visibility of their work among its target audience with a strong interest also being shown in metadata reusability (see Figure 3.9).

From within the community the feeling is strongly towards that of the informed reader making a choice. However the question of what metadata should be available to readers resulted in a very mixed response with some people wanting to know everything before making a decision of whether to read and others only wanting to know the basic bibliographic details (see Figure 3.5). While there was a match between the metadata desired and the meta-data given on the basic details the gap between the two grew on more contentious issues (Figure 3.6).

The most common reason given by authors for not wanting to provide information

[18]The 'markup prisoner's dilemma' concerns who is making the effort to produce the metadata and who is benefiting from it. The 'best case' scenario for each individual is that they not put in the work but that the other person does thus allowing them to benefit. The 'worst case', that they do the work and the other person benefits. Thus in cases where the benefit to a given individual is not clear there is little incentive for them to put the effort in, although they may hope that someone else does. By creating a situation where everyone contributes to the metadata and everyone uses it, the work that any given person has to do is offset by what they perceive they gain from everyone else doing the same.

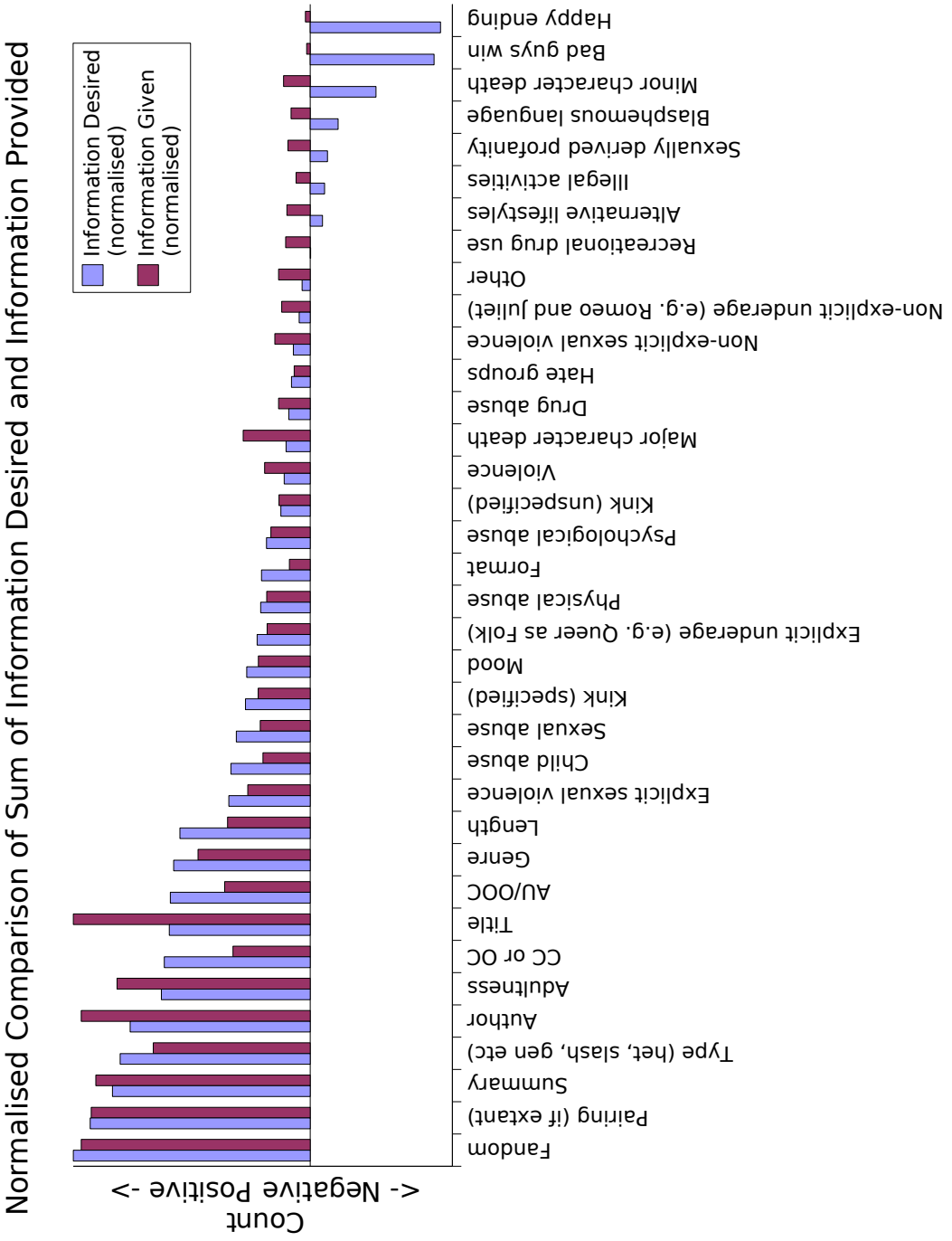

Figure 3.6: Currently Available Metadata

(other than time constraints) is that of spoiling the plot. This, unsurprisingly, is the same reason given by readers for not wanting to know. This is where the difference between human-readable and machine-readable information might be most useful to the community. One of the respondents to the community requirements survey noted that they wanted to be warned for subjects that they didn't like but wanted to be surprised

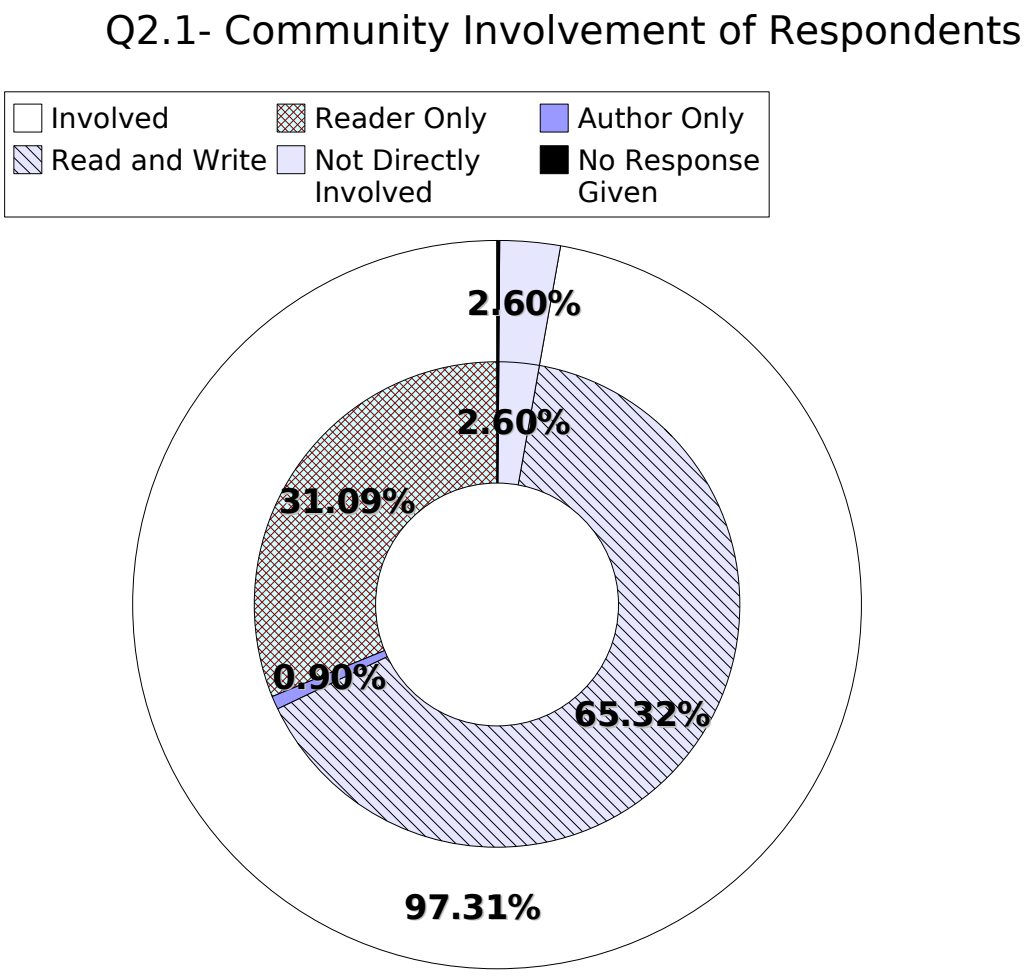

Figure 3.7: Community Involvement

by those that they did. By allowing for metadata to be used for searching and filtering at a machine level it is possible to provide community members with this capability. For the most part authors want their work to be consumed by the audience for whom it was intended so might be more amenable to adding additional data if they could also specify that it could be hidden. Equally for topics such as character death where there is no clear consensus individuals can decide for themselves whether that information is given to them. As more detailed information becomes the norm then members will even be able to search for or avoid the deaths of particular hated or beloved characters. From this we can conclude that personalisation would be a very useful feature and one which the addition of semantic data could provide.

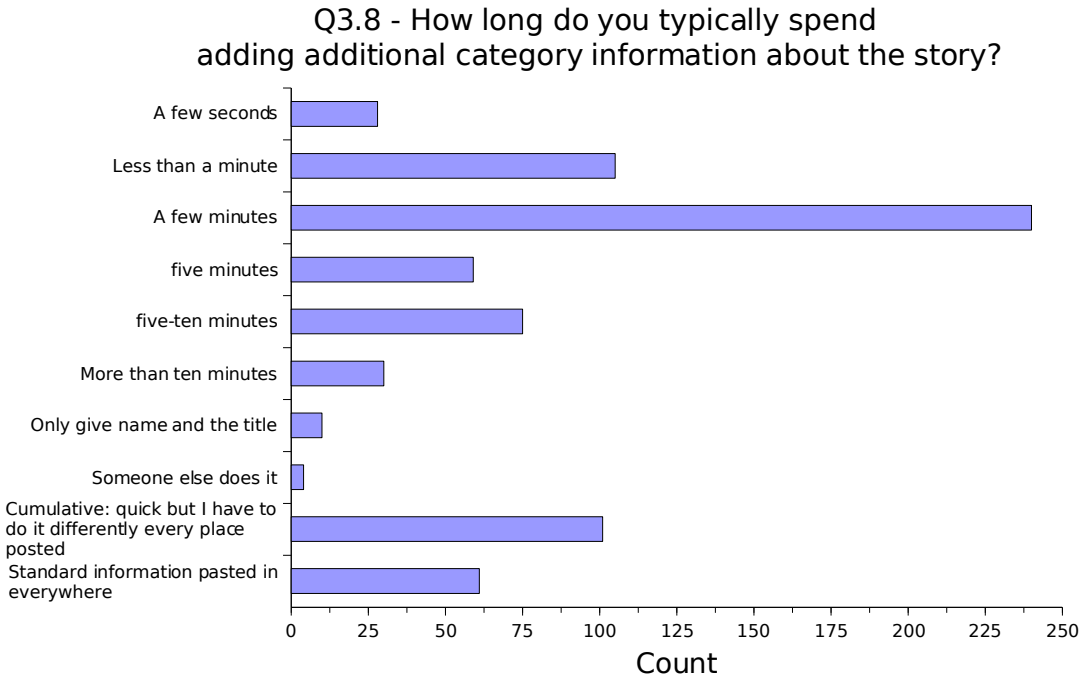

Figure 3.8: Time Taken to Add Metadata

3.2.7 Technical Knowledge

While Internet Explorer held a dominant position, a broad range of browsers were used with Mozilla/Firefox, Netscape, Opera and Safari also being popular. Equally while Windows was the most popular operating system, Macs, Linux, handheld computers as well as other operating systems were also used, suggesting that cross-platform and well as cross-browser compatibility would be a useful feature. Just over half of respondents gave their level of technical ability as comfortable with approximately 20% being happy making webpages although they did not regularly deal with any underlying code. Beyond that approximately 30% worked with HTML directly although they did not know how to program or use scripting languages. The remaining 15% were programmers with just over 5% web-scripters and nearly 5% programming professionally. The percentage of those people who identified themselves as writers increased from just over 50% at the lowest level of technical knowledge to nearly 80% at the 'able to create dynamic web content' level before remaining in the high 50s to 70% percent level at the higher technical ability bracket.

3.2.8 Commercial Services

There was a strong anti-commercial sentiment. While just over 50% of respondents would consider voluntary donations to an author they liked, for upkeep costs or would

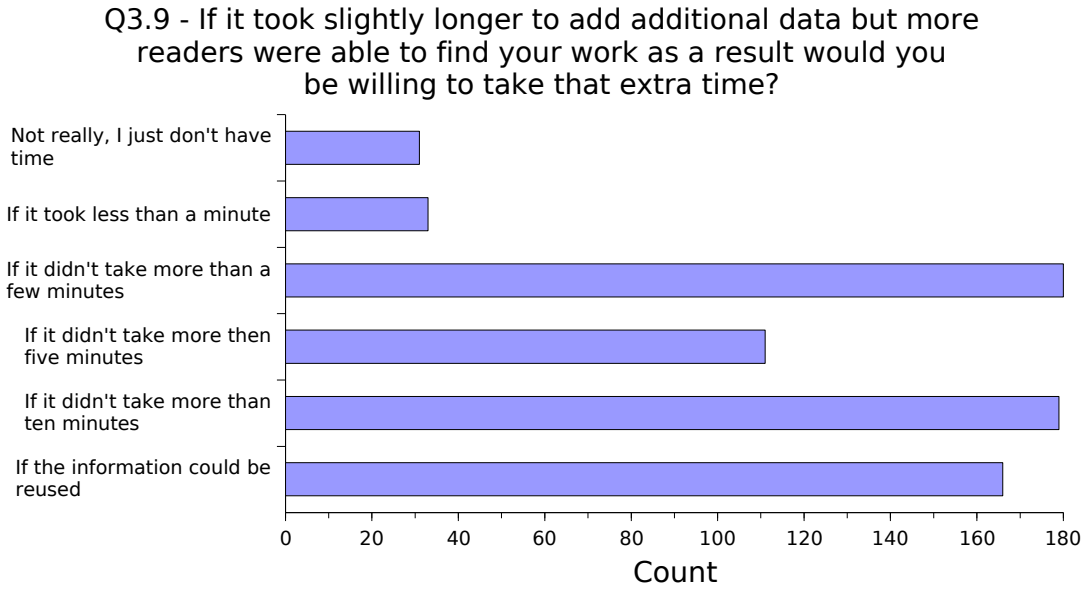

Figure 3.9: Additional Time For Semantic Metadata

pay for e-zines, approximately a third would not pay. Beyond the concern expressed by a number of respondents about what would happen to the community if commercial interest became involved, approximately 70% would not pay for such a commercial fiction distribution and/or filtering system with just over 20% wanting to test it first and less that 1% saying they would pay for such services.

3.3 Discussion

This investigation into the amateur fiction community represents a significant contribution to our knowledge, not only of this community but of the way that amateur users interact with each other in a computer-mediated environment. In this section we have presented a case study into a group which developed first as a distributed offline community (Merrick, 2004; Bacon-Smith, 1992) and then embraced the internet as a distribution medium to become an online community (Baym, 2000; Bury, 2005; Hellekson and Busse, 2006). In doing so we define the scope for this thesis and lay out the groundwork upon which the rest of the research contained herein will be based.

Our case study community represents a diverse and interesting collection of users. Not only due to the way that they have taken technology and subverted it to their own needs but also to the strong presence of women, both in the group itself and in positions of control, guiding the communities development. Beyond this, it presents an interesting case study due to the combination of the wide age range and the variety of material being produced and shared. This problem has been directly related to the influence of

the Internet as a distribution medium meaning that more people are in a position to become involved in the community while the relative percentage of offline interaction has fallen thus making the community more reliant on personal responsibility as the initiation procedure as described by Bacon-Smith (1992) becomes less feasible.

In this thesis we take the information that we have detailed in this chapter and concentrate on a number of technical issues. Primarily, we consider the community itself. As a offline and online entity it has a long history, further its members, as we have shown above, have found ways of using technology to support community activities in ways which run parallel to current research into subjects such as electronic archiving, metadata and trust. We investigate the types of network structures that have developed within the community and compare them to the other standard definitions of social groups such as Web Based Social Networks and Communities of Practice. As we have argued (see Section 2.2) there remains the logical step of the type of community whose coherence goes beyond basic network structures to a fully supported community with all that entails.

Moving on from our consideration of the current technical structure of the community, we present research on how the issues raised by this community can be addressed. These issues are drawn directly from the study detailed in this chapter and represent areas in which we argue that technical solutions can support the social interactions that our case study has revealed. The areas we have chosen to focus on are those relating to identity, both of users and of objects.

Two of the important parts of a community are the members themselves and the resources that they share. We consider how identity works within a community context (see Chapter 5), moreover one where importance is given to online identity over offline identity. In conjunction with this we consider the question of access control and therefore the nature of trust between members of a community such as we are investigating. While we focus on our case study community, the conclusions that we draw and the technical solutions that we present have application beyond our case study community to any which follow a similar pattern, as we will define.

The importance of metadata to the community has been clearly shown in this section. We, therefore, investigate the current methods of metadata addition by the community (see Chapter 6) and on the basis of this present research which, we argue, offers methods by which the needs of the community can be better met. This research includes ways of describing resources commonly exchanged by our case study community through machine-processable metadata (see Chapter 7) but also how this metadata could be presented to and used by community members (see Chapter 8) and how this methodology is driven by the nature of community.

Chapter 4

Visualizing Online Social Networks and Our Case Study Community

When considering online social networks, we argue that there are distinctions that can be drawn between networks of acquaintances or co-location (Lawrence et al., 2006a), communities of friends and communities based around both social interaction and shared interest (Bury, 2005; Golbeck and Parsia, 2004; Kruk, 2004; Porter, 2004; Komito, 1998, 1999). While social networks model the social bonds between people they do not intrinsically differentiate between close friendships and casual acquaintances. This differentiation can be achieved through additional structures such as trust values (Golbeck et al., 2003; Golbeck and Hendler, 2004; Golbeck and Parsia, 2004; Golbeck, 2005; Gray et al., 2003; Abdul-Rahman and Hailes, 2000; Aberer and Despotovic, 2001; Beth et al., 1994; Corritore et al., 2003) or extending the link information to describe the social level of the connection (Mika and Gangemi, 2004; Kruk, 2004; Matsuo et al., 2004). While these extensions can be used to facilitate the identification of groups or to filter at an individual level, we use a case study to investigate further how those closely knit, high-trust areas differentiate from the rest of the acquaintance matrix with regards to how they can be supported and how we can interpret the data within those areas.

Taking our case study community as exemplar, and in comparison with other social network groups, we consider the structure of the online relationships, as represented by links, that exist. To do this we investigate the links that exist between users on the electronic journalling site LiveJournal. Coppa (2006, P. 57) states that "mailing lists are rapidly dying, abandoned in favour of personalized blogging technology." While this may be an overstatement, the recent years have seen a surge in the use of sites like LiveJournal as a place for the community to interact. This has reached the point where LiveJournal has been incorrectly referred to as a "fan.fic site" in a British na-

tional broadsheet newspaper. While the article in question, When the Lit Hits the Fans (Helmore, 2006), does not appear to be well researched as it contains a number of inaccuracies besides the above, it is mentioned here to show the ease with which blogging and fan fiction sites can be correlated by the casual observer.

With this shift to blogging sites, with LiveJournal being one of the most well known for this, it seems reasonable to suppose that an investigation of the social constructs that exist within the community of writers, and especially fan writers, on LiveJournal can be seen as a usable representation of the types of relationships that exist within this sort of community environment. LiveJournal allows for the creation of two different types of journal - personal, or user, journals, which are owned and used by individuals, and community journals, which are a shared resource between multiple users. Other research has been carried out on LiveJournal (Ding et al., 2005; Paolillo et al., 2005) but this research has focused on personal journals and personal interests rather than considering the interaction between user and community journals.

4.1 Methodology for Visualization

Due to the fact that LiveJournal automatically creates FOAF files for every journal in its system, the initial intention was to use this FOAF data to plot the community groups and analyse the resulting map to verify whether community journals did, in fact, act as focal points. This idea was abandoned for two reasons. Firstly, LiveJournal produces easily parse-able text lists of friend links and interests specifically for this type of research. Since all analysable links were within the LiveJournal domain and followed a set pattern this reduced the need to parse the FOAF files since the friends and interests information could be obtained through this method. Secondly, the data which LiveJournal does not provide in these easily usable lists, that regarding communities, is only present in a uni-directional manner in the FOAF files; the FOAF data for a community journal lists the full members, although not the 'watchers', but lists of joined communities do not appear in the FOAF data related to personal journals. Since in the majority of cases our analysis will be seeded by a personal journal, this missing information is critical.

As a result of the information mismatch it was decided to use the LiveJournal provided text lists where possible and screen-scraping to gather the community information. While in this case the information was not retrieved from a FOAF file, the necessary structures are in place in the FOAF specification that, in theory, it could have been had they been filled in.

A crawler, a program which gathers information from a website (in this case a LiveJournal profile page) in accordance with a set of rules contained within it and, having done so, uses that information to gather information from related sites, was created. The crawler was programmed to comply with LiveJournal's bot policy (LiveJournal Team,

2004). The crawler was initially written to gather information from the initial node that it was given and from those that that were directly connected to it, which we shall refer to as one step. The code was written so that both the identity of the initial node and the number of steps which the crawler could take from this node could be given as arguments to the program. The information gathered by the crawler was saved in text files and exported into GraphML format. Initial runs were promising but trying to go beyond one step from the starting node proved to be too inefficient and so the code was rewritten to store the information in an MySQL database. As the LiveJournal bot policy required, caching was used to reduce stress on the LiveJournal servers, with sites being cached when first accessed and then LiveJournal only queried for additional data when it was necessary to move beyond the cached data. Caching took place on 30/10-03/11/2006, 18-19/01/2007 and 22-26/01/2007. This extended caching did have the effect of creating a slight disconnect between some of the data depending on when data was cached but the decision was taken that this disconnect was preferable to the time required to re-crawl the basic data each time.

Having considered different methods of visualization (Mutton and Golbeck, 2003; Heer and Boyd, 2005) it was decided to create a visualization engine to the display the GraphML using the Prefuse Java API developed at Berkeley and released under BSD licence. As part of this visualization, a routine identified nodes which were within community groups through an iterative process which calculated the number of shared neighbours for any two nodes. Nodes with a specified number of shared neighbours were identified as grouped. If one of the nodes was already part of a group with other nodes then the second node was added to this group. If neither node were part of a group they become the basis of a new group. After each iteration of the nodes, groups with less than three nodes were discarded. This process was repeated with the required number of linking nodes being lowered during each iteration.

In addition to gathering information about the links between the various journals, both community and individual user, the crawler also recorded information about the interests that were specified within the journal profile. A list of any shared interests between two nodes was stored in the GraphML with the linking information. This information was aggregated across nodes found to be in a group and a list of the most common interests was displayed when the cursor was held over the signifying colour block. This allowed for the identification of the top interests held in common within a group.

The following colour schemes were used within the visualisation:

- Nodes representing community journals are displayed in red while those representing user, or personal, journals where shown in blue.
- Bi-directional links between nodes are shown in black, mono-directional links are shown in grey with an arrow to indicate the direction.

- Community groupings of users are shown in blue, the darker the blue the more tightly-knit the community.
- Community groupings of users and community journals are shown in green, the darker the green the more tightly-knit the community.

Two versions of the grouping code were run. The default version (Version 1) allowed for three levels of grouping, at the minimum of two shared friends, four shared friends and six shared friends. The second version (Version 2) was used when the number of nodes in the visualisation required a greater degree of differentiation due to the larger clusters of nodes. The minimum limits started as four shared friends and then increased by two for a maximum of ten iterations. A maximum limit of one hundred and fifty nodes was put on any group. Each diagram specifies which version of the code was used to generate it.

A number of filters were made to simplify the visualization of the data:

- The node representing the community journal 'lj_maintenance'[1] was removed. This journal exists to track the status of LiveJournal, announce planned downtime and provide explanation of any problems that arise. New users are automatically given the option of joining this community. As an indicator of the status of the website and one that users are required to opt-out of joining, the decision was taken to treat this node as a special case and not indicative of the types of community linkings that otherwise did, or did not, connect two given users.
- In order to reduce the number of nodes being displayed, those with no links towards them or only one connecting link total were not displayed.
- The option was added to hide all community journals or those which were not part of community groups
- The option was added to hide all nodes which were not part of community groups

Initially the crawler and visualization code was run by the author centred on a journal set up by the author as a means of interacting with the case study community. Based on the data returned by this visualisation further nodes were identified as potentially interesting initial nodes. For privacy reasons and in accordance with the rules set down in the introduction (see Section 1.3), the names of all personal journals (shown in blue on the diagrams) have been removed. As they do not relate to individuals, the names of communities (shown in red of the diagrams) have been left visible. Where specific nodes are referenced, they are either identified by the name of the node (communities) or by a letter (individual). This identification is consistent throughout this chapter.

[1] `http://community.livejournal.com/lj_maintenance/`

4.2 Analysis of the Results

Having described our methodology, we now consider the results of the visualization. The basic visualisation for node 'F' (see Figure 4.1) shows a pattern of interlinked users who make up a number of distinct community groups. Filtering out any community journal nodes which are not identifies as being part of a community and highlighting the identified community groupings clarifies the picture further (see Figure 4.2)

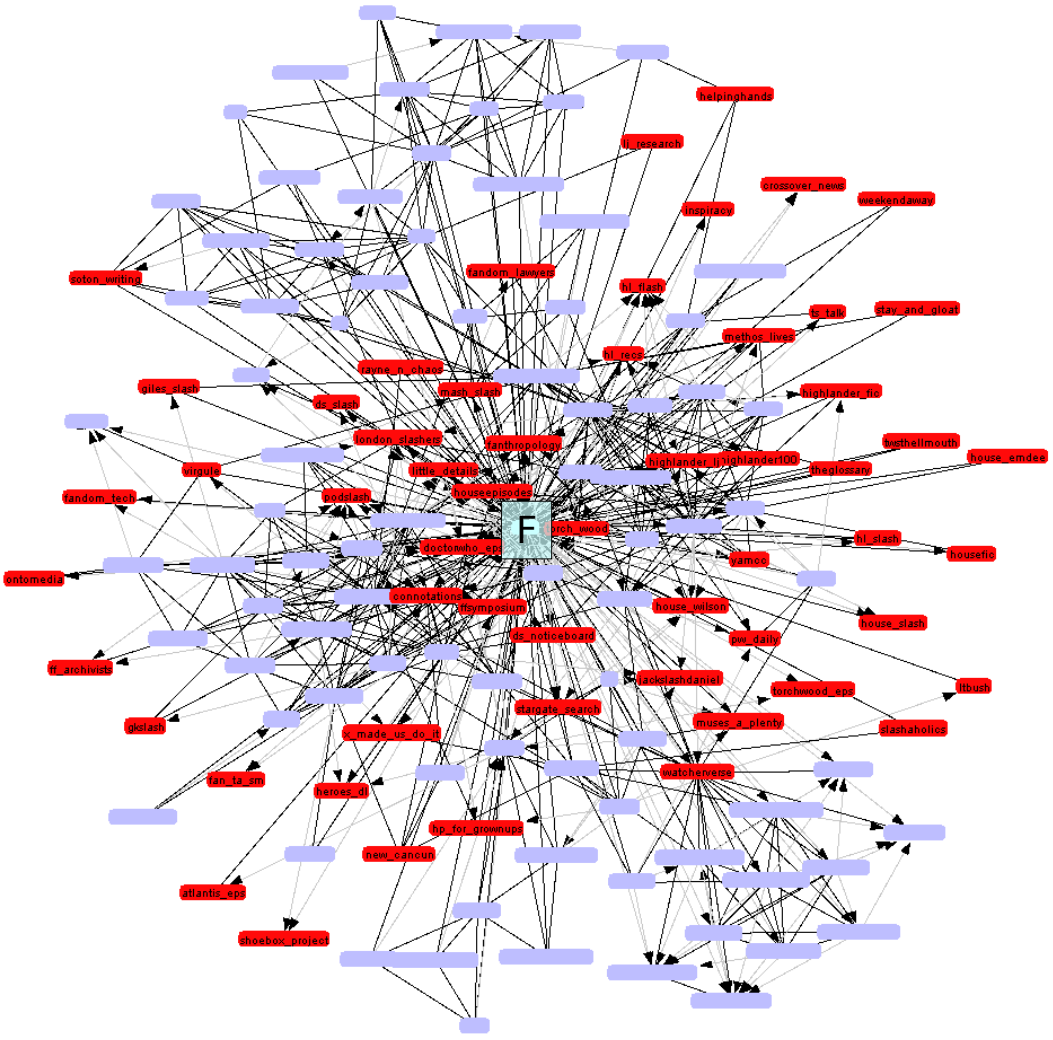

Figure 4.1: Social Connections on LiveJournal with Central Node 'F' (Code Version 1)

Six clustered groups were identified as relating to node 'F'. These were numbered 1 through 6 (see Figure 4.2 for identification). Of those six groups, one contained no community journals, Group 5, two were weakly connected to community journals, Groups 3 and 5, and three showed strong links, Groups 1, 4 and 6 (see Figure 4.3).

Through investigation of the shared interests of each group (see Table 4.1 and Section C.1) we can make a cautious identification of Groups 2, 4 and 6 as fan/fan fiction net-

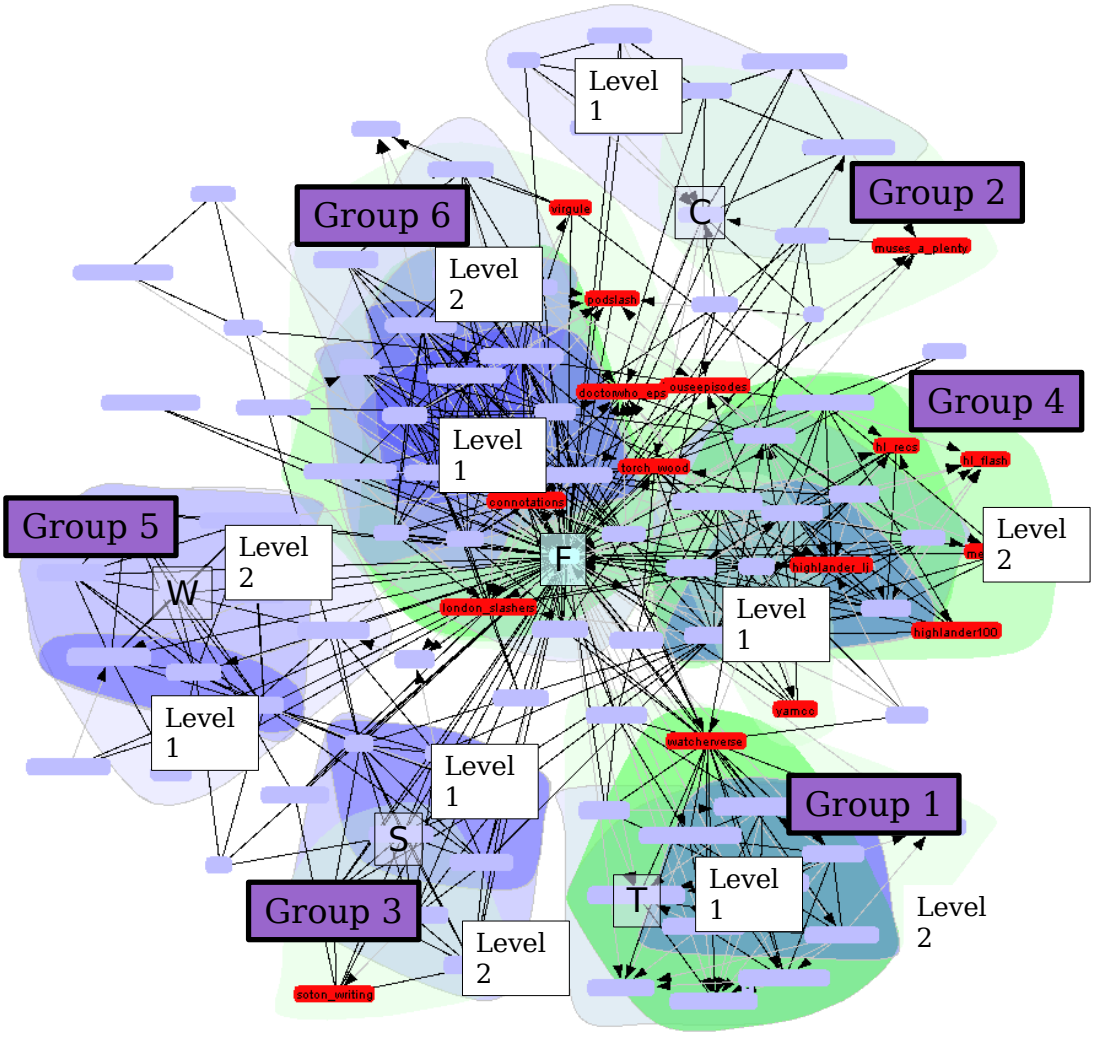

Figure 4.2: Social Network Groups on LiveJournal with Central Node 'F'. Main image highlighting groupings containing community journals (green areas) and those the groupings not including community journals (blue areas). (Code Version 1)

works. All three of these networks have one or more community journal node associated with them. Information given on the profile pages of the relevant community journals confirms this identification: Muses_a_Plenty[2], a general (fan) fiction writing support site, Highlander_LJ[3], a fan community site which allow the sharing of fan fiction as well as discussion, and two related to offline gatherings of fan fiction authors and readers, Connotations[4] and London_Slashers[5]. The sharing of social bonds as displayed by the preponderance of links between the personal journal nodes and the sharing of interest based information and resources as facilitated and demonstrated by the presence of the community journals, strongly suggests that these groups represent communities

[2] `http://community.livejournal.com/muses_a_plenty`
[3] `http://community.livejournal.com/highlander_lj`
[4] `http://community.livejournal.com/connotations`
[5] `http://community.livejournal.com/london_slashers`

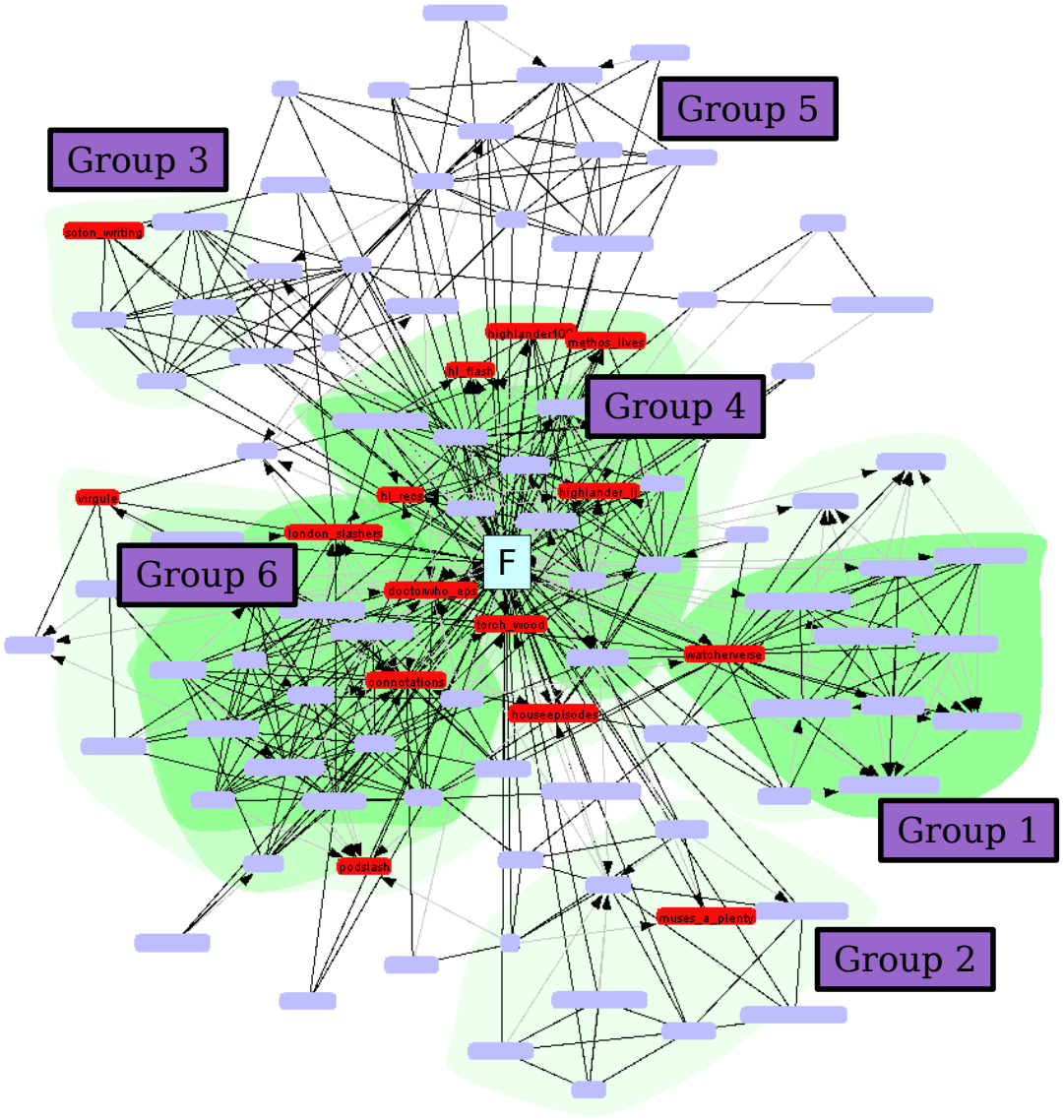

Figure 4.3: Social Network Communities on LiveJournal with Central Node 'F'. Darkness of green represents strength of links within that area. (Code Version 1)

(see Section 2.2). The missing factor of shared behaviours is beyond the scope of the information available through network analysis, although we would argue that it can be seen as inherent due to the social pressures that exist when there is collocation in a shared space. Further that investigation of the community journal profiles reveals that most include explicit rules of behaviour to which members must comply to retain their membership. On the basis of the factors described above (social interaction, shared interest/purpose, shared behaviour, shared resources) we argue that these networks can be described as communities.

Table 4.1: Most Common Shared interests of Nodes within Community Groups with Central Node 'F' (for full table see Section C.1)

Group	Level 1		Level 2		Community Journal Level	
	Interests	Nodes	Interests	Nodes	Interests	Nodes
1			Magic	3/9	Magic	3/8
	-	0/5	1/5		1/5	
	Community Nodes: Watcherverse					
2	Stargate	3/7			Slash Stargate Writing	3/6 3/6 3/6
	1/20 interests				3/21	
	Community Nodes: Muses_a_Plenty					
3	Over 15 interests at 2/5		Over 15 interests at 2/8		Writing	3/5
	n/a		n/a		1/11	
	Community Nodes: Soton_Writing					
4	Duncan/Methos Highlander Methos Peter Wingfield Slash	5/5 5/5 5/5 5/5 5/5	Highlander Methos	10/10 10/10	Highlander Methos	9/9 9/9
	5/81 interests		2/121		2/104	
	Community Nodes: Highlander_LJ					
5			Anime Babylon 5 Manga Utena	4/7 4/7 4/7 4/7		
	-	0/3	4/65			
6	Reading Slash Writing BDSM	3/4 3/4 3/4 3/4	Slash	6/9	Slash	3/15
	4/13 interests		1/28		1/70	
	Community Nodes: Connotations, London_Slashers					

The comparative weakness of the links between the nodes in Group 2 compared to Groups 4 and 6 is a potential argument against its identification as a community group. To investigate this differential, we took one of the nodes from Group 2, which we will identify as Node C, and created a visualization of the social network that surrounded that node (see Figure 4.4). This visualisation shows that Node C exists within a very tightly

packed network. Analysis of the shared interests (see Section C.2) that exist across the network suggests that there are three distinct areas (Areas 1-3) which can be identified as fan communities which allow the exchange of fan fiction. As with our analysis of the visualization of Node 'F', this information was confirmed through the profiles of the community journals which were identified as being central to the community groups. As an additional confirmation a visualization of the network around node 'C' was generated which included community journals up to two steps from the central node and which were identified as being within groups. This confirms the presence of community journals within this type of grouping.

A fourth area, Area 4, is also identifiable as a linking area between Area 1 and Areas 2 and 3. Analysis of the community journals that exist within this Area 4 are, according to their profiles, mostly related to discussion of the discussion that is going on within the other community groups. While representing a less distinct area than Areas 1 - 3, Area 4 still contains strong social links, the personal-personal journal linkages, and shared interests, the community journals. The presence of this area suggests that not only are there identifiable community groups but that these are part of a larger community. Taking the above analysis into consideration, it suggests that the comparatively weak links at appear in Group 2 are partly due to this group representing a bridging area between areas of more focused interest and partly due to the limitations of the visualisation process only displaying nodes one step from the central node.

Returning to the Node 'F' visualization, we consider the remaining three groupings: Groups 1, 3 and 5 (See Figure 4.3). From the analysis of the interests (see Table 4.1 and Section C.1) we can see a strong similarity in the interest trends between Groups 1 and 5. In both cases the more central nodes do not share any common interests, a distinct difference from the other groups we have analysed where the smaller collections of more tightly grouped nodes have had more interests in common. This suggests that there is no common interest shared by the group. It could be argued that this hypothesis is furthered by the lack of associated community within Group 5 however Group 1 is strongly linked to a community journal node. To determine whether there is a reason for this difference we consider the community journal that is associated with Group 1 and expand our visualization confirm the lack of presence of community journals in Group 5.

From the profile of the community journal associated with Group 1, Watcherverse[6], it was discovered that the majority of the nodes within Group 1 represent fictional characters created for a collaborative writing fan universe. In the visualization focusing on Node 'T', only one of the nodes displayed is not identifiable as a fictional character. This is interesting because it demonstrates that the social network of fictional people strongly resembles one of non-fictional users. The only difference between the two networks is that one represents a deliberate creation by a community, hence the strong linking to

[6] `http://community.livejournal.com/watcherverse`

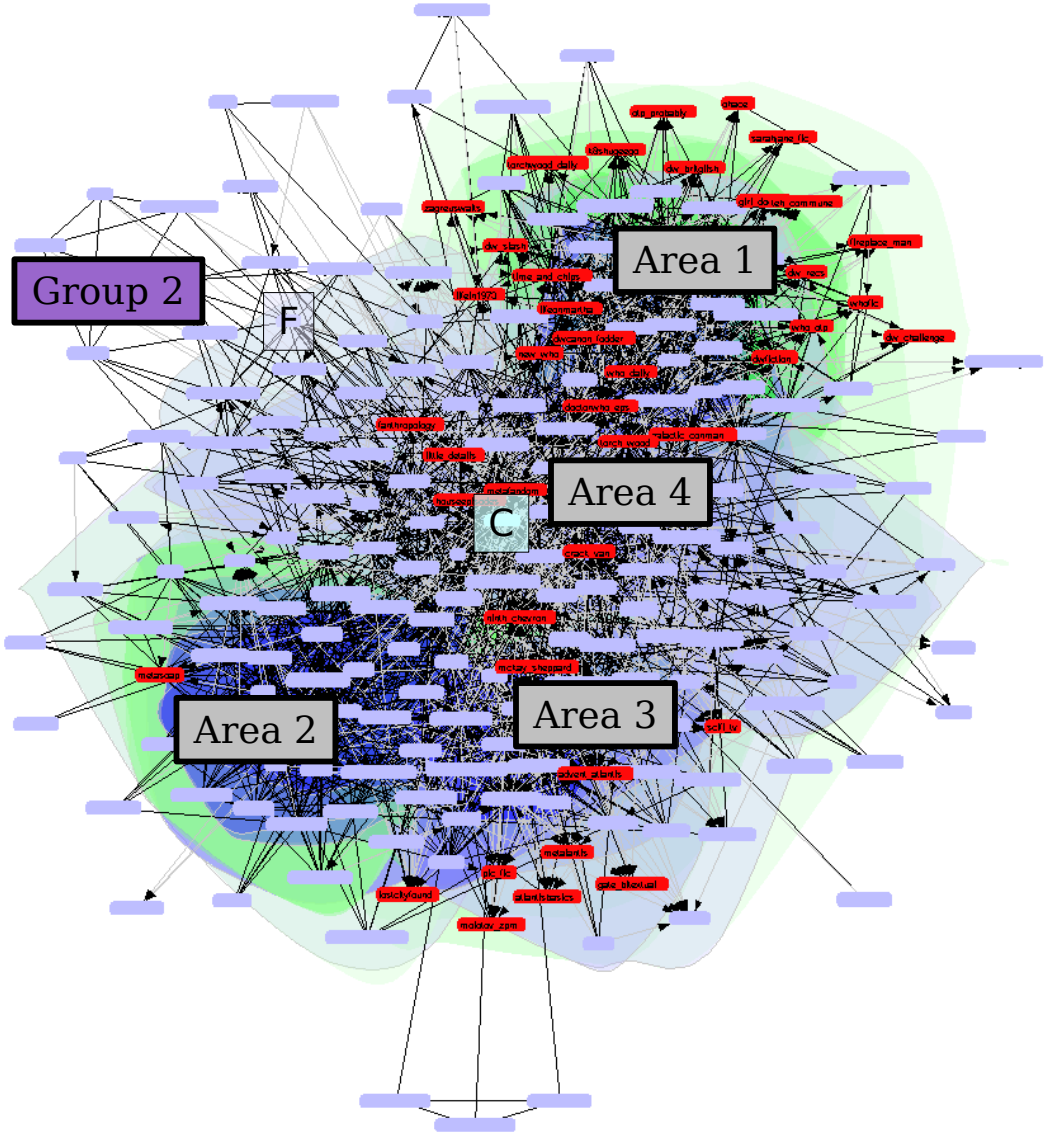

Figure 4.4: Social Network Groups on LiveJournal with Central Node 'C'. Image shows all personal journals and those community journals which were identified as being within a group. Groupings containing community journals highlighted in green, groupings not including community journals highlighted in blue. Areas identified in Figure 4.3 are labelled in purple. Areas identified in Figure 4.5 labelled in grey. (Code Version 1)

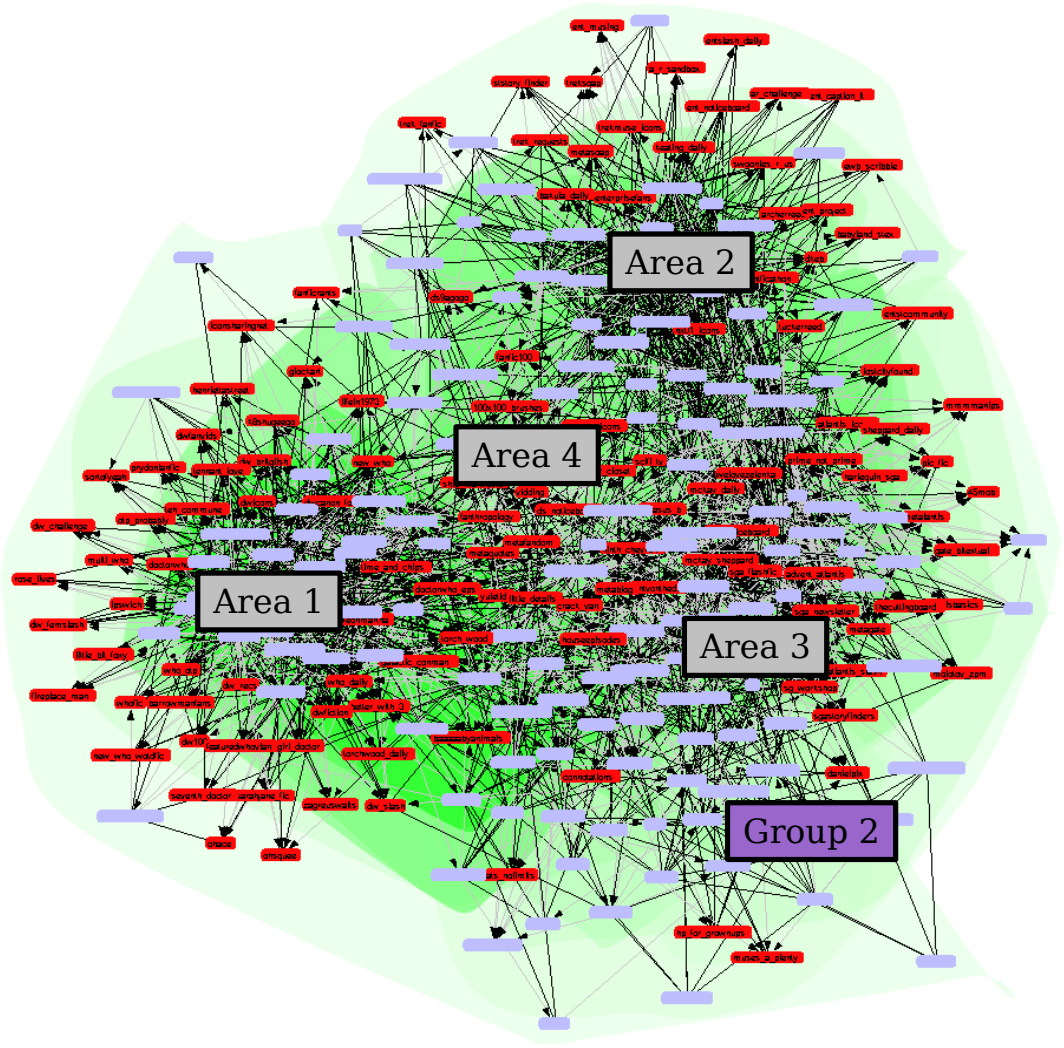

Figure 4.5: Social Network Communities on LiveJournal with Central Node 'C'. Image shows the extended community nodes that were identified as being within groups for personal nodes 1 step from node 'C' and community nodes which are two steps from node 'C'. Node 'C', as the gathering node has been removed to clarify the diagram. Groupings containing community journals highlighted in green. Areas identified in Figure 4.3 are labelled in purple. Areas identified in Figure 4.4 labelled in grey.

the community journal. As a creation of the community rather than a representation of users within the community, Group 1 is more closely related to the type of social network that can be seen illustrated by Group 5. In this respect, the presence of the community journal associated with the social network in Group 1 does not invalidate our hypothesis that there is a distinct difference between social networks of friends who may or may not have shared interests and communities which, by definition share both social and interest links.

The possibility exists that the community journals exist within the groups shown in the Node 'F' visualization but are not displayed because they are more than one step from

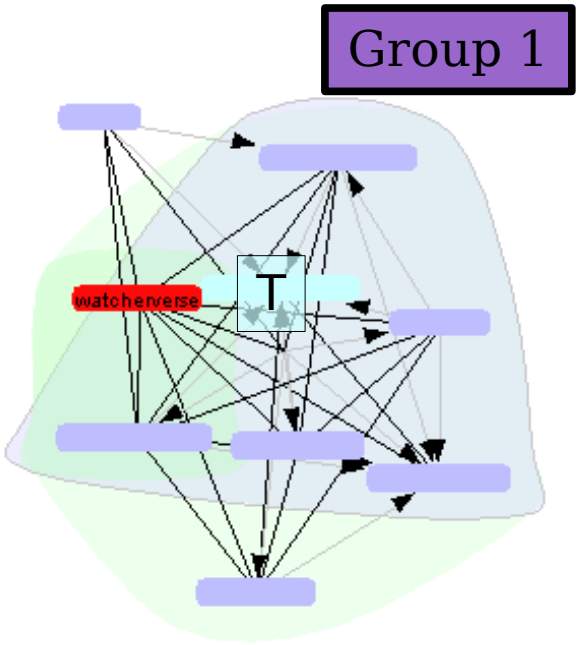

Figure 4.6: Social Network Groups on LiveJournal with Central Node 'T'. Groupings containing community journals highlighted in green, groupings not including community journals highlighted in blue. (Code Version 2)

the originating node. To investigate the potential existence of community journal nodes, further visualizations were generated for one node from Group 1, identified as Node 'W' (see Figure 4.7) and one node from Group 3, identified as Node 'S' (see Figure 4.9).

From the visualization of the social networks surrounding Nodes 'W' and 'S' we can see that the areas which relate to the Node 'F' Groups 2 and 5 contain no additional community nodes than those visible in the Node 'F' visualization. These two visualizations also show a number of other network groups which do not have connected community journals and those that do, demonstrating that the division seen in our initial visualization is not limited to that visualisation.

The visualization of Node 'S' also serves to emphasise the weakness of the link between the Group 3 community journal and the rest of Group 3. Unlike the other examples containing community journals, the grouping that contains the community journal is distinctly offset from the rest of the group suggesting that it represents a subgroup of Group 3 rather than a comparable one. Analysis of the community journal in question, Soton_Writing[7], reveals that it serves a university society. We argue that Group 3 represents a group of friends who are drawn together primarily by something other than a shared interest, although a number of the users that are identified as being within the group all have an interest in the same university society.

[7] `http://community.livejournal.com/soton_writing`

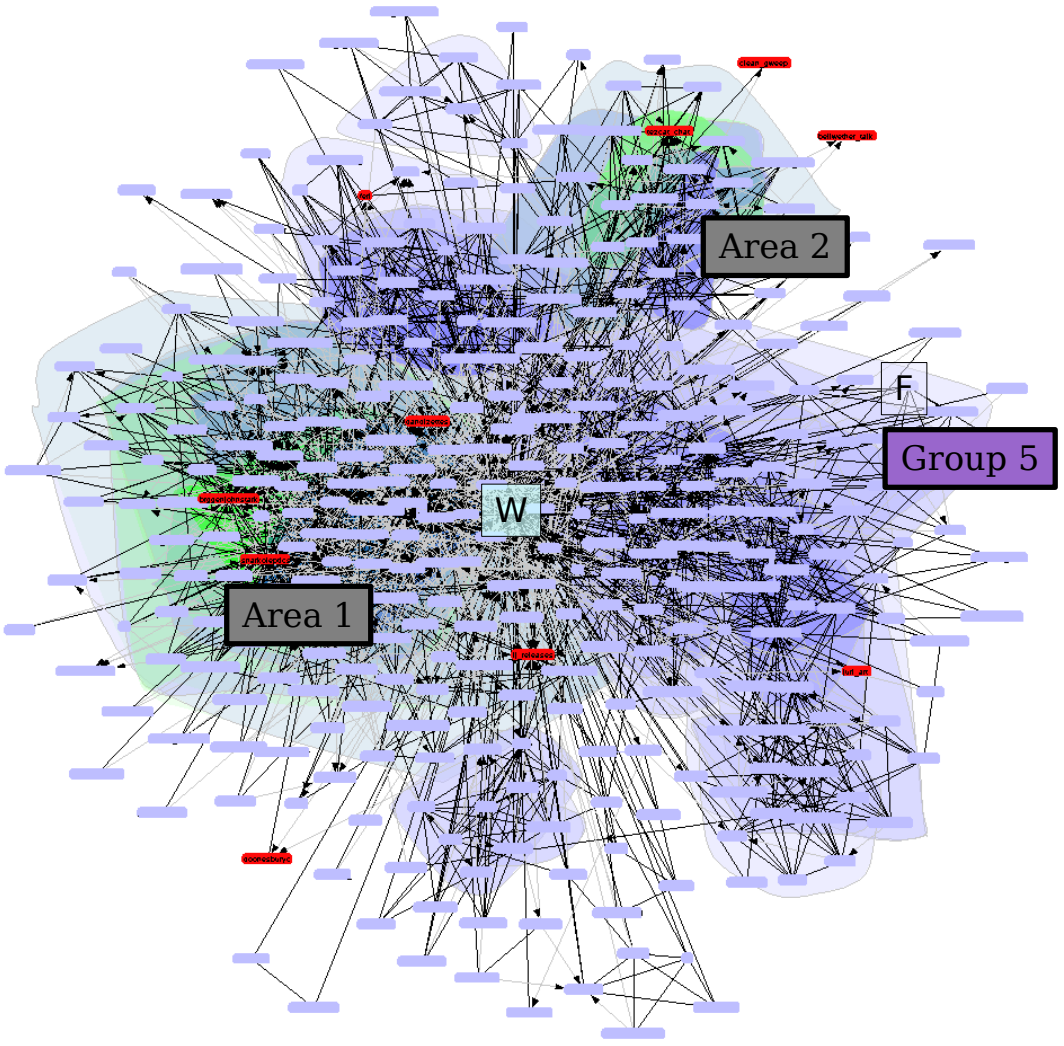

Figure 4.7: Social Network Groups on LiveJournal with Central Node 'W'. Image shows nodes identified as being within groups. Groupings containing community journals highlighted in green, groupings not including community journals highlighted in blue. Areas identified in Figure 4.3 are labelled in purple. Areas identified in Figure 4.8 are labelled in grey. (Code Version 2)

Given that LiveJournal, as a site, is accessible via a web browser, the links between the various users are stated in the profile for a given user, are both visible and browsable and the creation of these links is supported by the LiveJournal friend system, we would further argue that the networks contained on that site represent Web Based Semantic Networks (see Section 2.2). We argue that while Groups 3 and 5 represent social networks, and indeed WBSNs, no further inference can be drawn from them. These networks are noticeably different from those such as Groups 2, 4 and 6 which we have argued represent communities due to the presence of the community journals and what they represent.

As previously, from analysis of the shared interests (see Section C.3 and Section C.4) in

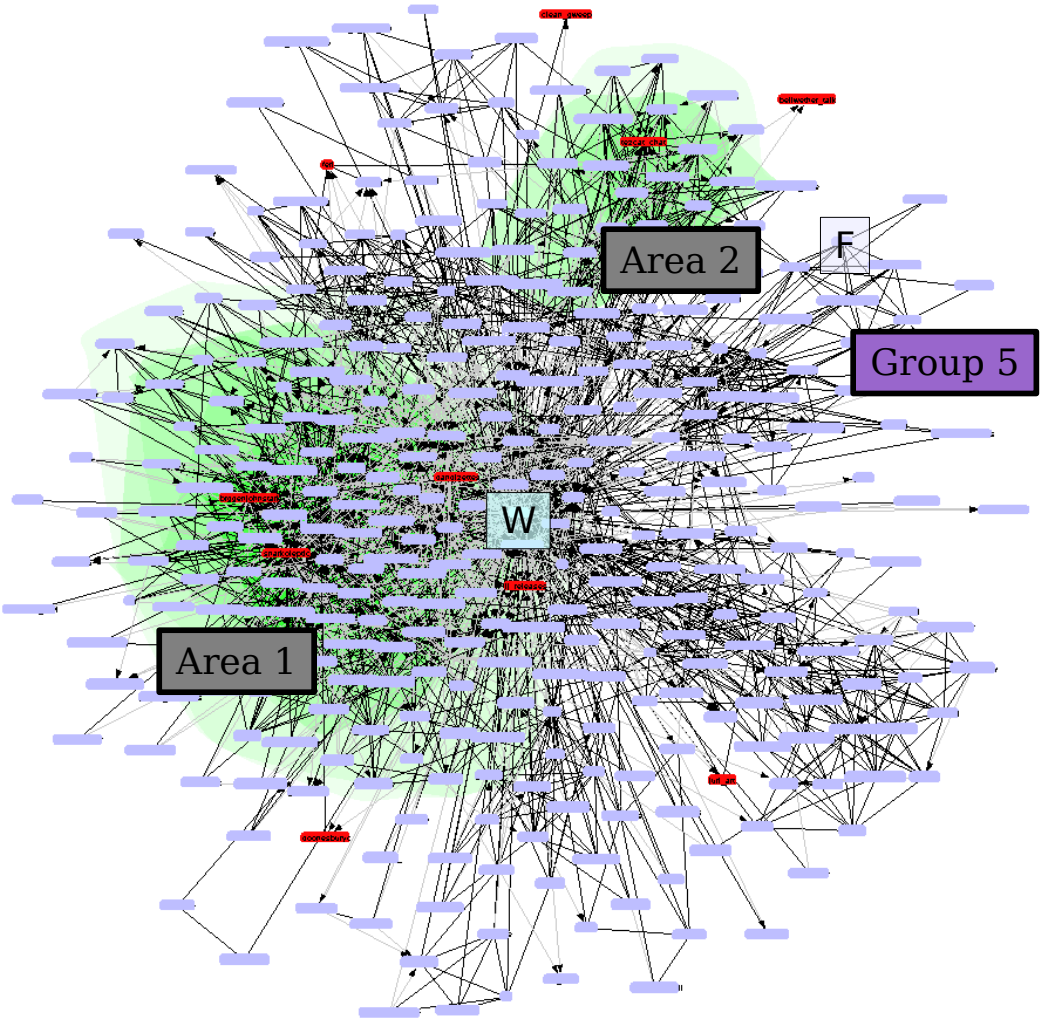

Figure 4.8: Social Network Communities on LiveJournal with Central Node 'W'. Image shows nodes identified as being within groups, groupings with community nodes highlighted in green. Areas identified in Figure 4.3 labelled in purple. Areas identified in Figure 4.7 are labelled in grey. (Code Version 2)

conjunction with information from the relevant community journals when extant, it is possible to identify the areas of interest around which the communities exist. The presence of communities centring around interests such as specific music genres, webcomics, authors and online forums strongly suggests that communities, as we have argued exist within the social networks, do so beyond our case study community. This supports our argument that while this thesis focused on the specific case as laid out in our case study, the research detailed in this thesis is applicable beyond our case study community to others of a comparable type.

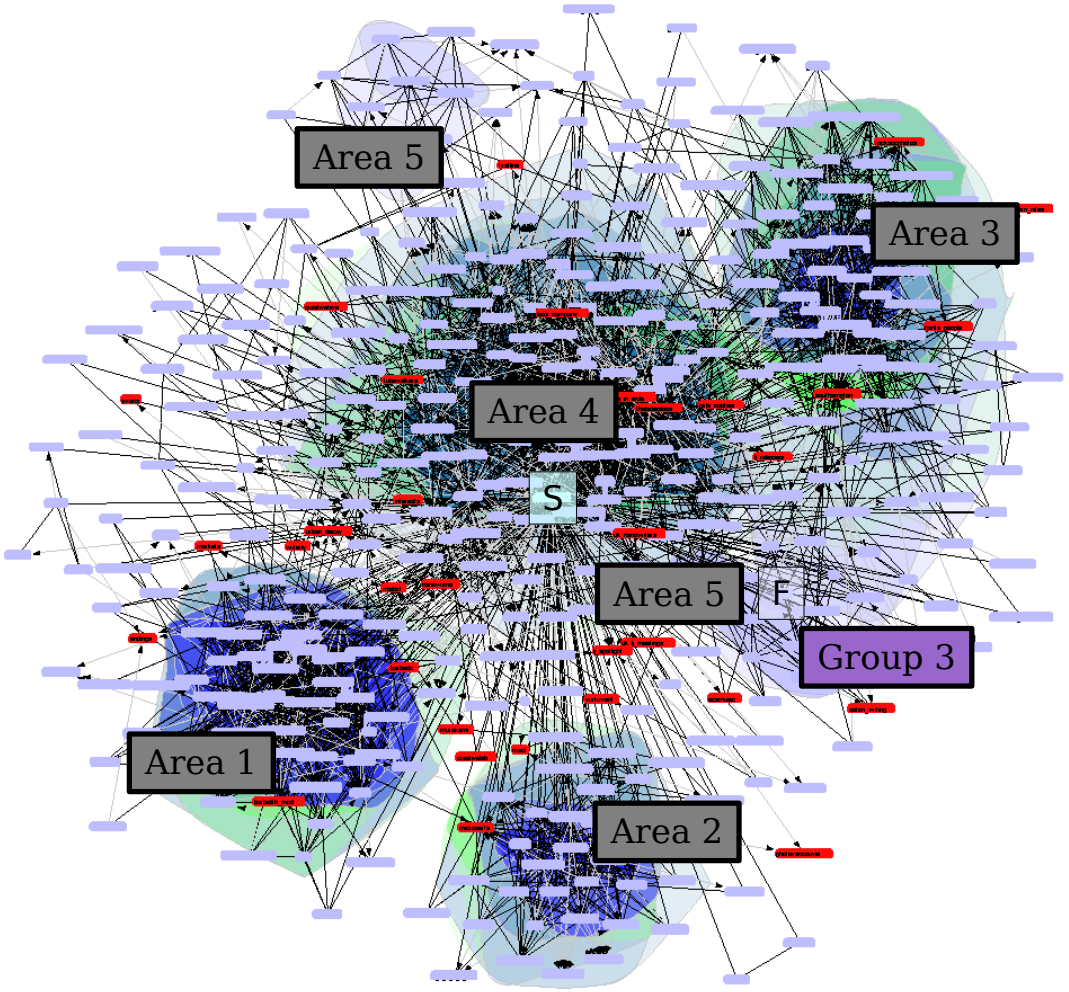

Figure 4.9: Social Network Groups on LiveJournal with Central Node 'S'. Image shows nodes identified as being within groups. Groupings containing community journals highlighted in green, groupings not including community journals highlighted in blue. Groupings of personal journal nodes highlighted in blue. Areas identified in Figure 4.3 labelled in purple. Areas identified in Figure 4.10 are labelled in grey. (Code Version 2)

4.3 Discussion

In this chapter we consider some of the patterns that can be seen in the visualisation of social network links. Previously, we argued that the community networks that are currently found within the semantic web do not necessarily describe communities as social constructs (see Section 2.2). We maintain that it is only those networks which have both social interaction and shared interests which fulfil the traditional social science definition of community and that, if this is shown to be the case, then that definition can inform the inferences and assumption that we can make on a technological level when analysing and processing data from and about communities of this type..

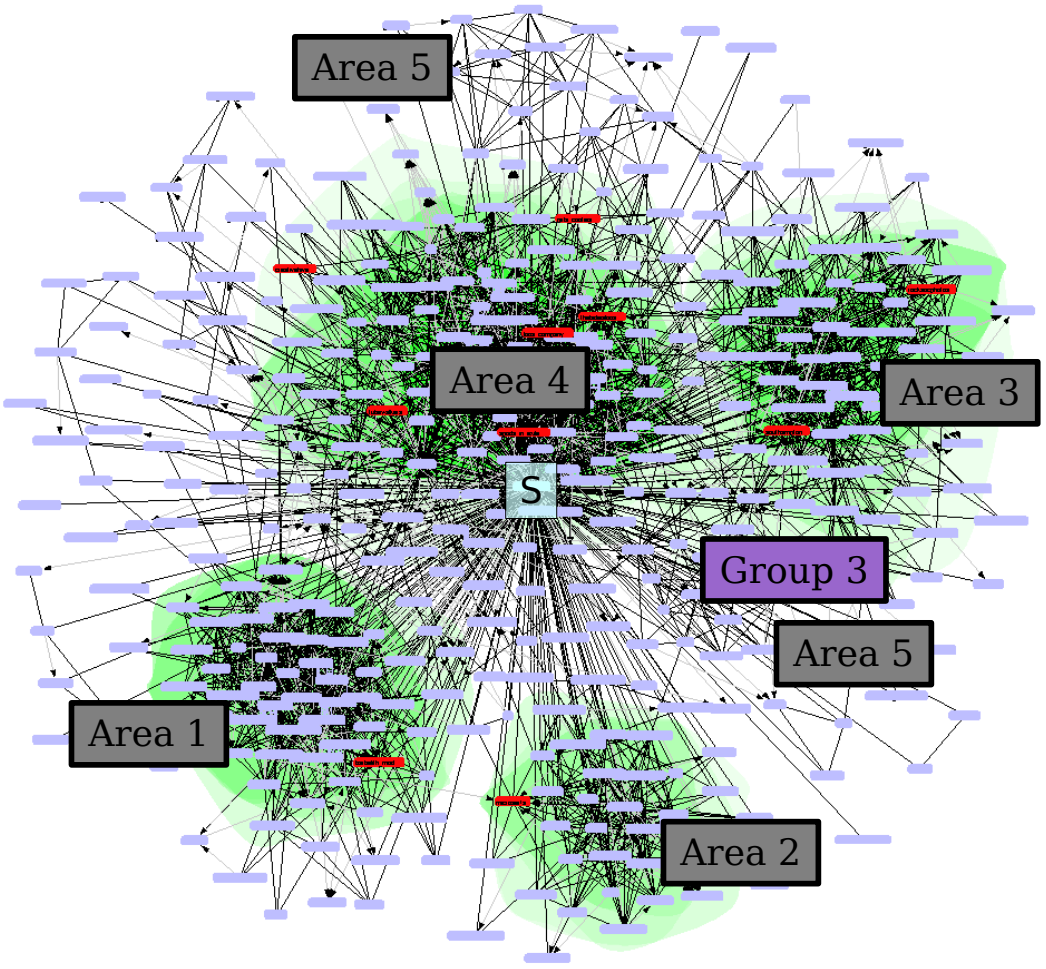

Figure 4.10: Social Network Communities on LiveJournal with Central Node 'S'. Image shows nodes identified as being within groups, groupings with community nodes highlighted in green. Areas identified in Figure 4.3 labelled in purple. Areas identified in Figure 4.9 are labelled in grey. (Code Version 2)

This builds on the current work done on social networks (see Section 2.2) by taking one significant and commonly seen structure that exists within social matrices and investigating the phenomenon more closely from both a social and technical perspective. If we consider the information we have gained through the visualization of the network and the responses to the survey, as detailed in the previous chapter, in the context of the common definitions of community, as exemplified by Whittaker et al. (1997), Preece (2000), Golbeck (2005, P. 13)'s WBSN and Wenger (1997)'s COP, we get the following result:

Members have some shared goal, interest, need, or activity that provides the primary reason for belonging to the community:

Taking the first requirement for community proposed by Whittaker et al. (1997) as

covering Preece (2000)'s requirement for a shared purpose and Wenger (1997) for a shared practice, we consider the evidence for a primary reason that any given nodes were part of identifiable groups within the visualized network structure. As we have presented above, the users in those groups most strongly identified as community groups, share a practice (writing and sharing the work they have created) and in the case of fan writers, a shared interest in the source material that acts as inspiration. The presence of collective interests can be seen clearly in our analysis of the interests shared by the grouped users with only those bridging general community journals not imprinting their areas of interest on the surrounding nodes.

This differs from the users in the groups not identified as as community groups. While those networks may have many social links they have no demonstrably over-arching interest or goal. It seems likely that these groups represent friends or colleagues for whom the social and/or co-locational bond provides the linking factor. They may, in some cases, therefore represent communities of practice as we might expect from groups with a co-locational bond such as work colleagues. Since this is the only requirement for a group to be identified as a COP, this identification adds little to our understanding of the group.

Members engage in repeated active participation and there are often intense interactions, strong emotional ties and shared activities occurring between participants:

It can be argued that second requirement given by Whittaker et al. (1997), corresponding to Preece (2000)'s first of social interaction, can be seen between all the nodes that are identified as being within groups. While the emotional content of the links cannot be derived from the information available to us, the links represent one user's desire to interact with another, even if that interaction is as basic as reading the other user's journal. Boyd (2006) compares the 'friend' links on LiveJournal with those of other social networks. She concludes that because of there is no structural requirement for receptivity in the friend links (the mono-direction links, shown in grey in our visualization) and the connection between friend links and privacy setting there is a greater social weight inherent in the bidirectional links (those shown in black on the visualization). This supports our hypothesis that the links between the node, especially those identified as bidirectional, satisfy this requirement.

Members have access to shared resources and there are policies for determining access to those resources:

The definition by Whittaker et al. (1997) is the only one to require shared resources. Archives, websites, mailing lists and community journals act as points of contact for members of the community and places through which information, media objects and other resources can be shared as well as social norms being set agreed on and enforced. While access is mostly controlled through obscurity, a scheme that is growing less effective, many of these nodes require users to join or otherwise have an account with the

site to gain full access to resources. Some have additional access policies such as age restrictions. In the case of our visualization, these shared resources are represented by the community journal. Above we discussed their presence, or lack thereof, within the different groups that we identified. The conclusion that we drew, was that their presence was an important factor within some groups, most noticeably those we identified as communities (their presence being one of the factors leading to that identification).

Reciprocity of information, support and services between members:

As with the previous requirement, this is also exclusive to Whittaker et al. (1997). The community journals exist as places for uses to gather, request and share information. Since is is an open process with all users having the option to both request and provide information it can be seen as representing a reciprocal relationship. Beyond this, as we can show by analysis of the profile pages of the various community journals, they also act as places to the exchange and review media objects created by members of the community, again a reciprocal activity with members providing media in exchange for the provision of other media and of comments and feedback on their work.

A common set of expected behaviours:

Preece (2000)'s requirement for shared expectations of appropriate behaviour can be correlated with the concept proposed by Whittaker et al. (1997) of a shared context. It can be argued that members of our case study community have a shared set of expected behaviours as demonstrated by the consistent way in which media objects are published and the metadata associated with those objects. Community expectations set the type of information and level of detail which authors are expected to include. There is also an understood etiquette going beyond standard netiquette (Bury, 2005; Hellekson and Busse, 2006) and this can be seen detailed on the profiles pages of a number of the community journal sites that we identified in our visualization. As these community journals act as a central hub for the nodes which link to them it seems reasonable to argue that the standards of behaviour laid down at the community nodes are at least acknowledged by the users being represented by the connecting nodes. The overlapping nature of the community groups as seen in the larger visualisations suggests that a common set of behaviours exist due to the interconnection of the users.

System must support the creation of the intra-community relationships/links:

While these links exist within websites such as LiveJournal, or JournalFen, as demonstrated above (see Section 4.2), they are not routinely or explicitly stated outside of these domains. Despite the popularity of LiveJournal and other electronic journalling sites, the users of these sites represent a small subset of the community. For the remainder of the community using mailing lists and other similar methods of communication there is no way to describe these relationship nor is there a way to do so in a cross-site manner. Even in those cases were such links can be described there any definitive way to to say

when these relationships are substantiated.

A computer system, of some type, mediating and facilitating communication:

Due to her focus on online communities, Preece (2000) requires a computer-mediated aspect as part of her community definition. Since the visualization data was collected from LiveJournal, all the groupings that we identify within the visualization fulfil both this condition and Golbeck (2005)'s of accessibility via a web browser.

Relationships/links between users must be directly stated, editable and browsable:

The majority of that requirements for the identification of a WBSN related to the relationship links that exist between the various nodes within the network. The visualizations were created through automatic processing of the links proving that they were stated, visible and browsable. That the links exist at all shows that the system, in this case LiveJournal, supports the creation of defined relationships as codified as mono- or bidirectional links.

From the above, we can see that while the network groups without the community nodes might be definable as communities of practice or web based semantic networks, only those with both user and community nodes fulfil all the conditions laid down by the four definitions. We argue that this combination of community of practice, social network and community, represents a distinct and significant structure within social networks.

We would further add to this definition and suggest that not only is the interaction within this type of community structure computer-mediated, but that is is also metadata-mediated. By this we mean that not only are the social links explicitly defined but that the resources shared by the community also carry some form of metadata. We propose to call this type of community as Internet Based Semantic Community (IBSC) to differentiate it from those other forms of community which we have discussed.

In making the case for the differentiation of this type of community, we lay out the concept of a semantic web based group which goes beyond the standard networks, social or practice, to support online communities. By treating IBSCs as different from other types of social network groupings we can leverage the definition of a community to allow inference and reasoning which would not otherwise be possible. Further, that the omission of this distinction is significant because it directly affects a number of interactions variables such as users' expectations of other users behaviour and their expectations of how the technology supports the user-user and user-community relationships. These expectations are directly connected to the concept of trust (see Section 2.2.1) and through trust to related applications such as access control.

While we have made our case for IBSCs, and our case study community as a representative example of such, the system that we have analysed in this chapter relies on the

use, by the community, of LiveJournal (or a similar website). While, as mentioned, we chose LiveJournal for this analysis because of the strong presence of the community on it, the community extends far beyond LiveJournal. In the remainder of this thesis we propose technical solutions which would allow the community as a whole, to meet the definition of a IBSC without being reliant on specific sites.

Part III

Social Modelling

Chapter 5

Describing Identity within the Online Fan Community

5.1 Methodology

In discussing online identity, Mackinnon (1995) wrote that the fundamental truth of the individual in an electronic context was: "I am perceived, therefore I am". In this chapter we considered identity as a facet of community membership. In doing do we have taken the user requirements generated by our investigation of our case study community and asked how these needs correlate to the current systems as typified by the FOAF schema.

Hypothesis: The identity of a member of a community represents their projection within that community. In the previous chapter we have shown how a user's involvement within a social network community structure as modelled in a computer system defines their representation within that system. Having made this argument we hypothesise that by modelling identity with the focus on identity as an aspect of community involvement we can extend the way that the user's presence is registered and processed within a computer network.

Methodology: In this section we consider the concept of identity, both in terms of a user's identity as an individual and as a member of a group. Having identified community networks as a specific sub-section of social networks, we ask how members of those networks might wish to be identified. As part of the community definition there exists the idea of members publicly identifying as part of that community or those communities of which they are members. Given this, we consider how this identification can be encoded within the identity construct. Using the community group identified in the previous chapter as our case study group, this section takes the user requirements identified related to identity and considers the issues related to implementation.

The Friend of a Friend (FOAF) ontology (Brickley and Miller, 2004) is extensively used

to describe agent constructs, including users. As we have described in our hypothesis, we argue that by extending this schema we can extend the way that identity is projected from being a construct of the individual to being a construct of the user and their actions within the context of the online community within which that identity exists.

Hypothesis: Going beyond the concept of individual identity we consider how individual community members are tied in to the rest of the community and using this involvement we hypothesise that it is possible to calculate a user's reputation within the community. Further, that this reputation, due to the definition of a community, can be leveraged to create a trust rating within the context of users abiding by the community's shared practices and behaviours. In communities such as our case study community, this trust rating, based on the social capital of the user within the community, can therefore be used in situations such as access control where a negotiation exists between those providing the information and those requesting it because the level and type of information provided is governed by community practice, while the provider is required to trust that the requester understands and accepts the implications of that request as one would expect from a member of the community.

Methodology: This continues the work in the previous section in focusing on the highly interlinked areas of social networks as representing a distinct subtype. Having taken this subtype of social network matrix and applied social science reasoning to the interactions, we argue how this can be modelled within the technology and argue that community standing, that is the social capital gained through community activity, can be used as a potential trust metric. Using the extension to FOAF that we propose, we consider a new way of modelling community capital and setting up a trust system based on analysis of this data. The rationale behind this system is based on the definition of a community as drawn from the social sciences. It is designed in such a way that the community can set controls based on shared rules and allow for the possibility of an initiation model which can be set up to work in an automated but personalisable manner. This trust metric differs from previously suggested metrics as it is based directly on the idea of the community pressure to conform to community standards that exists within community structure. The metric does not represent the trust between two individuals but the level of trust that exists between the individual and the community body. This is important because as we saw from the user requirements discussed in the previous section the problem of access control and member age is a contentious one but of growing concern. Through laying out a trust system that works within the current practice and does not require offline personal details we argue for a new way to support communities and their related standards while allowing for addition of extra controls into the social networking system.

5.2 Results: The Fan Online Persona Extension to the FOAF Schema

The Fan Online Persona (FOP) ontology was designed as an extension to the Friend of a Friend project (Brickley and Miller, 2004). The extension was created for two main reasons: to clarify the options available and applicable to the needs of amateur writers and their related readers, and to de-emphasise those which were not required. The class structure of the extension is shown below. Classes drawn from other ontologies, such as FOAF and Wordnet, are shown in italics and their provinence indicated by a prefix to the class name. See Appendix E.1 for the OWL definition.

- *FOAF:Person*
  - Persona
- NomDe
- *Wordnet:Domain*
  - eDomain
    - Archive
    - Fandom
- *FOAF:Document*
  - MyMedia (also subclasses eDomain, equivilent to OntoMedia:MediaRegion)
    - Image (also subclasses Media, equivilent to *FOAF:Image*)
      - Manip
      - Illo
    - Text (also subclasses Media)
      - Essay
      - Fic
      - FilkLyrics
    - Vid (also subclasses Media)
    - Audio (also subclasses Media)
      - AudioFic
      - Filk
  - Media (also subclasses eDomain, equivilent to OntoMedia:MediaRegion)
- *FOAF:Group*
  - SubscribedGroup (also subclasses eDomain)

  - Knights
- Compurgation
- *Wordnet:Assessment*
  - Rating
    * VouchLevel
    * TechAccuracy
    * Originality
    * Engagement
    * CanonAccuracy
    * Characterisation

Adams and Sasse (2001) argue that "users' privacy perceptions relate strongly to users' misconceptions due to inaccurate social and physical cues and not to a simplistic categorising of the data transmitted". As we discussed in the previous chapter (see Section 2.1, we believe that the presentation of forms to users in which they are asked for specific personal details constitutes a cue to the user that filling in such data is expected.

It has been suggested that "the more fundamental issue holding back widespread adoption of FOAF is privacy" (Smarr, 2004). The privacy issues, such as they are, are solely due to the totally open nature of the FOAF files. While users can choose to encrypt their own e-mail address and thus decide how much information about themselves to reveal, the possibility of other people revealing their personal details can lead to potential difficulties. There is no requirement for FOAF files to contain information related to a person's offline details or, indeed, to refer to a 'real' person. While the primary aim of FOAF is to create machine readable description of "people, the links between them and the things they create and do" it is clear from the available options that some combination of on- and offline details is expected if not encouraged by the forms available for data entry. The creation of the `fop:Persona` construct is intended to reinforce the differentiation. It may seem that the low requirement for FOP file creation and the lack of a strong link between off- and online will make such files meaningless, but as we have discussed above people become very attached to the persona they create and do not often create new ones unless a specific reason arises. This reason may be due to having gained a bad reputation, in which case a new persona will only be created if the disadvantages faced by the current identity are worse than those faced by a new construction. Given the low level of risk with which non-critical data and non-commercial interactions are assigned this is unlikely to be a large-scale issue. The most likely time when this would occur would be related to access control, especially an underage person accessing adult material. In this case the person with the most vested interest in preventing this happening is in all probability the parent, who (having been alerted to the problem) will be able to monitor the creation of the new persona.

It is for these reasons that the first of the changes in the extension was to subclass the `foaf:Person` class to `fop:Persona` and the creation of the `fop:NomDe` class which allows users to designate a context with which a specific username should be associated. The reason for doing this is to create a way of making a persona and community declaration which can be used in an IBSC while still remaining totally separated from the offline world. This is intended to be in line with Friedman's stated ideal "to maintain a persistent identifier within each social arena without relying on the verification and revelation of true identities" (Friedman and Resnick, 1999, P. 177).

Since we are dealing with a IBSC, we can assume that there is a shared set of behaviour values to which users need to conform or risk losing reputation. However reputation is gained simply by taking part in the social interaction which defines the community structure. Additional reputation may be earned through creation of works of media which results in their being known as a writer worth reading. Friedman sees "the distrust of newcomers is an inherent social cost of easy identity changes" (Friedman and Resnick, 1999, P. 176). This fits in remarkably well with the online community system because it is expected for members to know the rules of the community and newcomers need some time to learn what the expected behaviours are.

Within the amateur writing community the majority of the resources are going to be freely accessible to anyone, as can be seen by their current availability. This means that even 'untrusted' newcomers will have opportunity to be fully involved in the community process and thus gain trust. It is only if an author is concerned about making her, or his, work freely available, for example, due to the sensitive or adult nature of the subject matter dealt with, that the identity of the person trying to access the work becomes an issue.

By studying common practice it was possible to divine what was seen as important by the community. The FOP ontology also covers explicit descriptions related to the types of activities that interaction with the amateur writing community flagged as being important.

The FOP extension to `foaf:Group` includes the options to indicate the type, theme and restrictions for discussion forums such as mailing lists or electronic journals of which the user is a member or an administrator.

The expansion of `foaf:Document` allows FOP users to specify details of their own creations and make recommendations and reviews about others' work. The creation, exchange and review of works and ideas is the *reason d'etre* of the online amateur writing community. Where FOAF files consider work and school information, FOP files dismiss this information as potentially dangerous, and irrelevant when compared to specifying in which archives a persona's work is stored.

To keep the FOP ontology simple, information was restricted to the bibliographic level. As part of this restriction, any details related to the content of any given item were left to external resources to describe. This decision was mainly due to the contentious nature of issues such as ratings and warnings. Since a more complex system was needed to meet the needs in this area it made sense to leave it to a more complex system. The OntoMedia ontology (see Section 7) describes the content of media, see below, and is intended to complement the FOP ontology. While not totally integrated the two ontologies were envisioned to work together with the OntoMedia detailing additional information about media items, and their content, that biographical information did not cover and the simple FOP structure intentionally lacked the structure to do.

We argue that this would allow the social networks of amateur writers to be studied both at the friends- and the collaboration-level. Further that the amalgamation and analysis of this data could be used to support the community by laying the base upon which recommender systems could work and by allowing people to more easily find others whose taste they share as well as whose interests (Liu et al., 2006).

5.3 Discussion

FilmTrust[1] created by Golbeck (2005) is a film review site which uses a user's trust of other user's opinions on films to provide a parallel rating system. This means that the user can chose to give more credit to those people who, according to their user profile, have a comparable taste in films. The system is based on a version of FOAF that has been extended to include a trust rating. The success of this application lays the ground work for further projects, like this one, which have a similar initial premise.

The issue of trust is an important one in the amateur writing community, not just in the area of recommendation but also in the area of access control. If we consider the relationship between the reader and the writer, then we can see that a negotiation of trust occurs between the two (see Fig. 5.1). The reader has to trust that the information that they are provided by the author or distributor falls within an acceptable level of accuracy. This problem is not unique to this domain and occurs whenever metadata is created. In the amateur writing community it is considered more acceptable to be over-cautious than lenient. This is partly due to differing standards of what constitutes acceptable content, for example, the amount and type of obscenity which can be included without warning for adult content and similarly whether certain types of relationship should automatically raise the story to the level of adult-only even when there is no explicit content.

When a story is over-rated then the reader may be disappointed but less trust is lost than when the story is under-rated. This can be seen in the recent discussion that

[1] `http://trust.mindswap.org/FilmTrust/`

occurred on the HelpingHands electronic community journal[2]. The journal exists as a nexus for fan and other amateur writers to engage with parents over the technical problems and possible solutions related to preventing children stumbling across adult content while looking for child-friendly sites. While it was not seen as a solution, one of the steps taken to provide help for parents was the creation of a list of sites suitable for children. The suggestion was tabled to remove one well known site (fanfiction.net) from the list due to the level of distrust that existed about the self-assigned ratings attached to each story. This doubt was created by a minority mislabelling their work but it had a significant effect on the reputation of the archive. In this case the resulting compromise was that the archive remained within the list but a note was added to warn readers that the metadata attached to the stories might be misleading[3] thus propagating the message of distrust while allowing other readers the opportunity to judge for themselves.

The reader's dilemma, which at its heart is just the standard problem of the accuracy of metadata, is less interesting in many respects than the writer's dilemma. For a long time the understanding that existed in the amateur writing community was that the writer or publishing website would provide information to a known level of detail (which varied between communities), and then the reader could decide whether or not they would choose to read the work. This negotiation assumes that the information provided to the reader is correct. Having made that assumption, the decision over whether to access the document is left wholly to the requester. The trust at this stage revolves around whether the provider can trust the requester to make the right decision.

If we consider the worst case scenario to be the requester being exposed to something they did not wish to read then, assuming that the information is correct, the logical place for that final decision on access to be made is by the requester since they are in the best position to what they do and do not wish to view. This belief can be seen in the arguments made in petitions against the removal of adult-rated stories from FanFiction.net

> This is an outrage. We as writers are suffering because of reader's blatant disregard for warnings. Any work of fiction that falls into the NC-17 category is CLEARLY marked and labelled. Every work of this nature is optional to read. Months ago, Fanfiction.net installed a PG-13 default, making it impossible for any work of NC-17 nature to be found, unless one were to change the default settings.
>
> By removing the NC-17 option, this is mocking, offending, and insulting writers everywhere. If a reader stumbled upon a piece of fiction that is clearly marked as NC-17, it is purely his or her own choice to read. If they read it, it's their own fault and they have no right whatsoever to complain to the staff at Fanfiction.net. (Twiss, 2002, 1699 signatures as of 12/9/2006)

[2] `http://www.livejournal.com/community/helpinghands/`
[3] `http://www.livejournal.com/community/helpinghands/3351.html`

> We, the undersigned, feel this sudden banning of adult stories is a slap in the face to the innocent writers that properly rated our stories in order to keep them from the eyes of children. Fan fiction authors are not responsible for what children read. Rather, this is the responsibility of parents. If parents are concerned about what their children read, they should take the time to make sure their children are not reading stories that contain adult material. (Bustamante, 2002, 2785 signatures as of 12/9/2006)

> As a writer I find this unfair that this sort of fiction is been removed for the very reasons it is rated that in the first place. People complaining shouldn't be reading it, rating systems are there for a reason. 'controversial subject matter' is what makes it NC-17, and it's not aimed at younger readers, it's rated NC-17 so younger readers DON'T read it. (Miller, 2002, 761 signatures as of 12/9/2006)

While these objections had no effect, they clearly demonstrate the belief that if the correct information is provided then it is up to the user as to whether they request the resource or not.

Despite the prevalence of this attitude within the community, the balance, as effected by external pressures, is changing with the weight of perceived responsibility being moved away from the requester to the provider. The implicit assumption now required is that the requester cannot be trusted. This can be seen in the following quote from a Cease and Desist letter sent to the Harry Potter archive RestrictedSection.org in 2002:

> There is plainly a very real risk that impressionable children, who of course comprise the principal readership of the Harry Potter books, will be directed (e.g. by a search engine result) to your sexually explicit web site, which you will appreciate most right-minded people would consider wholly inappropriate for minors. Plainly the warnings to the effect that children under 18 should not access your website do not in fact prevent minors from doing so. Indeed, *such warnings may well serve simply to entice teenagers to your site* [emphasis mine]. (Cease and Desist 1, 2002; Cease and Desist 2, 2003)

Despite the information on content being provided accurately, it is not only seen as the provider who is responsible for the requesters' behaviour, with the implicit assumption that the majority of requesters will not act responsibly, but that the metadata is in itself suspect.

To deal with this new mistrust inherent in the network, the FOP files include the options necessary to model a web of trust. Rather than using the general structure seen in the

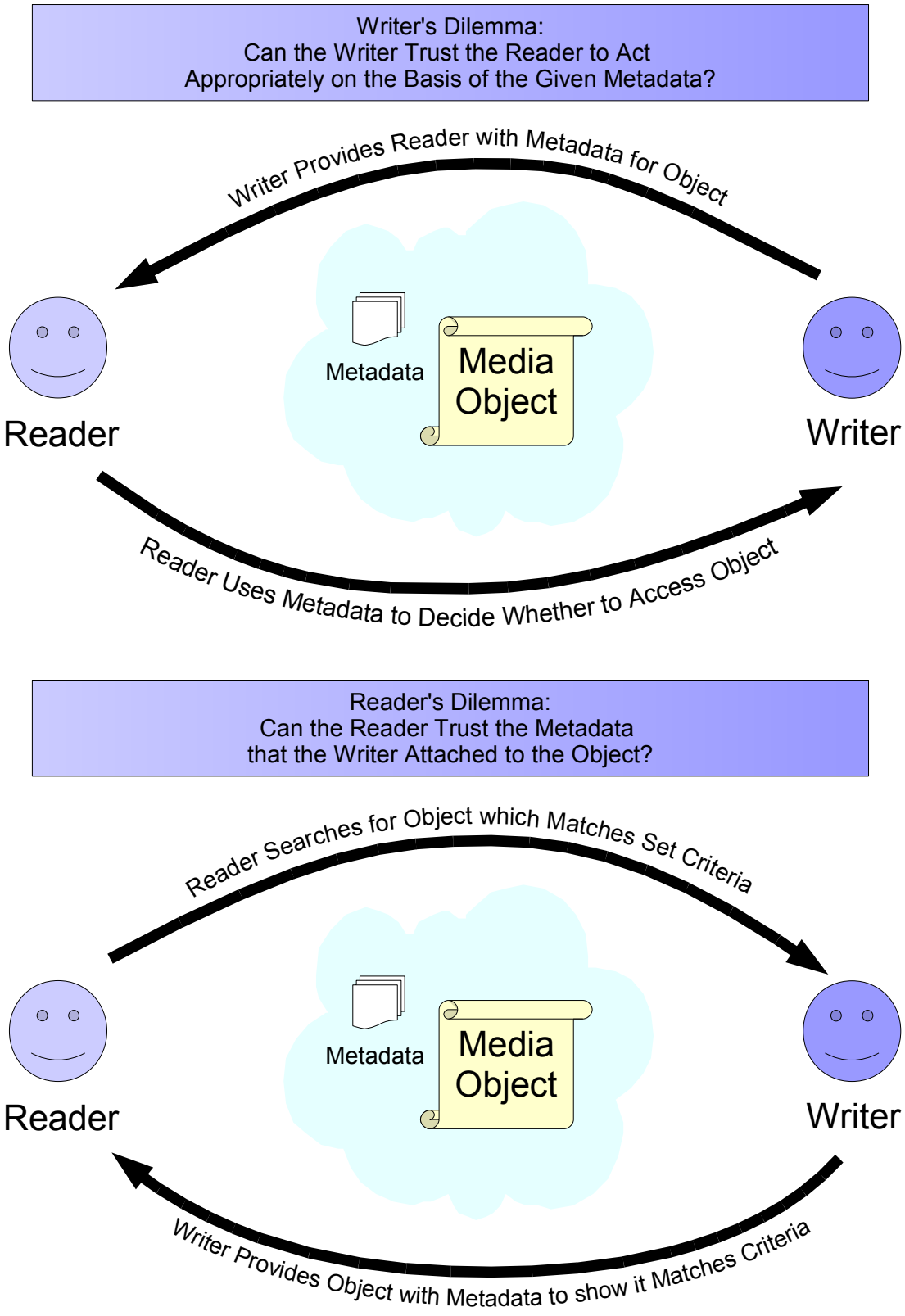

Figure 5.1: The Reader–Writer Dilemma

Golbeck trust ontology, the choice was made to create a specialised system. The largest contention faced by amateur writers is the aforementioned access of adult material by younger readers. This is a very debated issue since it is in effect preventing people doing online what it is acceptable offline. Other than obscene material, the written word does not carry a formal rating system in most countries and children are allowed in all areas of libraries and book stores. The main difference is the level of control that parents feel they have over their offspring's reading habits in the non-digital environment and the lack of trust they have in the digital environment. For this reason, the FOP ontology reduces the scope of the trust network that can be created to the area of acceptable access. Should further or general trust statements be required, then the Golbeck trust ontology can be used via the FOAF basis of the FOP files.

The initial design of the web of trust focused very heavily on age since the emphasis, as demonstrated in the quotes above, is often placed on the adult/child divide. It allowed one of two predefined assertions to be made: that the persona represented someone over the age of eighteen, or that the persona represented someone under that age. It was then possible for the persona to specify other personae that would vouch for them. It also provided a way for that persona to vouch for others. In much the same way that the general trust ontology allowed a gradient of trust and distrust, personae were allowed to qualify their support. This qualification took the form of a scale ranging from claiming offline knowledge supporting the statements through various levels of online knowledge to offline knowledge contradicting the statement. The webs of trust that can be constructed can then be used in a variety of ways to calculate a trust rating for the requester which the provider can use to decide whether to comply with the request.

There were two immediate questions raised by this idea. First, was it possible to the add enough annoyances that creating clusters of fake persona to validate yourself was not worth the pay-off? Second, whether people would make non-malicious statements of distrust and, if this proved to be the case, how the two distinct webs of trust and distrust could be integrated. A number of possible answers to these two problems have been considered and will be investigated in future work.

While the original FOP design envisioned a simple dichotomy of statements, over eighteen and under eighteen, this idea was discarded for a number of reasons. Most importantly, the results of the access and usability questionnaire raised doubts as to whether the set age of eighteen should be used since it was neither universal nor well liked as a cut-off point (see Table 5.2). This appeared to be especially true in those countries with a lower age of consent than age of majority. Significant support was shown for allowing teenagers greater freedom in their reading habits especially when parental permission had been given or for those over the age of consent. In the case of parental permission having been given for the underage reader to use their own discretion, the initially proposed system this would have required persons under the age of eighteen to lie on their statements. This would create an undesirable situation and undermine

the trustworthiness of the trust network. While allowing access based on age of consent was a popular choice the issues surrounding the publication of that information, that is whether the user is under or over the age of consent in their country or state, make that an untenable option.

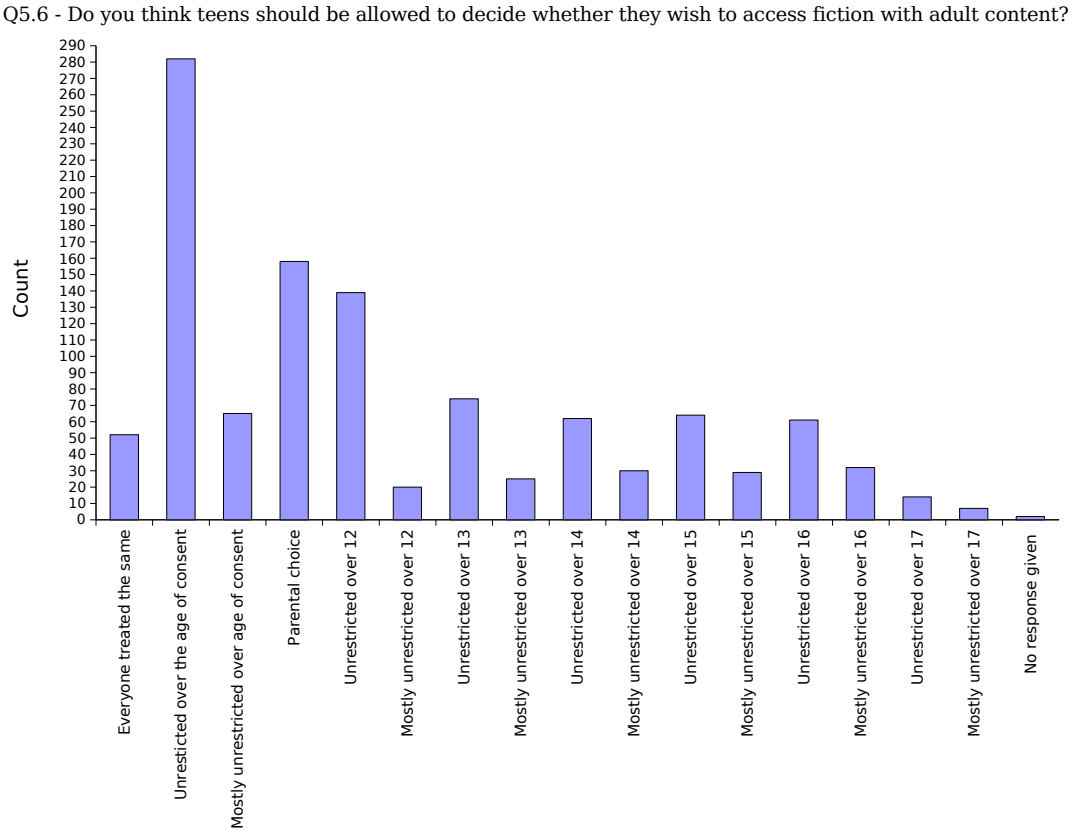

Figure 5.2: Teen Access to Adult Content, Information Gathered as Part of the Online Survey into our Case Study Community (see Section 3)

One option would be to integrate the system with home filtering software such as IRCAplus so that even if the underage statement was made this would be over-ridden by the access levels defined in the filter. Another would be to provide a greater range of statements, potentially including statements of responsibility rather than statements of age. This would allow individual websites more options to tailor their entry requirements. Some websites that purely contain text might be willing to allow entry without a specific age statement while others, for example those containing art or other images, might set stricter limits. By creating a way to open up access while still allowing people to make truthful statements, the advantage of making inaccurate statements is lowered. Results from the access survey showed that younger readers preferred not to lie and were less likely to do so if they were not looking for something specific and felt similar material could be found elsewhere without the lie being required. Experimentation is planned to investigate user preferences with regards to allowed statements as well as the

possibility of linking in with verified filter settings but time constraints resulted in this work falling outside the scope of this thesis (see Section 10.3.5).

Chapter 6

Ontology, Tagging and Something in Between

6.1 Methodology

Having undertaken an analysis of our case study community and shown that the addition of human-readable metadata is an important part of the current behaviour we consider both how the transformation from human-readable to human and machine-readable metadata can be undertaken and what the implications of this conversion might be. In this section we discuss the issues related to the addition of metadata to community created objects. We ask what forms of annotation, creation and addition are most suitable for our case study, and other similar, communities. In this frame we consider current user practice within the community and compare it to both free and formalised annotation systems. We ask whether it is possible to combine the strengths embodied by the different methods to produce a system which can support the community needs.

Hypothesis: We argue that the human-readable metadata being currently added by the community is a direct equivalent of the machine-readable data that makes up the semantic component of semantic applications. Further, that investigation of this long-term practice of human-readable metadata addition to documents can provide insight into how shared vocabularies of machine-readable metadata can develop.

Methodology: A survey was undertaken of the type of data required and used within the case study community. The data collected in this survey represents the cumulation of thirty years of community tagging. Statistical analysis was undertaken into the effect of a number of factors including variation of terms with the same meaning, source of the terminology and length.

This is significant because it provides an opportunity to investigate a community generated shared vocabulary that has had time to mature. From the results of this study

we can gain information on how to support the creation and evolution of user created metadata vocabularies such as folksonomies.

Hypothesis: While our case study community represents the type associated with the addition of unconstrained user generated metadata, we argue that the analysis of that metadata, which we have shown that the community adds to their creations, demonstrates that while the vocabulary may be shared the meaning associated with any given string of metadata is not fixed. Further that as the community and the associated shared vocabulary has matured over time and the range and amount of media being described has increased, the nuances of meaning have become increasingly important.

Methodology: Taking the results from our analysis of metadata currently in use within the community and those results from the previously described analysis of community practice (see Section 3.2.6) we argue that there is a need to move beyond the simple conversion from human-readable to machine-readable metadata if we are to fully meet the user requirements as drawn from our study. We consider how such an implementation might be undertaken and lay the groundwork for research described in the succeeding chapters into extending the basic user generated metadata to include more clearly defined information while still keeping the level of user knowledge required to a minimum.

6.1.1 Community Metadata

When considering metadata used by the amateur writing community it is necessary to consider it in the context of its use as well as in the general context of metadata use. A review of 7 mailing lists and 15 archives (see Table 6.1) gives a overview of what type of metadata is commonly found. Both the mailing lists and archives were chosen at random. In the case of the mailing lists the criteria for selection was that they had an introductory text file to which we had access and which explicitly listed the expected metadata rather than relying on user knowledge of standard posting etiquette. In the case of the archives, it was decided to focus on the medium-sized fandom archives as these best represented the community values for their specific group. All but one of the archives was automatic, meaning that the authors selected the metadata from a list of preset options rather than being all free text entry. The list of categories was derived either from the story upload form (when accessible) or from the categories listed as available on the search page when full search available. Almost all archives carry some restrictions as to the type of fiction allowed to be uploaded. Because we were working with small to medium sized archives these restriction mostly focused on the universe that the stories were required to be set in and the romantic, or not, relationships that were allowed. For this reason those particular, and otherwise expected, metadata classifications were removed from the study because in most cases they were implicit and therefore their lack of presence was not indicative of anything but the restrictions on the archive. These restriction are listed in Table 6.1.

Table 6.1: Surveyed Archives

Archive	Fandom	Relationship Types	Content	Stories
Smallville Slash Archive	Smallville	Restricted	Any	4216
Master-Apprentice	Star Wars	Restricted	Any	3880
Library of Moria	Lord of the Rings	Restricted	Any	?
House Archive	House	Any	Any	394
Area 52	Stargate	Restricted	Any	7304
Heliopolis	Stargate	Canon Only	No Adult	1765
Heliopolis 2	Stargate	Restricted	Teen/Adult	1023
Freedom of Speech	Multi	Any	Any	7943
Due South Archive	Due South	Any	Any	4759
CSI Forensics	All CSI varients	Any	Any	1389
Buffy Fiction Archive	Buffy and Angel	Any	Any	3403
Azkaban's Lair	Harry Potter	Single Pairing	Any	911
Anime Spiral	Multi	Any	No Adult	6442
Alpha Gate	Stargate	Any	Any	2550
852 Prospect	The Sentinel	Any	Any	5834

An initial investigation into community practice shows some idiosyncrasies that clearly illustrate the amateur nature of the community. There is a conceptual difference seen between categories and warnings, despite the fact that they are to all intents and purposes the same thing. The realisation that warnings could be used to find as well as avoid came early on but, despite that, the split between the two remains strong in many places. All the mailing lists except one required or advised that warnings should be stated and yet none asked for any indication of genre or other normally expected classification. Of the archives twelve out of the fifteen separated warnings from classifications. Of the remaining three one did not allow adult content which removed the necessity for all the most common warnings and one had no categories at all other than a list of the romantic pairings and the warnings.

The importance of metadata, and indeed warning, to the community can be clearly seen in the discussion that took place in April 2005 on the The Sentinel Adult Discussion List (known as Senad)[1]. The discussion was initiated by a complaint by a community member that a story recently posted to the main community archive did not carry a 'death' warning. While there was a recognition that some readers preferred the option of whether or not they saw the warnings, the clear majority felt that the advantages of warnings outweighed the disadvantages. The interaction between community desire and practice can be seen in the aforementioned exchange as the author whose story prompted the discussion was directly involved in it. As a direct result of hearing the various opinions on the subject she offered an apology to anyone who had been upset through the lack of warning and noted that she would alter the way she posted stories in future. It is a clear example of community pressure defining community standards of

[1] `http://www.senad.org/`

metadata. It was not the specific vocabulary but the classification, and whether that classification should be stated, which was under debate.

6.2 Analysis of Results

6.2.1 Analysing A Not So Restricted Vocabulary

In total there were 136 tag concepts identified (see Appendix D) from the 15 archives. Just over 50% of the tags were used more than once but only approximately 10% were represented on more than half the the archives. This lack of inter-archive cohesion may represent the different community standards with the 10% representing the overarching global standard. Or it may be due to lack of communication between the the different archives. As previously mentioned the majority of tags are human-readable only. Some archives output a RSS feed of stories as they are added but as yet this data has been used to feed update journals and individual use and has not been amalgamated into a general site. Due to this, there has been no community pressure for the individual archives to standardise so long as they represent the needs of the immediate community that they serve.

However the community archives act as both collection point for media items produced by the community and as focal nodes. Since they are created and maintained, almost exclusively, by members of the community the archives occupy an interesting position of being directly influenced by community expectations while, at the same time, reinforcing those behaviours by explicitly defining the information that the archive requires in addition to any media item. The mailing lists, eGroups and community journals occupy a similar place in the community hierarchy although, being totally free text entry, they allow more scope for individual expression. It could be argued that because these systems allow free text entry they are closer to free tagging systems than the archives which, while allowing some free text entry, for the most part give a choice of tags for the user to select. Given the choices embodied in the archives are drawn from the user experience with the free tags in the mailing lists and journals, what the list actually represents is the folksonomy that theory has suggested will develop from free tag use.

6.2.2 Archive Folksonomy Analysis

As discussed above there is only a conceptual difference between classification given to categorize an item and one given to warn for content. Therefore when the various descriptive tags were collected from the sample archives the two types were combined. Obvious synonyms were identified (humour-humor, expanded/non-expanded acronyms etc.) and grouped together to give a list of tag concepts, the total number of times that

Table 6.2: Archive Categories: Terminology Cohesion

Synonyms	Count
1	100
2	18
3	12
4	1
5	3
7	1
9	1

Table 6.3: Archive Categories: Vocabulary Source

Vocabulary	Count
Developed	51
Literature	28
Other	57

the tag was available across the fifteen archives and the number of variations of that tag (see Appendix D for full list of categorising tags).

The tags were characterised by:

- Source of the terminology e.g. Literature – Humour, Developed by the Community – Het, Other – Drugs (see Table 6.3)
- Class of thing described e.g. Document type – Essay, Genre – Drama, Content – Character Death *et cetera* (see Table 6.6)
- Content range described with the PICS categories (Miller et al., 1996) used for guidance (see Table 6.5)
- Complication of the tag e.g. Phrase – "Unusual Sexual Situations", Keyword – "Crossover", Acronym – "OOC"[2] *et cetera* (see Table 6.4)

A chi-squared test was used to determine whether there was a statistically significant relationship between these groupings and the numbers of variations found for a term.

6.2.2.1 Results

A statistically significant relationship was found between the number of synonyms and the popularity of the term ($p<0.000$), the complication of the term ($p<0.000$) and the source of the terminology ($p=0.035$).

[2]Out Of Character (see Glossary)

Table 6.4: Archive Categories: Complication of Term

Complication	Count
Phrase	48
Keyword	79
Acronym	9

Table 6.5: Archive Categories: Content Type

Content	Count
Not Content	48
Sex	28
Violence	16
Harmful Actions	2
Hate	1
Language	1
Other	40

No significant relationship was found between the number of variations and the type of thing being described or the category of classification.

6.3 Discussion

6.3.1 Tagging and the Community Folksonomy

It seems logical that the more parts the tag is comprised of, the more variations it may have. Observation of keyword tagging sites suggests that this is not reduced by limiting tags to a single word since users then struggle to convert the longer phrase they would otherwise have used. Synonym issues are a recognised feature of free tagging. Further analysis is needed to discover any measurable difference between keyword and phrase tagging.

As with the length of the tag, the relationship between concept popularity and variation

Table 6.6: Archive Categories: Class of Entity Described

Class	Count
Genre	32
Content	71
Genre/Content	15
Document Type	10
Source	5
Language	1
Fandom Dependent Object	2

is a logical one. The more people wish to express an idea, the more opportunity there is for divergence, whether accidental, contextual or intentional. The suggestion has been made that over time a natural consolidation of terms will occur especially around the more popular topics (Guy and Tonkin, 2006) and suggestions have been made for ways of supporting this process (Pind, 2005).

The fact that there was a statistically significant relationship between the derivation of the vocabulary and the number of variants raises a number of issues. While the two terms that carried the most variations (7 and 9) were both external terms being reused by the community it should be noted that one was an acronym and the other represents a concept which is currently under debate within the community. Given that, other than these two cases the most variations from borrowed vocabularies, literary or otherwise, is 3, there is a strong argument that they can be seen as special cases. If we disregard these two cases as outliers then it is clear that the terminology that evolves within the community has significantly more variation than that from outside.

The majority of the adopted terms are literary, legal, calendric or carnal with only a few not coming from a well defined and organised vocabulary. While the tags were freely added the difference that can be seen between the borrowed tags and the evolved tags may well be because at some point the borrowed tags were from a formally classified and defined categorisation. While statistically significant it could be argued that the practical difference is low and given the trend seems to be towards the condensing of terms perhaps time will continue to reduce this gap. Only time will reveal at what point the trend levels off but it should be noted in discussions that even though free tagging takes pride in its bottom-up approach it is drawing directly from existent imposed formalisations.

6.3.2 Of Data and Metadata

Having considered the current practice of human-readable tagging undertaken by our case study community, we argue that our case study community represents a good example of the type of community which has benefited from tagging over more formal classification methods such as that traditionally used to describe fiction. However, upon investigation of the state of tagging after thirty years we argue that the nuances of meaning, an area in which is where tagging is weak (Pind, 2005; Kroski, 2005), become increasingly important.

Considering the alternatives, work is being done on automatic metadata creation but this currently requires a corpus of material which can be used as a training system and is constrained by advances in natural language processing and artificial intelligence. The more unique the object or the more subtleties of language it contains, the more difficult it will be for an automatic system to correctly identify how the object should be categorised. While comparing the differences between a corpus of academic papers

and a corpus of amateur fiction would be of interest, automatic metadata creation falls outside the scope of this work.

We, therefore, return to the manual addition of metadata. People will put time into something for two main reasons – because it is something they care about or because they stand to gain from it. Gains, perceived or real, can take many forms but need to be proportional to the amount of work required. Data entry is universally recognized as being both time consuming and boring and yet given the right incentive people will do it voluntarily. Examples of this can be seen throughout the Internet – the World Wide Web took off when the average user was able to easily create websites about the things that interested them. Amateur authors, and fan authors in particular, are hobbyist orientated, writing for the love of it and their love of the characters. The online communities that support them are based on concept of sharing that love. This translates to the sharing of electronic documents, with accompanying metadata, and the sharing of information. Given the opportunity these types of communities want to, and are, creating and accurately checking the type of data that will power semantic applications.

Due to the amount and nature of the material produced by the amateur writing community and its hobbyist origins the current systems of storage, access and retrieval are immensely variable and frequently contentious. A discussion group was created to allow interaction with some of those involved in this community and to look into the possibility of creating a definitive taxonomy of terminology and meaning. This taxonomy would have acted as the knowledge base from which a tailored ontology could be created. It was quickly discovered that not only were many of the definitions vague but most were fluid and gained specific significance or meaning within one community that was lost or transformed in another. Only interaction within any of the communities allowed the user to pick up the most common meaning for the term within that group. This could be very confusing for those people coming into the group either from another community or from outside. One of the most striking examples of this was the use of the word ‘gen’ to describe a work of fiction. Depending on the context it could either be intended to mean a story with no romantic interests, one in which the romantic interests were of a level with and the same as the source material which inspired the piece or very occasionally a story which may contain anything up to and including non-explicit heterosexual romantic relationships. Thus if the source material included a specific relationship or a high level of sexual explicitness it could still be marked as ‘gen’ - a potentially unpleasant surprise for a reader who was expecting only platonic feelings and actions between the characters or one who had strong feelings about specific relationships.

Because of the shifting vocabulary it became clear that creating metadata to a level of detail that would engender a semantic application would require that data to exist at the level beneath that of the community specific concepts. This would also solve the problem of different vocabularies existing within the fan fiction section of the amateur

writing community and within the rest of the community. While this had the potential of requiring more detail than would otherwise be needed, it also offers the possibility of user-defined and personalized lexicons of terms, thus increasing the usability of the system and lowering the level of expertise that would be required of a new user.

6.3.3 Tagging

In his recent article on the overrating of ontologies, Clay Shirky makes two distinct arguments (Shirky, 2005) about the respective benefits of ontologies and tagging systems. While this was not a peer-reviewed article, it caused a significant amount of discussion among both academics and online commentators. For this reason, the author considers it important to address the issues that were raised by him. The first of these concerns the superiority of free tagging over structured ontologies in certain circumstances and the second concerns probabilistic categorisation. Considering his first point, Shirky sets out the type of context in which he argues that free tagging is better than an ontology. Below we compare each of the points (Shirky, 2005) raises and whether they apply to our case study usergroup.

Domain

- *Large corpus*: As we have shown in tables 3.1 and 3.2 the corpus of work we are dealing with could be categorised as large.
- *No formal categories*: While automatic archive systems will have categories from which the user has to select the most appropriate these are only a small part of the distribution process with posts to mailing lists, electronic journals, non-automatic archives and personal pages all requiring the poster to use their own categorisation systems.
- *Unstable entities*: While the community has a distinct vocabulary which it has developed to describe the content of stories the precise meaning of each term is fluid. While a number of thesauri have been created to provide definitions of commonly used terms, perceived meaning is typically gleaned from observation and thus can be both inconsistent in detail and changing over time.
- *Unrestricted entities*: As previously mentioned, while specific automatic archives restrict the entities which may be added, the overall emphasis of the community is on no restriction.
- *No clear edges*: Community membership is not a binary state and many people create similar works who are not within the community or are within a different but overlapping community. Equally members are not restricted to a single form of creativity, a single source of inspiration or a single interest in common. This

unconstrained organisation means that there are no clear edges between sections of the community or between the community and everyone else.

Participants

- *Uncoordinated users*: For many the concept of coordinated users seems unlikely. In that there is no single community portal, consistency of user requirements or user intents, we can describe the users, that is the community members, as being uncoordinated. Sub-communities may coordinate at a micro level but the lack of cross-consistency insures lack of coordination at the macro level.
- *Amateur users*: Due to the nature of the community (see Section 3) it remains firmly amateur in nature. While a few of the larger archives are maintained on a semi-professional basis these are the exception rather than the rule.
- *Naive cataloguers*: While the community does draw from librarians, archivists and others who have a background in cataloguing systems, the majority of users do not. After thirty years of communal investigation into 'what works for us' it is perhaps condescending to describe the community as naive. It can be argued that through trial and error they have developed many of the same systems that we now see in electronic archiving. However in the respect that they are not concerned with the 'correct' way to organise and categorise information they can be described as naive.
- *No Authority*: MacDonald (1998, P. 137 – 139) disagrees with Jenkins (1992) and Bacon-Smith (1992) on their lack of acknowledgement of hierarchy in fandom, although she does concede that Bacon-Smith (1992) recognises a knowledge hierarchy, it is important to recognise that hierarchy does not necessarily imply authority. It could be argued that only the creators of the original source material have any authority over it and yet the entire fan fiction community subverts that authority. While effort and knowledge are recognised, and the concept of a BNF (Big Name Fan), i.e. a community leader, exists, the idea that such people have authority over others within the community is extremely controversial and is strongly contested whenever it arises. Individual moderators and list owners are understood to have authority over their lists, sites or community journals but the result of this is that disagreeing elements can leave and start their own list. The authority of the moderator thus exists only so far as they are seen to act within the community's interests and follow the wishes of the majority of the community.

As shown it would be difficult to find a more accurate description on the amateur writing online community, so the question must be asked whether an ontology is the right way to proceed. The current system in use is fairly close to the free tagging system advocated by Shirky, except that it is not currently machine readable. One

option would be to use the automatic tools already in existence to identify and read the metadata that is already associated with the media. Given that Google already does pretty much everything that this system would be able to do, it cannot be seen as a particular improvement. As shown above, the amateur fiction world has a large number of terms that are specific to the area. Unfortunately, as mentioned, the terms do not necessarily mean the same thing from one sub-community to another (polysemy) and this is compounded where different sub-communities use different terms for the same thing (redundancy and ambiguity). Shirky dismisses the problem that 'film' people will be segregated from 'movie' people with the simplistic argument that they wouldn't want to talk to each other anyway[3]. Shirky uses LiveJournal interest lists as an example of where this free-text tagging occurs so let us consider that example. Shirky's argument is that in his example "the terms actually encode different things, and the assertion that restricting vocabularies improves signal assumes that that [sic] there's no signal in the difference itself, and no value in protecting the user from too many matches" (Shirky, 2005). Rather than 'movies' and 'films' let us consider terms more relevant to the domain under discussion in this thesis. Fig. 6.1 shows the number of individual journals (bottom-left of table) and communities (top-right of tables) on LiveJournal using the interest tags 'creative writing', 'writing', 'fan fiction', 'fanfiction', 'fan fic', 'fanfic' and 'fic'. The lists of individuals and communities were then compared to see how often the terms overlapped. While it could be argued that 'creative writers' do not wish to talk to 'writers' or fan writers and vice versa it would be hard to insist that the users of the different variations in spelling and abbreviation of the term fan fiction do not wish to communicate. The numbers were harvested from LiveJournal on 4 July 2005[4].

From the table, we can see the various ways of indicating an interest in fan fiction are more closely linked to each other than either is to creative writing or writing (or creative writing and writing are to each other). However even the nearly twenty percent of individuals and communities that use both 'fan fiction' and 'fanfic' is still a small section of what is in fact one interest. That is even before the need to differentiate between the same word meaning totally different things to different parts of the community. Terms are obviously domain-specific, and it could be argued here that the domain in question is the smaller community rather than the larger one. Does this then mean that cross-community searches become impossible? If not impossible, then they certainly become misleading unless some effort is made to consider not only the term but what is meant by it.

This brings us onto Shirky's second argument, that of probabilistic categorisation. The concept behind this is that one way to deal with problems of classification is to let everyone have their vote and then produce a merged result which represents all the classification given to it. This is an interesting idea but not one that is limited to free

[3]For the purposes of this thesis the terms 'film' and 'movie' will be used interchangeably.

[4]These numbers were taken at 5:30pm BST. This time is noted due to the rate at which LiveJournal statistics can change.

	"Creative Writing" [393 Communities]	"Writing" [425 Communities]	"Fanfiction" [412 Communities]	"Fan Fiction" [416 Communities]	"Fanfic" [414 Communities]	"Fan Fic" [288 Communities]	"Fic" [348 Communities]	
"Creative Writing" [465 Individuals]		17 (2%)	9 (1%)	4 (0.5%)	7 (0.9%)	3 (0.4%)	1 (0.1%)	"Creative Writing" [393 Communities]
"Writing" [464 Individuals]	20 (4%)		18 (2%)	9 (1%)	3 (0.4%)	2 (0.3%)	1 (0.1%)	"Writing" [425 Communities]
"Fanfiction" [468 Individuals]	15 (3%)	8 (2%)		62 (8%)	98 (13%)	25 (4%)	14 (2%)	"Fanfiction" [412 Communities]
"Fan Fiction" [462 Individuals]	6 (1%)	7 (2%)	35 (8%)		133 (19%)	53 (8%)	17 (2%)	"Fan Fiction" [416 Communities]
"Fanfic" [457 Individuals]	10 (2%)	4 (0.9%)	53 (13%)	73 (19%)		39 (6%)	44 (6%)	"Fanfic" [414 Communities]
"Fan Fic" [414 Individuals]	1 (0.2%)	1 (0.2%)	3 (0.7%)	10 (2%)	12 (3%)		38 (6%)	"Fan Fic" [288 Communities]
"Fic" [422 Individuals]	0 (0%)	0 (0%)	2 (0.5%)	1 (0.2%)	9 (2%)	13 (3%)		"Fic" [348 Communities]
	"Creative Writing" [465 Individuals]	"Writing" [464 Individuals]	"Fanfiction" [468 Individuals]	"Fan Fiction" [462 Individuals]	"Fanfic" [457 Individuals]	"Fan Fic" [414 Individuals]	"Fic" [422 Individuals]	

Figure 6.1: Usage Overlap of LiveJournal Interest Categories

text tagging (see Section 9.3.2). There is no reason why users should not be given the opportunity to describe other people's entities such as works of media using the ontology system in the same way as they can describe their own. If this is combined with a trust-web system, then weighting can be implemented, for example the author's classification of their own work could be given privileged status as could the opinions of people designated as the user's trusted friends.

6.3.4 Media Content and Reusability

The fan fiction community represents one which has moved from free tagging metadata to using the folksonomies created from those tags. The lack of machine-readable metadata may have drawn out the progression but the extended length of time which the community has been using the system more than compensates for any potential slowness. We can see how a mature system may behave with the tags feeding the taxonomy which in turn informs the community as to what tags are expected and appropriate vocabulary. We also see that where there is no formal structure underlining the vocabulary there is a greater variation in the exact tag string used. While a number of factors affect this, the underlying community agreement on vocabulary and meaning, whether in the community using the term or the one for which it was originally formalised, has a strong effect on the divergence of terms.

Despite the amateur writing online domain being, according to the Shirky (2005) model, an almost perfect example for the type of area that could benefit from free-tagging, on balance it does not seem as if it will fulfil the needs of that community as well as a carefully presented ontology would. We argue that given the current state of tag use, the community could benefit from an extension of the tag system which allows greater definition of meaning. We propose the creation of an ontology which can describe the required concepts with the desired level of precision but which can be linked and integrated with the current system. Having decided to develop an ontology, the other important consideration is how this ontology is presented to the amateur users.

In this thesis I theorise that for a system such as that proposed in this thesis to work, it would need to be capable of hidden so that its complexities are simplified in the interface while at the same time being powerful enough to deal with all the necessary situations that it will need to describe. The idea of allowing community tagging using the restricted definitions allowed by the ontology is an interesting one, and is possible with the system already proposed via the FOP files, which allow personae to either include a machine-readable description of a piece of media or to link to one for either their own or other people's creations. Whether this would be accepted as a continuation of the current recommendation system or would cause problems with malicious or just differently opinionated taggers is a question that can only be answered through testing. There are also other considerations related to the revelation of sensitive information such

as spoilers which needs to be dealt with in the ontology and beyond that would require careful handling when the descriptions of a piece of media's contents were correlated. The work detailed in the subsequent chapters represents the first steps towards proving, or disproving, this hypothesis.

Part IV

Modelling

Chapter 7

Describing the Narrative Content of Media

7.1 Methodology

In the previous section we considered the use of user-generated labels as metadata to describe the content of an item of media. We argued that to fulfil the user requirement for the metadata it was necessary to allow for more precision when desired. We showed that even though there was a shared vocabulary the understood meaning was not necessarily consistent. Having concluded that the community would benefit from the option of more formalised metadata, this section discusses the requirements that such an ontology would need to meet.

Hypothesis: From our investigation of user requirements as detailed in the previous chapters, it was clear that users were interested in information that went beyond that of basic bibliographic details to metadata describing certain types of events of themes that existed within the media. This information was neutral in that some users desired it as a means of locating media with specific content while others used it to aid their avoidance of the same. We therefore argue that by describing the events that exist within the narrative contained by an item of media we can provide a way for users to improve their options for personal filtering either for search or avoidance of particular types of media.

Methodology: To describe the content of media items we draw on research into narrative theory (Holden, 2003; Jordan, 2004; Chatman, 1978; Bal, 1997) and the information gathered from our case study community to inform our design of an ontology, OntoMedia, for the description of narrative events. This ontology represents the cumulation of a collaborative research project undertaken by the author, M. Jewell and M. Tuffield. This chapter lays out our design methodology for the ontology. We go on to provide examples demonstrating how the ontology allows linking between related concepts within

different media objects in a media-independent way and how narrative streams can be constructed from the basic elements within the ontology. In doing so we show how the design of the ontology fulfils the user requirements of our case study community and thus represents a contribution to the domain both in the specific, furthering the needs of the user group under investigation, and in general, creating a way of describing any narrative in a cross-medium manner.

7.1.1 Creating the OntoMedia Ontology

The Online Amateur Writing community produces many media objects. While the majority of these are textual, images and multimedia items are also created and shared alongside the texts. As mentioned previously, the output of the community is both large and diverse. Infinite diversity in infinite combinations (see Section 2.6.1) had been one of the guiding principles of the community even before the term existed. While promoting creativity, these principles can lead to difficulties for readers trying to find or avoid a specific types of story. It is customary to post additional information about the media object to assist readers in deciding whether they wish to view the media or not (see Section 5.3). The information added goes beyond basic bibliographic details to include hints as to the content of the story such as level of adult detail, the presence of relationships and the presence of any controversial subject matter (see Section 3.2.6).

Beyond this the language used in the header information is frequently drawn from the specific vocabularies used within the community (see Section 6.2.1) for example: 'slash', 'PWP'[1], 'saffic', 'dldr'[2], 'MPreg'[3], 'gen'[4] and 'Pumpkin Pie'[5] (for full definitions, see glossary).

To an outsider or new member of the community these terms can be very opaque in their meaning. Worse, the implied meaning of many of the terms is only vaguely defined and can change depending on the context of their use. Since the terms are evolving and even the community cannot decide on a definitive definition, it became clear that any ontology used would need to be independent of these terms. This has the advantage of not tying the ontology into one usage and opens the way for personalised vocabulary definitions, something welcomed by the members of the community interviewed since it did not favour one world view over another.

The amateur writing community already spends a significant amount of time associating metadata with the media items that they create (see Fig. 3.8). This is perhaps aided by the strong overlap between the writers who add the metadata and the readers who make

[1] 'Plot, What Plot' or 'Porn, What Plot'.
[2] 'Don't Like, Don't Read'.
[3] A story involving male pregnancy.
[4] A story with little or no romance component.
[5] A story set in the *Harry Potter* universe which contains a relationship between the characters Harry Potter and Hermione Granger.

use of it, thus reducing the split between those who do the work and those who make use of it. It is encouraging that the majority of those community members asked responded that they would be willing to consider spending slightly longer adding metadata if it would raise the visibility of their work among its target audience, with a strong interest also being shown in metadata re-usability (see Fig. 3.9). Having confirmed that the community would be interested in such an ontology, the question arose – which ontology should be used?

7.1.2 Defining The Problem

Why do we want to describe content? Bibliographic data is necessary for accurate attribution and to categorise works. Without it our system of identifying and describing works of media would collapse. Since this system has been working successfully up until this time the question arises as to why, with that information available, it is now also necessary to describe content. Our analysis of our case study community (see Section 3.2.6) revealed that content description is an important part of the metadata that members of the community both associate, and expect to find associated with, a media object. Before the Internet the way we interacted with media, especially text, was different. It is now possible for readers to have easy access to the type of details that previously would have been impractical to search for due to the sheer effort it would have taken to collect and correlate. Beyond that there are two related reasons to wish to have this information. First to improve searching and, second, to improve filtering.

In a presentation given at the AKT Southampton Workshop 25th January 2005, Hendler exemplified the type of query commonly used between people and which the semantic web might also be able to understand as "what was that movie with the short henchman who decapitates a statue with his bowler hat?" (Hendler, 2005). A person hearing that query, if they have any familiarity with the movie in question, will immediately think of the famous scene in the Bond movie *Goldfinger*. However, it is not the type of query that one can enter into a system like the Internet Movie Database[6] despite the vast array of bibliographic data that they have stored on films and television series. While this example relates to multimedia it can equally apply to text or images for example "what is that story where the hero has a portrait of himself that changes?" or "what is that book with a lamppost in the middle of a wood and it is always winter?". The questions could deliberately be more vague such as "which books have the main character making a deal with the devil?" or "which myths contain the world being created from body parts?". The former examples are more useful to track down a particular story while the latter are useful for comparative studies of literature, fictional or mythological. Returning to our case study community, users might wish to be able to answer questions such as "What stories contain Methos as Death?", "What stories contain a crossover

[6] `http://www.imdb.com/`

between *Highlander* and *Torchwood*?" or, more specifically "What stories are written in the *Highlander* universe which contain no sex or violence?". The OntoMedia ontology is a step towards answering these sorts of questions and to go beyond that into the relationships that exist within and between the elements within heterogeneous media.

7.2 Results: The OntoMedia Ontology

7.2.1 OntoMedia Scope

The scope of this ontology is the representation of heterogeneous media through description of the semantic content of that media. The representation may be limited to the description of some or all of the elements contained within the source or may include information regarding the narrative relationship that these elements have both to the media and to each other.

7.2.2 OntoMedia

The OntoMedia Ontology is currently written in OWL. To develop the ontology we initially used Protege. As work progressed we changed to writing the files manually and using other programs such as SWOOP (Kalyanpur et al., 2005), a "hypermedia-based featherweight OWL ontology editor", for visualisation and error-checking. A program, working title Meditate (see Section 8), is under development to aid OntoMedia ontology extension and entity creation. This program was designed to work with OWL and RDF files.

The basic ontology model was created in conjunction with Michael Jewell and Mischa Tuffield using information gathered from the user requirements survey (see Section 3.1.1). Once the basic structure was agreed upon responsibility was divided with the author being responsible for those sections which related to fiction and the presentation of fictional constructs such as characters. This thesis therefore focuses on the elements of the ontology related to fiction, especially written fiction.

7.2.3 Testing and Refining the OntoMedia Ontology

Having created the first version of the ontology a number of examples were created to test its robustness. These examples were of two types, what we considered 'top level' fandom information (see Appendix F.2) story narrative. For the second of these we chose to create the metadata for 'We Can Remember it for you Wholesale' by Philip K. Dick (1969) (see Appendix F.3). This short story was selected because it contained a number of interesting constructions such as false memories while at the same time being

surprisingly simple in its basic narrative path. As part of the collaborative OntoMedia project, testing on these examples was carried out by Jewell (2006).

Example data which used OntoMedia to describe the events in 'We Can Remember it for you Wholesale' was entered into a triple store (Harris and Gibbins., 2003). A number of character and event search queries were then run against this data (Jewell et al., 2006). The results from this experiment showed that we could pull a variety of information from the RDF, from generating a character list, identifying the female characters or identifying key scenes by checking which had events that were marked as containing spoilers. The final test run on the data was to confirm whether it was possible to identify the main characters by quantifying their involvement in the events of the story. This proved successful. Further testing was done, also by Jewell et al. (2005), in which information about a scene from *Total Recall*, in addition to information about the characters from 'We Can Remember it for you Wholesale', was entered into Sesame, an RDF Schema-based repository (Broekstra et al., 2002). Queries run on this data demonstrated the retrieval of characters in a scene, the linking of characters and the actors that played them, the identification of scenes where a specific type of event occurs (in this case where the character Lori loses something) and the cross-media linking of characters from the film (*Total Recall*) to the book upon which it was based ('We Can Remember it for you Wholesale') even thought the character names are not necessarily identical (as mentioned earlier the character Douglas Quail in the book becomes Douglas Quaid in the film).

In addition to this, examples were created that were not concerned with the structure of any particular story but instead modelled the basic elements that existed in the domain of a specific intellectual creation. These examples included the domains of the J.R.R. Tolkien's Middle Earth (see below), *M*A*S*H* (see Appendix F.2), *Highlander* (see Appendix F.6). This was done to test the more complex aspects of entity creation and the use of contexts since each of the mentioned examples contains overlapping but distinct versions of the entities and events that they contain. As well as confirming that the ontology could handle this sort of continuity issue, the examples also laid the groundwork for the defined entities and events to be reused if an in-depth mark up of one or more of the works or works containing one or more of the elements was desired. By allowing a definitive version of commonly used elements to be created, referential integrity can be assisted since all the versions of a specific object will point back to the same definition. From an usability perspective we intended to investigate if such a system will aid users by reducing the time needed to create the metadata for a given work.

The creation of examples allowed us to check the validity of our model while at the same time we referenced the previously identified user needs to confirm that we can meet them. This included comparing the results from the amateur writing access and usability questionnaire which relate to the types of information that readers wish to be

told and checking that against what we can currently describe.

With the aim of modelling the contents of fiction, whatever media format it is presented in, we faced the potentiality of having to deal with anything that the human mind can come up with. It was decided that the only way to deal with this lack of limitations is to plan for it. By making the ontology modular and expandable, we left the option open for the description of situations which we had not envisioned. Beyond acknowledging that we are not going to be able to cover every situation, supporting extensibility allows us to reuse existing ontologies where they already exist. For example, we extended the location ontology created for the Signage project (Millard et al., 2004) to provide a basic spatial model. We chose this ontology because it had a level of detail that matched what we envisioned for the rest of OntoMedia. This choice worked well in the examples that we created. However should the need arise for a different type of spacial representation then a different ontology could have be used instead.

7.2.4 The OntoMedia Model

While the initial design involved a single ontology it was decided to modularise the ontology from a single file into the structure described below. This was mainly to allow greater flexibility in usage by making it easier for people to use their own ontologies for specific sections and also to reduce the amount of extraneous options that a user was faced with.

The files in the ontology are divided into three sections:

- *Core*: These files contain the top level classes and properties which are seen as being core to the ontology. This section includes three files:
  - *OntoMedia Expression* which contains the basic classes and properties for describing narrative.
  - *OntoMedia Media* which contains the basic classes and properties for describing the media through which the narrative is expressed aqnd the relationship between the narrative and the media.
  - *OntoMedia Space* which describes locations and geograpahic areas.
- *Extensions*: These files contain extensions to the core classes and properties. This section is subdivided into:
  - *OntoMedia Common* which contains those extensions that are likely to be in common use such as those describing beings, traits and related classes.
  - *OntoMedia Detail* which contains more specific classes such as basic humanoid physiology and therefore while useful are less universal than those concepts described in either the core or common classes.

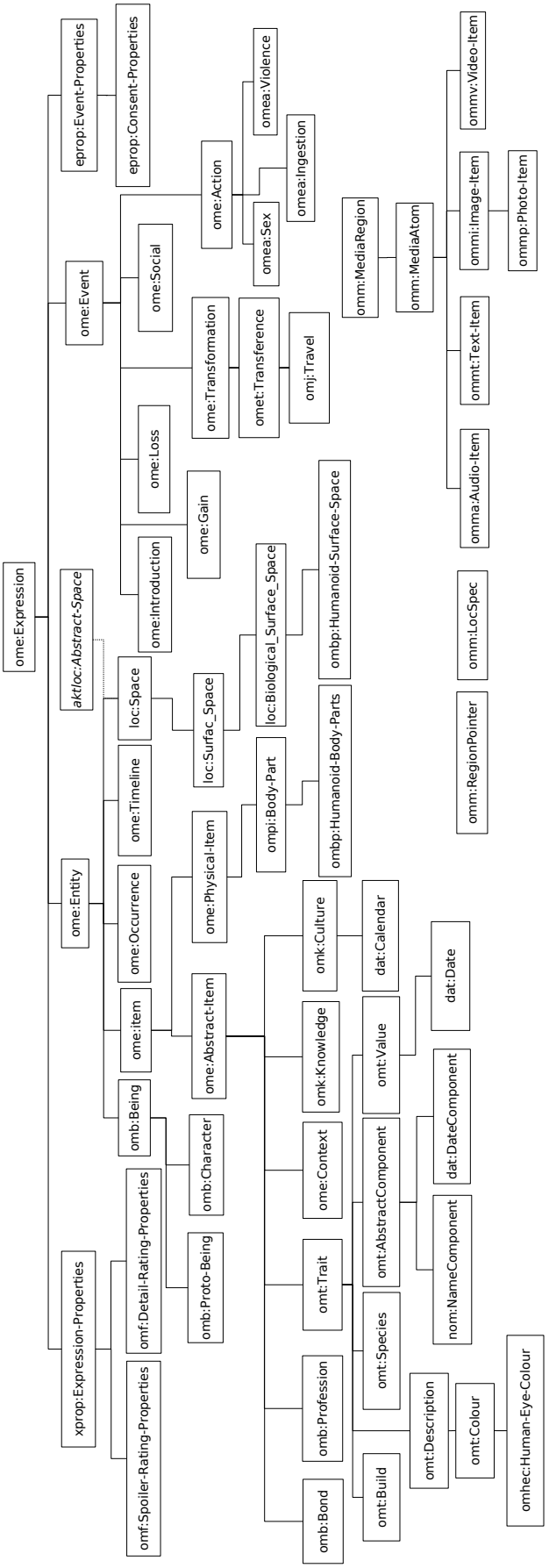

Figure 7.1: Top Levels of the OntoMedia Ontology Structure. Due to restrictions of space not all classes are shown. See following sections for detailed description of OntoMedia classes. Prefixes indicate which file the class is defined in.

  - *OntoMedia Events* which describes classes and properties which relate to events of different types.
  - *OntoMedia Fiction* which contains classes with relate directly to the concept of fiction and the differential between fiction and reality.
  - *OntoMedia Media* which describes classes and properties which relate to specific media types.

- *Misc*: These files contain classes and properties which are used with the OntoMedia ontology but which do not extend it directly and therefore can be regarded as independent from it.

Only the OntoMedia Core ontology is regarded as fairly stable although the main extensions are close to being frozen, subject to later review. The main version of the entire ontology is available at `http://ontomedia.ecs.soton.ac.uk/ontologies/`, while a working version for use with Meditate is currently held at `http://interaction.ecs.soton.ac.uk/ir/projects/ontomedia/ontomedia/`. Each component file and the main classes it contains are detailed below (see Fig 7.1 for diagram). The OWL descriptions and illustrating examples are included where the author was a significant contributor to the module in question.

In all class trees, the indented levels indicate a subclass relationship. Italisesed classes are not part the file being described but are referenced. The file they are defined within is either stated or can be inferred by the namespace prefix which is given.

7.2.4.1 Core - OntoMedia Expression

Scope: Top level content classes and properties related to the description of narrative content

Standard Namespace Prefix: ome

Main Classes (See classes with the 'ome' prefix on Fig 7.1):

- Expression
  - Entity
    - Item
      - Abstract-Item
      - Physical-Item
    - Timeline
    - Occurrence
  - Event

- Introduction
- Gain
- Loss
- Transformation
- Social
- Action

OWL: See Appendix G.1

Responsibility: Collective

The OntoMedia architecture is based on an Event and Entity model (see Fig. 7.1). We define an Entity as an object or concept. The subclasses of the Entity construct fall into three different types:

- Those related to objects both physical and abstract (the disjoint classes of `ontomedia:Being`, physical, and `ontomedia:Item`, both physical and abstract).
- Those related to spatial models (`ontomedia:Space`).
- Those relating to time (`ontomedia:Timeline` and `ontomedia:Occurrence`). `ontomedia:Timeline`s and `ontomedia:Occurrence`s subclass exist on the meta-layer outside the universe or `ontomedia:Context` being described. Any entity may have one or more `ontomedia:Timeline`s associated with it.

The split between physical and abstract items does not imply anything about the physical existence, or not, or a specific object, but whether objects of that type may have a potential physical manifestation. The model being used is of the world as a stage, `ontomedia:Entity`s are split between `ontomedia:Beings`, the actors/characters, `ontomedia:Physical-Items`, the props, and `ontomedia:Abstract-Items`, those concepts which may be symbolised by props but which cannot exit as props themselves. Thus a set of scales, even non-existent ones, are a physical-item while justice is an abstract one.

```
<rdf:Description rdf:about="#Scales">
  <rdfs:label>Pair of Scales</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Physical-Item" />
  </rdf:type>
  <omt:has-trait rdf:resource="#NonExistent" />
</rdf:Description>

<rdf:Description rdf:about="#Justice">
  <rdfs:label>Justice</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&ome;Abstract-Item" />
  </rdf:type>
</rdf:Description>
```

Listing 7.1: OntoMedia Expression Examples: Items.

An Event describes an interaction between one or more `ontomedia:Entity`s during which zero or more attributes of those `ontomedia:Entity`s are modified or a new `ontomedia:Entity` is created. An `ontomedia:Entity` may have an attribute set to show that it no longer exists but the `ontomedia:Entity` itself is not destroyed.

The subclasses of events are influenced by studies of narratives (Chatman, 1978; Bal, 1997) and the types of events that are most often seen when those narratives are deconstructed. In this we partially turned to our own knowledge of media, what types of events stood out for us as consumers, but also to the results of the previously completed survey (see Section 3.1.1) on what information users wished to be given (see Figure 3.5).

While not explicitly done so in the ontology, events can be seen as being one of two characteristic types: those which could be described by a persistent change in the metadata, and those in which the event had little or no discernible effect on the underlying information or entities that existed beyond the scope of that event. The latter are regarded as exposition events, while the former were narrative events or plot events.

Narrative events are mostly concerned with changes that occur on or to the entities that exist within the narrative. The three events that fall within this category are Gain, Loss and Transformation. Gain and Loss represent those events where their was a overall increase or reduction of the entities related to the primary subject or subjects of the event.

Transformations are similar to `ontomedia:Gain` and `ontomedia:Loss` events except that they represent a zero-sum game with regards to their overall outcome. Transfers of items both physical, including travel, and abstract, such as knowledge or information, are also regarded as transformations. In these cases the `ontomedia:subject-entity` is the thing being moved, the person or group in the case of travel and the item in the case of a transfer. The `ontomedia:to` and `ontomedia:from` being the locales or people that the entity or group of entities is passing between. Types of travel are expanded on within the travel class (see Section 7.2.4.8).

Exposition events are often related more to what is presented in the text or video than what occurs in the plot. It covers events that may have little to do with the overall plot or in which little of significance happens. The `ontomedia:Introduction` event represents the revelation of a character to the audience. It is intended for use with the descriptive paragraph or set-piece which serves no purpose other than marking the presence of the character. The `ontomedia:Action` class is subclassed into the areas of sex, violence and consumption although `ontomedia:Sex` events may also subclass the

`ontomedia:Social` event type which exists to describe social interactions (see Section 7.2.4.9).

```
<!-- Event -->

<rdf:Description rdf:about="#LotR-Hobbits-Intro">
  <rdfs:label>The Hobbit: Reader is introduced to concept of Hobbits</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Introduction" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR-Hobbit" />
  <ome:has-subject-entity rdf:resource="#Species_Hobbit" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-BilboGivesRingToFrodo">
  <rdfs:label>Lord of the Rings: Bilbo gives the One Ring to Frodo</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR" />
  <ome:has-subject-entity rdf:resource="#LotR-One-Ring" />
  <ome:from rdf:resource="#LotR-Bilbo" />
  <ome:to rdf:resource="#LotR-Frodo" />
  <ome:contains rdf:resource="#LotR-Bilbo-Gives-Up-Ring" />
  <ome:contains rdf:resource="#LotR-Frodo-Gains-Ring" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Frodo-Gains-Ring">
  <rdfs:label>Lord of the Rings: Frodo recieves the One Ring</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR" />
  <ome:has-object-entity rdf:resource="#LotR-One-Ring" />
  <ome:has-subject-entity rdf:resource="#LotR-Frodo" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Bilbo-Gives-Up-Ring">
  <rdfs:label>Lord of the Rings: Bilbo gives up the One Ring</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Loss" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR" />
  <ome:has-object-entity rdf:resource="#LotR-One-Ring" />
  <ome:has-subject-entity rdf:resource="#LotR-Bilbo" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Gandalf-revive">
```

```
  <rdfs:label>Lord of the Rings: Gandalf returns from the dead</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR" />
  <ome:has-subject-entity rdf:resource="#LotR-Gandalf" />
  <ome:from rdf:resource="#Dead" />
  <ome:to rdf:resource="#Alive" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Frodo-ring-info">
  <rdfs:label>Lord of the Rings: Gandalf tells Frodo about the Ring</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR" />
  <ome:has-subject-entity rdf:resource="#LotR-Ring-Know" />
  <ome:from rdf:resource="#LotR-Gandalf" />
  <ome:to rdf:resource="#LotR-Frodo" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Eowyn-Faramir-Chat">
  <rdfs:label>Lord of the Rings: Eowyn and Faramir talk</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Social" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR" />
  <ome:has-subject-entity>
    <rdf:Bag>
      <rdf:li rdf:resource="#Eowyn" />
      <rdf:li rdf:resource="#Faramir" />
    </rdf:Bag>
  </ome:has-subject-entity>
  <ome:contains rdf:resource="#LotR-Faramir-proposes" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Eowyn-fights-Nazgul">
  <rdfs:label>Lord of the Rings: Eowyn fights the Lord of the Nazgul</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Action" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotR" />
  <ome:has-object-entity rdf:resource="#LotR-Lord-Nazgul" />
  <ome:has-subject-entity rdf:resource="#LotR-Eowyn" />
  <ome:contains rdf:resource="#LotR-Nazgul-mount-dies" />
  <ome:contains rdf:resource="#LotR-Eowyn-injured" />
  <ome:contains rdf:resource="#LotR-Nazgul-injured" />
  <ome:contains rdf:resource="#LotR-Nazgul-dies" />
```

```
</rdf:Description>
```

Listing 7.2: OntoMedia Event Examples (Examples from Lord of the Rings (J. R. R. Tolkien, 1954 – 5))

`ontomedia:Event`s can contain other events allowing for a breakdown of the sub-`ontomedia:Event`s and the description of these in more detail. These contained `ontomedia:Event`s do not have to relate directly to the event being described to be contained by it, just be occurring within its aegis. However the relative positions of different events in time to each other are specified through the use of `ontomedia:Occurrence`s. The one exception to this is that `ontomedia:Event`s can specify another `ontomedia:Event` as the initial event that marks its beginning and a final event which marks its end. These can be used to build up a structure of connected events (see Appendix F.4.3) or the `ontomedia:Occurrence`s of these delimiting `ontomedia:Event`s can be used to show the relative positions of the beginning and end of `ontomedia:Event`s to each other. This allows the three relative properties for occurrences, `ontomedia:follows`, `ontomedia:precedes` and `ontomedia:concurrent`, to be able to describe not only those discrete states but also the various overlapping possibilities (see Fig. 7.2).

An `ontomedia:Event`, in itself, exists outside the concept of time. Due to the nature of the subject being described it was not considered possible to use a universal time system, instead the focus is on the relative occurrence of events. An `ontomedia:Occurrence` is a specific instance of an event which occurs within a single `ontomedia:Timeline`. The length, relative and absolute time at or over which the `ontomedia:Occurrence` can be described through the use of the `ontomedia:Occurrence` properties. Time, as related to `ontomedia:Event`s, was modelled in this manner for two main reasons. First, that the concept of time in fiction is often more loose and fluid than in reality and in many cases exact time measurements or periods are not specified, instead the reader is presented with events positioned relative to each other. Second, an single event may take a different amount of time for different `ontomedia:Entity`s involved in it or when viewed through different timelines. By separating out the occurrences of an `ontomedia:Event` and the `ontomedia:Event` itself, the ontology is able to treat each unique `ontomedia:Occurrence` as a separate entity which has its own defining characteristics both within itself and in the way it relates to other `ontomedia:Occurrence`s.

```
<!-- Event -->

<rdf:Description rdf:about="#HJ_CrushMission1">
  <rdfs:label>Halo Jones.The Crush (Mission 1)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omea;Violence" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#HJ_BetaPlatoon" />
  <ome:has-object-entity rdf:resource="#HJ_TarantulaArmy" />
  <ome:has-occurrence rdf:resource="#HJ_JonesCrushMission1" />
```

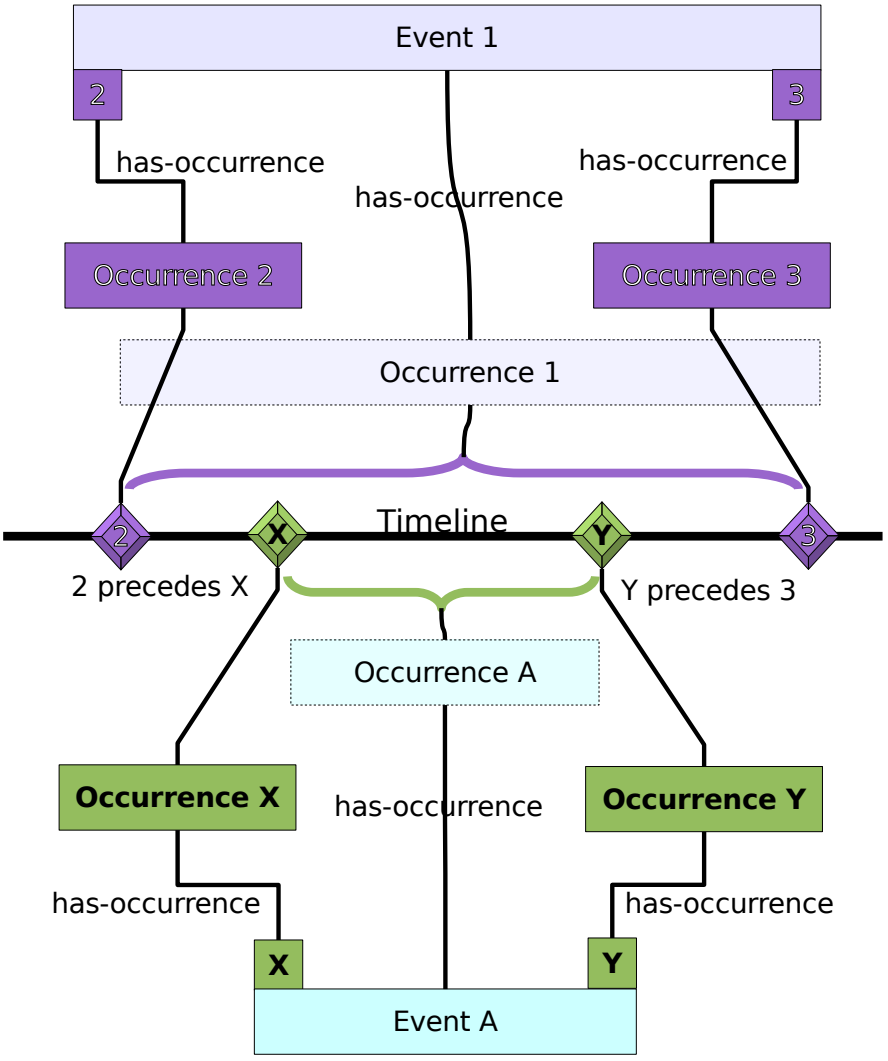

Figure 7.2: Relative Positions of Overlapping Occurrences on a Timeline (see Appendix F.4.1.1 for RDF)

```
  <ome:has-occurrence rdf:resource="##HJ_ChronCrushMission1" />
</rdf:Description>

<!-- Occurrences -->

<rdf:Description rdf:about="#HJ_JonesCrushMission1">
  <rdfs:label>Halo Jones.The Crush (Mission 1) Jones Timeline</rdfs:label
    >
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:occurrence-of rdf:resource="#HJ_CrushMission1" />
  <ome:timeline-ref rdf:resource="#HJ_Jones_TL" />
  <ome:has-duration rdf:resource="#5Mins" />
</rdf:Description>
```

```
<rdf:Description rdf:about="#HJ_ChronCrushMission1">
  <rdfs:label>Halo Jones.The Crush (Mission 1) Chronology Timeline</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:occurrence-of rdf:resource="#HJ_CrushMission1" />
  <ome:timeline-ref rdf:resource="#HJ_Chronology_TL" />
  <ome:has-duration rdf:resource="#2Months" />
</rdf:Description>
```

Listing 7.3: OntoMedia Expression Examples: Time Dilation (see Appendix F.4.1.2 for full example)

Any `ontomedia:Entity` can have one or more `ontomedia:Timeline`s associated with it. While the most common case will be a `ontomedia:Timeline` showing the events that occur within a `ontomedia:Context`, i.e. the history of that universe, an equally useful option will be a timeline showing the narrative order of events within an item of media. It is therefore likely that more than one `ontomedia:Timeline` instance will need to be defined for any given work. Any specified event will occur on multiple `ontomedia:Timeline`s but the relationship between the events on any given `ontomedia:Timeline` will not necessarily be the same as on any other `ontomedia:Timeline`. For example, if as previously suggested we define one `ontomedia:Timeline` to describe the events which occur in the narrative and another to describe the events chronologically these two will differ whenever we encounter a 'flashback' or one of the characters mentions either an historical event or something from their past.

```
<!-- Timelines -->

<rdf:Description rdf:about="#Narrative">
  <rdfs:label>Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Chronology">
  <rdfs:label>Chronological Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<!-- Events -->

<rdf:Description rdf:about="#EventA">
  <rdfs:label>Event A</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#EventA">
  <rdfs:label>Event A</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
</rdf:Description>

<!-- Occurrences -->

<rdf:Description rdf:about="#EventA_NT">
  <rdfs:label>Event A on Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Narrative" />
  <ome:occurrence-of rdf:resource="#EventA" />
  <ome:follows rdf:resource="#EventB_NT" />
</rdf:Description>

<rdf:Description rdf:about="#EventB_NT">
  <rdfs:label>Event B on Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Narrative" />
  <ome:occurrence-of rdf:resource="#EventB" />
  <ome:precedes rdf:resource="#EventA_NT" />
</rdf:Description>

<rdf:Description rdf:about="#EventA_CT">
  <rdfs:label>Event A on Chronological Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Chronology" />
  <ome:occurrence-of rdf:resource="#EventA" />
  <ome:precedes rdf:resource="#EventB_CT" />
</rdf:Description>

<rdf:Description rdf:about="#EventB_NT">
  <rdfs:label>Event B on Chronological Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Chronology" />
  <ome:occurrence-of rdf:resource="#EventB" />
  <ome:follows rdf:resource="#EventA_CT" />
```

```
</rdf:Description>
```

Listing 7.4: OntoMedia Expression Examples: Time (see Fig. 7.3 for illustration)

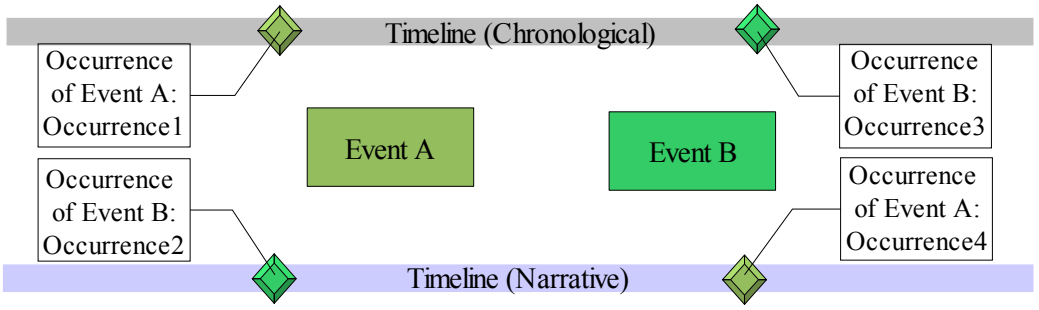

Figure 7.3: Timelines and Occurrences. See Listing 7.4 for RDF

This flexibility regarding time is especially important when describing fictional contexts and events, since stories may involve time travel and related paradoxes. While a 1:1 mapping exists between an instance of `ontomedia:Timeline` and an instance of `ontomedia:Occurrence`, a 1:Many relationships exist between any instance of an `ontomedia:Event` and the instances of `ontomedia:Occurrence` that contextualise it. This can even allow more than one `ontomedia:Occurrence` of the same event to exist on the same `ontomedia:Timeline`, for example if a character meets their future self on their personal `ontomedia:Timeline` this event will occur twice, once when they are the younger version of themselves and once when they are the older version.

```
<!-- Timelines -->

<rdf:Description rdf:about="#DrWhoTimeline">
  <rdfs:label>Dr Who Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<!-- Characters -->

<rdf:Description rdf:about="#Dr3">
  <rdfs:label>The Third Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:is rdf:resource="#Dr2" />
  <omfc:portrayed-by rdf:resource="#JonPertwee" />
</rdf:Description>

<rdf:Description rdf:about="#Dr2">
  <rdfs:label>The Second Doctor</rdfs:label>
```

```
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:is rdf:resource="#Dr3" />
  <omfc:portrayed-by rdf:resource="#PatrickTroughton" />
</rdf:Description>

<!-- Events -->

<rdf:Description rdf:about="#2_3meet">
  <rdfs:label>The 3rd Doctor meets the 2nd Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Social" />
  </rdf:type>
  <ome:has-object-entity rdf:resource="#Dr2" />
  <ome:has-subject-entity rdf:resource="#Dr3" />
</rdf:Description>

<rdf:Description rdf:about="#2_3regen">
  <rdfs:label>The 2nd Doctor regenerates into the 3rd Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#Dr2" />
  <ome:from rdf:resource="#Dr2" />
  <ome:to rdf:resource="#Dr3" />
</rdf:Description>


<!-- Occurrences -->

<rdf:Description rdf:about="#3Meets2As2">
  <rdfs:label>The 3rd Doctor meets the 2nd Doctor as the 2nd Doctor</
   rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#DrWhoTimeline" />
  <ome:occurrence-of rdf:resource="#2_3meet" />
  <ome:precedes rdf:resource="#2to3Regen" />
</rdf:Description>

<rdf:Description rdf:about="#3Meets2As3">
  <rdfs:label>The 3rd Doctor meets the 2nd Doctor as the 3rd Doctor</
   rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#DrWhoTimeline" />
  <ome:occurrence-of rdf:resource="#2_3meet" />
  <ome:follows rdf:resource="#2to3Regen" />
```

```
</rdf:Description>

<rdf:Description rdf:about="#2to3Regen">
  <rdfs:label>The 2nd Doctor regenerates as the 3rd Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#DrWhoTimeline" />
  <ome:occurrence-of rdf:resource="#2_3regen" />
  <ome:precedes rdf:resource="#3Meets2As3" />
  <ome:follows rdf:resource="#3Meets2As2" />
</rdf:Description>
```

Listing 7.5: OntoMedia Expression Examples: Time Loops and Multiple Versions of Entities

Time travel was not the only occasion when characters have been known to meet themselves. The idea of multiple universes or realities is a staple in science fiction and fantasy. The `ontomedia:Context` class, a subclass of `ontomedia:Abstract_Item`, was created to separate the many different versions of the same entity that may exist. It allows us to differentiate both between different representations of the same fictional character, different version of the same character and between real people, fictionalisations of real people and fictional characters. This is a particular issue when considering the contents of fiction, especially when those works have been reinterpreted across media, within the same work or after a period of time. Since these different interpretations can be physically distinctive, for example when a character is portrayed by different actors (see Listing 7.5), or given different personality traits or back history it becomes necessary to recognise that while they may be supposed to be to same entity there are occasions when their differences are as important as their similarities. Examples of this can be seen in almost every movie adaptation of a book. For example, the recent *Lord of the Rings* movies directed by Peter Jackson[7] or the transformation of 'We Can Remember It For You Wholesale' (Dick, 1969) to the movie *Total Recall* directed by Paul Verhoeven (1990). In the first case the character of Faramir as portrayed in the movie by David Wenham was both physically and emotionally different to the character described in the book (see Listing 7.6), much to the disappointment of many fans. In the second the hero of the short story 'Douglas Quail' becomes 'Douglas Quaid'. An even more extreme case can be seen in the new *Battlestar Galactica* series in which two of the characters (Starbuck and Boomer) have changed gender since the original series was aired.

```
<!-- Contexts -->

<rdf:Description rdf:about="#LotRBooks">
  <rdfs:label>Lord of the Rings (Books)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
```

[7] *The Lord of the Rings: The Fellowship of the Ring* (2001), *The Lord of the Rings: The Two Towers* (2002), *The Lord of the Rings: The Return of the King* (2003)

```
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#LotRMovie">
  <rdfs:label>Lord of the Rings (Movie)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:shadow-of rdf:resource="#LotRBooks" />
</rdf:Description>

<!-- Characters -->

<rdf:Description rdf:about="#Faramir">
  <rdfs:label>Faramir</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotRBooks" />
  <omt:has-trait rdf:resource="#Description_RavenHair" />
</rdf:Description>

<rdf:Description rdf:about="#Faramir_Movie">
  <rdfs:label>Faramir (Movie)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotRMovie" />
  <ome:shadow-of rdf:resource="#Faramir" />
  <omfc:portrayed-by rdf:resource="#DavidWenham" />
  <omt:has-trait rdf:resource="#Description_BlondHair" />
  <omt:has-trait rdf:resource="#Description_Beard" />
</rdf:Description>

<!-- Events -->

<rdf:Description rdf:about="#FaramirGoodCall">
  <rdfs:label>Faramir Decides to help Frodo Destroy the Ring</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:exists-in rdf:resource="#LotRBooks" />
  <ome:has-subject-entity rdf:resource="#Faramir" />
  <ome:has-object-entity rdf:resource="#Motivation_DestroyRing" />
</rdf:Description>

<rdf:Description rdf:about="#FaramirBadCall">
  <rdfs:label>Faramir Decides to take Frodo and the Ring back to Gondor</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
```

```
  </rdf:type>
  <ome:exists-in rdf:resource="#LotRMovie" />
  <ome:has-subject-entity rdf:resource="#Faramir_Movie" />
  <ome:has-object-entity rdf:resource="#Motivation_RingToGondor" />
</rdf:Description>
```

Listing 7.6: OntoMedia Expression Examples: Context and Variations.

Interaction with users showed that they frequently distinguished between these different representations as well as creating their own. Since the separation was important to them, it was also important to be able to model that distinction and allow the metadata to reflect it for the purposes of reducing ambiguity in search and retrieval.

7.2.4.2 Core - OntoMedia Media

Scope: Classes related to the physical media

Standard Namespace Prefix: omm

Main Classes (See classes with the 'omm' prefix on Fig 7.1):

- MediaRegion
  - MediaAtom
- LocSpec
- RegionPointer

OWL: See Appendix G.1 and Jewell (2006)

Responsibility: M. Jewell

This section of the ontology was developed by M. Jewell to allow the description of media or regions within an item of media and relate that to a part of the narrative.

7.2.4.3 Core - OntoMedia Space

Scope: Classes and properties extending the Signage Location ontology (Millard et al., 2004).

Standard Namespace Prefix: loc

Main Classes (See classes with the 'loc' prefix on Fig 7.1):

- *AKT Location Ontology:Abstract-Space*

  - Space (also subclasses Ontomedia:Entity)
    * Level-Traversing-Space
    * Surface-Space
      · Biological-Surface-Space

- *AKT Location Ontology:Enclosed-Space*
  - Vessel
  - Portal
  - Container

- *AKT Loaction Ontology:Open-Space*
  - Urban-Area
    * Village
    * Town
    * City
    * Metropolis
      · Capital
  - Region
    * Aquatic
      · Puddle
      · Pond
      · Pool
      · Lake
      · Sea
      · Ocean
      · Stream
      · River
      · Estuary
    * Arboreal
      · Copse
      · Forest
      · Orchard
      · Wood
    * Hydrated
      · Marsh
      · Swamp
      · Bog

        - Arable
            - Field
        - Area
            - Ledge
            - Lot
        - Mountain
            - Volcano
        - Continent
        - Mountain-Range
        - Country
    - World
    - Galexy
    - Universe

OWL: See Appendix G.2

Responsibility: Author

While the Signage Location Ontology provided a simple way to describe internal locations it was lacking in classes to describe larger regions or general geographical areas. The OntoMedia Space classes took their main model from the Location ontology but attempted to fill these gaps.

Examples:

```
<rdf:Description rdf:about="#LotR-Middle-Earth">
  <rdfs:label>Lord of the Rings: Middle Earth</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;World" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#LotR-Orodruin">
  <rdfs:label>Lord of the Rings: Orodruin</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Volcano" />
  </rdf:type>
  <omt:has-trait rdf:resource="#Name-Orodruin">
  <omt:has-trait rdf:resource="#Name-MtDoom">
  <aktloc:is-located-in rdf:resource="#LotR-Middle-Earth" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Dead-Marshes">
  <rdfs:label>Lord of the Rings: Dead Marshes</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&loc;Marsh" />
  </rdf:type>
  <aktloc:is-located-in rdf:resource="#LotR-Middle-Earth" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-Gondor">
  <rdfs:label>Lord of the Rings: Gondor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Country" />
  </rdf:type>
  <ome:contains rdf:resource="LotR-MinasTirith" />
  <aktloc:is-located-in rdf:resource="#LotR-Middle-Earth" />
</rdf:Description>

<rdf:Description rdf:about="#LotR-MinasTirith">
  <rdfs:label>Lord of the Rings: Minas Tirith</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Capital" />
  </rdf:type>
  <aktloc:is-located-in rdf:resource="#LotR-Gondor" />
</rdf:Description>
```

Listing 7.7: OntoMedia Space Examples (Examples from Lord of the Rings (J. R. R. Tolkien, 1954 – 5))

7.2.4.4 Extensions/Common - OntoMedia Being

Scope: Classes and properties describing beings, groups of beings and links between beings.

Standard Namespace Prefix: omb

Main Classes (See classes with the 'omb' prefix on Fig 7.1):

- *ome:Entity*
  - Being
    - Proto-Being
    - Character
- *ome:Abstract-Item*
  - Profession
  - Bond
    - Pledge
    - Deal
    - Enmity

        - Alliance
            - Friendship
        - Family
            - Blood
            - Adopted
            - Foster
            - Step
        - Possession
    - Mental-Illness
    - Physical-Illness
    - Physical-Injury
    - Emotional-Crisis
- *ome:Collection*
    - Group
        - Community
            - Household
            - Bonded-Group
        - Organisation
            - Company
            - Government

OWL: See Appendix G.4

Responsibility: Author

The classes described in the being section of OntoMedia relate to people, fictional or otherwise, and groups thereof. For specific use in fiction, `ontomedia:Being` class was extended to `ontomedia:Character`. Entities of the `ontomedia:Character` type are defined as fictional entities which have a personality. For example, a toaster would be a type of `ontomedia:Physical-Item`, a subclass of `ontomedia:Item`, whereas the talkie toaster from the television series *Red Dwarf* created by Rob Grant and Doug Naylor (see Listing 7.8), and the related books written by same, would be classed as an `ontomedia:Character` despite having the physical appearance of a toaster.

```
<rdf:Description rdf:about="#Toaster">
  <rdfs:label>A Toaster</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Physical-Item" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality" />
```

```
  <omt:has-trait rdf:resource="#Description_RedToaster" />
</rdf:Description>

<rdf:Description rdf:about="#TalkieToaster">
  <rdfs:label>Talkie Toaster</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#RedDwarf" />
  <omt:has-trait rdf:resource="#Description_RedToaster" />
</rdf:Description>

<rdf:Description rdf:about="#SlitheenEgg">
  <rdfs:label>"Margaret Blaine" Slitheen (In Egg)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Proto-Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#DrWho" />
</rdf:Description>
```

Listing 7.8: OntoMedia Being Examples: Characters.

The `ontomedia:proto-being` class was added to deal with entities which had the potential to develop into a being but which did not have any form of awareness or personality and for which there might be some debate as to whether they should therefore be counted at a `ontomedia:Physical-Item` or a `ontomedia:Being`. An example of this would be the Slitheen egg (see Listing 7.8) from the *Doctor Who* episode 'Boom Town' written by Russell T. Davies (first aired 4 June 2005 (IMDB Staff, 2006a)).

Character development is shown using an entity-focused `ontomedia:Timeline`. A `ontomedia:Character`, or any other `ontomedia:Entity`, is associated with a `ontomedia:Timeline`. Any changes that occur to that `ontomedia:Entity` are then referenced in the timeline. To discover the state of a `ontomedia:Entity` at any given point it is just necessary to start with the initial description of the `ontomedia:Entity` and then make any changes required by `ontomedia:Events` occurring on the `ontomedia:Timeline` up until the point of interest. The reason that the decision was taken to model `ontomedia:Entity` development like this was to limit the number of versions of the `ontomedia:Entity` that were required. It was considered that the comparatively simple calculation on the part of the computer was a preferable option to the time that a user would otherwise spend. In some cases where there are very distinct changes to the `ontomedia:Entity` then the user may wish to make a new `ontomedia:Entity` which has a `ontomedia:is` relationship with the first version and this too can be added to the `ontomedia:Timeline`. An example of when this might occur is if the actor playing a character changed such as the many Bonds or the various incarnations of the Doctor in *Doctor Who* (see Listing 7.5).

The `ontomedia:Bonded-Group` class is used to describe groups that share a common

bond or closeness. One important variation of a `ontomedia:Bonded-Group`, although not shown in the class tree above, is a partnership. `ontomedia:Partnership`s were seen as closely bonded groups of two, and thus a specific subclass of `ontomedia:Bonded-Group`. It was decided not to differentiate between types of partnership at this level. While the `ontomedia:Partnership` class models a close bond between two people, only through the existence of other events, or lack thereof, can any conclusions be drawn on whether the partnership has a sexual component or any legal recognition. This was done to avoid prejudice through assumption when the ontology has to cover many different types of partnerships, close friendships, couples and 'marriages', the difference between which may not be clearly defined by the people or characters within them.

```
<!-- Group -->

<rdf:Description rdf:about="#LotR-Fellowship">
  <rdfs:label>Lord of the Rings: Fellowship</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Bonded-Group" />
  </rdf:type>
  <omt:has-trait rdf:resource="#Link-FellowshipPledge">
  <ome:contains rdf:resource="#LotR-Frodo">
  <ome:contains rdf:resource="#LotR-Sam">
  <ome:contains rdf:resource="#LotR-Merry">
  <ome:contains rdf:resource="#LotR-Pippin">
  <ome:contains rdf:resource="#LotR-Gandalf">
  <ome:contains rdf:resource="#LotR-Strider">
  <ome:contains rdf:resource="#LotR-Boromir">
  <ome:contains rdf:resource="#LotR-Legolas">
  <ome:contains rdf:resource="#LotR-Gimli">
  <omb:has-number-of-parts>9</omb:has-number-of-parts>
</rdf:Description>

<!-- Partnership -->

<rdf:Description rdf:about="#LotR-Frodo-Sam">
  <rdfs:label>Lord of the Rings: Frodo-Sam Partnership</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Partnership" />
  </rdf:type>
  <ome:contains rdf:resource="#LotR-Frodo">
  <ome:contains rdf:resource="#LotR-Sam">
  <omt:has-trait rdf:resource="#Link_FrodoSam_Friendship">
</rdf:Description>

<rdf:Description rdf:about="#LotR-Eowyn-Faramir">
  <rdfs:label>Lord of the Rings: Eowyn-Faramir Marriage</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Partnership" />
  </rdf:type>
  <ome:contains rdf:resource="#LotR-Eowyn">
```

```
  <ome:contains rdf:resource="#LotR-Faramir">
  <omt:has-trait rdf:resource="##Link-MarraigePledge">
</rdf:Description>

<!-- Bond -->

<rdf:Description rdf:about="#Link-FellowshipPledge">
  <rdfs:label>Lord of the Rings: Link Between the members of the
    Fellowship</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Link" />
  </rdf:type>
  <omt:has-bond rdf:resource="#LotR-FellowshipPledge">
</rdf:Description>

<rdf:Description rdf:about="#LotR-FellowshipPledge">
  <rdfs:label>Lord of the Rings: Pledge of the Fellowship</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Pledge" />
  </rdf:type>
  <omb:pledge-maker rdf:resource="#LotR-Fellowship">
  <omb:pledge-reciever rdf:resource="#LotR-Frodo">
  <omb:will-do rdf:resource="#Event-Destroy-Ring">
</rdf:Description>
```

Listing 7.9: OntoMedia Being Examples: Groups and Bonds (Examples from Lord of the Rings (J. R. R. Tolkien, 1954 – 5))

7.2.4.5 Extensions/Common - OntoMedia Trait

Scope: Classes and properties describing traits which entities may have such as descriptive properties, motivations, current physical, mental or psychological state and other information related to an entities profile.

Standard Namespace Prefix: omt

Main Classes (See classes with the 'omt' prefix on Fig 7.1):

- *ome:Abstract-Item*
  - Trait
    - Being-Trait
      - Sexuality
      - Kink
      - Faith
    - Name (also subclasses Being-Trait)

* Gender (also subclasses Being-Trait)
  - Female
  - Male
  - Neuter
  - Other
* Ethnicity (also subclasses Being-Trait)
* Species (also subclasses Being-Trait)
* Age (also subclasses Being-Trait)
* Description (also subclasses Being-Trait)
  - Distinguishing-Mark
  - Colour
  - Dimension
  - Build
  - Style
  - Material
  - Type
* Motivation (also subclasses Being-Trait)
* Employment (also subclasses Being-Trait)
* State-Of-Form (also subclasses Being-Trait)
  - Corporeal
  - Incorporeal
* State-Of-Being (also subclasses Being-Trait)
  - Alive
  - Dead
  - Undead
  - Non-Existent
  - Inanimate
  - Unknown
  - Unprovable
* State-Of-Consciousness (also subclasses Being-Trait)
  - Conscious
  - Altered
  - Instinctual
  - Asleep
  - Unconscious
  - Unresponsive
* Value (also subclasses Being-Trait)

        - Abstract-Component
    - Knowledge (also subclasses Being-Trait)
    - Link (also subclasses Being-Trait)
    - Ordering (also subclasses Being-Trait)
    - Abstract-Obstacle (also subclasses Being-Trait)

- *ome:Physical-Item*
    - Physical-Obstacle

OWL: See Appendix G.5

Responsibility: Author

Traits represent the descriptive information that can be applied to an entity either in terms of appearance, construct or nature. These are considered abstract because they represent the concept of the thing rather than the thing itself even when specifying otherwise physical items such as material.

Traits are used to create a profile of an `ontomedia:Entity` at a given moment. As previously mentioned (see Section 7.2.4.4), it is through the use of entity-timelines that the cumulative changes that occur to an `Entity`, such as a `Character`, can be calculated. Thus a `Character` can gain links to other `Character`s, knowledge and distinguishing marks, can change state, gender or age and otherwise develop.

An entity can have three different types of traits associated with them through the `has-trait`, `has-projected-trait` and `has-observed-trait` properties.

Trait	What is
Projected Trait	Trait as seen by other characters within the same universe
Observed Trait	Trait as seen by those beyond the forth wall

The projected and observed traits model the fact that different levels of information are available to different entities within a given context and to the audience observing the context. In many cases, characters attempt to conceal information from or deliberately mislead other characters thus necessitating the ability to distinguish between what is known by characters within the context and what is actually the case. In some cases, projected traits can be used when the information that has been given has been revealed to be either questionable or false. Equally, observed traits can be used in situations where the audience has been lead to believe something about the character which has not been specifically stated within the context (see Listing 7.11 and 7.12).

When dealing with those entities existing within reality then it is impossible to specify a value for observed traits since we exist within that context. However, projected traits can be seen to be the public persona or outward appearance of an object or person.

When a trait is projected, the option exists through use of the `projected-at` and `not-projected-at` properties to specify who this deceptive information is aimed at. If not value is given then the default assumption is that the projection of the information is aimed at all other entities within that context.

```
<rdf:Description rdf:about="#HL_Methos">
  <rdfs:label>Highlander.Methos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <omt:has-trait rdf:resource="#Name_Methos" />
  <omt:has-trait rdf:resource="#Species_Immortal" />
  <omt:has-trait rdf:resource="#Age_5000" />
  <omt:has-projected-trait rdf:resource="#Name_AdamPierson" />
  <omt:has-projected-trait rdf:resource="#Human_Cover" />
  <omt:has-projected-trait rdf:resource="#Age_30s" />
  <omfc:portrayed-by rdf:resource="#PeterWingfield" />
</rdf:Description>

<rdf:Description rdf:about="#HL_JoeDawson">
  <rdfs:label>Highlander.Joe Dawson</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <omt:has-trait rdf:resource="#Name_JoeDawson" />
  <omt:has-trait rdf:resource="#Species_Human" />
  <omt:has-trait rdf:resource="#Employment_Watcher" />
  <omt:has-trait rdf:resource="#Employment_Barman" />
  <omt:has-projected-trait rdf:resource="#Barman_Cover" />
  <omt:contained-by rdf:resource="#HL_Watchers" />
  <omfc:portrayed-by rdf:resource="#Jim Byrnes" />
</rdf:Description>

<rdf:Description rdf:about="#HL_Watchers">
  <rdfs:label>Highlander.Watchers</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Organisation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
</rdf:Description>

<rdf:Description rdf:about="#HL_Immortals">
  <rdfs:label>Highlander.Immortals</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Collection" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <omb:of-type rdf:resource="#Species_Immortal" />
```

```
</rdf:Description>

<rdf:Description rdf:about="#Name_AdamPierson">
  <rdfs:label>Adam Pierson</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <omt:has-name rdf:resource="#FullName_AdamPierson" />
  <omt:has-name rdf:resource="#Name_Adam" />
  <omt:projected-at rdf="#HL_Watchers" />
  <omt:not-projected-at rdf="#HL_JoeDawson" />
</rdf:Description>

<rdf:Description rdf:about="#Human_Cover">
  <rdfs:label>Appears Human</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omc;HomoSapiens" />
  </rdf:type>
  <omt:not-projected-at rdf="#HL_Immortals" />
  <omt:not-projected-at rdf="#HL_JoeDawson" />
</rdf:Description>

<rdf:Description rdf:about="#Species_Immortal">
  <rdfs:label>Highlander Immortals</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omc;Humanoid" />
  </rdf:type>
</rdf:Description>
```

Listing 7.10: OntoMedia Trait Examples: Projected Traits (Examples from Highlander)

By analysing any discrepancies between the traits, projected traits and observed traits of a character it is possible to identify characters who have secrets or are otherwise lying about themselves.

One of the traits that characters can have is a `ontomedia:Motivation`. These motives are described as `ontomedia:Event`s which the character either does or does not want to come to pass. By comparing these `ontomedia:Event`s with those that actually occur it is possible to test how many of the characters hopes and fears were realised. The events do not need to match exactly, just on those elements specified by in the motivating event. For purposes of comparison it can be generally assumed that the difference between subject and object entities is unimportant and that a `ontomedia:involves` relationship indicates that the `ontomedia:Entity` indicated can be involved anywhere in the `ontomedia:Event` in question.

```
<rdf:Description rdf:about="#JackHarkness">
  <rdfs:label>Captain Jack Harkness</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
```

```
  </rdf:type>
  <ome:exists-in rdf:resource="#DrWho" />
  <omt:has-trait rdf:resource="#Sexuality_ToSame" />
  <omt:has-trait rdf:resource="#Sexuality_ToAnyOther" />
  <omt:has-trait rdf:resource="#Male" />
  <omt:has-trait rdf:resource="#Corporeal" />
  <omt:has-trait rdf:resource="#Alive" />
  <omt:has-trait rdf:resource="#Employment_HeadT3" />
  <omt:has-trait rdf:resource="#Motivate_FindDoc" />
  <omt:has-trait rdf:resource="#Motivate_SaveEarthFromAliens" />
  <omt:has-observed-trait rdf:resource="#Motivate_GetLaid" />
  <omt:has-projected-trait rdf:resource="#Name_CaptJack" />
  <omt:has-projected-trait rdf:resource="#Species_Human" />
</rdf:Description>
```

Listing 7.11: OntoMedia Trait Examples: Character Profile (see Appendix F.4.2.1 for full example)

The two obstacle traits, `ontomedia:Physical-Obstacle` and `ontomedia:Abstract-Obstacle`, are another aspect of the influence of narrative theory on the ontology. Traditionally the hero has a number of challenges he or she has to overcome to succeed. These challenges are modelled by the two types of obstacle. As with `ontomedia:Motivation`, analysing which obstacles were overcome allows another way of interrogating the metadata for the the narrative.

```
<!-- Characters -->

<rdf:Description rdf:about="#Huff_Tony">
  <rdfs:label>Huff.TonyFoster</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#BloodSmoke" />
  <omt:has-trait rdf:resource="#Sexuality_ToSame" />
  <omt:has-trait rdf:resource="#Male" />
  <omt:has-trait rdf:resource="#Corporeal" />
  <omt:has-trait rdf:resource="#Alive" />
  <omt:has-trait rdf:resource="#Name_TonyFoster" />
  <omt:has-trait rdf:resource="#Employment_TAD" />
  <omt:has-trait rdf:resource="#FaciesLee" />
</rdf:Description>

<!-- Motivation -->

<rdf:Description rdf:about="#FaciesLee">
  <rdfs:label>Crush on Lee</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Motivation" />
    <owl:Class rdf:about="&omf;Text" />
  </rdf:type>
```

```
  <omt:has-motivation rdf:resource="#Tony_Lee" />
  <omt:has-trait rdf:resource="#LeeNotInterested" />
  <omt:has-trait rdf:resource="#LeeCareer" />
</rdf:Description>

<!-- Obstacles -->

<rdf:Description rdf:about="#LeeCareer">
  <rdfs:label>Effect on Lee's career</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Abstract-Obstacle" />
  </rdf:type>
  <ome:is rdf:resource="#LeeCareerAffected" />
</rdf:Description>

<rdf:Description rdf:about="#LeeNotInterested">
  <rdfs:label>Lee Not Interested</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Abstract-Obstacle" />
  </rdf:type>
  <ome:is rdf:resource="#LeeStraight" />
</rdf:Description>
```

Listing 7.12: OntoMedia Trait Examples: Obstacles (see Appendix F.4.2.2 for full example)

7.2.4.6 Extensions/Common - Other

Other Files:

- Bestiary (See Appendix G.7)
- Expression Property (See Appendix G.9)
- Physical Items (See Appendix G.8)
- Professions (See Appendix G.6)
- Weapons (See Appendix G.10)

Responsibility: Author

Of the other extensions, the majority were created as extensions to the ontology as the need arose from the examples that were being created for testing. In cases such as those relating to physical items, no attempt has been made to cover the entire subject area just offer a few classes onto which other ontologies such as the CIDOC CRM have already modelled.

The bestiary class was created to provide a basic structure to classify species. While humans and a few animal types have been included the main focus of the classes is mythological and other fictional species. It was decided that classifying real species was best left to domain experts within that area.

The expression property classes deal with ratings with can be applied to the instance to provide additional information. The accuracy rating allows an instance to be marked as accurate or approximate. This is especially important with numerical information such as ages because often the exact figure is not known.

The other rating, abstractness, allows for the genericness of the concept described by the instance to be stated. In general, information marked as `ontomedia:Generic` exists, with the same meaning in more than one context and the default assumption can be that two objects marked as `ontomedia:Generic` with the same class can be considered to be of comparable type even if they are stated to exist in different contexts. In the same way, `ontomedia:Specialised` information can be carried over into any sub-contexts while information given a `ontomedia:Specific` rating only belongs to the context is exists within. The `ontomedia:Detail` and `ontomedia:Nitpick` ratings indicate the information is very specific and if required can be ignored depending on restrictions of time and processing.

7.2.4.7 Extensions/Detail

Files:

- Knowledge (See Appendix G.11)
- Human Body Parts (See Appendix G.12)
- Human Body Types Default Instances (See Appendix G.13)
- Human Eye Colour Default Instances (See Appendix G.14)
- Human Hair Colour Default Instances (See Appendix G.15)

Responsibility: Author

While the concept of knowledge exists as a `ontomedia:Trait` this describes a thing known by a person, group or universe/context (public knowledge). The information modelled in the Knowledge file may be known, and therefore linked to through `ontomedia:Knowledge`, or may just exist. Information is currently divided into three subclasses:

- Fact - Something that can be proven to be true

- Theory - Something that is believed to be true
- Memory - Something that was remembered as true

These subclasses allow for differing levels of evidential existence for the information being described. While facts are supposedly inviolate, theories can be wrong and memories can be misleading or altered (see Appendix F.3).

As well as containing the basic `ontomedia:Information` classes, the knowledge file also includes classes relating to the concepts of `ontomedia:Culture` such as `ontomedia:-Language`, `ontomedia:Alphabet` and `ontomedia:Belief`.

The human body parts classes are not intended to be anatomically precise but to provide a simple set of classes to describe the types of humanoid body parts that occur in narratives. These are intended to be mainly used either to provide detail to events (see Listing 7.24) or, in combination with the `ontomedia:Trait` classes and properties, for descriptive information (see Listing 7.13). The default instance files include a number of RDF instances which can be used for `ontomedia:Being` descriptions. They are not exhaustive but exist to provide the basic details that might commonly be needed and demonstrate the way in which the ontology can be expanded when necessary.

```
<!-- Characters -->

<rdf:Description rdf:about="#RayK">
  <rdfs:label>DueSouth.Ray Kawalski</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omfc;Character" />
  </rdf:type>
  <omt:has-trait rdf:resource="#Descrip_RayK" />
</rdf:Description>

<!-- Description -->

<rdf:Description rdf:about="#Descrip_RayK">
  <rdfs:label>Physical Description of Ray Kawalski</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Description" />
  </rdf:type>
  <omt:has-feature rdf:resource="#BlueEyes" />
  <omt:has-feature rdf:resource="#BlondHair" />
  <omt:has-description rdf:resource="#5-10-5" />
  <omt:has-description rdf:resource="&omhbt;Ectomorph" />
  <omt:has-description rdf:resource="#LogoTattoo" />
</rdf:Description>

<!-- Features -->

<rdf:Description rdf:about="#BlueEyes">
```

```
  <rdfs:label>Blue Eyes</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omhbp;Eyes" />
  </rdf:type>
  <omt:has-trait rdf:resource="&omhec;Blue" />
</rdf:Description>

<rdf:Description rdf:about="#BlondHair">
  <rdfs:label>Blond Hair</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omhbp;Head-Hair" />
  </rdf:type>
  <omt:has-trait rdf:resource="&omhhc;Dirty-Blond" />
</rdf:Description>

<rdf:Description rdf:about="#TattooedArm">
  <rdfs:label>Tattooed Arm</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omhbp;Arm-Right-Upper-Surface" />
  </rdf:type>
</rdf:Description>

<!-- Description -->

<rdf:Description rdf:about="#5-10-5">
  <rdfs:label>Five Foot Ten and a Half</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Dimension" />
  </rdf:type>
  <omt:has-dimension>height</omt:has-dimension>
  <omt:has-unit>inch</omt:has-unit>
  <omt:has-value>70.5</has-value>
</rdf:Description>

<rdf:Description rdf:about="#Slender">
  <rdfs:label>Slender</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omhbt;Ectomorph" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#LogoTattoo">
  <rdfs:label>Champian Spark Logo Tattoo</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Distinguishing-Mark" />
  </rdf:type>
  <omt:mark-location rdf:resource="#TattooedArm" />
</rdf:Description>
```

Listing 7.13: OntoMedia Detail Examples: Physical Description (Examples from Due South)

7.2.4.8 Extensions/Events - OntoMedia Travel

Scope: Classes and properties describing basic travel.

Standard Namespace Prefix: omj

Main Classes:

- *omtz:Transference*
  - Travel
    - Void-Travel
      - Space-Travel
    - Solid-Travel
      - Terrain-Travel
      - Submatter-Travel
      - Subterranean-Travel
    - Liquid-Travel
      - Marine-Travel
      - Submarine-Travel
    - Gas-Travel
      - Air-Travel

OWL: See Appendix G.16

Responsibility: Author

`ontomedia:Travel` is modelled as a subclass of `ontomedia:Transference`, a form of `ontomedia:Transformation` (see 7.2.4.9). The way that this models travel is that the `ontomedia:Entity` or `ontomedia:Entity`s that are moving are considered the subject of the event, being the active party, while the locations being moved between from the `ontomedia:to` and `ontomedia:from` components. In many cases the means of travel, the craft, will also make the journey. In these cases the craft will be the subject and the travellers will be `ontomedia:contained-by` the craft. In those situations where the transporting device remains in its initial position while moving the travellers then the travellers will be the subjects of the event while the portal or other such device will comprise the object of the event.

Travel is categorised by the type of element that the form of transport is connected with. Travel between dimensions or through mystic/sub-reality realms, wormholes or other similar constructions are generally regarded as subclassing `ontomedia:Void-Travel`. Teleporters also fall into this category because even when the transportation otherwise

goes through one of the other elements, for example when transported from one end of a room to the other. The reason for this categorisation is that teleportation occurs regardless of the elements between the starting point and the destination and thus can be seen to occur on a subspace layer. This is easier to model as a void than to attempt to plot the path that the journey must have taken and all the intervening changes in element that the teleporting `ontomedia:Entity` must have encountered.

While most forms of transport only cover one travel through one element, some can move between elements, for example an atmosphere-capable spaceship or a amphibious vehicle. In the cases of such journeys the instance describing the `ontomedia:Travel` can be of all the required types and can include sub-events to show the aspects of the journal and, if required, the order in which they occurred.

```
<!-- SGC to Atlantis -->

<rdf:Description rdf:about="#SG_SGCtoAtlShort">
  <rdfs:label>Stargate.SG1 to Atlantis (Short Way)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;VoidTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#SG_DJackson" />
  <ome:has-object-entity rdf:resource="#Stargate" />
  <ome:from rdf:resource="#SGC" />
  <ome:to rdf:resource="#Atlantis" />
</rdf:Description>

<rdf:Description rdf:about="#SG_SGCtoAtlLong">
  <rdfs:label>Stargate.SG1 to Atlantis (Long Way)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;AirTravel" />
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:initial-event rdf:resource="#SG_EarthToDeadalus" />
  <ome:final-event rdf:resource="#SG_EarthOrbitToAtlantis" />
  <ome:from rdf:resource="#SGC" />
  <ome:to rdf:resource="#Atlantis" />
</rdf:Description>

<rdf:Description rdf:about="#SG_EarthToDeadalus">
  <rdfs:label>Stargate.Earth to Deadalus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;AirTravel" />
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#F-302" />
  <ome:initial-event rdf:resource="#Atmo" />
  <ome:final-event rdf:resource="#Therm" />
  <ome:from rdf:resource="#Earth" />
  <ome:to rdf:resource="#Deadalus" />
```

```
</rdf:Description>

<rdf:Description rdf:about="#SG_EarthOrbitToAtlantis">
  <rdfs:label>Stargate.Earth Orbit to Atlantis Orbit</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#Deadalus" />
  <ome:final-event rdf:resource="#SG_DeadalusToLantea" />
  <ome:from rdf:resource="#EarthOrbit" />
  <ome:to rdf:resource="#AtlOrbit" />
</rdf:Description>
```

Listing 7.14: OntoMedia Travel Examples (see Appendix F.4.3 for full example)

7.2.4.9 Extensions/Events - Other Events

Other Files:

- Action (See Appendix G.17)
- Gain (See Appendix G.18)
- Introduction (See Appendix G.19)
- Loss (See Appendix G.19)
- Social (See Appendix G.22)
- Event Properties (See Appendix G.23)

Main Classes:

- *ome:Action*
  - Sex
    - BDSM
  - Violence
    - Corporal-Punishment
    - Sexual-Violence (also subclasses Sex)
  - Ingestion
- *ome:Gain*
  - Creation

- *ome:Introduction*
  - First-Meeting
- *ome:Loss*
  - Betrayal
  - Destruction
- *ome:Transformation*
  - Transference
  - Division
  - Merge
  - Degradation
- *ome:Social*
  - Flirtation (also subclasses Sex)
    - Proposition
- Event-Properties
  - Consent-Properties
    - Consent-Given
    - Consent-Implied
    - Consent-Not-Given
    - Consent-Unclear

Responsibility: Author

The various `ontomedia:Event` subcategories represent the types of events that were considered likely candidates for use. The `ontomedia:Sex` and `ontomedia:Violence` related classes were included both for their commonality and because these types of events were highlighted as being important to users as metrics which they could use to inform their choice of whether or not to consume the item of media in question.

The class `ontomedia:First-Meeting`, as with `ontomedia:Introduction`, is for use in the case of purely descriptive narrative during which nothing happens other than the image being painted for the audience. This is distinct from a `ontomedia:Social` event where there character interaction actually occurs and thus does not subclass `ontomedia:Social` in addition to `ontomedia:Introduction`.

Once described, no `ontomedia:Entity` ceases to exist on the metadata level (although the described `ontomedia:Entity` may be non-existent). Equally, the information about

the `ontomedia:Entity` may exist before the `ontomedia:Entity` does within the narrative sequence. The `ontomedia:Creation` and `ontomedia:Destruction` events, which subclass `ontomedia:Gain` and `ontomedia:Loss` respectively, delimit the existence of an entity from an in-universe perspective.

The `ontomedia:Transformation` subclasses represent the exchange of an `ontomedia:Entity` between two others (`ontomedia:Transference`), the separation of an `ontomedia:Entity` into component parts (either in a single `ontomedia:Event`, `ontomedia:Division`, or over an extended period of time, `ontomedia:Degradation`) and the combining of `ontomedia:Entity`s into a single whole (`ontomedia:Merge`). The distinction between `ontomedia:Gain`/`ontomedia:Loss` events and `ontomedia:Merge`/`ontomedia:Division` is whether the resulting `ontomedia:Entity`, in the case of `ontomedia:Gain`/`ontomedia:Merge`, or the initial `ontomedia:Entity`, in the case of `ontomedia:Loss`/`ontomedia:Division`, can be regarded as a single unit or multiple units, one of which may contain the others. In all of these cases and `ontomedia:Entity`s contained by the `ontomedia:Entity`s being transferred go with their parent `ontomedia:Entity` (see Listing F.13 and 7.14).

The transfer of an `ontomedia:Abstract-Item` is the exception to the general transformation rule than while things may change there is no overall gain or loss within the transformation event. The transfer of a physical object typically contains a loss event for the giver and a gain event for the receiver. However, when an `ontomedia:Abstract-Item`, most commonly some form of information, `ontomedia:Knowledge` or `ontomedia:Motivation`, is transferred it is not removed from the giver while it is still gained by the receiver. This arguably represents an overall gain within the event however it was decided that the metaphorics of the case were less important than consistency and therefore this case if treated like any other transfer.

The other case which sometimes presents an apparent inconsistency is `ontomedia:Degradation`, especially in cases of decomposition or erosion. However, in the case a degrading `ontomedia:Entity` there are one of more `ontomedia:Entity`s being created and separating from it but these are typically of a level and importance that makes modelling them an exercise in completeness rather than practicality. For general use, the subject of a `ontomedia:Degradation` event is seen to be the `ontomedia:Entity` undergoing the transformation. Only if the resultant `ontomedia:Entity`s produced are of significant size or interest will they be listed within the `ontomedia:to` property along with the originating `ontomedia:Entity` which will also provide the `ontomedia:from` case.

The event properties exist to allow us to differentiate between forced actions and those done of a `ontomedia:Entity`'s freewill. This is most important when modelling the actions of `ontomedia:Being`s and related subclasses.

The consent being modelled is that of the *subject* of the event. It was decided that for any given `ontomedia:Event` instance the question of consent should only be specified for the `ontomedia:Entity` that is acting as the focus. This decision was made due to the fact that the level of consent given for an event may not be the same from the perspective of each of those involved. In cases such as this, multiple instances describing the event from the perspective of the various `ontomedia:Entity`s involved can be created with the respective consent levels for each subject `ontomedia:Entity` specified. An `ontomedia:is` statement can then be used to clarify the fact that the different instances all refer to the same event.

7.2.4.10 Extensions/Fiction - OntoMedia Character

Scope: Classes and properties that relates to fictional characters

Standard Namespace Prefix: omfc

Main Classes:

- *omb:Character*
  - Original-Character
  - Guest-Character

OWL: See Appendix G.24

Responsibility: Author

While not required information, the guest and original character subclasses give users to option to specify if a given character is original to the context in which is is appearing or if it comes from another source. This information can be inferred through the use of the `ontomedia:shadow-of` property but in many cases users may wish to clearly differentiate. While useful for media-inspired creations such as fan fiction, this is also relevant to professional publications and productions which feature characters from other series.

The use of the `ontomedia:Guest-Character` class makes no claims as to the status of the character, the accuracy in the depiction of the character or whether permission has been given or even sought for use. The designation is intended, solely, as an acknowledgement that credit for the creation of the character belongs elsewhere.

```
<!-- Characters -->

<rdf:Description rdf:about="#TN_ThursdayNext">
  <rdfs:label>Nextverse.Thursday Next</rdfs:label>
```

```
  <rdf:type>
    <owl:Class rdf:about="&omfc;Original-Character" />
  </rdf:type>
  <ome:has-shadow rdf:resource="#TN_Thursday1-4" />
  <ome:exists-in rdf:resource="#Nextverse" />
</rdf:Description>

<rdf:Description rdf:about="#TN_Havisham">
  <rdfs:label>Nextverse.Miss Havisham</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omfc;Guest-Character" />
  </rdf:type>
  <omfc:originating-context rdf:resource="#GreatExpectations" />
  <ome:is-shadow-of rdf:resource="#GE_Havisham" />
  <ome:exists-in rdf:resource="#Nextverse" />
</rdf:Description>

<rdf:Description rdf:about="#TN_Thursday5">
  <rdfs:label>Nextverse.Thursday5</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omfc;Original-Character" />
  </rdf:type>
  <ome:is-shadow-of rdf:resource="#TN_ThursdayNext" />
  <ome:exists-in rdf:resource="#Nextverse" />
</rdf:Description>

<rdf:Description rdf:about="#GE_Havisham">
  <rdfs:label>Great Expectations.Miss Havisham</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omfc;Original-Character" />
  </rdf:type>
  <ome:has-shadow rdf:resource="#TN_Havisham" />
  <ome:exists-in rdf:resource="#GreatExpectations" />
</rdf:Description>

<!-- Context -->

<rdf:Description rdf:about="#Nextverse">
  <rdfs:label>Nextverse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#GreatExpectations">
  <rdfs:label>Great Expectations</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>
```

Listing 7.15: OntoMedia Character Examples (Examples from The Eyre Affair (Fforde, 2001))

7.2.4.11 Extensions/Fiction - OntoMedia Fiction

Scope: Classes and properties that relate to fiction and the presentation of fiction

Standard Namespace Prefix: omf

Main Classes:

- *xprop:Expression-Properties*
  - Spoiler-Rating-Properties
    - Spoiler
    - Key
    - Main
    - Fact
    - Nitpick
  - Detail-Rating-Properties
    - Implied
    - References-Concept
    - In-Passing
    - Vague-Description
    - Describes
    - Detailed-Description
    - Extremely-Detailed-Description
    - Fade-To-Black
  - Textuality-Rating-Properties
    - Text
    - Calculated
    - Subtext
    - Interpretation
    - Supplemental

OWL: See Appendix G.25

Responsibility: Author

In the same manner as the event and expression properties, the various fiction rating properties exist to allow addition of further information about a given `ontomedia:Event` or `ontomedia:Entity`. These rating relate directly to the depiction of an `ontomedia:-Event` or `ontomedia:Entity` in fiction and represent the consumers interpretation of

that representation. While a general consensus is expected not everyone will interpret a given thing in the same way so methods such as probabilistic categorisation (see Section 9.3.2) and alternate viewpoints (see Section 7.3.1.2).

The concept of spoilers was one that came through very clearly from the user requirement survey (see Section 3.1.1). The addition of the spoiler rating classes was to allow users to mark important information as being privileged either through its importance or because it gave away intended plot twists or dramatic moments within the narrative. This provides a metric upon which users may choose to filter what information is being to them.

The descriptiveness rating is intended for use primarily with `ontomedia:Action` events although it is not limited to this. When media is categorised by the content of the narrative there is often little differentiation between a concept mentioned in passing and one graphically described. This can be an important distinction, especially when it relates to sex and/or violence. One potential use of this rating, in conjunction with the various event types, is to allow the generation of suggested ratings based on the users personal or preferred rating scheme.

The textuality rating allows the user to specific how much evidence exists for a given piece of information:

- *Text*: Indicates that the information was stated in the source material.
- *Subtext*: Indicates that the information was implied in the source material.
- *Interpretation*: Indicates that the information is an interpretation of the source material by the consumer. This interpretation may be based as much in outside influences, such as the consumers preferences or a literary or political theory, as information inherent in the text.
- *Calculated*: Indicates that the information was never stated directly but can be calculated from the information given.
- *Supplemental*: Indicates that the information was given in secondary source material such as interviews but not in the source material itself.

7.2.4.12 Extensions/Media

Files:

- Audio Item (See Appendix G.26)
- Photo Item (See Appendix G.28)

- Text Item (See Appendix G.29)
- Text Types (See Appendix G.30)
- Video Item (See Appendix G.31)
- Video Types (See Appendix G.32)

Responsibility: M. Jewell

The various media items and types were created by M. Jewell to describe the physical media through which the narrative was being expressed.

7.2.4.13 Misc - Dates

Scope: Classes and properties describing dates in different calendaring systems.

Standard Namespace Prefix: dat

Main Classes:

- *omk:Culture*
  - Calendar
- *omt:Value*
  - Date
    - CalendarReferencePoint
- *omt:AbstractComponent*
  - Date-Component
    - Second
    - Minute
    - Hour
    - Day
    - Month
    - Year
    - Qualifier
- *omt:Ordering*
  - Date-Ordering
    - Standard

OWL: See Appendix G.33

Responsibility: Author

The immediate issue with dates is that in fiction, especially in the historical, science-fiction and fantasy genres, the dating system used may bare no relation to any of the current standard calendaring systems. One cannot assume that a date can be expressed using the international standard date and time notation which would otherwise be the obvious choice.

Calendar systems all follow a similar basic pattern in that they count the number of a given unit, normally a year or year equivalent, to or from a referential point in time. This point may represent a significant event such as a birth, death or coronation, or may just be an arbitrary date such as 00:00 January 1st 1970. While the event being commemorated may be the reference point of the dates, there is no guarantee that the event actually took place at the time indicated by the calendar system or, indeed, that it happened at all. Thus is it not possible to simply reference an event and use this as a reference point.

The date classes provide a way of defining a calendar system and the component parts within it (see Appendix F.5). Once a `ontomedia:Calendar` and it's `ontomedia:-CalendarReferencePoint` has been defined (see Appendix F.5.1) then dates can be constructed using the `ontomedia:Date-Components` (see Appendix F.5.2) placed in a specific order. Which only the `ontomedia:Standard` order for date display is modelled by default, the `ontomedia:Date-Ordering` class can be extended to describe the different forms of dates and the components which make up each. Thus when a `ontomedia:Date` is defined it has, as its properties, one or more `ontomedia:Date-Orderings` of different types which describe the date in different ways or with different levels of precision or formality.

Each date exists within a given calendaring system and which system it uses can be set as a property. However through the use of the `ontomedia:is` property, `ontomedia:-Dates` from different `ontomedia:Calendar` systems can be defined as representing the same time. If desired it is also possible to define one `ontomedia:Calendar`'s components in respect to another's thus allowing for automatic calculation of the translation of dates between the two systems. This is made easier due to the presence of the `ontomedia:-reference-point-minus-one` and `ontomedia:reference-point-plus-one` properties which can be used, as needed, to confirm the count being given to the year before (when counting up) or after (when counting down) the reference date and thus the presence, or not, or a zero year.

```
<rdf:Description rdf:about="#19780120">
  <rdfs:label>1978-20-01</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&omd;Date" />
  </rdf:type>
  <omd:after-reference-point rdf:resource="#Gregorian_Dot"/>
  <omd:uses-calendar rdf:resource="#Gregorian"/>
  <omd:has-date-ordering rdf:resource="#BasicDateDisplay"/>
</rdf:Description>

<rdf:Description rdf:about="#BasicDateDisplay">
  <rdfs:label>20th January 1978</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Common" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="&omdd;Day_20" />
      <rdf:li rdf:resource="&omdd;Month_1" />
      <rdf:li rdf:resource="&omdd;Year_1978" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>
```

Listing 7.16: OntoMedia Date Examples: Gregorian Date

7.2.4.14 Misc - Names

Scope: Classes and properties describing basic names.

Standard Namespace Prefix: nom

Main Classes:

- *omt:AbstractComponent*
  - Name-Component
    - Title
    - Minute
    - Patronymic
    - Primary-Name
    - Additional-Name
    - Family-Name
    - Qualifier
    - Nick
- *omt:Ordering*
  - Name-Ordering

- Formal
- Professional
- Informal
- Familiar
- Full
- Birth

OWL: See Appendix G.34

Responsibility: Author

In the same way that dates were modelled as being defined by having a series of orderings each of which held variations of the components that made up the date sequence, so names are defined through a series of `ontomedia:Name-Ordering`s. The different `ontomedia:Name-Component` classes represent the different parts of a name structure. The `ontomedia:Name-Ordering` specifies which of these parts should be included in different situations and in what order. As with dates, this was done to allow for names that do not follow the traditional western-style name conventions. It is possible, for example, to specify the `ontomedia:Family-Name` should proceed the `ontomedia:Primary-Name` in sequence without causing confusion as to which component is the 'first' name and which is the surname.

Further this method allows for the possibility of automatic selection of which name configuration to use to refer to the `ontomedia:Entity`.

```
<!-- Names -->

<rdf:Description rdf:about="#Name_Starsky">
  <rdfs:label>David Micheal Strasky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <nom:has-ordering rdf:resource="#DMS_Professional" />
  <nom:has-ordering rdf:resource="#DMS_Formal" />
  <nom:has-ordering rdf:resource="#DMS_Nick" />
  <nom:has-ordering rdf:resource="#DMS_Birth" />
  <nom:has-ordering rdf:resource="#DMS_Informal" />
  <nom:has-ordering rdf:resource="#DMS_Familier" />
</rdf:Description>

<!-- Name Ordering -->

<rdf:Description rdf:about="#DMS_Professional">
  <rdfs:label>Det. Sgt. Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
```

```
  </rdf:type>
    <trait:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#DetSgt" />
        <rdf:li rdf:resource="#Starsky" />
      </rdf:Seq>
    </trait:has-order>
</rdf:Description>

<rdf:Description rdf:about="#DMS_Nick">
  <rdfs:label>Starsk</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
  <trait:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Starsk" />
    </rdf:Seq>
  </trait:has-order>
  <omb:used-by rdf:resource="##SH_Hutch" />
</rdf:Description>

<rdf:Description rdf:about="#DMS_Birth">
  <rdfs:label>David Micheal Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
  <trait:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#David" />
      <rdf:li rdf:resource="#Micheal" />
      <rdf:li rdf:resource="#Starsky" />
    </rdf:Seq>
  </trait:has-order>
</rdf:Description>
```

Listing 7.17: OntoMedia Name Examples (see Appendix F.4.4 for full example)

7.2.4.15 Misc - Other

Other Files:

- Colour (See Appendix G.35)
- Geometry (See Appendix G.36)
- Locspec (See Appendix G.37)

Responsibility: M. Jewell

The remaining files were created by M. Jewell for the description of areas within the physical media so that `ontomedia:Event`s or `ontomedia:Entity`s could be associated with specific areas of text, image or sequence.

7.3 Discussion

7.3.1 OntoMedia Examples

In this section we give examples to show how the OntoMedia ontology can be used to describe narrative events and concepts within the narrative and the various connections between them. For examples related to `ontomedia:Character` and `ontomedia:Being` description (see Section 8.2.1). We provide these examples to generate discussion of the way that the ontology can be used and to show the ontologies fitness for purpose as described by its scope and the needs of our case study community.

7.3.1.1 Intertextuality

One of the intentions behind the OntoMedia system was that it would allow the description of the intra- and intertextual links that exist between different texts (by texts, we mean not only written documents but any type of medium which contains some form of narrative). The intertextual nature of documents is of great interest in a number of disciplines such as English literature, drama and media studies.

To demonstrate the contextual links which exist between entities within different texts, media and periods (see Figure 7.4) we take the classic iconography of the `Four Horsemen of the Apocalypse` (See Appendix F.6 for RDF). As an initial starting point we can place the concept which is being represented, that of the four horsemen, within the context of `Christian Belief` which exists within the reserved context of `Reality`.

```
<rdf:Description rdf:about="#CB_4Housemen">
  <rdfs:label>Christain.Four Horseman of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#ChristianBelief" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>
```

Listing 7.18: OntoMedia Intertextuality Examples: The Four Horsemen in Christian Belief

The television show *Highlander the Series* (Davis Panzer Productions) and novel *Good Omens* written by Terry Pratchett and Neil Gaiman (Pratchett and Gaiman, 1990) both

contain a version of the Four Horsemen. In the case of *Highlander*, the Biblical horsemen are purported to have been based on a group of mounted raiders known as `The Horsemen`. Thus we see a variation of the `Christian Belief` context existing within the `Highlander (Series)` context. This context has a `ontomedia:shadow-of` relationship to version of the context existing within `Reality` as do their respective versions of the `Four Horsemen of the Apocalypse`. The `Highlander (Series)` context also includes `The Horsemen` as a `ontomedia:bonded-group` which includes as members the `ontomedia:Character`s of `Methos (aka Death)` and `Kronos`. Both these `ontomedia:-Character`s are linked to their respective actors `Peter Wingfield` and `Valentine Pelka` who exist in the `Reality` context. `Kronos` also links to the `ontomedia:Character` of `Kronos` which exists in the `Greek Mythology`.

```
<!-- Highlander Characters -->

<rdf:Description rdf:about="#HL_Kronos">
  <rdfs:label>Highlander.Kronos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <ome:shadow-of rdf:resource="#GM_Kronos" />
  <omfc:portrayed-by rdf:resource="#ValentinePelka" />
</rdf:Description>

<rdf:Description rdf:about="#HL_Methos">
  <rdfs:label>Highlander.Methos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <omfc:portrayed-by rdf:resource="#PeterWingfield" />
</rdf:Description>

<!-- Highlander Groups -->

<rdf:Description rdf:about="#HL_4HorsemenOTA">
  <rdfs:label>Highlander.Four Horseman of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderChristianBelief" />
  <ome:shadow-of rdf:resource="#CB_4Horsemen" />
  <ome:inspired-by rdf:resource="#HL_4Horsemen" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<rdf:Description rdf:about="#HL_4Horsemen">
  <rdfs:label>Highlander.4 Horseman</rdfs:label>
```

```
  <rdf:type>
    <owl:Class rdf:about="&omb;BondedGroup" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <ome:contains rdf:resource="#HL_Kronos" />
  <ome:contains rdf:resource="#HL_Methos" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<!-- Actors -->

<rdf:Description rdf:about="#PeterWingfield">
  <rdfs:label>Peter Wingfield</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality" />
</rdf:Description>

<rdf:Description rdf:about="#ValentinePelka">
  <rdfs:label>Valentine Pelka</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality" />
</rdf:Description>

<!-- Greek Mythology -->

<rdf:Description rdf:about="#GM_Kronos">
  <rdfs:label>Greek Mythology.Kronos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GreekMythology" />
</rdf:Description>
```

Listing 7.19: OntoMedia Intertextuality Examples: The Four Horsemen in Highlander

In the `Good Omens` context, the `Four Horsemen of the Apocalypse` have a `ontomedia:shadow-of` relationship with our original Horsemen. They also `ontomedia:inspire` a second group `The Motorcyclists of the Apocalypse`.

```
<rdf:Description rdf:about="#GO_4Horsemen">
  <rdfs:label>Good Omens.Four Horseman of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GoodOmens" />
  <ome:shadow-of rdf:resource="#CB_4Horsemen" />
```

```
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<rdf:Description rdf:about="#GO_4Bikers">
  <rdfs:label>Good Omens.Four Moterbikers of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GoodOmens" />
  <ome:inspired-by rdf:resource="#GO_4Horsemen" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>
```

Listing 7.20: OntoMedia Intertextuality Examples: The Four Horsemen in Good Omens

We can also see the relationships between the `ontomedia:Character` of `Death` that exists within the `Reality:Christian Belief` and `Good Omens` contexts and `ontomedia:is` an anthropomorphication of the concept of `State-Of-Being:Dead`. In this case we have used a simple `ontomedia:is` relationship because it can be inferred that when a `ontomedia:Being` `ontomedia:is` an `ontomedia:Abstract-Item` then it must be an anthropmorphisation of that concept just as a `ontomedia:Physical-Item` would be a representation of it. However, it would be possible to create a new subclass of `ontomedia:is`, `anthropomorphic-is`, to describe this specific type of relationship.

The `ontomedia:Character` of `Death` that exists within the `Highlander` context is not linked here because "Death" is a name used by the character rather than the character actually being a representation of death unlike the `Death` that exists within the *Sandman* graphic novels written by Neil Gaiman (Gaiman, 1988 - 1996).

```
<!-- Christian Belief -->

<rdf:Description rdf:about="#CB_Death">
  <rdfs:label>Death</rdfs:label>
  <rdfs:comment>'And I looked, and behold a pale horse: and his name that
     sat on him was Death, and Hell followed with him' - Rev 6:8</comment>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#ChristianBelief" />
  <ome:is rdf:resource="#Death" />
</rdf:Description>

<!-- Good Omens -->

<rdf:Description rdf:about="#GO_Death">
  <rdfs:label>Good Omens.Death</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
```

```
  <ome:exists-in rdf:resource="#GoodOmens" />
  <ome:shadow-of rdf:resource="#CB_Death />
  <ome:is rdf:resource="#Death" />"
</rdf:Description>


<!-- Sandman Novels -->

<rdf:Description rdf:about="#NG_Death">
  <rdfs:label>Sandman.Death</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Sandman" />
  <ome:is rdf:resource="#Death" />
</rdf:Description>

<!-- State -->

<rdf:Description rdf:about="#Death">
  <rdfs:label>The Concept of Death</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Death" />
  </rdf:type>
</rdf:Description>
```

Listing 7.21: OntoMedia Intertextuality Examples: Death

The `Sandman` context also includes the `ontomedia:Character` of `Orpheus` which, like that of `Kronos`, links back to the `Greek Mythology` context.

This is a reduced example of the types of links that can exist. Within the example we have included concepts from multimedia sources (television), text (books), images (graphic novels), arguably oral tradition (mythology) and reality (actors). This shows the true media independence of the ontology as well as demonstrating how these narratives can be linked back to the "real world". While not displayed in the diagram the `ontomedia:Context`s can be linked to the works in which they exist as media objects. This type of linking would allow for queries on the presence of shared elements or motifs such as our example questions "which books have the main character making a deal with the devil?" and "which myths contain the world being created from body parts?".

7.3.1.2 Sleeping Beauty

From considering how OntoMedia describes entities across contexts, we now present an example to show how the specific events of a scene can be described and the scene built up from its basic elements. For this example we have chosen the pivotal scene from the

fairy tale *Sleeping Beauty* in which the Prince kisses Sleeping Beauty and by doing so wakes her up (See Appendix F.7 for RDF).

Scene: The Prince kisses the sleeping princess and wakes her up.

So we know we need the two characters: `ontomedia:Character` 1 (The Prince) and `ontomedia:Character` 2 (The Princess)

```
<rdf:Description rdf:about="#SB_Princess">
  <rdfs:label>Sleeping Beauty.Princess</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
</rdf:Description>

<rdf:Description rdf:about="#SB_Prince">
  <rdfs:label>Sleeping Beauty.Prince</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
</rdf:Description>
```

Listing 7.22: OntoMedia Sleeping Beauty Examples: Defining the Characters

The OntoMedia Ontology allows for two events classes that could conceivably model the kiss depending on whether we regard it as a `ontomedia:Sex` or a `ontomedia:Social` event, or whether it should be both. This illustrates one potential problem with the ontology in that events are open to interpretation but that is a problem beyond the scope of the ontology to solve. In the majority of the versions of *Sleeping Beauty*, the Prince is struck by the Princess's beauty and, since the Princess is unconscious thus negating the possibility of a social exchange, a `ontomedia:Sex` event best models the narrative.

```
<rdf:Description rdf:about="#SB_Kiss">
  <rdfs:label>Sleeping Beauty.Kiss</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omea;Sex" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
  <ome:has-object-entity rdf:resource="#SB_Princess" />
  <ome:has-subject-entity rdf:resource="#SB_Prince" />
</rdf:Description>
```

Listing 7.23: OntoMedia Sleeping Beauty Examples: The Kiss (General)

Having decided that 'The Kiss' is a sexual event we could just create an event of that category and set the Prince and Princess entities as the subject and object of the event

respectively. Unfortunately the concept of a sexual event covers everything from the chaste kiss to an orgy. To avoid any misunderstandings it is possible to provide more specifics.

```
<rdf:Description rdf:about="#SB_Kiss">
  <rdfs:label>Sleeping Beauty.Kiss</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omea;Sex" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
  <ome:has-object-entity rdf:resource="#SB_Princess_lips" />
  <ome:has-subject-entity rdf:resource="#SB_Prince_lips" />
</rdf:Description>
```

Listing 7.24: OntoMedia Sleeping Beauty Examples: The Kiss (Specific) (see Fig. 7.6 for illustration)

The case of the kiss in Sleeping Beauty is comparatively simple, in part because the source is textual and we are told what the Prince is thinking, that he is overcome by the beauty of the girl. However, especially in visual media the intentions of the character are less clear and may be open to interpretation. Staying with the kiss theme, one example we can consider is the kiss on the cheek that multiple-agent Alex Krycek gives hero Fox Mulder in the *X-Files* episode 'The Red and the Black' written by Chris Carter and Frank Spotnitz (first aired 8 March 1998 (IMDB Staff, 2006e)). It is generally agreed that the kiss, between two characters whose normal method of communication is violence, was done with intent – however few fans are sure what that intent was. Some argue that it was a Russian custom (social), that Krycek is messing with Mulder head (social), that is a gesture of friendship or trust (social) or, not unsurprisingly, that there was a sexual tension between the two characters (sex) and that the kiss was put in by the writers in the knowledge that this interpretation existed among some fans and the writers were playing up to it.

There are different possible ways of dealing with this ambiguity. The simplest from a technological perspective would be to select one interpretation as the correct one as has been done in all the other examples. However from a social perspective, this is problematic as it promotes one world-view over another when the case is not clear cut. This is likely to alienate those users who do not share the selected interpretation and cause significant debate over which interpretation is prompted. Another alternative is to have one, or more shadow, contexts representing the different positions (see Appendix F.8). Thus each interpretation is promoted within the world-view or context that supports it and users can choose which contexts they wish to deal with. While having multiple contexts correctly models the different schools of thought that exist after the analysis of an event it does not solve the problem of what data should be contained within the main context.

```
<rdf:Description rdf:about="#XFiles">
  <rdfs:label>X-Files</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:has-shadow rdf:resource="#XFiles-MKSlash" />
</rdf:Description>

<rdf:Description rdf:about="#XFiles-MKSlash">
  <rdfs:label>X-Files (M/K Slash Googles)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:shadow-of rdf:resource="#XFiles" />
</rdf:Description>

<rdf:Description rdf:about="#XFiles-MKGen">
  <rdfs:label>X-Files (Gen Googles)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:shadow-of rdf:resource="#XFiles" />
</rdf:Description>
```

Listing 7.25: OntoMedia Interpretation Examples: Alternate Contexts (see Appendix F.8 for full example)

Through use of the `RDF:alt` collection it is possible to offer more than one interpretation for the `ontomedia:Event` that is being described by a given `ontomedia:Occurrence` (see Appendix F.8). This is a necessary option, not just because it allows the possibility of dealing with ambiguous cases, but also because it opens the way for users to enter their own interpretations in a collaborative manner and this information to be aggregated and analysed (see Section 9.3.2).

```
<rdf:Description rdf:about="#XF_TRatBKiss_XFTL">
  <rdfs:label>Krycek Kisses Mulder</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#XFilesTL" />
  <ome:occurrence-of>
    <rdf:Alt>
      <rdf:li rdf:resource="#XF_TRatBKissAmbig" />
      <rdf:li rdf:resource="#XF_TRatBKissInnocent" />
    </rdf:Alt>
  </ome:occurrence-of>
</rdf:Description>
```

Listing 7.26: OntoMedia Interpretation Examples: Alternate Events (see Appendix F.8 for full example)

Returning to *Sleeping Beauty* post-kiss, in the next section of the narrative sequence the Princess wakes up.

This time the event represents a simple change between two values of one property (state:asleep to state:awake) i.e. a transformation.

```
<rdf:Description rdf:about="#SB_Wake_Up">
  <rdfs:label>Sleeping Beauty.Princess Awakes</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
  <ome:caused_by rdf:resource="#SB_Kiss" />
  <ome:has-subject-entity rdf:resource="#SB_Princess" />
  <ome:from rdf:resource="#Asleep" />
  <ome:to rdf:resource="#Conscious" />
</rdf:Description>
```

Listing 7.27: OntoMedia Sleeping Beauty Examples: Waking Up (see Fig. 7.8 for illustration)

While the level of detail makes the result potentially confusing for users, it does have the advantage that more interesting queries and data comparisons are possible. It is also unlikely that this type of detail is likely without specific reason and, even with reason, would be difficult to sustain without automation at some of the steps. This automation would be simple enough through the creation of common structures which could then be reused. For example, the concept of a kiss is one that occurs frequently in narrative, by associating the collection of instances required to describe a kiss and automatically generating them when a kiss is requested it is possible to simplify the options presented to the user (see Chapter 8)

The example of *Sleeping Beauty* also raises an interesting question of inference. The Prince awakens The Princess with a kiss, that is a sexual act carried out while she is unconscious. A query designed to identify narratives containing events such as non-consensual sexual activity might conceivably flag *Sleeping Beauty* as containing sexual assault. Considering the responses from our case study community on their preferences for metadata annotation of media (see Section 3.2.6), some users wished to be informed of the presence of non-explicit sexual violence, which would include all forms of sexual assault, within the narrative being expressed within a media object. The kiss with which the Prince wakes Sleeping Beauty raises the issue of how we translate from the basic facts that occur within a narrative to our interpretation of those facts. While suggesting that the *Sleeping Beauty* story contains sexual assault might seem unlikely, it should be noted that in the earlier version of the narrative (Basile, 1893) the sleeping woman, named Talia, gives birth to twins nine months after her encounter with the King, but prior to her waking up. Rather than a kiss which awakes her, it was one of the babies sucking on her finger and through this action removing the splinter of flax which was

causing her unconscious state (See Appendix F.7 for RDF).

While beyond the scope of this ontology, being forced to consider all narratives on an equal basis does cause some questions about the universal application of filters or categories. A more extreme example would be the possibility of *Romeo and Juliet* (Shakespeare, 1597) being marked as inappropriate due to the presence in the narrative of underage sexual activity (Juliet's age being given as thirteen) or the *Satyricon* by Petronius which includes a 'sex' scene involving a pre-pubescent child (Arbiter, C. 60) among other events described in the novel.

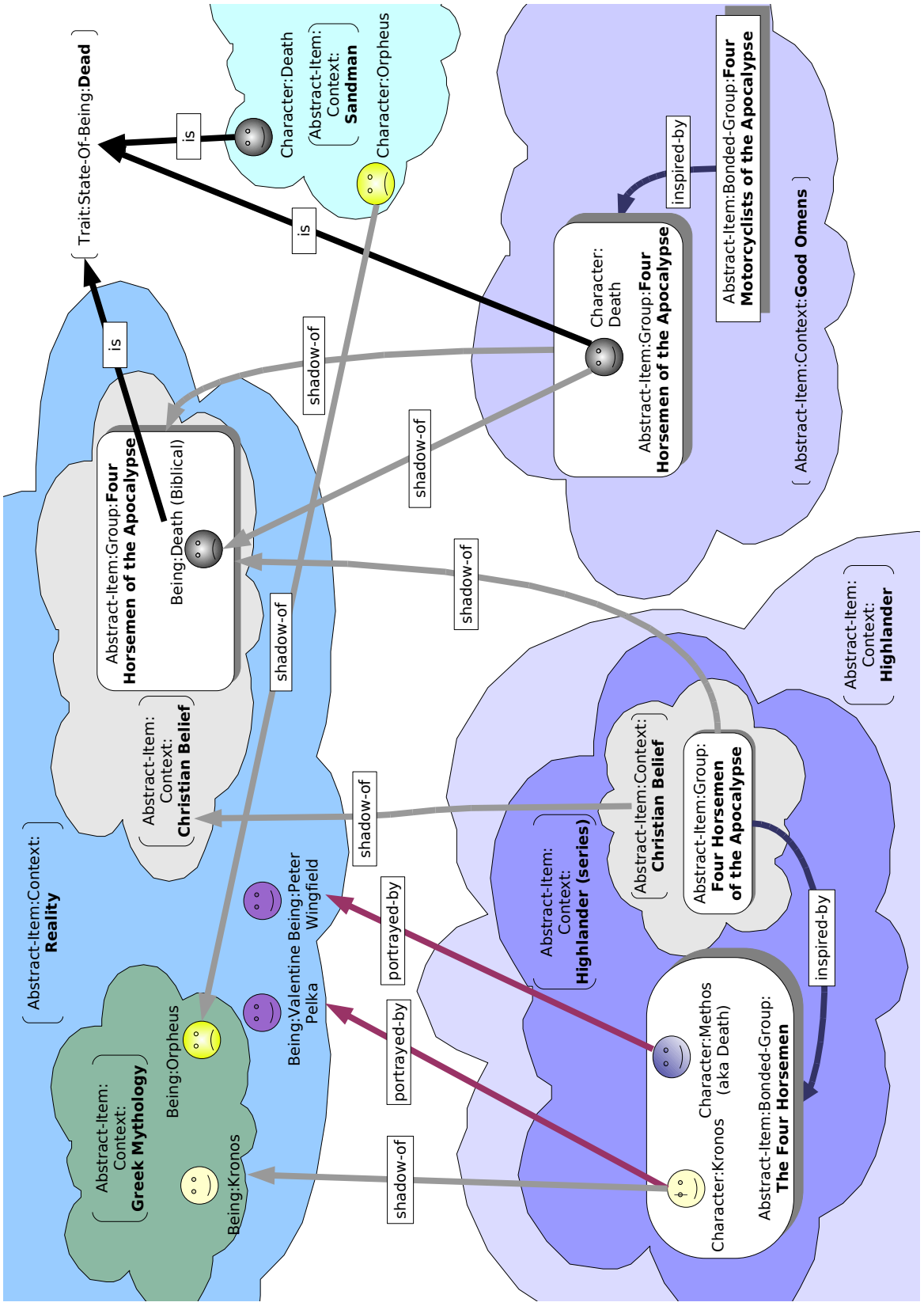

Figure 7.4: Illustrating Intertextual Relationships through OntoMedia (See Appendix F.6 for RDF). The paths of the classes are given with ":" indicating a subclass relationship.

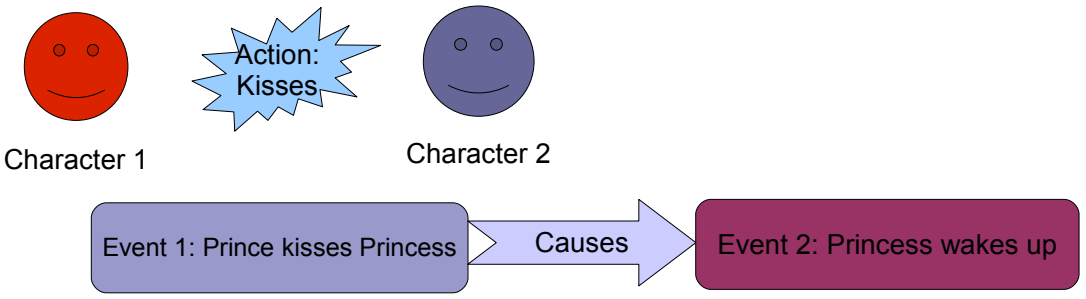

Figure 7.5: Sleeping Beauty: The Prince kisses the sleeping princess and wakes her up

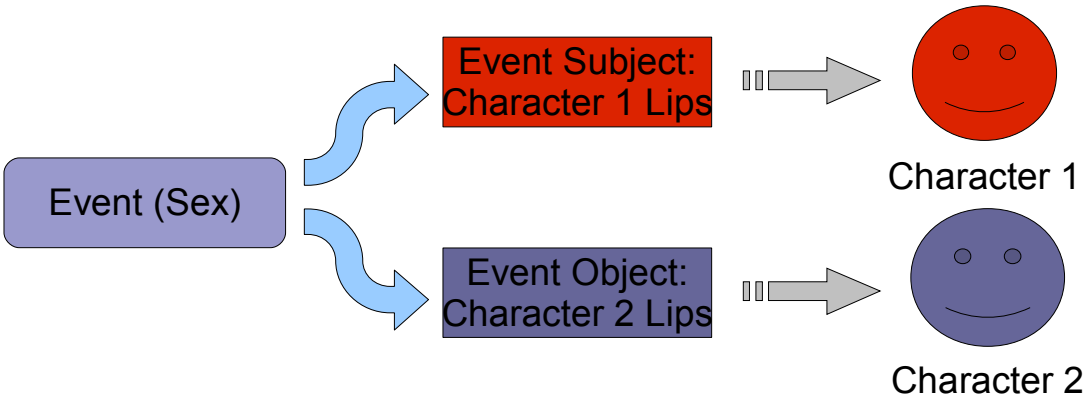

Figure 7.6: Sleeping Beauty: The kiss. The linking arrows represent the properties that the classes have to link to each other. In this case: 'Has Subject Entity' (a property of the Event class), 'Has Object Entity' (a property of the Event class) and 'Contained By' (a linking property). (see Listing 7.24)

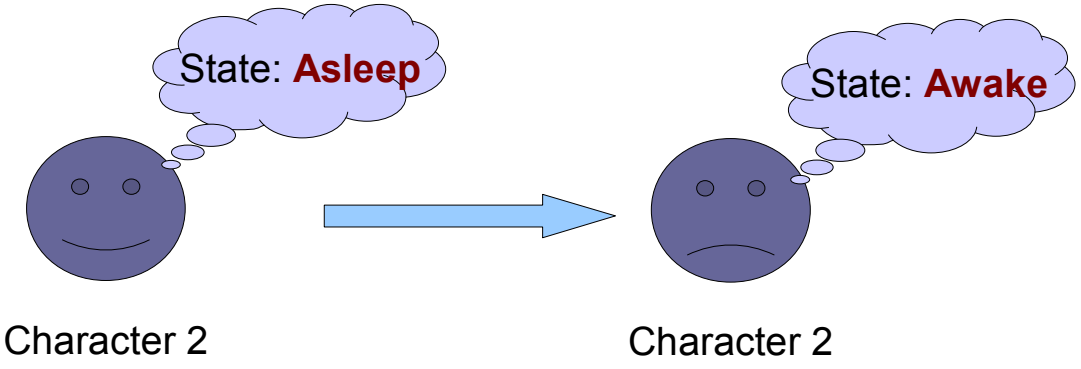

Figure 7.7: Sleeping Beauty: Waking Up (see Listing 7.27)

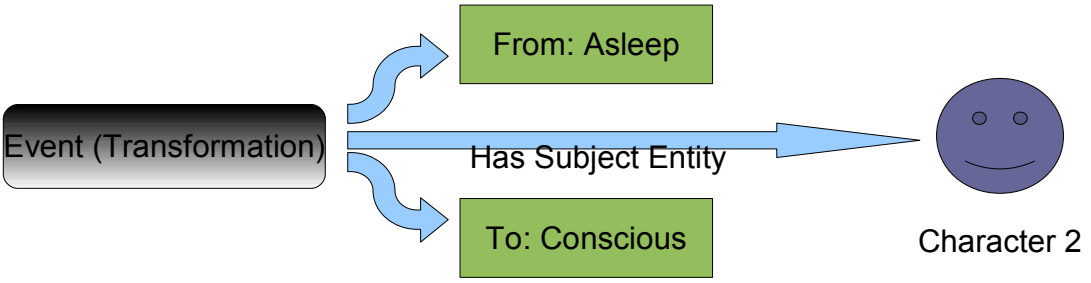

Figure 7.8: Sleeping Beauty: The Princess Awakes (see Listing 7.27)

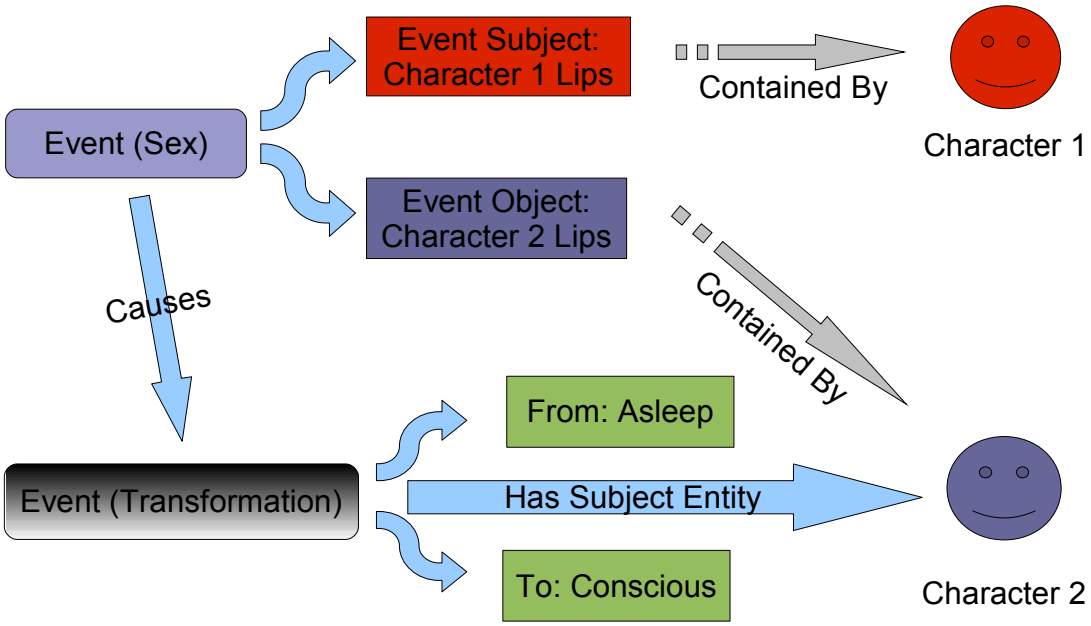

Figure 7.9: Sleeping Beauty: Kiss Scene (see Appendix F.7)

Chapter 8

Creating a User Interface for the OntoMedia Ontology

8.1 Methodology

The decision was made to use Java as the main programming language in which Meditate was built. The reasoning behind this choice was based on relative familiarity with the language, a desire to make it easily platform independent and the hope that a web-based version could eventuate. Time constraints have not allowed the creation of an applet version of the program although this may occur in the future. The benefit of an online version would be that the user would not need to download and install software onto their own system, a step which some users might find off-putting.

Due to the complexity of the ontology Meditate is being put together on a 'start small and slowly expand' basis. Rather than trying to deal with all the possible types of entities at once, the first version of Meditate concentrates, initially, on allowing the creation of `ontomedia:Being` and `ontomedia:Character` entities. As more of the options applicable to `ontomedia:Being`s and `ontomedia:Character`s are realised, it will be necessary to implement other parts of the ontology.

A careful balance has been striven for between dynamically generating options from the ontology, and hard-coding elements. As development continues the emphasis will shift further towards options being determined by the OntoMedia ontologies. At the present time, Meditate reads and stores information from various OntoMedia OWL files which can be obtained either from a central online store or from the user's own hard drive. The values obtained from these files are used to populate the dropdown options while taking any restrictions specified in the OWL into account. Meditate can also save and load instances via OntoMedia RDF files. Like the OWL files, these can either be exported to or imported from a central online repository or held on a local directory.

It is intended that future versions should also output an OWL file containing any personal extensions to the OntoMedia ontology that have been created (see Section 10.2). Both of these files can then be shared or used with other applications for example the proposed OntoMedia event and locspec editor, working name Motivate, or in conjunction with other annotation tools such as SiX (Screenplays in XML), both being created by Mike Jewell (Jewell, 2006).

8.2 Results: A User Interface for Interaction with the OntoMedia Ontology

8.2.1 Using Meditate

At the time of writing, Meditate was in the beta stage of development. The following illustrates the software at this stage. See Section 10.2 for information on the future development of the application.

Meditate was originally designed with the description of fictional entities in mind. Following discussions with groups such as the eChase project[1] (Addis et al., 2006) who are possibly interested in using the Meditate and the OntoMedia Ontology to describe non-fictional entities, this assumption was shown to be inaccurate. Concern was expressed over the default inclusion of what might be regarded as fiction-specific options, such as the state 'undead' among the `ontomedia:State-Of-Being` and the spoiler-level options that accompany each item of information. These concerns were addressed so that the user could more easily work in non-fictional contexts. This included the addition of restrictions to the OWL which could then be read by the Meditate system and used to control what options were made available to the user (see Section 8.2.1.5).

8.2.1.1 Meditate: Start Up

When Meditate is run it initialises with a default fictional namespace or domain in which the entities will exist. This domain includes a `ontomedia:Context` ('default') and a default unnamed character (see Figure 8.1) which is added into that `ontomedia:-Context`. The `ontomedia:Context` is hidden on start up, as it is whenever there is only one context within the domain (see Section 8.2.1.7).

The user has the option to create a new namespace with either a fictional or non-fictional context or to load a previously created namespace, stored on a local drive or from the shared online entity store (see Figure 8.2).

[1] `http://www.echase.org/`

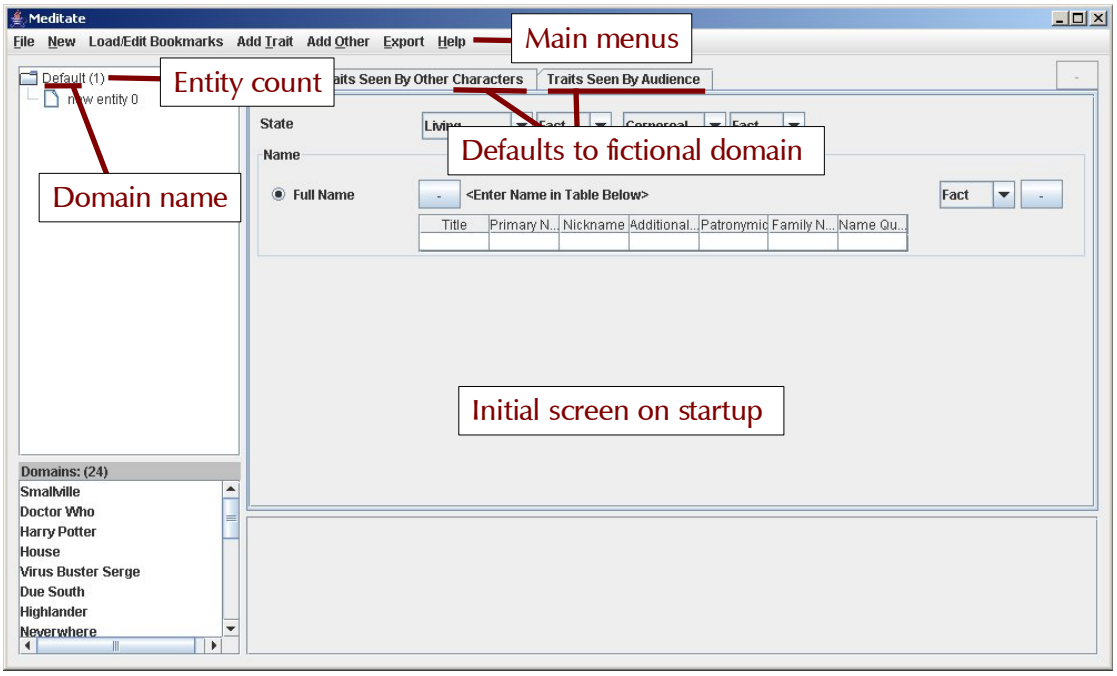

Figure 8.1: Meditate: Initial Screen on Startup

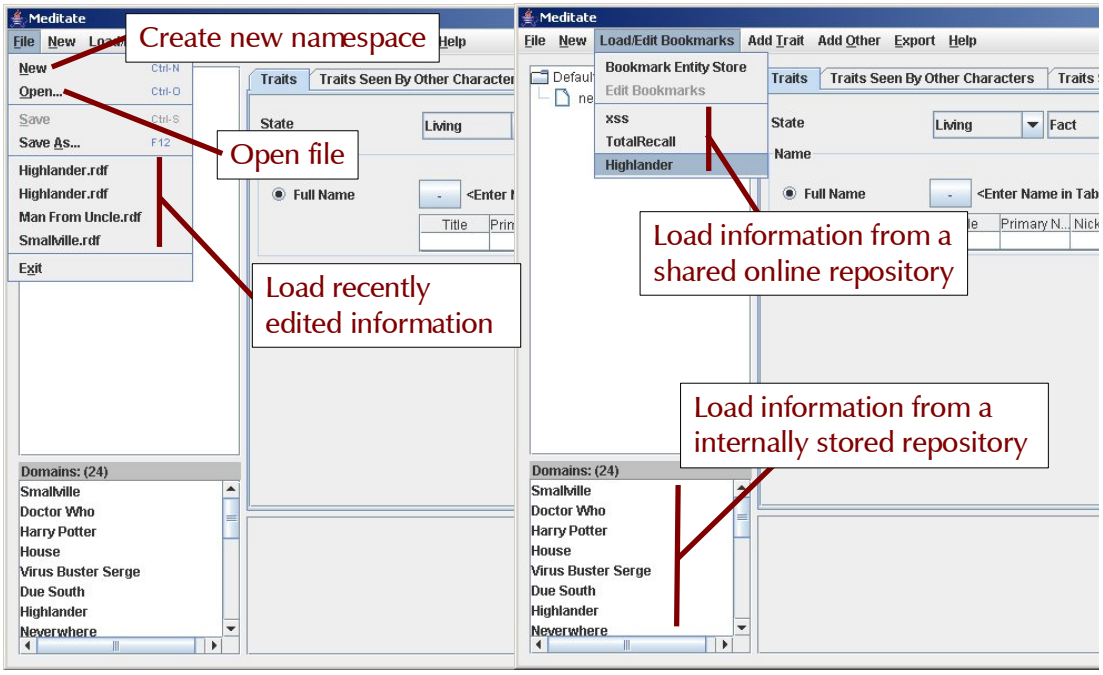

Figure 8.2: Meditate: Loading and Creating Domains

8.2.1.2 Meditate: Initial Views

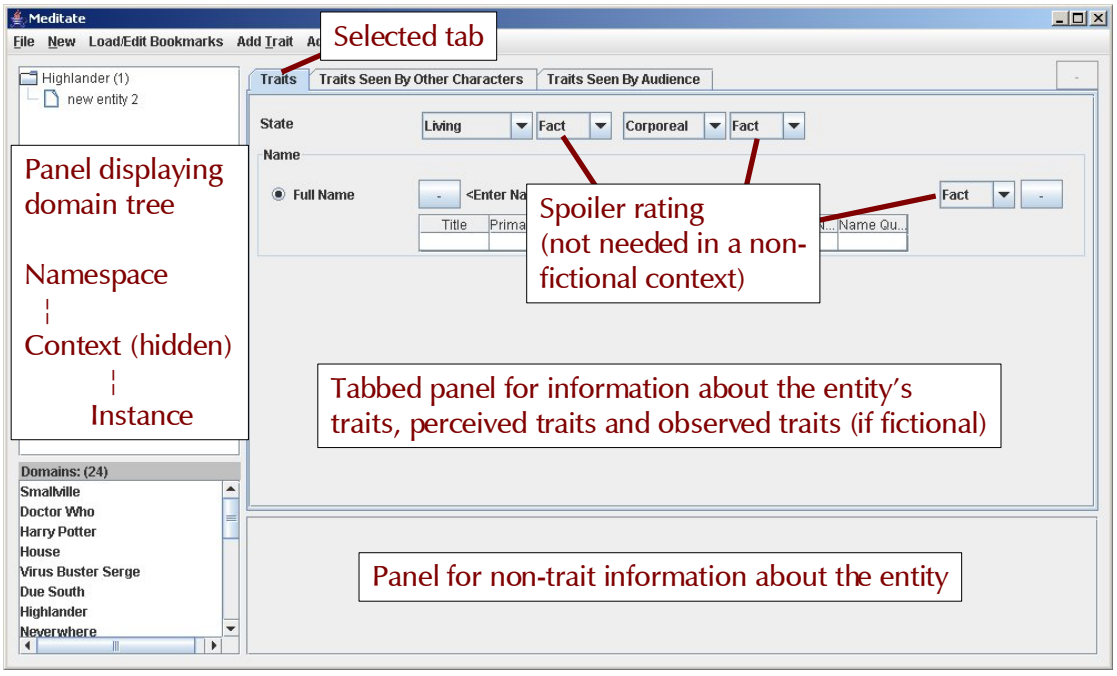

Figure 8.3: Meditate: Initial Screen for Fictional Contexts

The initial Meditate display contains four sections (see Figures 8.3 and 8.4). The main panel is tabbed and used for displaying traits, perceived traits (labelled as 'Traits Seen By Other Characters' or 'Traits Seen By Other People' for ease of understanding) and, if the `ontomedia:Entity` is fictional, observed traits ('Traits Seen By Audience'). New traits can be added to any of these tabs (see Section 8.2.1.4). This is currently done via the 'Add Trait' menu. If a trait includes a link to another `ontomedia:Entity` and has an inverse value defined within the ontology, then the reciprocal information is automatically added to the referenced `ontomedia:Entity`.

When a new `ontomedia:Character` or `ontomedia:Being` is created it is automatically given three traits: the linked traits of `State-Of-Being` and `State-Of-Form` and a full name, which is blank by default. The full name trait can be removed by clicking on the remove button, but the other two traits are considered part of the minimum requirement for an entity and so cannot be removed.

The top left panel displays the currently created instances in a tree structure. In its initial state, the tree displays the overall domain in which the user is working and the new character which has been created. If other `Contexts` are defined then these are also displayed so that it can be seen into which with `ontomedia:Context`(s) a given entity falls. As types of entities beyond characters are implemented, these will also be split for ease of use.

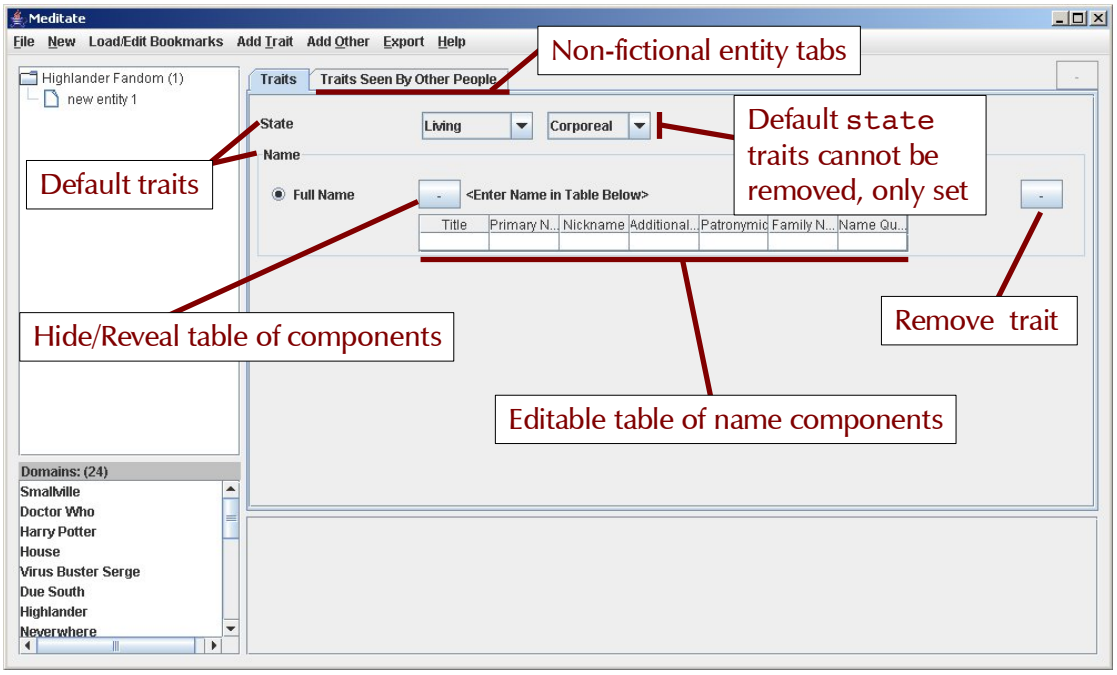

Figure 8.4: Meditate: Initial Screen for Non-Fictional Contexts

The bottom left panel displays the list of locally stored domains. In the future the user will be given the option of deciding which domains will be displayed from either a local or networked folder. It provides a quick, simple way of loading previously created files.

The bottom right panel displays non-trait information related to the entity. Currently this includes non-trait relationships between entities, references to external URIs and lists of contributors for that entity. Further options will be implemented later (see Section 10.2).

8.2.1.3 Meditate: Names

The name, or names, used by `ontomedia:Entity` is set by filling in the name-component table (see Figures 8.5 and 8.6). When the `ontomedia:Entity` is first created they are given a blank 'full name' trait. Under the trait menu there are options to add both different names and different types of names including 'full name', 'formal name', 'informal name' and 'familiar name'. The table that accompanies each of these name types have different columns available by default.

Names of different types can be defined together within one name instance to allow users to show the different forms that the name takes in different situations (see Figure 8.6). Alternatively the `ontomedia:Entity` may have many different names and pseudonyms (see Figure 8.5). As with all traits, names can be added into any of the given trait tabs.

The order of the columns in the table sets the order of the name components within

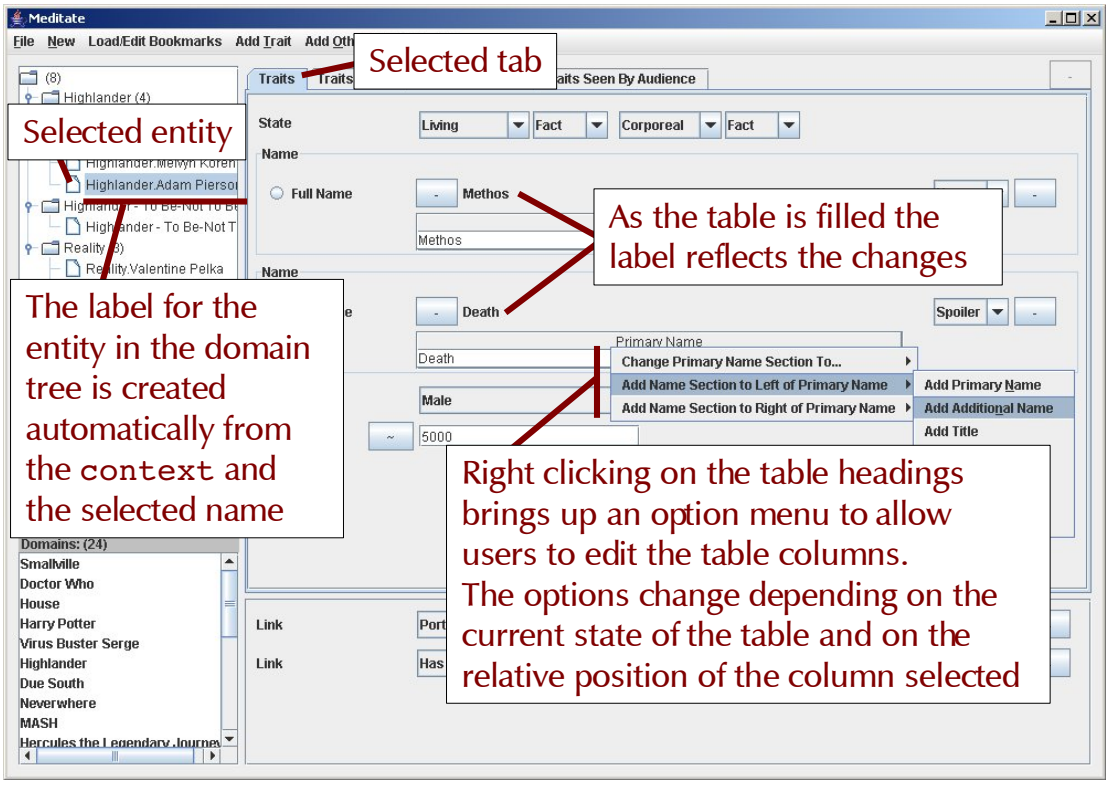

Figure 8.5: Meditate: Editing Entity Names

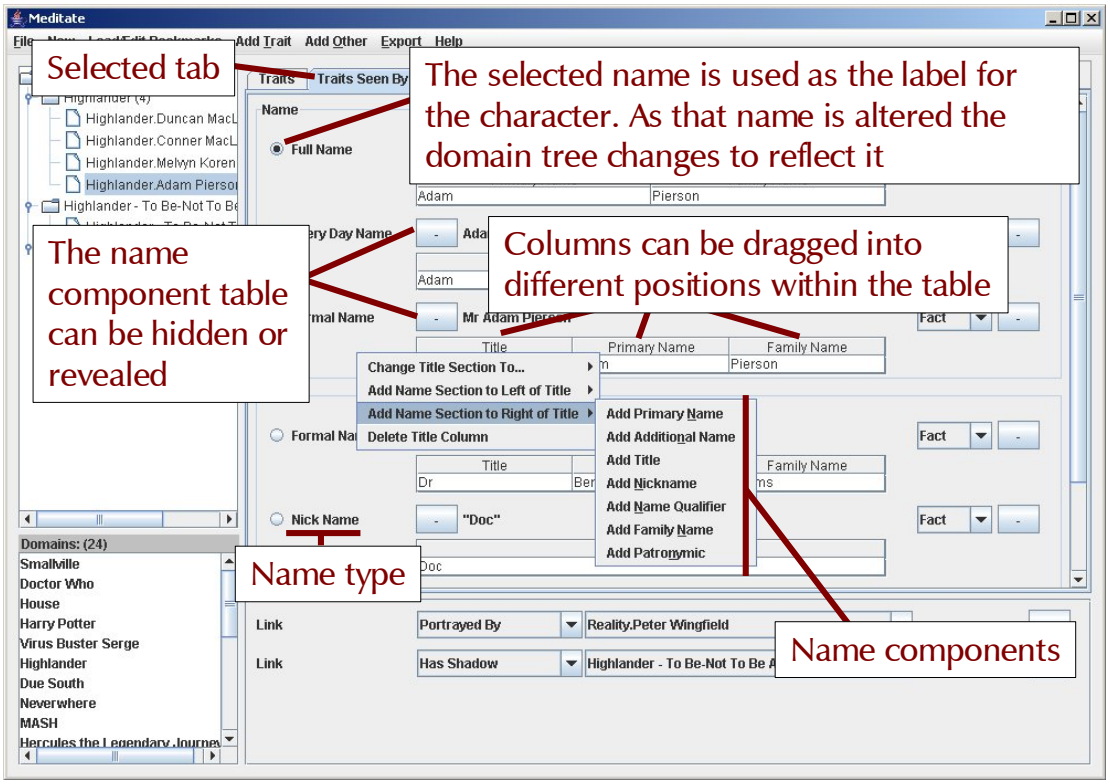

Figure 8.6: Meditate: Editing Entity Name Components

the name. At all times the columns of the table can be rearranged by dragging, and this rearranges the order of the elements in the name. Because the ontology stores the name-components in a `rdf:Seq`, the ordering of the name components in the table can be transferred directly to the sequence. The table can also be edited through right-clicking on the column heading which reveals a menu allowing the addition, deletion or transformation of a column. The options displayed in the menu are generated dynamically depending on the state of the table and which column the option menu relates to.

Due to the fact that the table adds complication into the page, it is designed to be hidden when not being edited. The page would then display just the name label which would still allow the user to see the complete, constructed, name. In the future, it would be desirable to allow free text entry from which a suggested component split can be automatically derived and presented to the user for correction. However this would be difficult to implement well and does not represent an immediate need.

The name trait is also used to define the label given to the `ontomedia:Entity` in the entity tree in the left-hand panel. The panel takes the descriptor from the name of the context in which the entity exists and the name of the `ontomedia:Entity`. Users are able to select which name is used for the identifier when more than one is defined or to set the label manually. Future work is needed to deal with entities that exist in more than one context.

8.2.1.4 Meditate: Adding Traits

All traits can be added through the add trait menu (see Figure 8.7). Traits are added to whichever tab is currently selected allowing the same components to represent traits, perceived traits and observed traits. Through the simple act of adding traits onto the different tabs the profile of the character can be built up.

Currently, additional information related to perceived traits (i.e. who is/is not perceiving that information) has not been implemented. Options related to this, and to allowing the specification of which `ontomedia:Entity`s or `ontomedia:Group`s use a specific name variation, need to be implemented at a future time.

8.2.1.5 Meditate: Trait Options

When adding some traits, the user is presented with a dropdown list of options of which they can select one. While the user can only select one option from each dropdown they can add as many occurrences of a given trait as they need only any tab.

The options are generated directly from the ontology with the text being taken from the

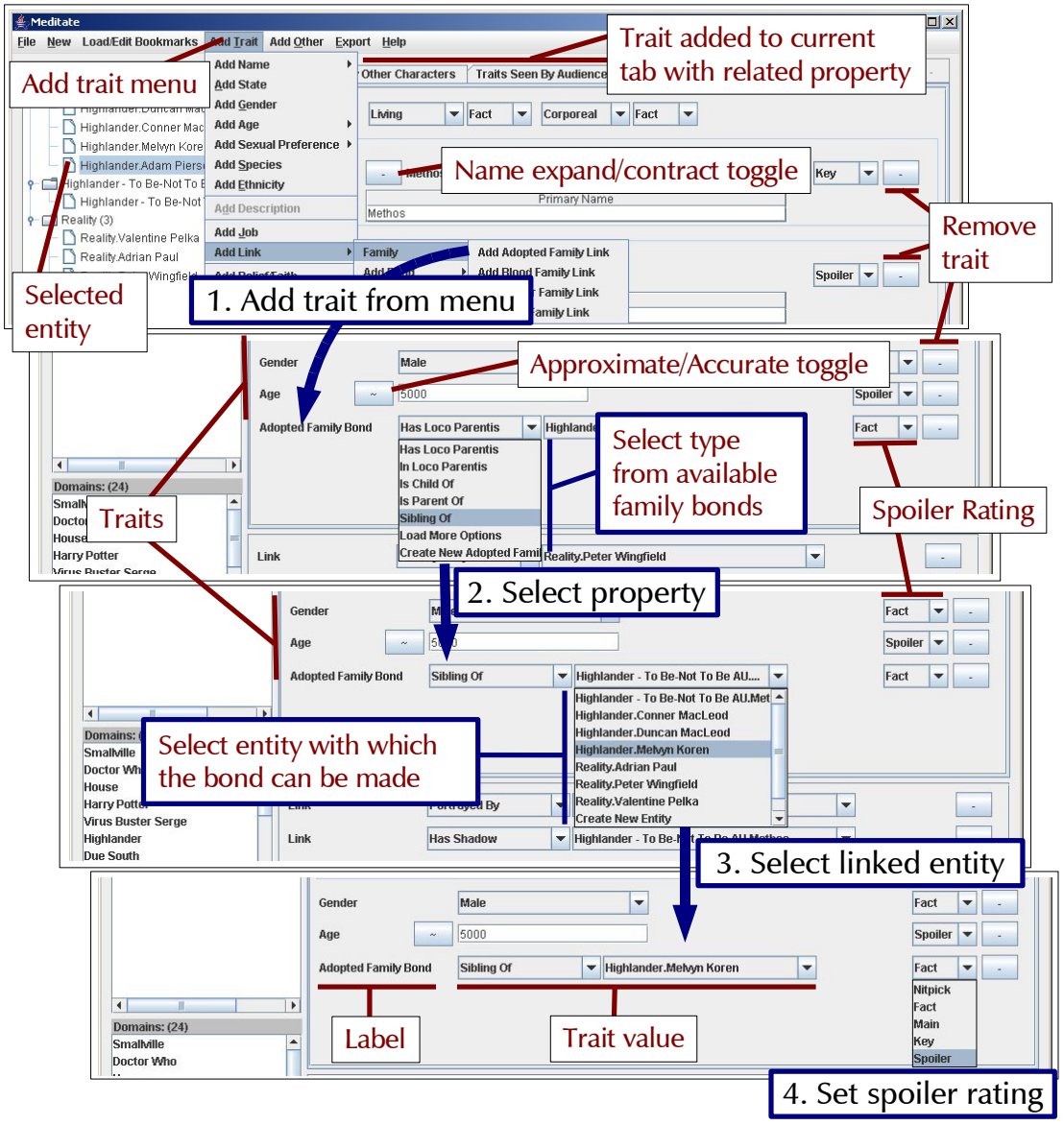

Figure 8.7: Meditate: Adding Traits

`rdf:labels`. The options available in the dropdowns are resolved from the specifications in the ontology, either directly or by the restrictions being applied to referenced entities.

Example 1 (top of Figure 8.8): Fictional `ontomedia:Entitys` are permitted to be Undead but non-fictional `ontomedia:Entitys` are not given this option.

Example 2 (bottom of Figure 8.8): A fictional `ontomedia:Entity` can textttportray another fictional `ontomedia:Entity` or be textttportrayed-by both fictional and non-fictional `ontomedia:Entitys`. However, a non-fictional `ontomedia:Entity` can `portray` but not be `portrayed-by` anther `ontomedia:Entity` since any portrayal would be of a fictional shadow of them. Thus only fictional `ontomedia:Entitys` are offered when the relationship `portrays` is selected.

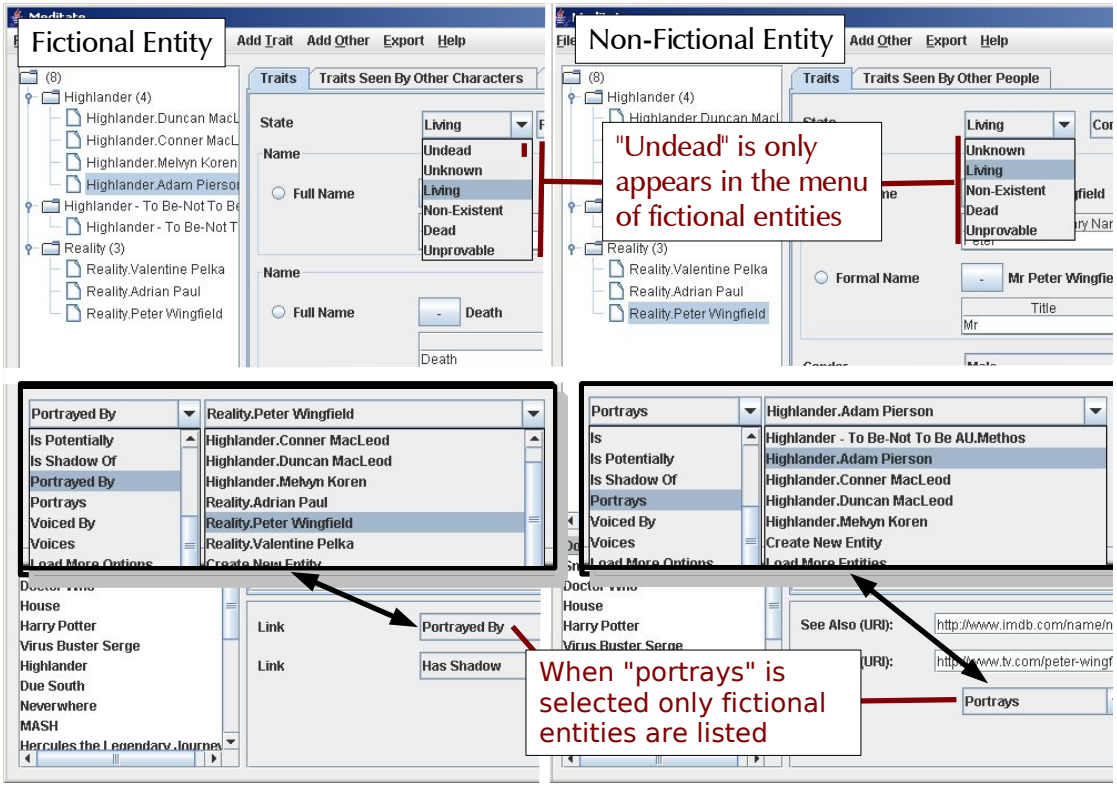

Figure 8.8: Meditate: Ontology Control of Dropdown Options

Because the necessary options might not be pre-loaded the drop-downs also include the default options of creating new options or loading more. When implemented, the first of these will allow the user to create new `ontomedia:Entity`s. The result will be stored in a file which the user can then reuse or share. The second will result in a dialogue box via which the user can specify the location at which an OWL or RDF file exists with further defined options. This functionality has yet to be implemented.

8.2.1.6 Meditate: Entity Profiles

Through the addition of traits and other information, the user builds up a simple profile of the character (see Figure 8.9). Meditate outputs RDF files either for the entire namespace or for an individual entity. The entities can then be used and reused whenever that entity is needed.

8.2.1.7 Meditate: Contexts

While the `ontomedia:Context` in which the created `ontomedia:Entity`s exist is normally hidden, additional ones can be created (see Figure 8.10). When this occurs, the `ontomedia:Context`s are all revealed in the sidebar so it is clear which entities exist in

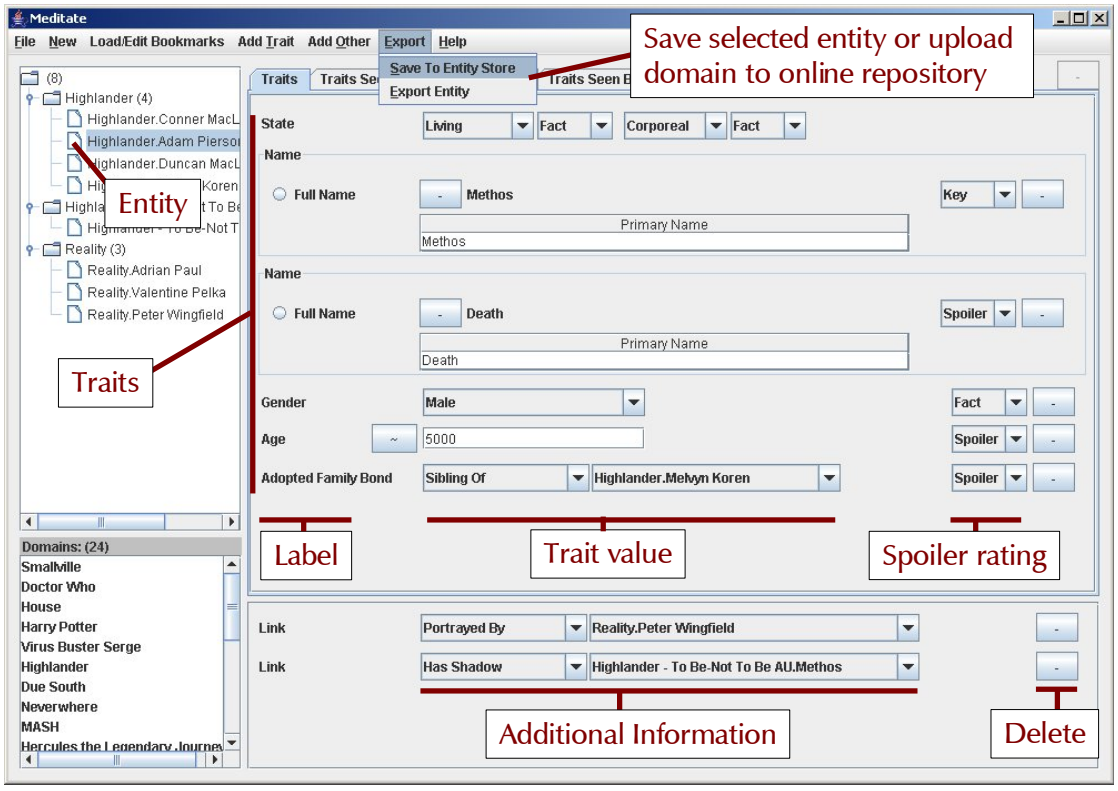

Figure 8.9: Meditate: An Entity Profile is Built Through the Addition of Traits

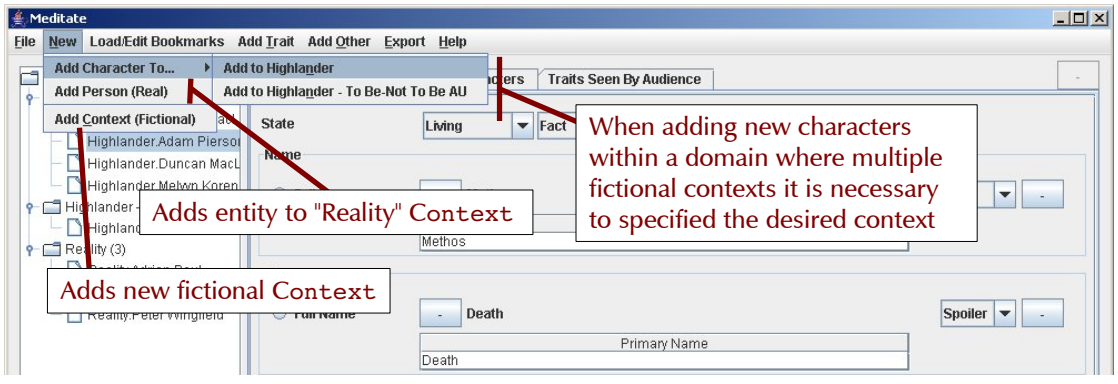

Figure 8.10: Meditate: Entity Addition with Multiple Contexts

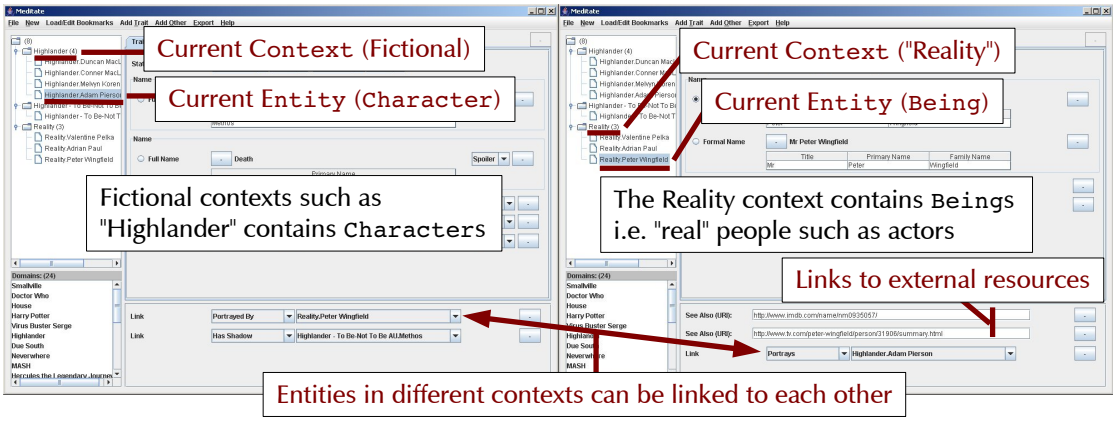

Figure 8.11: Meditate: Linking Between Multiple Contexts

which `ontomedia:Context`. While not fully implemented, an `ontomedia:Entity` may exist in more than one `ontomedia:Context`. When this occurs the textttontomedia:-Entity is displayed under all `ontomedia:Contexts` to which it belongs with a link icon to show that it also exists elsewhere. Similarly when it is selected all the pointers to it in the sidebar will be highlighted.

When more than one fictional `ontomedia:Context` exists the 'new character' menu option requires the user to specify which `ontomedia:Context` the new entity should be added to. This is translated to the `exists-in` property. A user may also add a new `ontomedia:Being`. In this case a 'reality' `ontomedia:Context` is automatically created if it does not already exist. If it does exist then the `ontomedia:Being` is automatically added to it.

Entity relationships are displayed in the lower right window (see Figure 8.11). Further implementation will allow these relationships not only refer to entities within the currently loaded namespace, but to external entities defined elsewhere. This can either be a direct link to an entity in another namespace, or a link to a copy created in the user's area. In the later case, the information from the entity store, or wherever the information is located, will be used as a template for the user's version of that character and a `shadow-of` relationship will automatically be generated and refer back to the original version.

8.3 Discussion

The OntoMedia Ontology, as described in the previous section, represents a powerful but very complex method for describing the content of media. Due to the complexity of the system, it appears highly unlikely that direct interaction with the ontology would be an option for the majority of users. Despite the presence of a comparatively high

level of technical ability in some members of the community (see Section 3.2.7), this supposition is supported by the data from the responses in our initial survey.

In this section we have presented an application, working title Meditate, developed by the author for use with the OntoMedia ontology. The application is intended to prove the hypothesis that the OntoMedia ontology can be presented to the user through a simple interface. While, currently, only implementing a small part of the OntoMedia ontology, Meditate allows users to create descriptions of characters and people. By outputting the data in such a way that it can be easily used and shared (RDF), Meditate acts as generation point for information which can then be used by and in conjunction with other applications.

Although it retrieves the ontology from a publicly available location, the current system can save the RDF descriptions of the characters (see Listing 2.2) onto the local drive or export it to the Entity store. The next version of the application will add authentication to support multiple users interacting directly with an online repository, or entity store, and their additions and alterations become available to everyone on a wiki-esque basis. As development progresses, more features will be implemented until all of an textttonto-media:Entity's traits can be described. By definition, this will require some additional entities to be created and edited so Meditate will, incrementally, move from being an `ontomedia:Character` and `ontomedia:Being` creator to being a general `ontomedia:-Entity` editor (see Section 10.2).

The basic premise of the program was to automate as much of the metadata creation process as possible and simplify what remained. A lot of this simplification occurs behind the scenes, with Meditate automatically creating all the RDF classes needed to describe a given concept selected from the interface. Another goal centred on the concept of data exchange and user collaboration.

In the previous section (see Section 2.5) we argued that a community generated store of information can be created and through it was possible to distribute the work load and ensuring that the maximum time is given to those areas in which there is the most community interest. One of the concepts that had been associated with the OntoMedia from the beginning was that of the creation of Entity and Event stores. This idea presupposed that certain elements would be reused on a frequent basis and making these elements shareable would ultimately speed up and improve the marking-up experience for the user. This is one area where the nature of amateur fiction, especially the fan fiction sub-genre, lends itself well as an example of this theory. It is frequently said that all the stories have been written and there no original ideas left. Whether this is true or not there are demonstratively well known elements that frequently re-occur: the daring rescue, the destruction of Tokyo or the Chrysler Building, the relationship that develops between the two main protagonists, *et cetera*. Meditate is intended not only to allow the user to create new entities but also to interact with entities that have already been

```
<rdf:Description rdf:about="#Highlander_Adam_Pierson_Character_1">
  <rdfs:label>Highlander.Adam Pierson</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&being;Character" />
  </rdf:type>
  <ontomedia:exists_in rdf:resource="#Highlander_Context_0"/>
  <trait:has-trait rdf:resource="#_new_entity_29__Alive_Fact_18"/>
  <trait:has-trait rdf:resource="#_new_entity_3__Corporeal_Fact_19"/>
  <trait:has-trait rdf:resource="#_new_entity_35__Name_Key_20"/>
  <trait:has-trait rdf:resource="#_new_entity_6__Name_Spoiler_21"/>
  <trait:has-trait rdf:resource="#_new_entity_37__Male_Fact_22"/>
  <trait:has-trait rdf:resource="#
  _new_entity_14__Age_Approximate_Spoiler_23"/>
  <trait:has-projected-trait rdf:resource="#
  _new_entity_38__Name_Fact_24"/>
  <trait:has-projected-trait rdf:resource="#
  _new_entity_19__Age_Approximate_Fact_25"/>
  <trait:has-observed-trait rdf:resource="#
  _new_entity_5__Age_Approximate_Fact_26"/>
  <trait:has-observed-trait rdf:resource="#_new_entity_9__Name_Key_27"/
  >
  <being:portrayed-by rdf:resource="#Reality_Peter_Wingfield_Being_28"/
  >
  <trait:has-projected-trait rdf:resource="#_new_entity_18__Name_Fact_2
  "/>
  <ontomedia:has-shadow rdf:resource="#Highlander_-_To_Be-
  Not_To_Be_AU_Methos_Character_25"/>
</rdf:Description>
```

Listing 8.1: Mediate RDF for Highlander.Adam Pierson Entity

created and made available by others.

There are many potential problems in managing a collaborative system such as this proposed scheme would entail. Initially, the premise would be to allow trusted users to edit these 'top level', shared elements. The standard user will instead be able to take a copy which can act as a template of values for a new instance describing their view of the character or event and which they can edit. Ideally default reasoning would be able to fill in values from parent versions where information was not given, i.e. the information would by default be the same as the parent where no contradictory data was provided. However current reasoning technology is not yet able to deal with this type of complication and so instead the template will just represent a copy of the data present at that time. This new instance would belong to the user and exist in their own personal interpretation `ontomedia:Context` but would identify itself as having a `shadow-of` relationship with the instance used as a template (see Figure 8.12).

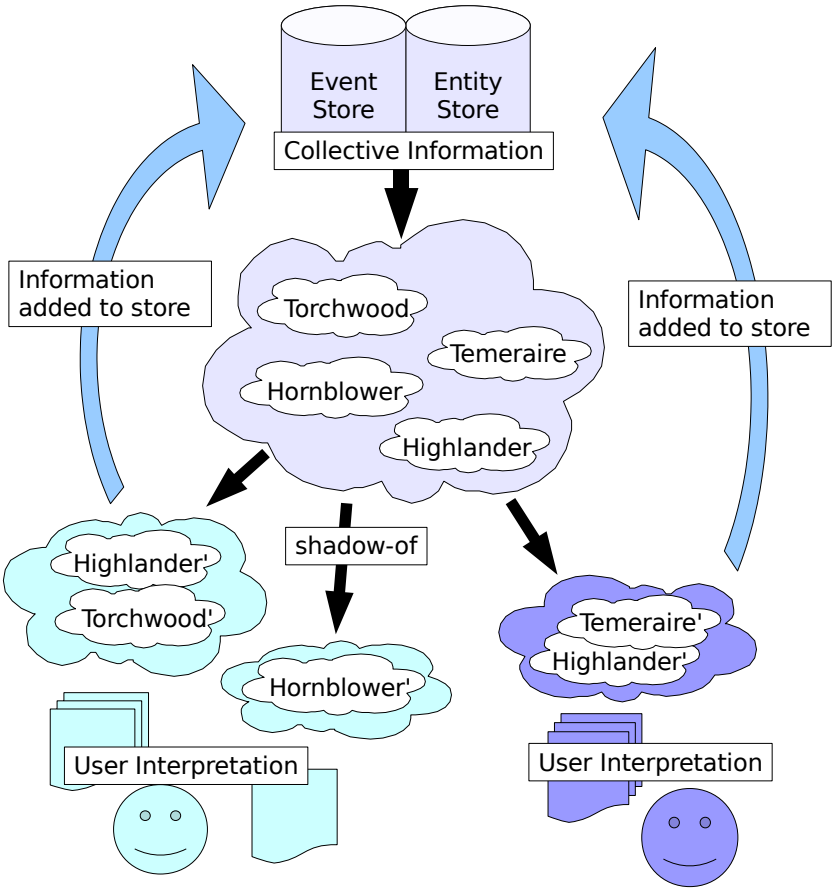

Figure 8.12: Event and Entity Stores Allowing Reuse and Improved Maintenance of Relationships Across Disparate Media (Examples from Forester (1937 – 1967), Novik (2006), Highlander and Torchwood)

Chapter 9

Testing the Meditate Application

9.1 Methodology

9.1.1 Initial Responses

The Meditate application was designed to provide an easy-to-use interface that could exist between the user and the RDF. By taking the options available to the user directly from the OWL ontology definition and exporting the created entities in RDF, Meditate acts as an entry point into the OntoMedia world. To require expert knowledge or even familiarity with the underlining ontology immediately limits the number of users for the system. This limitation is especially relevant when the intended user base is made up of people for whom a high technical literacy cannot be assumed.

An early version of the software was shown to a group of potential users at a small British fan convention at the beginning of October 2005 (attendance approximately sixty people). The program was demonstrated to a self-selected initial group over the course of the weekend. By the Sunday evening a number of the users felt confident enough to use the software unaided and indeed instruct other fans in its use. Contributions were added by nine people covering twenty TV shows, movies, books and original universes and nearly two hundred characters.

While a few areas were highlighted as needing more simplification or explanation, the overall response was exceedingly positive; so much so that more than one person wanted to know whether they could have a copy of the program. Failing that, whether it was possible for them to collect more data together in a spreadsheet or some similar file which could then be submitted later so that they could continue to add information after they had gone home. When it was explained that the system was not currently capable of interaction with that format the users wanted to know whether it was possible for them to be given an RDF file to use as a template for filling in extra character data. This is a notable contrast to the typically negative response to data entry.

Beyond this an interesting phenomenon was observed with regard to which characters were entered. The first few users to test the system just added a few random, favourite or funny characters. A few users happened to have lists of characters and their personal information with them, in these cases the characters were added as they appeared in the list. However more people became involved, as they were asked for specific information about which they were perceived as knowledgeable or 'expert'. Once involved, the experts frequently caused the group to deviate from the lists they were using to take advantage of the additional knowledge base. This soon evolved into something of a game in which the users tried to come up with as many characters as possible within a given domain. The result was that one hundred and twenty eight of the nearly two hundred characters came from the same series of books, with most of those entries coming from a group effort by four individuals. Two conclusions can be drawn from this, first, that the display and exchange of knowledge can act as a way of gaining reputation within the community as well as bonding members of the community. Second, that because of this, community interest can drive people to spending more time on a project than when they are acting as individuals.

9.1.2 Initial User Testing

An experiment was designed to investigate the initial reaction of users to the software. The exploratory trial used 10 people, of which five identified as female (three members of online fandom, two non-members) and five identified as male (one member of online fandom, four non-members). Each user was given an explanation of how to use the software and the opportunity to ask questions and clarify anything they were unsure about. When the user felt ready they were asked to perform ten tasks of varying difficulty (for full breakdown of tasks see Appendix J). During the tasks, the user was permitted to ask questions but were otherwise given no help or prompting unless they were about to go beyond the bounds of the software in its then state. Any questions asked or comments made during the session were noted and are included in Appendix I. The user could choose to leave a task at any given time and go on to the next one. Following to the tasks the user was given a short questionnaire about themselves and their experiences.

The tasks were designed to reflect the type of basic information that users would typically expect to add about entities within a context. A fictional television show provided the setting that was used. This was done to avoid bias from users who knew information about any existing media source that might serve as a setting.

All the sessions were carried out on an IBM Thinkpad with a 1200MHz Pentium III processor and 504 MB of RAM. During the testing the software suffered one significant error which required the session to be restarted and a minor error which was recovered from without effect on the experiment session. Known bugs in the software were taken into account when analysing the results.

9.2 Results

All users started with a new context and the default initial character layout.

9.2.1 Task 1

Task: The Characters name is “Krisella Huntinghawk”

Correct Steps (/3)	Count
3	9
2	1

The first task involved basic use of the name structure. This task was almost universally successful with only one user filling in the entire name into one part of the table rather than splitting the name into ‘primary’ and ‘family’ name components and entering them in the relevant cells in the name table.

9.2.2 Task 2

Task: The Character also had the nickname “Krisella the Monk” although this information is considered a spoiler.

Correct Steps (/4)	Count
4	4
3	2
2	4

Under half the users managed to fulfil this task correctly suggesting that a re-think of the way that names are presented to users might be necessary. Only four of the users realised that to designate the nickname information as a spoiler they were required to add a new name configuration to the profile rather than just typing the information into the nickname cell of the existing name table. Confusion was noted about whether the spoiler designation applied to the entire name or to a given cell and whether the relevant spoiler dropdown was the on vertically above the table (closer to the cell) or the one on the right hand side (consistent with the other parts of the layout).

9.2.3 Task 3

Task: The Character is known to other characters as “Krisella Huntinghawk of the Swords”

Correct Steps (/6)	Count
6	1
5	1
3	4
2	2
1	2

As with the previous task, users had difficulties with the concept of adding in new name configurations and entering the individual components. Half of the users correctly switched to the 'traits as seen by other characters' tab and six of the ten added a new name configuration trait. The most common error (eight out of ten respondents) appears to have been in not entering the primary and family components of the name as separate parts. In three of the cases where this occurs, the name was added to the profile as being a nickname and thus the name was entered in its complete form under this designation. It might be argued that this is a correct response although it was not the expected one and therefore marked as incorrect. Of the remaining five users who failed to enter the first parts of the name correctly, two split the name as expected but because they were entering it in the original name table, rather than a new name configuration, the sections of the name had already been entered from the previous task and so could not be entered for this one. The remaining three users totally failed to split the name in any way.

9.2.4 Task 4

The Character is a ghost although this information is strongly implied but never stated in the program. Set her states to reflect this

Correct Steps (/4)	Count
4	5
3	2
2	3

While only half the users performed this task successfully it appears that part of this result might have been due to interpretation on the part of the users and part due to their failure to realise that there were two variables, and associated evidence level, to set rather than one. To correctly complete the task it was assumed that both State Of Form and State of Being dropdowns would be set with their related Evidence dropdowns. Of the five that did not complete all the steps as expected, three only set half of the options: two set State of Being to dead or undead but did not take the State of Form into account, while the other set the State of Form of the character but left the default values

for the State of Being. Of the remaining two, one set both State of Form and State of Being but only set the evidence level for one of the two, while the other set the evidence level but choose to keep with the default State of Form value of 'corporeal'. In these latter cases it seems likely that the user was aware of the options but chose unexpected interpretations of what was meant by the information they were given. If this is the case then their answers can be seen as a community interpretation issue and not a technical or interaction one despite their not being counted as successfully completing the task.

9.2.5 Task 5

The Character is female, add a trait to show this

Correct Steps (/2)	Count
2	10

This task was successfully completed by every user.

9.2.6 Task 6

The Character is in her mid-30s according to an interview with the actress. Add this information to the profile

Correct Steps (/4)	Count
4	5
3	2
2	2
1	1

While only half of the users were totally successful with this task, all the users added the age trait and nine out of the ten correctly interpreted mid-30s to mean 35. The largest difficulties were encountered with the addition of further detail. Four out of the ten users did not realise that it was possible to set the value to 'approximate' rather than 'equals'. This problem could be dealt with by the addition of tooltips or similar explanatory help. Three users failed to set the Evidence dropdown to indicate that the information came from supplemental sources i.e. the opinion of the actress outside the shows stated canon. In two these three cases the Evidence dropdown was set indicating that the user understood what was required but did not interpret the terms in the expected manner. As with the approximate/accurate button, this can be dealt with through the addition of examples and explanatory texts or tooltips.

9.2.7 Task 7

A webpage about the Character exists at 'www.ghostmonk.org'. Add the information that people should also see that site

Correct Steps (/2)	Count
2	10

This task was deemed to be completed successfully by all users although it was noted that some users added in the 'http://' part to create a complete URL while others added exactly what they were told. The system currently does not check viability of URI's added nor well-formedness.

9.2.8 Task 8

The Character is played by an actress 'Mary Susan Trouber'. Add a new 'real' person and set her name

Correct Steps (/5)	Count
5	5
4	3
3	1
1	1

As with the earlier name tasks, some difficulty was noted in the separation of the name components and in addition three of the users, two of who would have otherwise completed the task successfully, failed to make sure that the word entered into the name table had been registered (a glitch due to a peculiarity of the way Java tables are handled but one that the users had been specifically informed off).

However, in one case the user created the profile of the actress but then returned to the profile of the character and added a new name into which the actresses name was entered. This suggests a lack of understanding as to how the idea of a fictional character is conceptualised with the system and steps would need to be taken to make this clearer, perhaps with examples or the addition of an alternative visualisation that would graphically show the links between entities.

9.2.9 Task 9

Since Mary-Sue portrays the character of Krisella, add the information of this link between the two entities

Correct Steps (/3)	Count
3	7
2	1
0	2

While seven out of the ten users successfully this task, it was the only one where any users either passed or totally failed to complete any of the steps. Of the three users who did not perform all the steps as expected, two were unable to complete any of the steps; one passed on this task, and the other had previously created a profile for the actress but had then chosen to fill in the actresses details on the character profile and so tried to re-arrange the information on the character profile to indicate the link rather than signify a link between the two entity profiles.

The third user created a link between the two entities as required but chose to make the link of type 'is' rather than 'portrays'. The 'portrays' relationship is a child of the 'is' relationship and interpretation of such a link between a fictional and non-fictional entity might equate in meaning to a portrays relationship. The raises the issue of information retrieval and data querying since there will be many cases where information may either be described in equally valid but different ways or with greater or lesser precision. That a given character has a 'portrayed by' relationship with a given actor specifies the nature of the relationship with greater precision than if any of the possible parent properties were used but it is still the same concept that a link exists between these two entities that is being stated.

9.2.10 Task 10

Save the information you have entered as User[no].rdf in the MeditateExp folder

Correct Steps (/2)	Count
2	10

All the users successfully completed this task. For an edited[1] version of the RDF produced see Appendix K.

9.2.11 Results from the Questionnaire

The majority of volunteers fell within the 26–35 range range with two users (both male) in the 22–25 and one user (female) in the 36–45 category. This peak is comparably to

[1]The RDF has been edited due to a bug in the software preventing the removal of a section of the RDF when the users performed a specific sequence of actions. The RDF exists only due to this bug and not due to the users and so has been removed for clarity.

the second peak seen in the distribution of respondents to the earlier user requirements survey (see Figure 3.2) and well within the expected user range.

When asked to rate their general technical ability out of five (with five being expert and zero being none) the average for female respondents was 2.9 and 4 for male respondents. Likewise, when asked to rate the usability of the Meditate software (five being hard to use and zero being easy) the female volunteers rating averaged 2.9 while the male volunteers averaged 1.6. The results were much closer if the volunteers were divided by membership of online fandom or not with a very similar average level of technical ability being claimed (3.625 for online fans, $3.\dot{3}$ for non-fans) although the fans, on average, rated the software as slightly more difficult to use (2.625 for fans, 2 for non-fans).

9.2.11.1 Influence of Technical Ability on Perception of Usability and Accuracy

Interestingly, how high the subjects rated their personal technical ability did not have significant affect on either how usable they rated the software (Chi^2 Test: p=0.731) or how well they performed (Chi^2 Test: p=0.344). This result may be partially due to the small sample size used in this experiment which renders the Chi^2 Test inaccurate or it may indicate that the software is either simple or different enough that previous technological experience is not an important factor in usage.

A breakdown of the figures by gender suggests that there is some affect visible on the male side, if not the female. The male respondents all rated their technical ability between 3 and 4.5 and the ease of use between 1 and 2 out of five. The female respondents, conversely had a much wider range of both ability (1.5 to 4.5) and usability (2 to 4.5).

Rating	Tech		Ease	
	Male	Female	Male	Female
1			2	
1.5		1		
2		1	3	2
2.5				
3	1	1		2
3.5		1		
4	2			
4.5	2	1		1

It should be noted that while one of the female respondents rated the difficulty at 4.5 she also specified that this was on initial exposure and that it quickly became straight forward once you had located the options available (see Appendix J.2.5). Further those

who gave the software the highest difficulty ratings were not necessarily those who rated their technical ability as low (2, 3, 4.5). From this we conclude that overall the software was comparatively easy to use with an introductory learning curve due to its nature but otherwise reasonable simple.

When considering the lack of relation between how difficult users rated the software to use and how many of the steps were completed successfully we must conclude that further feedback is required to help users know when they are entering data in an incorrect manner and thus not give them a false sense of satisfaction. One possibility would be the automatic generation of a tool tip for each section of information which stated in natural language the information that had been entered. This would create a check for the user and allow them to verify that what they had entered was what they thought that they had entered.

Correct Steps (/34)	Technical Rating	Difficulty Rating
34	4.5	2
31	1.5	2
30	4	2
29	4.5	1
28	3.5	2
26	4.5	3
26	2	4.5
26	4	1
19	3	2
16	3	3

9.2.11.2 Software Distribution

In addition to questioning the users on how difficult they found the software to use, responses were sought on whether the volunteers thought they would contribute or reference an online repository of the type of information that they were entering. One concern was that the current version of Meditate would require a user to download and install it before they could use it.

While the result showed some concern, especially for installing software from an unknown source, only two would not even install a browser plugin.

Would download	4
Would use if plugin	4
Would not download	2

One of the advantages of using Java for Meditate was the possibility of converting it into an applet and allowing it to run in a browser. While requiring the user to have

as few additional requirements put on them as possible is the ideal, this result suggests that needing to download the software would not put off all users and creating an online interface using browser plugins would be a reasonable compromise.

9.2.11.3 Influence of Gender on Future Use of on OntoMedia System

Null Hypothesis: Gender had no influence on whether the user would use the system

Gender	Would Add	Would Not Add
Female	5	0
Male	1	4
Chi^2 Test: p=0.01, Fisher's: p=0.048		

Gender	Would Reference	Would Not Reference
Female	5	0
Male	2	3
Chi^2 Test: p=0.038, Fisher's: p=0.167		

While a larger sample would produce more definite results, the results from the experiment suggest that women rather than men are more likely to both add information to and reference an online resource of narrative and characters since in both cases the result of the Chi-squared test was moderate evidence against the null hypothesis. This corresponds to the evidence presented in the first part of this thesis and, it can be argued, potentially relates to the strong representation of women among the respondents to the survey of user requirement that was theorised. Given the bias towards female involvement during the design stages of the ontology and software this gender division does not necessarily represent a flaw in the system so much as a reflection of the desires expressed by those perspective users.

9.2.11.4 Influence of Membership of Online Fandom on Future Use of on OntoMedia System

Null Hypothesis: Membership of online fandom had no influence on whether the user would use the system

Online Fan	Would Add	Would Not Add
Yes	4	0
No	2	4
Chi^2 Test: p=0.035, Fisher's: p=0.076		

Online Fan	Would Reference	Would Not Reference
Yes	4	0
No	3	3
Chi^2 Test: p=0.091, Fisher's: p=0.2		

From the results available it appears that there is moderate evidence against the null hypothesis with regards to adding information and the suggestion of evidence against it for referencing to the information.

From this we can conclude that members of online fandom are statistically more likely to contribute to a shared resource than people who are not in the community although referencing the information is likely to be a more widespread activity. This correlates with the arguments made earlier in the thesis about the effect of community on online interaction.

9.3 Discussion

9.3.1 General

Of the ten people only one passed on any tasks (one task: task 9), while the remainder were all completed more or less successfully (see Figure 9.1). While only one person performed all the tasks totally successfully, the overall success level was high, especially considering that the software was new to all the users and they had no tooltips or guide them. Only one subject scored less than 50% and eight of the ten achieved over 75% accuracy.

In deciding whether a task, or part of a task, was completed according to the expected criteria, spelling was not taken into account. However the majority of subjects (seven of ten) asked for clarification about spelling and whether it mattered for the purposes of the test. Two users added additional information beyond that which they were asked for having calculated this information from the data already entered (gender of actress) and that given in the questions (nickname of actress). One other volunteer asked for further information about the character (species of character) to enter but did not bother to add it when informed that that information went beyond the scope of the test. This we take as a positive indicator since the majority of users were showing concerns about accuracy of information and even with a totally fictional test case some users were trying to add information beyond the bounds of the test scenario.

As might be expected the greater the number of steps required to complete a given task the less users managed to complete it successfully.

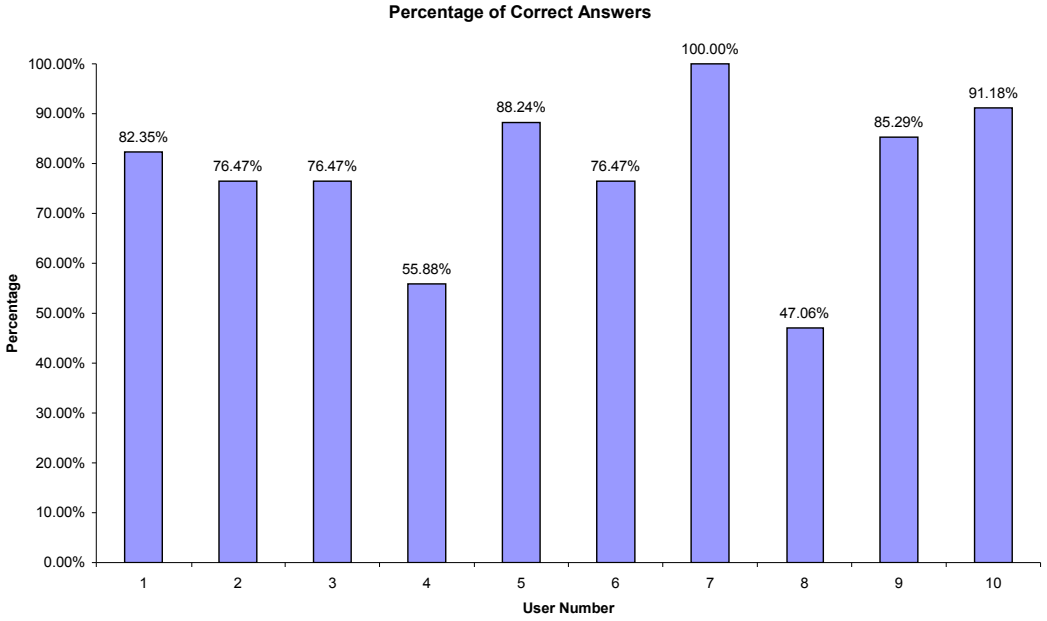

Figure 9.1: Graph shows the percentage of correct responses achieved by each subject.

Number of Steps	Number of Successful Completions (/10)		
2	10	10	10
3	9	7	
4	4	5	5
5	5		
6	1		

The most consistent problems where with the entering of name components which suggests a redesign on this part of the interface might be beneficial. Other usability issues were relatively minor and can be addressed with tooltips and help files, as discussed above.

9.3.2 Interpretation

Other than the issue of the name presentation the main point raised by the experiment was that of interpretation. This is not a problem, per say, with the software but a feature of the type of distributed system being implemented. The concept of probabilistic categorisation was previously mentioned within the context of tagging (see 6.3.3). The argument was made that it was not exclusively a property of tagging and could also be applied when the classification are drawn from on ontology. Using the results of Task 4 this idea is explored further.

In Task 4, the volunteers were asked to set the states of a character who was a ghost.

For added complication the information that the character was a ghost had been implied in the fictional source material but not stated outright. In evaluating the results a state of 'Dead' or 'Undead' was accepted in combination with a state of 'Incorporeal'.

The responses are shown in Table 9.1.

Table 9.1: Classification Responses to Meditate Experiment Task 4

State of Being	Evidence	Value	State of Form	Evidence	Value
Dead	Interpretation	3	Corporeal	Interpretation	3
Dead	Interpretation	3	Corporeal	Text	5
Dead	Interpretation	3	Incorporeal	Calculated	2
Dead	Subtext	4	Incorporeal	Interpretation	3
Living	Text	5	Incorporeal	Interpretation	3
Living	Text	5	Incorporeal	Interpretation	3
Undead	Calculated	2	Incorporeal	Interpretation	3
Undead	Interpretation	3	Incorporeal	Subtext	4
Undead	Interpretation	3	Incorporeal	Subtext	4
Undead	Subtext	4	Incorporeal	Text	5

In addition, the volunteers then had to select a representing level of evidence for this information. The default levels of evidence are defined in the OntoMedia ontology (see 7.2.4.11). Due to the fact that the volunteers only had the information in the question to rely on and had not seen the (fictional) show any of 'Calculated', 'Interpretation' and 'Subtext' were accepted. These results are included in Table 9.1. For the purpose of further analysis, a weighting value was assigned to the evidence levels with 'Text' being given the highest and 'Supplemental' the lowest.

State of Being	Evidence Total	Evidence Average	Number of Votes	% of Votes
Dead	13	3.25	4	40
Undead	12	3	4	40
Living	10	5	2	20

State of Form	Evidence Total	Evidence Average	Number of Votes	% of Votes
Corporeal	8	4	2	20
Incorporeal	27	3.375	8	80

This illustrates a user interface issue. The default value for the evidence dropdown is 'Text' because the majority of information being added to the system is stated within the source material (character name, age/date of birth/gender etc.) and therefore this is

Table 9.2: Possible Weightings For the Various Evidence Levels

	Weighting			
Evidence Level	Default	Alternate	Moderated	Percentage
Text	5	3	1	0.2
Subtext	4	3	0.8	0.2
Interpretation	3	5	1.5	0.5
Calculated	2	2	0.1	0.1
Supplimental	1	1	0	0

the value that will be needed most often. However, when weighting the information, that stated in the text has a greater 'in-universe' truth than that which the audience[2] has divined. This result of these two factors is that the most likely error in user interaction, the user forgetting to set the evidence level to something other than 'Text', produces the most misleading result.

If we consider a graphical representation of the overlap between the responses (see Fig. 9.2) the separation of the two Living/Text responses from the others is clear. One option is to adjust the weighting based on the level of evidence that people think is available. Since the majority of respondents agree that the available evidence is at the level of 'Interpretation' we give that the highest value (5) and so forth (see Table 9.2). Both the originally proposed weighting system and this alternate option use discreet rankings based on perceived value, differing only in what value matrix is used. Two further alternative weighting schemes were considered. The first (Moderated Weighting in Table 9.2) takes into account both the respective values of each level of evidence (as per the original weighting scheme) but then moderates this value by taking into account the percentage of respondents who think that level of evidence is available. The final weighting is just based on the percentage of users that think that a given level of evidence for a specific piece of information (Percentage Weighting in Table 9.2).

Calculating these different weightings gives the following results for the characters state of being.

	Evidence Level			
State of Being	Default	Alternate	Moderated	Percentage
Dead	13	18	5.3	1.7
Undead	12	15	3.9	1.3
Living	10	6	2	0.4

[2]While characters are not always reliable about the information they give, unreliable narrations can exist within their own context within the main context thus allowing for differing or even conflicting truths to exist within one universe and be compared and contrasted. The information given in these cases exists as textual truth with its context whether or not it is 'true' or accurate within the wider scheme.

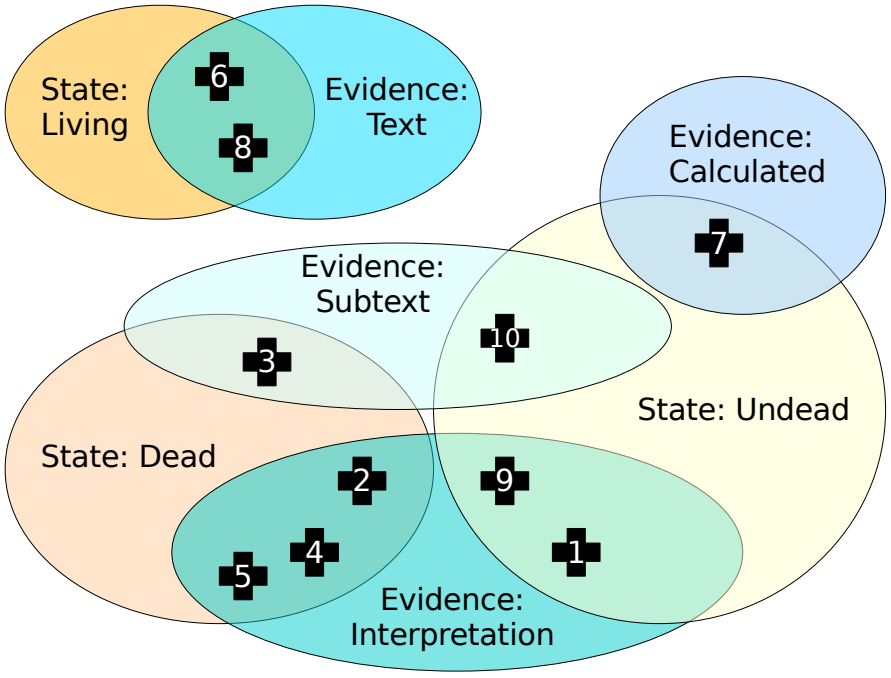

Figure 9.2: Venn diagram showing the interaction between the state of being/evidence answers given to the forth task. The User ID is shown within the relevant cross, size of area is not representative.

By considering these values as relative percentages (see Figure 9.3) we can see how taking the number of votes for each level of evidence into account we can compensate somewhat for user error induced by the software defaulting to an evidence level of 'Text'.

Repeating this with the values for 'State of Form' (see Figure 9.4) we get the following results[3]:

	Evidence Level			
State of Being	Default	Alternate	Moderated	Percentage
Corporeal	8	8	2.5	0.7
Incorporeal	27	31	8.8	2.7

From these results it can be seen that there is a strong possibility that the character is Incorporeal. Further the character is probably Dead or Undead, with it slightly more likely that the character is Dead. Given the limits of the example it is not possible to draw definitive conclusions about which method of weighting should be used although it is clear that the some moderation of the data to take into account the level of evidence the users believe is available is important. Further testing with larger datasets is needed

[3]In this instance the distribution of evidence level classifications was the same in both cases, thus the values described in Table 9.2 also hold true for both

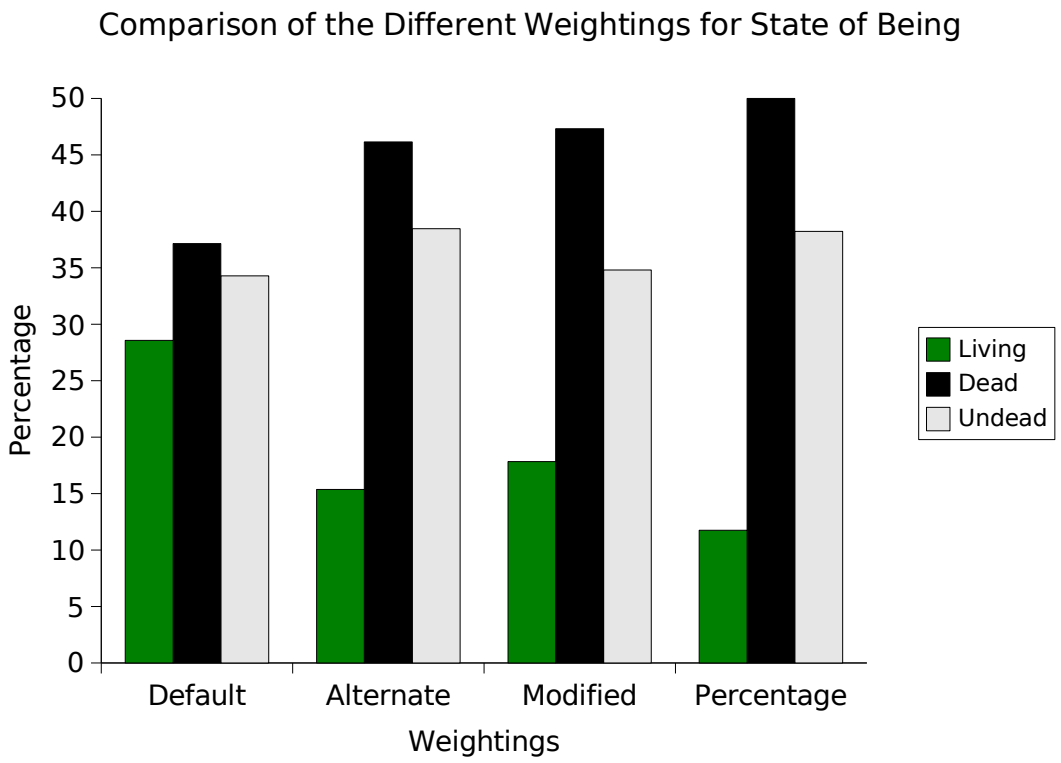

Figure 9.3: Comparative Weightings: State of Being

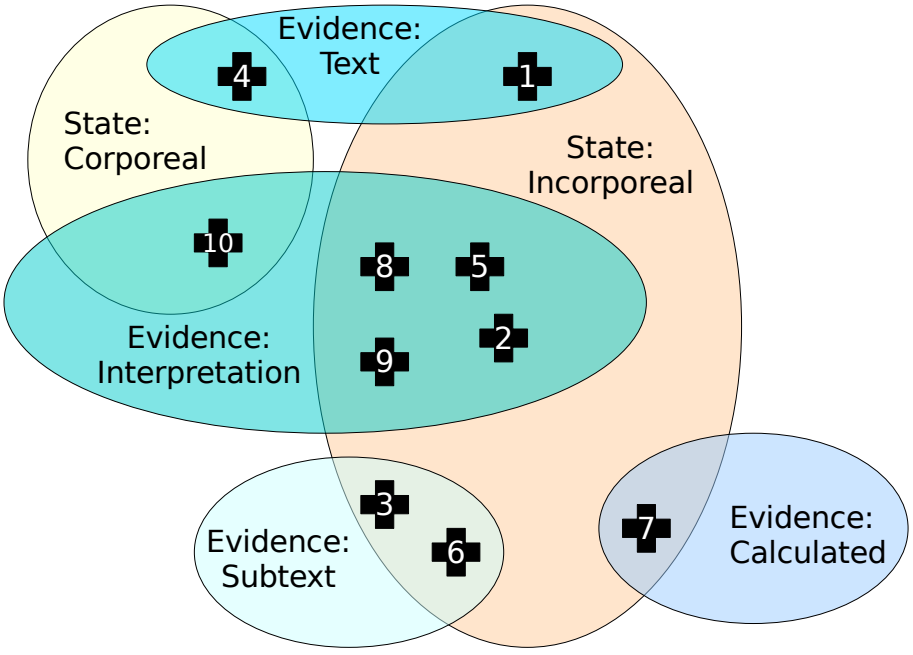

Figure 9.4: Venn diagram showing the interaction between the state of form/evidence answers given to the forth task. The User ID is shown within the relevant cross, size of area is not representative.

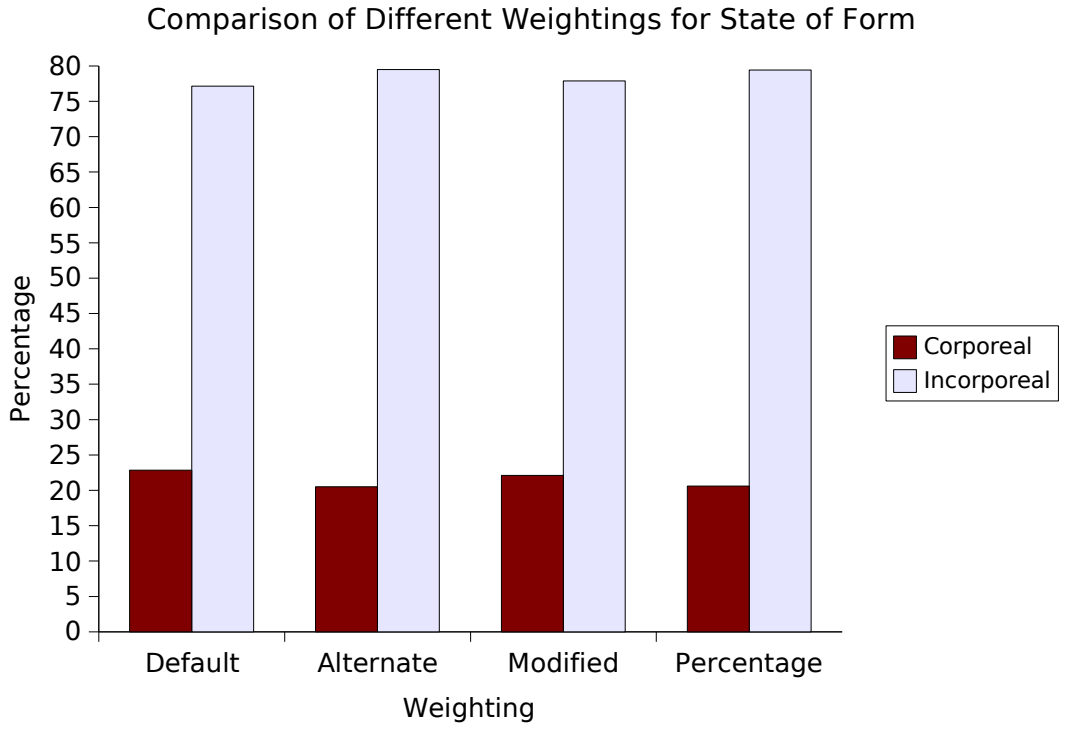

Figure 9.5: Comparative Weightings: State of Form

to make recommendations as to how analysis of the evidence clusters can assist probabilistic clustering but the theory can be seen to be viable with ontologically derived classifications. This suggests that a system based of this data would be able to include more complicated breakdowns and analysis of the amalgamated data and present this to the user.

9.3.3 Usage

The appeal of the system to fans over non-fans is not surprising given the subject matter and that intent of the project. What was more interesting was that the female volunteers unanimously thought they would participate in a collaborative online repository of the type that Meditate would act as a front end for, whether or not they were part of online fandom. From this it might be argued that the people most likely to use the system for which Meditate provides a user interface is women in general and male fans. This goes beyond the expected user group (fans) and opens up the possibility that such a system would be used for narratives beyond pop culture and into other areas such as folk stories and mythology in which women have traditionally had an interest.

Of those who thought that they would not use the resource if it existed, one commented that it would depend on how the information was presented but would probably just use Wikipedia. While Wikipedia does contain a significant amount of information about

characters and narratives they deliberately move away from what they describe as 'fancruft', information primarily of interest to experts on that topic (i.e. fans).

> Interested individuals can, after all, find the fictional universe's account of events by simply reading the books, playing the games, or watching the films and television programs. As mentioned above, there is a healthy market for derivative works, such as detailed encyclopaedias about fictional universes. It is not our role to fill that niche. (Wikipedia (Various), 2007)

The emphasis on being an 'out of universe' source which does not give undue weight to minor details is in many ways the opposite approach to that being taken with the OntoMedia ontology which maintains both the value of even insignificant detail (with the ability written into the Ontology to differentiate between major and minor points) and the value of regarding facts within their own context (the in-universe perspective) so that they can be compared across those contexts. This difference may be put down to the difference in emphasis and user base between the more general, aimed at the masses system that Wikipedia typifies and the type of system that the OntoMedia was designed to support which would be aimed at experts (fans and academics) as well as providing basic reference material. It also underlines the difference in potential power between a basic text source and a site based on semantic data which will allow for more computer processing of the contained information.

Part V

Conclusion

Chapter 10

Future Work

10.1 Implementation: Supporting an IBSC

In this thesis we have shown that our case study group represents a very important subtype of online community. While metadata both human and machine readable is being used within the community for the description of people and objects it can be strongly argued, as we have shown, that this metadata addition is occurring by accident rather than design. We contend that the addition of usable semantic data supports the community by allowing the user more control over their interactions and the information that they reveal. We have tried to show some ways in which this may be achieved and the benefits which might be gained from it. Throughout the process, the goal was to work within the current usage patterns so that users will not be disadvantaged by any annotation. While technology shapes the way that users interact, it was felt that creating a system which required significant changes to the user would be self-defeating. While dealing with a community, it must be recognised that in many ways the community is not homogenised. Many subsections of the community have their own practices and restrictions. Given the adverse reaction to having practices imposed rather than developed within the community or sub-community, it is necessary that any system be flexible enough for it to work for the community rather than imposing upon it.

10.1.1 Extending Fan Networks with Semantic Data

10.1.1.1 Extending Archives

As well as distributing media through individual websites and journals which would allow the type of tagging described above, works are stored or indexed in electronic repositories. These repositories act as focal nodes for the community but are themselves not inter-connected even when many serve the same area of interest. In recent years

there has been a move away from manual archiving and a number of automatic archiving systems are in popular use. The most common are Automated Archive (Perl/CGI based)[1], eFiction (PHP based)[2] and Storyline (PHP based), although the latter is no longer distributed. Information is stored in a database (normally MySQL) with the script creating the dynamic web interface. Of these archives only eFiction creates any externally available structured data as standard[3] since it allows for an RSS feed to be created. The rest allow basic categorisation and the association of metadata to a story, or other allowed item of media, and these features form the basis of the archive's search capability but nothing beyond that.

Taking eFiction as the base line for current technology we consider how we might extend these features to add in semantically rich data.

E-Prints is an electronic repository developed primarily to archive academic publications (Gutteridge, 2005). Distributed under an open source licence and developed at the University of Southampton, it offers similar features to eFiction but with the advantage of being easily extensible. Research is undergoing into the different requirements needed for an academic repository and a creative works' archive and as a result it was decided to work mainly with this software.

10.1.1.2 Describing Content

One of the areas under consideration is additional descriptive data relating to the content of a media item. This area was one selected for focus for three reasons. Firstly, the amount of amateur content being created means that users have, on the one hand, the option of being more selective as to what they consume but, at the same time, have increasing difficulty in finding items that match their preferences. Secondly, community practice already expects the addition of this sort of information. However, despite this standard, opinions vary widely about what and how much information should be made available to the consumer. Adding in machine-processable data not only allows the information to be dealt with at the pre-consumer level but also allows the consumer to set preferences for what information is revealed to them. Thirdly, there is increased public concern about the nature of online content and how it should be marked if is it not completely child-friendly. This is a problematic issue since standards vary not only from community to community but household to household. The addition of more complete machine-readable information on the details of content would allow for much more personalised search and retrieval system, allowing people to filter in the media they wanted or filter out that which either they were not interested in or which a higher authority deems is not appropriate for the user to view.

[1] `http://www.netspace.org/~shalott/archive/`
[2] `http://efiction.org/`
[3] `http://efiction.org/features.php`

10.1.1.3 Describing Authors

The other area in which semantic annotation could be of significant use is in author description. FOAF (Brickley and Miller, 2004) accounts for a significant percentage of the RDF currently being produced. A large part of FOAF's popularity can be attributed to the automatic creation of FOAF data by electronic journalling sites such as LiveJournal. Despite the high use of LiveJournal and similar sites by the community there has, as yet, been no move to either use the available metadata or integrate it in any way with the RSS data that is being outputted by the archives.

The Fan Online Persona (FOP) extension to FOAF (see Section 5) was created to dissuade authors from adding personal information and to allow authors and consumers to specify additional information about works that had been created, works they either liked or disliked, and about their involvement within the community. As electronic journalling sites publish author data, repositories will provide the option of publishing account details as FOP files. One reason for this is to allow more specific author identification. While it is rare to get authors with the same name writing in the same area of the community it is not unknown for confusion to occur. By associating a story not with a string to signify the author but with a defined identity it is possible to process the data at a much more defined level.

RSS-FOAF, an extension to RSS incorporating FOAF has been proposed (Ernst, 2006) however this concentrates on describing FOAF data as an RSS feed rather than providing a link between the two formats. The basic RSS 1.0 specification (Beged-Dov et al., 2000) allows for the inclusion of Dublin Core data (DCMI, 2006) within the official modules. The present version follows the practice of string values although it is noted that richer information is expected to evolve.

The FOP file allows for the description of the author's persona and information about their prior works. Basic information can be automatically generated from information stored in the repository and simple options can be provided allowing the author to specify if they wish to hide certain information, such as contact details, or add in additional information such as friends or external activities. Links to expanded descriptions of the creator/contributor as defined within FOP can be included in the Dublin Core data through `rdf:seeAlso` and thus enrich the information.

10.1.1.4 Automatic Content Generation

Of the archives surveyed, all of the automatic archives required the author to select which categories their story should be archived under; these options minimally included genre and some information about content such as romantic pairing and the presence of potentially controversial content (bad language, character death etc.). Despite the frequent differentiation seen between categories and 'warnings' within the community there

is no difference beyond the unfounded assumption that categories provide information to help in the location of an item while warnings provide assistance in avoidance.

Using the OntoMedia ontology (see Section 7) we can describe the common types of events which are typically flagged. Having created a reusable collection of RDF data it is then possible to compose an overall description of events within the media by associating each molecule of RDF with one of the category tags. Since the OntoMedia ontology allows for differentiation between levels of description detail in the content, we not only created a tree of potential subjects, which could be linked at each level to the representative RDF, but made it possible for the author to give some indication of whether the subject was meaningfully present or mentioned as a passing reference. This addition was intended to assist authors who were unsure whether they should tag the presence of something that was only superficially existent in their work and also to allow greater control for consumers by letting them separate between an event, such as a sexual relationship, being inexplicitly mentioned and explicitly described.

10.1.1.5 Extending the Feeds

Having discussed how to produce automatically additional metadata with the archive, it is only logical that we also consider how to disseminate the information. As with many sites we can provide the FOP and OntoMedia files and allow the information to be harvested by community portals. This process can be aided by the simple action of providing the information in one stream, and the RSS feed already offers this function. One of the proposed modules for RSS 1.0 allows for additional RDF annotation to be referenced by the item. The RSS stream can then reference not just further information on the content of the item but also on the creator, or creators. These basic steps would allow processing of the information, both in-site and cross-site, which is not currently possible, but with little technological effort and no additional effort on the part of the users.

The standard RSS feed on archives such as those discussed in this paper follows a pattern similar to this example taken from an E-Print archive (see Listing 2.2).

Using the same example as before, the RSS item now contains links to the RDF data describing the author and the content of the object, with is defined as a `ontomedia:-MediaItem` (see Listing 8.1). This information described in the RSS feed can now be aggregated and processed using the two defined ontologies, and can be done so without any additional actions on the part of the creator. By enriching the information that is already created and shared it is possible to add semantic information without disrupting current practice.

```
<item rdf:about="http://www.my-archive-url.net/9/">
<title>Regenesis</title>
<link>http://www.my-archive-url.net/9/</link>
<description> Regenesis. (2006) by Fides </description>
<dc:creator>Fides</dc:creator>
<dc:date>Tue, 6 Jun 2006 18:35:51 -0500</dc:date>
</item>
```

Listing 10.1: Default RSS Feed

```
<item rdf:about="http://www.my-archive-url.net/9/">
<title>Regenesis</title>
<link>http://www.my-archive-url.net/9/</link>
<description> Regenesis. (2006) by Fides </description>
<dc:creator>
  <rdf:value>Fides</rdf:value>
  <rdf:seeAlso resource="http://www.my-archive-url.net/view/
                                                people/Fides?output=fop" />
</dc:creator>
<annotate:reference rdf:resource="http://www.my-archive-url.net/
                                                9/?output=ontomedia" />
<dc:date>Tue, 6 Jun 2006 18:35:51 -0500</dc:date>
</item>
```

Listing 10.2: Extended RSS Feed

10.2 Implementation: Meditate

The long-term goals for Meditate are to convert it into a web-based interface through which users can log into a shared repository of data and add their own information to the collective whole. There are, however, many milestones that must be reached before that can be realistically considered.

The first milestone for development is to provide a basic system for download which allows the user to log in, through Meditate, to a shared repository and to import and export data to that repository.

To this end, there are a number of bugs which were discovered during development, relating to the way that entity links are handled and entity deletion, which must be solved. In addition to that, the development of the ontology into the most recent version (the one detailed within this thesis), specifically the way that dates are handled, requires development within Meditate to handle the changes. Usability issues raised in the initial user testing (see Chapter 9) also need to be addressed, especially the addition of tooltip and help information.

Finally the code for user identity and logging needs to be added so that changes can be tracked and merged. A number of possible ways for doing this are being considered such as using a wiki or subversion back-end. At this stage, the code should be stable enough to release to users and a trial of the software will be undertaken.

There are a number of areas which would benefit from further development including efficiency as the current code runs slower than would would be optimum and, while currently conjecture, is unlikely to scale well.

The development path following the first milestone is to introduce further options for the entity profiles including allowing users to generate and share basic entities of useful types such as physical and abstract items. These user-generated items may required the creation of new OntoMedia classes and the intention is the these classes will be output as OWL files which can then be shared and reused. In this way it is hoped to slowly build up the number of options available until the majority of the ontology dealing with character profiles has been implemented.

10.3 Future Research Questions

In this section we discuss some of the research questions which were raised during the course of the research but which have fallen outside the scope of this work.

10.3.1 Further Analysis of Questionnaire Results

While the results of the questionnaire have played a large part in informing this thesis, there was a significant amount of additional data collected which fell outside the scope of this work but which might be of future interest. The primary disciplines which might benefit from these data are media and fan studies. Areas particularly open for further investigation include:

- *Fandom Clustering*: Many fans participate in more than one fandom, analysis of how fandom participation clusters can lead to interesting information on trends of popularity and recommendations.
- *Effects of Age and/or Participation Length*: While we have considered the effects of age in the context of access this has necessarily focused on the adult/child split. There have been suggestions that there are differences between fandoms which have a lower average age than those who have comparatively older participants. It would be interesting to compare not only the distribution of fandoms across the age ranges (are younger fans interested in older shows?) but also whether there is any significant difference between the attitudes and participation methods of the different age ranges.
- *Effects of Mono- or Multi-Fandom Participation*: As well as comparing the results across age groups, another interesting area to investigate would be whether there were any differences visible between fans who only participate in one fandom and those that participate in multiple fandoms.

- *Reaction to Access Controls*: While only a subset of the respondents, over one hundred teenagers gave their opinions on the type of age restriction controls that they had encountered online and how they had reacted to them. Further analysis of this data could help in our understanding of how such systems work, or don't, at a social level.

These areas have been highlighted as areas of significant contribution for a number of reasons. From the perspective of fan studies, looking at the correlation of interest patterns and similarities can increase out knowledge of the fan bases and the type of fans a given show is likely to acquire. It would also have potential to act as the basis for a recommendation system as well as increasing knowledge on those fans who participate in multiple fandoms and help create a bridge between the various fan subgroups.

One of the suggestions frequently raised is that the Internet has lead to an increase of fans involved in on online fandom and an increase in the proportion of younger fans. It would therefore be an interesting addition to the study of fandom to consider whether there is any significant difference in the patterns of behaviour and beliefs in terms of community involvement between more recent and longer term fans and between younger and older fans, as distinct divisions or combination. As mentioned above, multi-fandom fans act as intermediaries between groups of mono-fans. This division presents a further way of analysing fan interaction and thus increasing the amount of knowledge on the subject.

The final area noted for further investigation is the responses received from younger users specifically related to the various methods of access control that are found online. Through investigation of their attitudes on the different methods information can be gathered which will inform the design of such systems in the future.

10.3.2 Extending OntoMedia

The OntoMedia ontology was designed by a multidisciplinary team who were interested in using the resulting meta data for different purposes. While the development of the ontology was driven by the needs of those involved there was an ongoing acknowledgement that the type of information that would be made available could be used in a number of other ways.

10.3.2.1 Narrative Study and Automatic Classification

One of the first possibilities raised for consideration was for automatic classification. Bibliographic records often include some indication of genre. Research is currently ongoing into automatic classification through natural language systems (Godby and

Stuler, 2001; Qu et al., 2006; Williams and Calvo, 2002; Karlgren and Cutting, 1994). However this has focused on analysis of the text and vocabulary usage. We propose a similar analysis but implemented using the conceptual entities and events that occur during a work of fiction. The experiment would be twofold. First, to see whether this is a valid method of sorting and second, to consider what is actually described by a genre such as 'drama' or 'science fiction'. Such a use would not be limited to fiction since it could be applied to anything that could be modelled using the OntoMedia Ontology.

10.3.2.2 Myths, Legends and Cultural Heritage

We argue that there would be interesting research to be gained through further work with the OntoMedia Ontology. While this thesis has been concerned, in the majority with modern culture, the possibility of describing stories that are part of our cultural heritage was previously raised as a possibility (see Sections 2.6.3 and 7.3.1)

Comparative mythology would just be the first discipline to benefit from being able to search for myths of a particular type or ones in which certain events occurred. Through the previously discussed mapping between OntoMedia and the CIDOC CRM (see Section 2.6.3), the information related to cultural narratives can then be combined with external sources such as historical events and trade patterns to provide an integrated view of the conditions that existed in the period under investigation and the influences that would have existed from and between the social, economic and religious elements.

10.3.2.3 A Cultural Narrative Repository

The repository would store low level descriptions of the concepts found in cultural narratives such as traditional myths and legends. It would also store mappings between the low level ontology and a thesaurus of commonly used concepts to allow users to interact with the information using a mutually understood vocabulary which can be personalised and extended and using this vocabulary allow users to tag stories with concepts and thus add to the available information.

The only difference between pop cultural and cultural heritage is time. By accepting information from all narratives, we open the way for more links between the various elements contained within those narratives to be included, and, thus, allow users to see gain a greater understanding of how a narrative is positioned within its genre.

By working with base principles the stored information is abstracted from any specific vocabulary. This allows for users to utilise personalised vocabularies in the language of their choice and conversely allows the collection and analysis of conceptual synonyms and language usage. It also has the advantage of being media-independent and therefore can be used to compare differences between different media versions as well as over time.

This information would be useful in the fields of cultural heritage, preservation and education, notably in the areas of literature, history, comparative religion/mythology, anthropology, sociology and media studies. These subjects all benefit from the study of cultural narratives as sources, either as direct domains of research or as supplementary information through which they can improve understanding of the culture that created them. By enabling a way for themes and tropes to be identified and searched on, similarities in narrative across otherwise unconnected sources can be identified and compared, even as the changes in those narratives can to traced and analysed.

From a computer science perspective, the challenge is to present this data to non-technically advanced users in such as way that it is both simple and informative. The question is not just how to hide the semantic detail and complication from the user while still providing them with access to the search and analysis capabilities that such as system would have, but also how to best enter the data so that the information is available to be queried. In this thesis, I have proposed methods by which users can collectively add information to be shared, and through this harnessing of the power of enthusiasts populate the data repository but this method will, most likely, be more successful within the domain of pop culture rather than literature or heritage narratives. Even where there is a will to enter the data, a user-friendly system is required so that this is possible with as little room for accidental user error as possible.

While this thesis has described both an ontology to act as the backbone for such a system and an application for data entry using that ontology, neither is complete enough at the time of writing to undertake such as task without further development. Having created the core ontology the question remains how further expansion should occur and whether this should be done in a symbiotic relationship with the users on an 'as needed' basis as information is added. This offers the opportunity to further investigate user-created ontologies and developing hierarchies of concepts.

With any system there are trust issues regarding the accuracy and provenance of the data, some of which have already been discussed within this thesis. In addition to those there is the problem of missing information as distinct from information not being given because it does not apply. Strategies would need to be formulated and tested to find the method that returned the most useful proportion of helpful results verses false positives and the dismissal of wanted information.

10.3.3 Tag2: Bridging the Tag-Ontology Gap

With the complexities inherent in using an ontology such as OntoMedia, we argue that through community-driven metadata reuse it is possible to reduce the complexity for the user. By allowing for the creation of associations between simple strings, such as the tags discussed chapter 6, and more complex metadata descriptions of the type described

in chapter 7. We argue that that the simplicity associated with current tagging practice can be combined with the ontologically rendered definition.

I proposed the Tag2 Schema (see Appendix H) as a way of bridging between tags or collections of tags and RDF descriptions. Further work is needed to test the accuracy and efficiency of this system. By this, I mean whether using tags linked to ontologies through the schema returns the expected results in a reasonable time compared with current tagging systems. Further whether those results, while of the type expected, produced a greater, smaller or similar range of than retrieved by tagging alone.

The Tag2 schema defines classes and properties for linking between RDF statements and tags or collections of tags. The classes model the concepts of an RDF description, a query that will return RDF data, a tag or keyword and a collection of tags or keywords. The classes are accompanied by properties mapping between the RDF-based descriptions and the tag-based based ones as well as the relationship between the collection of tags and the individual tags which it contains. Through this is is possible to imbue a word or phrase, of collection of such, with a formalised machine-processable definition.

Expanding the SKOS example given in the introduction (Listing 2.1), we can use Tag2 to link between the OntoMedia definitions, which can then be used for machine processing, and the tag definitions as described with SKOS (Listing 10.3).

The current schema postulates two methods of linking – either to a RDF definition or to a defining query. We hope to discover if different results are produced using the two different mappings. Further, whether there is a difference in the results returned and the time taken to return those results between the two methods. On the basis of this, we can make recommendations as to the suitability of one method or the other in different settings.

What is proposed in this work is to test the hypothesis that vocabularies, such as those used within communities, can by linked to machine-processable descriptions thus allowing the power of formal definitions to be combined with the ease of use seen in tagging systems.

10.3.4 Content Focus and User Groups

The metadata that fans include with a story or other creation is noticeably different that that seen accompanying typical works of fiction. In this thesis, I have laid out means by which fans can extend the descriptions that they attach to media and how they can use their own personal vocabularies to interact with this information.

To further investigate this, an experiment is proposed which will compare the vocabularies used by both fans and non-fans to tag works of fiction, both original and fan created. This experiment would compare the amount of variation in the terms used between the

different groups and whether different information was provided as to content. As well as extending the work already done on fan shared vocabularies, this would provide useful data on whether different user groups focused on different elements within fictional narratives and whether the type of fiction had any affect on how the users perceived its content.

10.3.5 The Network of Distrust

Having laid the groundwork for a social network system that can be used to generate community trust values, we ask how the system could be abused and, therefore, how this abuse could be minimised.

- Does the pattern of trust surrounding a sock-puppet/false identity differ from that of a genuine persona?
- Do personas relating to fictional characters more closely relate to real person personas or sock-puppet/fake personas?
- If a difference does exist, does it exist in the surrounding pattern, in the temporal creation of the surrounding pattern or both?
- Does the existence of fictional personas affect sock-puppet/fake persona identification?

To investigate these questions, a test network of the type proposed would be created and populated by members of the fan community who wished to participate in the project. This process would be monitored to record the patterns of links that develop when new nodes join the network. Through this period, various alternate methods of calculating community trust levels would be trialled allowing the comparison of values when different aspects of community involvement were taken into account. These values would also be compared against other methods of trust evaluation such as general trust rankings between users. This stage of the experiment would result in a proposal as to how community trust could be calculated.

This proposed method could then be tested by seeding the network with bad nodes and false information and confirming whether this could be identified as well as studying the affect that it had on the network.

10.3.6 Community Changes Over Time

As described in Section 4.2 the networks of links between users on LiveJournal were visualized. During the process of creating this visualization the data stored in the cache

was cleared and a new cache created. This resulted the generation of the visualization of the network links surrounding Node 'F' with data from two different times, 21 October 2006 (see Figure 10.1) and 30 November 2006 (see Figure 10.1).

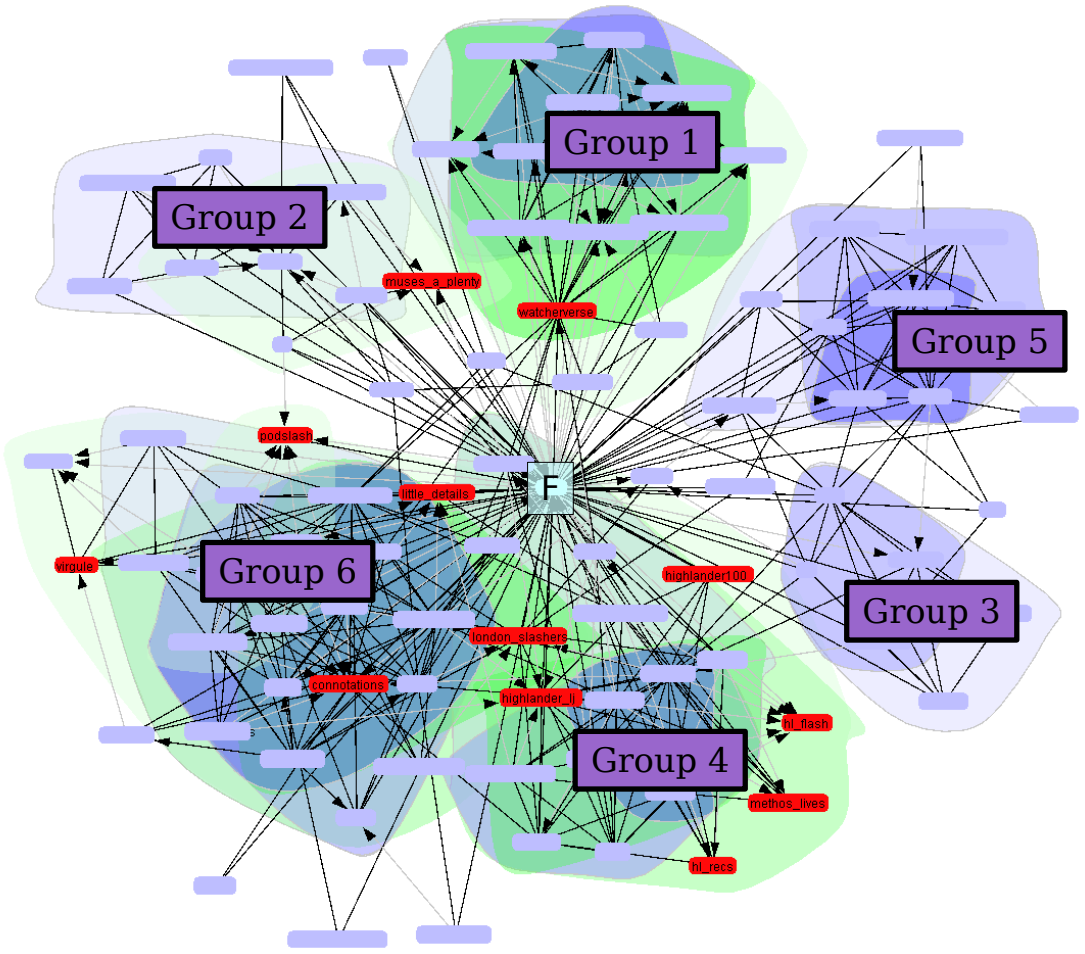

Figure 10.1: Social Network Groups on LiveJournal with Central Node 'F'. Image generated from data collected on 21/09/2006. (Code Version 1)

The most noticeable change between these two visualization is the presence of two community journals (highlighted in Figure 10.2) that bridge Groups 4 and 6. Analysis of these two community journals reveal that they both relate to *Doctor Who* and/or its spin-off series *Torchwood*. It seems likely that this shift corresponds to the premiering on BBC3 on 22 October 2006 of the first season of the television show *Torchwood*[4] created by Russell T. Davies. From this we can conclude that the show was popular with the users of both these groups, a popularity that was significant enough in the case of Group 4 that one of the two communities Torch_Wood[5] appears in the list of level 2 community journals for that group (see Appendix C.1).

[4] `http://www.bbc.co.uk/torchwood/`
[5] `http://community.livejournal.com/torch_wood`

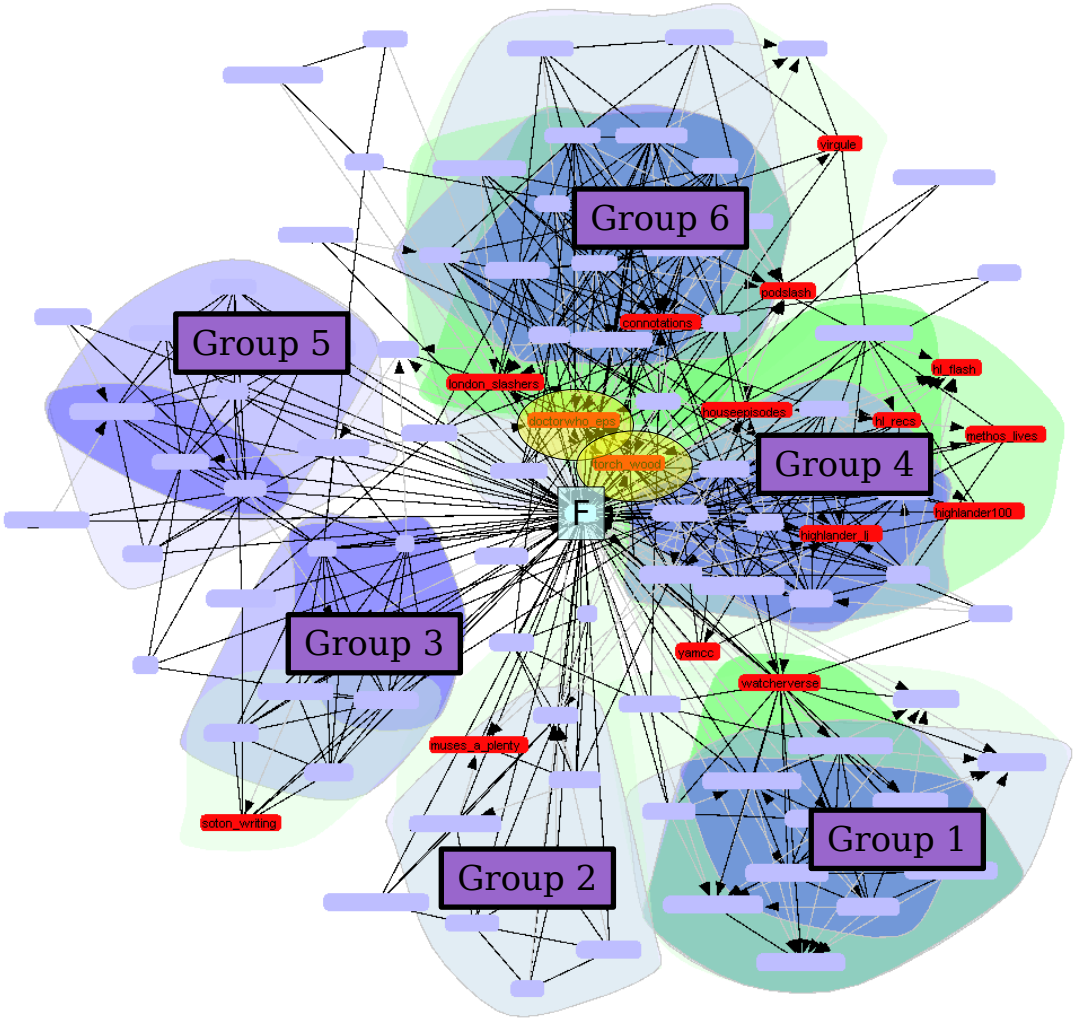

Figure 10.2: Social Network Groups on LiveJournal with Central Node 'F'. Image generated from data collected on 30/11/2006. Main differences highlighted in yellow. (Code Version 1)

Future research taking a number of initial nodes as starting points and following the changes in the social network surrounding them would be of interest, not only in the analysis of social networks and the interaction between personal journals and community journals on LiveJournal, but also in studying the changing patterns of fan groups and the influence that of events, such as the production of new material or the cancellation of a series, have on the fan community.

```
<!DOCTYPE rdf [
  <!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY skos "http://www.w3.org/2004/02/skos/core#">
  <!ENTITY tag2 "http://contextus.info/Tag2-schema#">
  <!ENTITY text "http://thesaurus.contextus.info/#">
  <!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
                                                    expression#">
  <!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/
                                                    common/trait#">
  <!ENTITY owl owl="http://www.w3.org/2002/07/owl#">
]>

  <rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:skos="&skos;"
   xmlns:tag2="&tag2;"
   xmlns:text="&text;"
   xmlns:owl="&owl;"
   xmlns:ome="&ome;"
   xmlns:omt="&omt;">

  <skos:Concept rdf:about="&text;char-death">
    <skos:prefLabel>Character Death</skos:prefLabel>
    <skos:scopeNote>
      <rdf:value>
        Indicates the media contains the death of
        one or more of the characters
      </rdf:value>
      <tag2:mapsTo rdf:resource="&text;char-death" />
    <skos:scopeNote>
    <skos:broader rdf:resource="&text;death" />
    <skos:narrower rdf:resource="&text;minor-char-death" />
    <skos:narrower rdf:resource="&text;major-char-death" />
    <skos:narrower rdf:resource="&text;oc-death" />
    <skos:related rdf:resource="&text;canon-death" />
    <skos:inScheme rdf:resource="&text;" />
  </skos:Concept>

...

  <rdf:Description rdf:about="&text;char-death">
    <rdfs:label>Character Death</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Transformation" />
    </rdf:type>
    <ome:from rdf:resource="&omt;Alive" />
    <ome:to>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:resource="&omt;Dead"/>
          <owl:Class rdf:resource="&omt;Undead"/>
        </owl:unionOf>
      </owl:Class>
    </ome:to>
  </rdf:Description>
  </rdf:RDF>
```

Listing 10.3: Integration of SKOS, Tag2 and OntoMedia

Chapter 11

Summation: Community and the Semantic Web

11.1 Identity

In looking at identity (see Section 2.1 and Chapter 5), we considered how the identity of the individual connected to their identity as members of a community. Taking the current FOAF specification, which is primarily aimed at occupation-based social networks, we propose an extension which is based on the needs of our example community. In doing so we recognise that a person has multiple online identities, one of which is connected with their community membership but which may not be connected with any other parts of their lives. While form-based identities do not allow for as much personal expression as user-driven ones, they do allow the data to be machine processed to a degree that is not possible with the idiosyncrasies of user generated profiles.

This ability to process the data can be seen as a bad thing when it is used for marketing or profiling, but within the context of the community it allows for the process that is happening to be encoded in a way that can benefit that community through the information sharing which is part of a community's ethos. Although the extensions, as we have described them, are specific for the community which provided our requirement data, they set out a pattern which is equally applicable to other online communities. The necessity is for the information in the profile to be seen as relevant and useful to the community and by extension to the members of that community. If this is not the case then the information and the uses to which it could be put might be seen as suspect and undermine the network.

11.2 Community Network

The community is an important part of many people's online activities. Having analysed an active online community we argue that community interest can be harnessed to drive the next generation of online development but it is necessary to work with that community rather than require it to subvert the available technology.

We chose to look at a female-dominated community because, despite being frequently connected with communication and the social aspects of the Internet, they are under-represented in the research. What we discovered was a complex and evolving community which was open to new technology when there was a perceivable benefit. Despite not being representative of the demographic most associated with cutting edge technology, the community has a long tradition of social networking, tagging, electronic archiving and online community self-management.

Many of these techniques are undergoing rapid changes at the present time due to the accelerated pace at which the supporting technologies are developing and the massive increase in users in the recent years. By investigating the current methods through which the community evolves, we have laid out suggestions as to how this community and upcoming technologies might develop together in the future. While the specific suggestions contained within this thesis relate to the community under investigation, the methodology of studying the community's current practice and then identifying which issues are technological issues and which are social issues, which technological developments might be able to support but not solve, is applicable to the myriad amateur communities that exist online.

11.3 Media Content

One of the issues that was raised by our investigation of the community was the problem of defining the content of the media objects which they shared. Investigation of current practices revealed a strong tagging culture but also highlighted a number of problems. While there were developed folksonomies which existed within the community, the meanings associated with each term varied between sections of the community. While the vocabulary was *mostly* stabilised, what the user understood by the term was not.

To move beyond basic string tagging, an ontology was developed to describe narrative events. Drawing on narrative theory as well as the information gathered from the community the OntoMedia Ontology can be used to describe characters and events that occur. While designed with the intent to describe fictional narratives it has the power to describe any narrative sequence.

Methods of combining the information contained within the structured descriptions cre-

ated using the ontology and the tagging systems currently in use were discussed. One proposal is to use a mapping system to allow users to specify which definition of a tag they wish the tag string to be associated with thus disambiguating the term in a machine-readable manor.

11.4 Internet Based Semantic Communities

In this thesis we have argued that the idea of community is an important one. When the possibility of online communities was first discussed the debate was over what defined a community since there are vital difference between a community and a group or even a network of people. Now the idea that physical space defines community seems unlikely but the necessity to discuss what is and is not a community is still important. That discussion has happened for the Internet and now it must happen for the Semantic Web and its associated group structures.

One recent trend has been the ease with which people can make connections with other people. Many of these linkages are weak, webs of acquaintances rather than webs of friendship, and it can be hard to pick out the meaningful links within the many. The debate over whether something is or is not a community is important because it not only allows us to differentiate the group from other looser structures but it also allows us to make certain assumptions which we could not make otherwise. Looking at the definitions for communities which have been used in the past, the groupings most commonly seen as communities within Semantic Web research, communities of practice and social networks, may be but are not definitively communities. The Internet Based Semantic Community represents those networks, whether social, communities of practice or something else, which do meet the commonly accepted community definitions.

Having identified our case study community as an IBSC, we have laid out ways in which this status could be sustained in a cross-site and independent manner. We have argued that the community structures themselves can help drive the development of the technological system, while those systems, when in place, can help support the community. As part of this process we have considered the issues of identity within a community context, using community reputation as a trust metric and how the resources that are shared by the community can be described in both an accurate and user-friendly way. While the examples have focussed on one community, the theory behind it is applicable to any community which meets the required criteria and would benefit from semantic annotation and processing.

11.5 Final Thoughts

In this thesis we have considered how the Semantic Web might affect online communities and vice versa. We argued that none of the current online networks being investigated within the Semantic Web space could be assumed to be communities in the traditional sense of the term since they did not necessarily have both the social interaction and the shared bond. Taking the idea of online communities we examine the next logical step, the community within the social network which is supported by exchange of data and metadata on the technical level, modelling the bonds that are created by such exchanges on the personal level. We have argued that communities represent a special case due to the additional social rules that define them and, further, that by taking these rules into account we can not only identify communities in social networks but also treat them differently from networks of acquaintances.

By combining the definition of a community with that of a semantically enabled network we have proposed the recognition of a new type of group, the Internet Based Semantic Community. We have given the arguments for the development of IBSC and have considered both the benefits and issues which are inherent in such a system. We have proposed the online amateur writing community as an exemplar of the type of community which we contend is a IBSC. Using this community as a case study we have analysed both the community and the current community practices to demonstrate how community centred design can be used to assist in creating a network which can support the community while minimising any disadvantages or perceived disadvantages which potentially come with such a system.

As part of this demonstration we have developed an extension to the FOAF schema which takes into account the community concerns over privacy and identity as well as providing a way for the modelling of identity as a community structure. This includes a way of making a statement about personal responsibility and adherence to community standards which can act as the basis for the calculation of community social capital through recognition of this statement by others in the community. In this way we aim to enable communities to self-govern taking into account the social pressures that exist within the community and those that are inflicted upon it from external sources.

We also developed an ontology to describe narrative in a media-independent manner. Through analysis of literary theory and the user requirements drawn from the community analysis, we have designed an ontology which can describe characters, events and plotlines in and across media and the universes that they contain. Having investigated the use of human-readable tags by the community, we concluded that just making those tags machine-readable would not, thanks to current search technology, produce a significant improvement as it did not address the biggest issues inherent in tagging. Instead we have proposed a way to combine the power of structured definition as seen in an ontology with the ease of use and simplicity that represents the main advantage to tagging.

In this we present a number of contributions, the two ontology schemas that we have developed, a methodology for bridging ontological definitions and tag strings and an investigation into the development of tags over a long-term period. With the increased attention on tagging and speculation as to how it might develop, profiling a community which has been tagging in a online context for thirty years provides some clues as to where the social rather than technological aspects of tagging have the greatest effect and the relative importance of the issues and problems which have been highlighted as potential weaknesses of the tagging system.

Throughout this thesis we have tried to ensure that the social aspect of computing is considered an equal part of the system. The user and the social environment in which the user is working are components that need to be taken into account during the design process. Recently the social aspects of computer use have been highlighted with laws and campaigns directed at the way technology can be used; however it is necessary not to fall into the fallacy of completely separating social and technical solutions. Instead of trying to use technology to solve social problems we propose using community and user centred design to allow technology to support social solutions to social problems. To do this we need to define what the users need within the context they are working and through this analysis understand how the current structures can be supported through the design process. As technology opens up new possibilities, so the human element becomes increasingly important as what we can do gives way as a barrier to what we should do. In this thesis we describe a number of technical contributions which stem from the concept of supporting the community. While we have focused on one, albeit a diverse, community the methodology and practices that we used in this thesis are transferable to other online communities and through them into the wider online environment such as those seen in social networks. While the work in this thesis cannot solve the problems inherent in such systems, it can suggest ways to alleviate some of the issues by supporting ways for people to work together on them.

Glossary

AMV Anime Music Video.

Anime Japanese, or Japanese-style, animated television shows and movies. While animated, this style covers a wide range of genres and types, from children's shows to very graphically adult.

BNF 'Big Name Fan' – A well known, and often respected, fan.

COP Community of Practice

Daddy Kink A roleplay situation it which those involved assume the power-dynamics of a father-child relationship and apply it to a sexual setting.

DLDR 'don't like, don't read' - The frequently made suggestion by authors to readers that, if a story is not to their taste then they don't read it

EBay Popular online auction site.

EPIC Electronic Privacy Information Center

Facebook A Social Networking site aimed primarily at people in education. `http://www.facebook.com/`

Fan Fiction Fiction written about characters or set in a world that has been previously created by someone else, i.e. fiction written by a fan of a given fictional universe. The term implies that the work is of an unauthorised and amateur nature. Abbreviations include 'fan fic', 'fanfic' and 'fic'.

Fanbase The fans of a franchise.

Fancruft Information that is only really of interest to fans and not to the world at large. It is often seen as having a negative connotation because it makes a judgement of the relative value of the information.

Fanfiction Fanfiction see Fan Fiction.

Fanfictionland The domain encompassed by fan fiction, and other fan creations, rather than by officially sanctioned production.

Fangirl A general term used to describe female fans

Fanzine See Zine.

Femmeslash An alternative term for stories containing or focusing on a female-female sexual relationship. See Femslash.

Femslash Term used to differentiate slash fiction focusing on female-female relationships from that based around male-male relationships since the later, in general, makes up the majority of the genre. Other terms used include 'femmeslash' and 'saffic'.

Folksonomy Shared vocabulary list created through common usage.

Gen A story which contains either no relationship content or relationship content only of the type and to the level seen in the canon source. Normally seen as distinct from 'slash' or 'het' although the definition has become confused with the inclusion of canonical same-sex or explicit relationships within mainstream programming

Google A popular Internet seach engine.

IBSC Internet Based Semantic Community

ICRA Internet Content Rating Association `http://www.icra.org/`

IDIC The concept of Infinite Diversity in Infinite Combinations or IDIC was introduced as a Vulcan philosophy during the original series of Star Trek. Whether it was successful as the marketing ploy it is believed to have been, the rational it represented of celebrating the vast array of possibilities that may exist was one that was adopted by fandom and fan authors to the point that the origin of the phrase is often forgotten by those outside the Star Trek fandom.

LiveJournal an electronic journalling site. `http://www.livejournal.com/`

Machinima Style of video production using 3D virtual environments such as computer games to provide the setting and actors.

Mary-Sue Initially an author insertion character, the term has come to be associated with a badly written, wish-fulfilment style character. The male equivalent is sometimes 'Marty-Sue', 'Marty-Stu' or 'Gary-Stu'

MPreg A story involving male pregnancy

MySpace A popular social networking site. `http://www.myspace.com/`

NC-17 American Movie Rating, approximately equivalent to a 18 rating in the UK.

Netiquette Online etiquette.

OOC Out Of Character (OOC) is a term used to indicate the story contains the characters acting in a manner not consistent with that seen in canon. When used by the author of the piece it indicates that this character distortion has been done deliberately often for comic effect or to make a point.

PG-13 American Movie Rating, approximately equivalent to the UK 12a rating.

PICS Platform for Internet Content Selection

Pumpkin Pie A story set in the *Harry Potter* universe which contains a relationship between the characters Harry Potter and Hermione Granger. Information from `http://forums.fictionalley.org/park/showthread.php?\&threadid=4591(Accessed13/10/06)`

PWP 'Plot, What Plot' or 'Porn, What Plot' - a short story with little or no internal plot development.

RPS Real Person Slash or RPS refers to the genre of fiction that involves characters created from fictionalisation of real, rather than fictional, people and which incolves a same-sex relationship. It is often distinguished from fiction related to or including historical figures although this is a subset of the genre.

Saffic An alternative term for stories containing or focusing on a female-female sexual relationship. See Femslash.

SKOS Simple Knowledge Organisation System.

Slash The term most commonly indicates a genre of fiction featuring a same-sex relationship, often as a main aspect of the story. The majority of such stories involve male-male pairings, leading some to regard the term as indicative of this. However female-female slash stories, sometimes differentiated as saffic, femmeslash or femslash are becoming increasingly popular, and have a strong presence in many fandoms as well as being the dominant form in a few. Sometimes the term can be used to describe any non-canonical pairing whatever the gender of the participants or only non-canonical same-sex pairings but these variations are historically based and comparatively rare. Slash archives tend to be less restrictive towards content and so while slash fiction runs the full gamut from totally innocent to adult it tends to be stored within the same archive or domain.

Slash Goggles The method of interpreting the text which promotes any subtextual suggestion (or anything that may be taken as a subtextual suggestion) of same-sex feelings between the character as indicative of such.

Social Network A social network is a system made of nodes representing people or objects which are connected by the relationships that exist between them, for example friendship. Social networking sites are a full scale, interactive implementation of this concept.

Sock-Puppet A secondary identity set up and controlled by another user so that the user can act in a way that would otherwise damage the reputation of the primary identity or as a way of lending support to the primary identity.

Squick Something that sets off a bad visceral reaction. Possibly related to the noise the reader makes as they hurriedly hits the back button on their browser.

Tag A metadata label

WBSN Web Based Social Network

YouTube A website allowing users to upload and comment on video clips.

Zine A small circulation publication done on a non-commercial or not for profit basis or alternately a self-published work based around a minority interest. The word "zine" is an abbreviation of magazine. While zines have a reputation for being produced on a photocopier, there are now small publishers which specialise in zines, multimedia and electronic "e-zines" are available.

Bibliography

Alfarez Abdul-Rahman and Stephen Hailes. Supporting Trust in Virtual Communities. In *Hawaii Int. Conference on System Sciences 33*, Maui, Hawaii, January 2000.

Karl Aberer and Zoran Despotovic. Managing Trust in a Peer-2-Peer Information System. In *Proceedings of the Tenth International Conference on Information and Knowledge Management (CIKM01)*, pages 310 – 317. ACM Press, 2001.

Alessandro Acquisti and Ralph Gross. Imagined Communities: Awareness, Information Sharing and Privacy on the Facebook. In *Proceedings of the 6th Workshop on Privacy Enhancing Technologies*, Cambridge, 2006.

Lada A. Adamic. The Small World Web. In *Proceedings of European Conference on Digital Libraries '99*, pages 443 – 452, 1999.

Anne Adams and Martina Angela Sasse. Privacy in Multimedia Communications: Protecting Users, Not Just Data. In A. Blandford, J. Vanderdonkt, and P. Gray, editors, *People and Computers XV - Interaction without frontiers. Joint Proceedings of HCI2001 and ICM2001*, pages 49 – 64. Springer, September 2001.

M. J. Addis, S. Hafeez, D. Prideaux, R. Lowe, P. H. Lewis, K. Martinez, and P. A. S. Sinclair. The eCHASE System for Cross-border Use of European Multimedia Cultural Heritage Content in Education and Publishing. In *Proceedings of AXMEDIS 2006: 2nd International Conference on Automated Production of Cross Media Content for Multi-channel Distribution*. ICSRiM, 2006.

R. Albert, H. Jeong, and A.-L. Barabasi. Diameter of the World-Wide Web. *Nature*, 401:130 – 131, September 1999.

D. Andrews, B. Nonnecke, and J. Preece. Conducting Research on the Internet: Online Survey Design, Development and Implementation Guidelines. *International Journal of Human-Computer Interaction*, 16(2):185 – 210, 2003.

Peter Anghelides. *Torchwood: Another Life*. BBC Books, 2007.

Gaius Petronius Arbiter. *Satyricon*, chapter 4:XXVI. C. 60.

Camille Bacon-Smith. *Enterprising Women: Television Fandom and the Creation of Popular Myth*. University of Pennsylvania Press, Philadelphia, 1992.

Mieke Bal. *Narratology: Introduction to the Theory of Narrative*. University of Toronto Press, Toronto: Canada, 2nd edition, 1997.

Albert-Laszlo Barabasi and Reka Albert. Emergence of Scaling in Random Networks. *Science*, 286:509 – 512, 1999.

Leonard Barkan. What did Shakespeare Read? In Margreta de Grazia and Stanley Wells, editors, *The Cambridge Companion to Shakespeare*. Cambridge University Press, 2001. http://www.fathom.com/feature/122558/index.html (06/02/2007).

Giambattista Basile. *The Pentameron of Giambattista Basile*, volume Day 5, Tale 5. Privately Published, 1893. Translated by Richard F. Burton, translation revised by D. L. Ashliman. Available online at http://www.pitt.edu/ dash/type0410.html#basile (06/02/2007).

Nancy K Baym. The Emergence of Community in Computer-Mediated Communication. In Steve Jones, editor, *CyberSociety - Computer Mediated Communication and Community*. Sage Publications Ltd., London, 1995.

Nancy K Baym. *Tune In, Log On: Soaps, Fandom and Online Community*. Sage Publications Ltd, 2000.

BBC Online Staff Writer. 'Amateur Culture' Set to Explode. *BBC News Online*, 18 July 2005. http://news.bbc.co.uk/1/hi/entertainment/4685471.stm (01/08/2005).

Gabe Beged-Dov, Dan Brickley, Rael Dornfest, Ian Davis, Leigh Dodds, Jonathan Eisenzopf, David Galbraith, R.V. Guha, Ken MacLeod, Eric Miller, Aaron Swartz, and Eric van der Vlist. RDF Site Summary (RSS) 1.0. Technical report, RSS-DEV, December 2000. http://web.resource.org/rss/1.0/spec (07/02/2007).

Harry M. Benshoff. Secrets, Closets and Corridors Through Time: Negotiating Sexuality and Gender Through Dark Shadows Fan Culture. In Cheryl Harris and Alison Alexander, editors, *Theorizing Fandom: Fans, Subculture and Identity*, The Hampton Press Communication Series, pages 119 – 218. Hampton Press, 1998.

Tim Berners-Lee. *Weaving the Web : The Original Design and Ultimate Destiny of the World Wide Web by its Inventor*. Harper Collins, San Francisco, 1999.

Tim Berners-Lee, James Hendler, and Ors Lassila. The Semantic Web. *Scientific American*, May 2001.

Thomas Beth, Malte Borcherding, and Birgit Klein. Valuation of Trust in Open Networks. In *Proc. 3rd European Symposium on Research in Computer Security – ESORICS '94*, pages 3 – 18, 1994.

Rajat Bhattacharjee and Ashish Goel. Avoiding Ballot Stuffing in eBay-like Reputation Systems. In *Third Workshop on the Economics of Peer-to-Peer Systems*, 2005.

Danah Boyd. Friends, Friendsters, and Fop 8: Writing Community into Being on Social Network Sites. *First Monday*, 11(12), December 2006. http://www.firstmonday.org/issues/issue11_12/boyd/ (06/02/2007).

Dan Brickley and Libby Miller. FOAF Vocabulary Specification. Namespace specification document, FOAF, September 2 2004. http://xmlns.com/foaf/0.1/ (09/02/05).

Jeen Broekstra, Arjohn Kampman, and Frank van Harmelen. Sesame: A Generic Architecture for Storing and Querying RDF and RDF Schema. In *International Semantic Web Conference*, Sardinia, Italy., 2002.

Rhiannon Bury. *Cyberspaces of their Own: Female Fandoms Online*, volume 25 of *Digital Formations*. Peter Lang, 2005.

Jenafiona Bustamante. Bring Back NC-17 Stories on FanFiction.Net. Petitiononline.com, 2002. http://www.petitiononline.com/ffnet/petition.html (13/11/2006).

Carole Cadwalladr. Harry Potter and the Mystery of an Academic Obsession. *The Observer*, August 2006. http://books.guardian.co.uk/departments/childrenandteens/story/0,,1838086,00.html (17/9/2006).

Kim Cameron. The Laws of Identity. Whitepaper, Microsoft, May 2005. http://www.identityblog.com/?page_id=354 (24/07/2005).

Cease and Desist 1, 2002. Harry Potter in the RestrictedSection. Website (Chilling Effects), January 2002. http://www.chillingeffects.org/fanfic/notice.cgi?NoticeID=522 (12/03/2004).

Cease and Desist 2, 2003. Re: Harry Potter Adult Fan Fiction. Website (Chilling Effects), January 2003. http://www.chillingeffects.org/fanfic/notice.cgi?NoticeID=534 (12/03/2004).

Seymour Chatman. *Story and Discourse: Narrative Structure in Fiction and Film*. Cornell University Press, New York, 1978.

Brigid Cherry. 'So We Said Screw It and Wrote It Ourselves': Creative Ownership, Gendered Narratives and Slash Fiction in the On-Line Start Wars Fan Communities. In Chris Bichler and Mary Ellen Curtin, editors, *The Slash Reader*. 2006. In Press. Chapter provided by author in personal communication.

Rosaria Conte and Mario Paolucci. *Reputation in Artificial Societies. Social Beliefs for Social Order*. Kluwer Academic Publishers, 2002.

Francesca Coppa. A Brief History of Media Fandom. In Karen Hellekson and Kristina Busse, editors, *Fan Fiction and Fan Fiction Communities in the Age of the Internet*, pages 41 – 59. McFarland and Company, 2006.

Cynthia L. Corritore, Beverly Kracher, and Susan Wiedenbeck. Online Trust: Concepts, Evolving Themes, a Model. *Int. J. Hum.-Comput. Stud.*, 58(6):737 – 758, 2003.

Victor J Costello. *Interactivity and the 'Cyber-Fan': An Exploration of Audience Involvement within the Electronic Fan Culture of the Internet.* PhD thesis, The University of Tennessee, August 1999.

Nick Crofts, Martin Doerr, Tony Gill, Stephen Stead, and Matthew Stiff (eds). Definition of the CIDOC CRM Conceptual Reference Model. Reference document, International Council of Museums, March 2005. http://cidoc.ics.forth.gr/official_release_cidoc.html (18/04/2005).

Donna Cromer. SciFi TV Fandom: The Influence of the Internet. In Leslie Fife, editor, *2000-2002 Southwest/Texas Popular Culture Association/American Culture Association Conference Proceedings*, pages 317 – 331, 2002.

Marc Davis. Knowledge representation for video. In *Proceedings of the Twelfth National Conference on Artificial intelligence (AAAI-94)*, volume 1, pages 120 – 127. AAAI Press, 1994.

DCMI. Dublin Core Metadata Element Set, Version 1.1. Dcmi recommendation, Dublic Core Metadata Initiative, December 2006. http://dublincore.org/documents/dces/ (07/02/2007), ISO Standard 15836-2003 (February 2003), NISO Standard Z39.85-2001 (September 2001).

Abigail Derecho. Archontic Literature: A Definition, a History, and Several Theories of Fan Fiction. In Karen Hellekson and Kristina Busse, editors, *Fab Fictrion and Fan Fiction Communities in the Age of the Internet*, pages 61 – 78. McFarland and Company, 2006.

August Derleth, editor. *Tales of the Cthulhu Mythos.* Cthulhu Mythos. Arkham House Publishers, 1969.

Philip K. Dick. We Can Remember It for You Wholesale. In *The Preserving Machine.* Ace Books, 1969.

Li Ding, Lina Zhou, Tim Finin, and Anupam Joshi. How the Semantic Web is Being Used: An Analysis of FOAF. In *Proceedings of the 38th International Conference on System Sciences*, January 2005.

Martin Doerr, Jane Hunter, and Carl Lagoze. Towards a Core Ontology for Information Integration. *Journal of Digital Information*, 4(1), April 2003.

EPIC Staff Writer. Social Networking Privacy. Website, 31 October 2006. http://www.epic.org/privacy/socialnet/default.html (31/01/2007).

Johannes Ernst. RSS-FOAF. RSS Extensions Wiki, 2006. http://rss-extensions.org/wiki/RSS-FOAF (17/12/2006).

Christopher Evans, Clive D.W. Feather, Alex Hopmann, Martin Presler-Marshall, and Paul Resnick. PICSRules 1.1. W3c recommendation, World Wide Web Consortium, December 1997. http://www.w3.org/TR/REC-PICSRules (24/05/2004).

Michal Feldman, Christos Papadimitriou, John Chuang, and Ion Stoica. Free-Riding and Whitewashing in Peer-to-Peer Systems. In *Proceedings of the ACM SIGCOMM workshop on Practice and theory of incentives in networked systems*, pages 228 – 236. ACM Press, 2004.

J. Feng, J. Lazar, and J. Preece. Empathic and Predictable Communication Influences Online Interpersonal Trust. *Behavior and Information Technology*, 2004.

Alberto Fernandes, Evangelos Kotsovinos, Sven Ostring, and Boris Dragovic. Pinocchio: Incentives for Honest Participation in Distributed Trust Management. In *Proceedings of the 2nd International Conference on Trust Management (iTrust 2004)*, Oxford, UK, March 2004. Also published in Springer-Verlag Lecture Notes in Computer Science (LNCS), Volume 2995, pp. 63-77.

Jasper Fforde. *The Eyre Affair*. A Thursday Next Novel. Viking Adult, 2001.

Cecil Scott Forester. *Hornblower Series*. Michael Joseph, London, 1937 – 1967.

Batya Friedman, Jr. Peter H. Khan, and Daniel C. Howe. Trust Online. *Commun. ACM*, 43(12):34 – 40, 2000.

Eric J. Friedman and Paul Resnick. The Social Cost of Cheap Pseudonyms. *Journal of Economics and Management Strategy*, 10(2):173 – 199, 1999.

Francis Fukuyama. *Trust: The Social Virtues and the Creation of Prosperity*. Penguin, 1995.

Neil Gaiman. *The Sandman*. DC Comics, 1988 - 1996.

Yolanda Gil and Varun Ratnakar. Trusting Information Sources One Citizen at a Time. In *Proceedings of the First International Semantic Web Conference on The Semantic Web*, pages 162 – 176, London, UK, 2002. Springer-Verlag.

Cinda Gillilan. War of the Worlds: Richard Chaves, Paul Ironhorse, and the Female Fan Community. In Cheryl Harris and Alison Alexander, editors, *Theorizing Fandom: Fans, Subcultures and Identity*, The Hampton Press Communication Series, pages 119 – 218. Hampton Press, 1998.

Mark Glaser. Companies Subvert Search Results to Squelch Criticism. *USC Annenberg Online Journalism Review*, May 2005. http://www.ojr.org/ojr/stories/050601glaser/.

Jean Godby and Jay Stuler. The library of congress classification as a knowledge base for automatic subject categorization. In *IFLA Preconference Workshop Subject Retrieval in a Networked Environment*, Ducblin, Ohio, US, August 2001. http://staff.oclc.org/g̃odby/auto_class/godby-ifla.html (07/02/2007).

Jennifer Golbeck. *Computing and Applying Trust in Web-based Social Networks*. Thesis, University of Maryland, April 2005.

Jennifer Golbeck and James Hendler. Accuracy of Metrics for Inferring Trust and Reputation in Semantic Web-based Social Networks. In *Proceedings of EKAW 04*, 2004.

Jennifer Golbeck and Bijan Parsia. Trusting Claims from Trusted Sources: Trust Network Based Filtering of Aggregated Claims. Submitted to ISWC'04, 2004.

Jennifer Golbeck, Bijan Parsia, and James Hendler. Trust Networks on the Semantic Web. In *Proceedings of Cooperative Intelligent Agents 2003*, 2003.

Scott Golder and Bernardo A. Huberman. Usage Patterns of Collaborative Tagging Systems. *Journal of Information Science*, 32(2):198 – 208, 2006.

Lee Gomes. How Sellers Trick EBay's Rating System. *The Wall Stree Journal Online*, 22 December 2006. http://startup.wsj.com/ecommerce/ecommerce/20061222-gomes.html?refresh=on (05/02/2007).

Sara Kehaulani Goo. Art and Marketing All Mashed Up. *Washington Post*, August 2006. http://www.washingtonpost.com/wp-dyn/content/article/2006/08/01/AR2006080101134.html (03/11/2006).

Sara Kehaulani Goo and Molly McRoberts. Video Mash-Up (Transcript). *Washington Post*, August 2006. http://www.washingtonpost.com/wp-dyn/content/discussion/2006/08/01/DI2006080101062.html (03/11/2006).

Google Blogoscoped Team. Googlebomb Watch. Google Blogoscoped, 2004. http://blog.outer-court.com/googlebomb/ (05/02/2007).

Sonja Grabner-Krauter and Ewald A. Kaluscha. Empirical Research in Online Trust: A Review and Critical Assessment. *Int. J. Hum.-Comput. Stud.*, 58(6):783 – 812, 2003.

Elizabeth Gray, Jean-Marc Seigneur, Yong Chen, and Christian Jensen. Trust Propagation in Small Worlds. In Paddy Nixon and Sotirios Terzis, editors, *Proceedings of the First International Conference on Trust Management*, 2003.

Ralph Gross and Alessandro Acquisti. Information Reveleation and Privacy in Online Social Networks (The Facebook Case). In *ACM Workshop on Privacy in the Electronic Society (WPES)*, Alexandria, Virginia, USA, November 2005. ACM.

R. Guha, Ravi Kumar, Prabhakar Raghaven, and Andrew Tomkins. Propagation of Trust and Distrust. In *Proceedings of WWW 04*, pages 403 – 412. ACM, May 2004.

Chris Gutteridge. New developments in E-Prints. In *CERN workshop on Innovations in Scholarly Communication (OAI4)*. CERN, 2005.

Marieke Guy and Emma Tonkin. Folksonomies: Tidying up Tags? *D-Lib Magazine*, 12 (1), January 2006.

Tony Hammond, Timo Hannay, Ben Lund, and Joanna Scott. Social Bookmarking Tools (I): A General Review. *D-Lib Magazine*, 11(4), April 2005.

S. Harris and N. Gibbins. 3store: Effcient Bulk RDF Storage. In *Proceedings of the 1st International Workshop on Practical and Scalable Semantic Systems (PSSS'03)*, pages 1 – 15, Sanibel Island, Florida, 2003.

Jeffrey Heer and Danah Boyd. Vizster: Visualizing Online Social Networks. In *IEEE Symposium on Information Visualization*, Minneapolis, Minnesota, US., October 2005. http://jheer.org/publications/2005-Vizster-InfoVis.pdf (11/07/2006).

Karen Hellekson and Kristina Busse, editors. *Fan Fiction and Fan Fiction Communities in the Age of the Internet*. McFarland and Company, 2006.

Edward Helmore. When Lit Hits The Fans. *The Observer*, October 2006. http://observer.guardian.co.uk/review/story/0,,1933977,00.html (01/12/2006).

Jim Hendler. Unpublished, 2005. Presentation given at AKT Workshop.

Susan C. Herring, Inna Kouper, Lois Ann Scheidt, and Elijah L. Wright. Women and Children Last: The Discursive Construction of Weblogs. *Into the Blogosphere: Rhetoric, Community, and Culture of Weblogs.*, 2004. http://blog.lib.umn.edu/blogosphere/women_and_children.html (08/11/2005).

Matt Hills. *Fan Cultures*. Sussex Studies in Culture and Communication. Routledge, London, 2002.

Lauren Hinton. Women and Slash Fanfiction. James Madison University Write On Sixth Annual Competition Awards Winners Website, 2006. http://www.jmu.edu/writeon/documents/2006/Hinton.pdf (12/10/2006).

Philip Holden. Vladimir Propp's Functions of Narrative. Website, 2003. http://www.usp.nus.edu.sg/literature/theories/Propp.html (18/01/2005).

Annabel House. Web of Fantasy Turns the Boy Wizard Blue. *The Scotsman*, January 2003. http://news.scotsman.com/index.cfm?id=13492003 (17/09/2006).

Tanya Huff. *Smoke Series: 'Smoke and Shadows', 'Smoke and Mirrors' and 'Smoke and Ashes'*. DAW, New York, 2004 – 2007.

Jane Hunter. Enhancing the Semantic Interoperability of Multimedia through a Core Ontology. *IEEE Transactions on Circuits and Systems for Video Technology*, January 2003.

Neil Gaiman (Illustration by Bryan Talbot and Stan Woch). August. In Karen Berger and Alisa Kwitney, editors, *The Sandman: Fables and Reflections*. DC Comics, 1993.

Alan Moore (Illustration by Ian Gibson). *The Complete Ballad Of Halo Jones*. Titan Books, London, 1991.

IMDB Staff. Doctor Who: Boom Town. Internet Movie Database, 2006a. http://www.imdb.com/title/tt0562987/ (20/07/2007).

IMDB Staff. MASH: Tuttle. Internet Movie Database, 2006b. http://www.imdb.com/title/tt0638468/ (20/09/2007).

IMDB Staff. Star Trek: Amok Time. Internet Movie Database, 2006c. http://www.imdb.com/title/tt0708416/ (04/07/2007).

IMDB Staff. Star Trek: The Enemy Within. Internet Movie Database, 2006d. http://www.imdb.com/title/tt0708463/ (19/07/2007).

IMDB Staff. X-Files: The Red and the Black. Internet Movie Database, 2006e. http://www.imdb.com/title/tt0751234/ (11/09/2007).

J. R. R. Tolkien. *Lord of the Rings*. Allen & Unwin, London, 1st edition, 1954 – 5.

Henry Jenkins. *Textual Poachers: Television Fans and Participatory Culture*. Routledge, New York and London, 1992.

Henry Jenkins. *Convergence Culture: Where Old and New Media Collide*. New York University Press, New York, 2006a.

Henry Jenkins. *Fans, Bloggers, and Gamers: Exploring Participatory Culture*. New York University Press, 2006b.

Henry Jenkins. Good News for Aca/Fen. In *Confessions of an Aca/Fan: The Official Weblog of Henry Jenkins*, August 2006c. http://www.henryjenkins.org/2006/08/good_news_for_acafen.html.

Henry Jenkins. How to Watch a Fan-Vid. In *Confessions of an Aca/Fan: The Official Weblog of Henry Jenkins*, September 2006d. http://www.henryjenkins.org/2006/09/how_to_watch_a_fanvid.html.

Michael O. Jewell. *Motivated Music: Automatic Soundtrack Generation for Film*. Thesis, University of Southampton, 2006.

Michael O. Jewell, K. Faith Lawrence, Adam Prugel-Bennett, and m. c. schraefel. Annotation of Multimedia Using OntoMedia. First International Workshop on Semantic Web Annotations for Multimedia (SWAMM 2006), Edinburgh, United Kingdom., 2006.

Michael O. Jewell, K. Faith Lawrence, Mischa M. Tuffield, Adam Prugel-Bennett, David E. Millard, Mark S. Nixon, m.c. schraefel, and Nigel R. Shadbolt. OntoMedia: An Ontology for the Representation of Heterogeneous Media. In *Proceedings of Multimedia Information Retrieval Workshop*, 2005.

Robert Jones. From Shooting Monsters to Shooting Movies: Machinima and the Transformative Play of Video Game Fan Culture. In Karen Hellekson and Kristina Busse, editors, *Fan Fiction and Fan Fiction Communities in the Age of the Internet*, pages 261 – 280. McFarland and Company, 2006.

Gary Jordan. The Basic Plots in Storytelling. Website, 2004. http://members.aol.com/jgary763/7stories.html.

John Jurgensen. Rewriting the Rules of Fiction. *The Wall Street Journal*, September 2006. http://online.wsj.com/public/article/SB115836001321164886-Y0O1DfzuHNEO_UgGUIHFskuFTzM_20061015.html?mod=tff_main_tff_top (03/11/2006).

Aditya Kalyanpur, Bijan Parsia, James Hendler, and Jennifer Golbeck. SMORE - Semantic Markup, Ontology, and RDF Editor. In *Proceedings of the 3rd International Semantic Web Conference (ISWC-2004)*. ISWC, 2004. poster.

Aditya Kalyanpur, Bijan Parsia, Evren Sirin, Bernardo Cuenca-Grau, and James Hendler. Swoop: A 'Web' Ontology Editing Browser. In *Journal of Web Semantics*, volume 4, 2005.

Jussi Karlgren and Douglass Cutting. Recognizing text genres with simple metrics using discriminant analysis. In *Proceedings of the 15th International Conference on Computational Linguistics*, Kyoto, Japan, 1994.

Kaisa Kauppinen, Anri Kivimaki, Taina Era, and Mike Robinson. Producing Identity in Collaborative Virtual Environments. In *VRST*, pages 35 – 42, November 1998.

Anri Kivimäki, Kaisa Kauppinen, and Mike Robinson. Identity in Virtual Communities. In *ACM SIGGROUP Bulletin*, volume 19, pages 29 – 33. ACM, December 1998.

Graham Klyne and Jeremy J. Carroll. Resource Description Framework (RDF): Concepts and Abstract Syntax. W3c recommendation, W3C, February 2004. http://www.w3.org/TR/rdf-concepts/ (05/02/2007).

Lee Komito. The Net as a Foraging Society: Flexible Communities. In *The Information Society,*, volume 14, pages 97 – 106. Routledge, May 1998.

Lee Komito. Virtual Communities: paradise or mirage? In *Communitarian Summit 1999*, Washington, DC, February 1999.

Tim Krauskopf, Jim Miller, Paul Resnick, and Win Treese. Pics label distribution label syntax and communication protocols. W3c recommendation, World Wide Web Consortium, October 1996. http://www.w3.org/TR/REC-PICS-services (24/05/2004).

Fred Kroon. Towards Non-Being: the Logic and Metaphysics of Intentionality, by Graham Priest. *Disputatio*, 1(19):295 – 301, November 2005.

Ellyssa Kroski. The Hive Mind: Folksonomies and User-Based Tagging. InfoTangle Blog, December 2005.

Sebastian Ryszard Kruk. FOAF-Realm - Control Your Friends' Access to Resources. In *Proceedings of 1st Workshop on Friend of a Friend, Social Networking and the Semantic Web*, September 2004.

Alace LaPlante. EBay Feedback: Fatally Flawed? Forbes.com, 2 January 2007. http://www.forbes.com/entrepreneurs/2007/01/02/ebay-smallbusiness-feedback-ent-sales-cx_al_0102smallbizresource.html (05/02/2007).

Jamie Lawrence, Terry Payne, and Dave De Roure. Co-presence Communities: Using pervasive computing to support weak social networks. In *Proceedings of 4th International Workshop on Distributed and Mobile Collaboration*, Manchester, 2006a.

K. Faith Lawrence, Max Wilson, m. c. schraefel, Daniel A. Smith, and Alistair Russell. Integrating Semantic Metadata Into an Existing Tagging Community: Semantic Tags Online. 2006b.

J. Lazar, E. Hanst, J. Buchwalter, and J. Preece. Collecting User Requirements in a Virtual Population. *WebNet Journal: Internet Technologies*, 2(4):20 – 27, 2001.

Doug Lenat. *The Dimensions of Context-Space*. Cycorp, Austin, Texus, 1998.

Douglas B. Lenat, R. V. Guha, Karen Pittman, Dexter Pratt, and Mary Shepherd. Cyc: toward programs with common sense. *Commun. ACM*, 33(8):30 – 49, August 1990.

Hugo Liu, Pattie Maes, and Glorianna Davenport. Unraveling the Taste Fabric of Social Networks. *International Journal on Semantic Web and Information Systems*, 2(1):42 – 71, 2006.

LiveJournal Team. Join LiveJournal: Account Information. Website, 2000. https://www.livejournal.com/create.bml (30/01/2007).

LiveJournal Team. LiveJournal Bot Policy. Website, 2004. http://www.livejournal.com/bots/ (10/07/2006).

LiveJournal Team. LiveJournal: Terms of Service. Website, 18 April 2006. http://www.livejournal.com/legal/tos.bml (30/01/2007).

Andrea MacDonald. Uncertain Utopia: Science Fiction Media Fandom and Computer Mediated Communication. In Cheryl Harris and Alison Alexander, editors, *Theorizing Fandom: Fans, Subcultures and Identity*, The Hampton Press Communication Series, pages 131 – 152. Hampton Press, 1998.

Richard C. Mackinnon. Searching for the Leviathon in UseNet. In Steven G. Jones, editor, *CyberSociety - Computer-Mediated Communication and Community*, pages 112 – 137, London, 1995. Sage Publications.

Richard C. Mackinnon. Punishing the Persona: Correctional Strategies for the Virtual Offender. In Steve Jones, editor, *Virtual Culture: Identity and Communication in Cybersociety*. Sage Publications Ltd., London, 1997.

Ernst Mally. *Gegenstandstheoretische Grundlagen der Logik und Logistik*. 1912.

Kevin Marks, Tantek Çelik, and Derek Powazek. rel-tag: Draft Specification. Draft specification, Microformats, 2005. http://microformats.org/wiki/rel-tag (23/11/2006).

Claudio Masolo, Stefano Borgo, Aldo Gangemi, Nicola Guarino, Alessandro Oltramari, and Luc Schneider. Wonderweb deliverable d17. the wonderweb library of foundational ontologies and the dolce ontology, 2001.

Adam Mathes. Folksonomies - Cooperative Classification and Communication Through Shared Metadata. Website, December 2004. http://www.adammathes.com/academic/computer-mediated-communication/folksonomies.html (23/06/2005).

Yutaka Matsuo, Masahiro Hamasaki, Junichiro Mori, Hideaki Takeda, and Koiti Hasida. Ontological Consideration on Human Relationship Vocabulary for FOAF. In *Proceedings of 1st Workshop on Friend of a Friend, Social Networking and the Semantic Web*, September 2004.

Marissa Mayer. Googlebombing 'Failure'. GoogleBlog, 16 September 2005. http://googleblog.blogspot.com/2005/09/googlebombing-failure.html (05/02/2007).

Alexius Meinong. *Untersuchung zur Gegenstandstheorie und Psychologie*. 1904.

'meme_pool'. Faceted Tags. Beyond Folksonomy Weblog, Feburary 2006. http://www.beyondfolksonomies.com/wordpress/faceted-tags/ (05/08/2006).

Helen Merrick. 'We Was Cross-Dressing 'Afore You Were Born!' Or, How SF Fans Invented Virtual Community. *Refractory: A Journal of Entertainment Media*, 6, 2004. http://www.refractory.unimelb.edu.au/journalissues/vol6/HMerrick.html (18/09/2006).

Peter Mika and Aldo Gangemi. Descriptions of Social Relations. In *Proceedings of 1st Workshop on Friend of a Friend, Social Networking and the Semantic Web*, September 2004.

Alistair Miles and Dan Brickley. Skos mapping vocabulary specification. W3c working draft, W3C, November 2004. http://www.w3.org/2004/02/skos/mapping/spec/ (12/08/2006).

Alistair Miles and Dan Brickley. SKOS Core Vocabulary Specification. W3c working draft, W3C, November 2005. http://www.w3.org/TR/swbp-skos-core-spec (12/08/2006).

Stanley Milgram. The Small World Problem. *Psychology Today*, 2:60 – 67, 1967.

Ian Millard, David De Roure, and Nigel Shadbolt. The Use of Ontologies in Contextually Aware Environments. In Jadwiga Indulska and David De Roure, editors, *Proceedings of First International Workshop on Advanced Context Modelling, Reasoning And Management*, pages 42 – 47, 2004.

Jim Miller, Paul Resnick, and David Singer. Rating Services and Rating Systems (and Their Machine Readable Descriptions). W3c recommendation, World Wide Web Consortium, October 1996. http://www.w3.org/TR/REC-PICS-services (24/05/2004).

Tasha Miller. Freedom of speech at Fanfiction.net, bring back NC-17 fic. Petitiononline.com, 2002. http://www.petitiononline.com/ff11/petition.html (13/11/2006).

Elinor Mills. Study: eBay Sellers Gaming the Reputation System? *C—Net*, January 2007. http://news.com.com/2061-10803_3-6149491.html (06/02/2007).

Paul Mutton and Jennifer Golbeck. Visualization of Semantic Metadata and Ontologies. In *Seventh International Conference on Information Visualization*, pages 300 – 305. IEEE, July 2003.

Ian Niles and Adam Pease. Towards a standard upper ontology. In Chris Welty and Barry Smith, editors, *Proceedings of the 2nd International Conference on Formal Ontology in Information Systems (FOIS-2001)*, Ogunquit, Maine, 2001. ACM.

Daniel Nolan. Properties and Paradox in Graham Priest's Towards Non-Being. *Philosophy and Phenomenological Research*, 73(3):665 – 679, 2006.

Naomi Novik. *Temeraire Series*. Del Ray, New York, 2006.

Kieron O'Hara. *Trust, from Socrates to Spin*. Icon Books, 2004.

Kieron O'Hara, Harith Alani, Yannis Kalfoglou, and Nigel Shadbolt. Trust Strategies for the Semantic Web. In *Proceedings of 3rd International Semantic Web Conference (ISWC), Workshop on Trust, Security, and Reputationon the Semantic Web*, Hiroshima, Japan, 2004.

Kieron O'Hara, Harith Alani, and Nigel Shadbolt. Identifying Communities of Practice: Analysing Ontologies as Networks to Support Community Recognition. In *IFIP World Computer Congress. Information Systems: The E-Business Challenge*, 2002.

Ioannis Paniaras. Virtual Identities in Computer Mediated Communication. In *ACM SIGGROUP Bulletin*, volume 18, pages 33 – 37. ACM Press, August 1997.

John C. Paolillo, Sarah Mercure, and Elijah Wright. The Social Semantics of LiveJournal FOAF: Structure and Change from 2004 to 2005. In *Proceedings of the ISWC 2005 Workshop on Semantic Network Analysis*, November 2005.

Lars Pind. Folksonomies: How we can improve the tags. Blog, January 2005. http://pinds.com/articles/2005/01/23/folksonomies-how-we-can-improve-the-tags (17/08/2006).

Constance Elise Porter. A Typology of Virtual Communities: A Multi-Disciplinary Foundation for Future Research. In *Journal of Computer-Mediated Communication*, volume 10, 2004. http://jcmc.indiana.edu/vol10/issue1/porter.html (07/02/2007).

Terry Pratchett and Neil Gaiman. *Good Omens: The Nice and Accurate Prophecies of Agnes Nutter, Witch.* Gollancz, 1990.

J. Preece. Etiquette and Trust Drive Online Communities of Practice. *Journal of Universal Computer Science*, 2004.

Jenny Preece. *Online Communities - Designing Usability, Supporting Sociability.* John Wiley and Sons, Ltd., 2000.

Graham Priest. *Towards Non-Being:the Logic and Metaphysics of Intentionality.* Clarendon Press, Oxford, 1998.

Sheenagh Pugh. *The Democratic Genre: Fan Fiction in a Literary Context.* Seren Books, Bridgend, 2005.

Hong Qu, Andrea La Pietra, and Sarah Poon. Classifying Blogs Using NLP: Challenges and Pitfalls. In *Spring Symposium Series Technical Reports.* AAAI Press, March 2006.

Alice Randall. *The Wind Done Gone: A Novel.* Houghton Mifflin Company, 2001.

Shiyali Ramamrita Ranganathan. *Colon Classification.* Ess Ess Publications, 6th edition, 2006.

Paul Resnick and Richard Zeckhauser. Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System. In Michael R. Baye, editor, *The Economics of the Internet and E-Commerce*, volume 11 of Advances in Applied Microeconomics, Amsterdam, 2002. Elsevier Science.

Paul Resnick, Richard Zeckhauser, Eric Friedman, and Ko Kuwabara. Reputation Systems: Facilitating Trust in Internet Interactions. In *Communications of the ACM*, pages 45 – 48. ACM, December 2000.

Howard Rheingold. *The Virtual Community: Homesteading on the Electronic Frontier.* Secker and Warburg, 1993.

Matthew Richardson, Rakesh Agrawal, and Pedro Domingos. Trust Management for the Semantic Web. In Dieter Fensel, Katia Sycara, and John Mylopoulos, editors, *The Semantic Web - ISWC 2003*, pages 531 – 368, Berlin, October 2003. ISWC, Springer-Verlag.

K. G. Saur. Functional Requirements of Bibliographic Records: Final Report. Technical report, IFLA Study Group on the Functional Requirements of Bibliographic Records, München, 1998. http://www.ifla.org/VII/s13/frbr/frbr.pdf (07/08/2005).

Diane J. Schiano and Sean White. The First Noble Truth of CyberSpace: People are People (Even When They MOO). In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, pages 352 – 359, New York, USA, 1998. SIGCHI, ACM.

m. c. schraefel. Jacking in to the Virtual Self. In S. Brodribb, editor, *Reclaiming the Future: Women's Strategy for the 21st Century*, pages 149 – 170. Gynergy Press, 1999.

m.c. schraefel, Danial A. Smith, Alistair Russell, and Max. L. Wilson. Semantic Web meets Web 2.0 (and vice versa): The Value of the Mundane for the Semantic Web. ECS EPrints Repository, 2006. http://eprints.ecs.soton.ac.uk/12665/ (23/11/06).

William Shakespeare. *Romeo and Juliet.* John Danter, 1597.

Ryan Shaw. Media Streams Metadata Exchange: User Study and Initial Requirements. Final report, Media Streams Metadata Exchange Project, May 2005.

Josepha Sherman. *Highlander: Captive Soul.* Time Warner International, 1999.

Clay Shirky. Ontology is Overrated: Categories, Links, and Tags. Clay Shirky's Writings About the Internet Website, 2005. http://www.shirky.com/writings/ontology_overrated.html (23/06/2006).

Ben Shneiderman. Designing Trust into Online Experiences. *Commun. ACM*, 43(12): 57 – 59, 2000.

Dan Simmons. Cyber Bullying Rises in S Korea. *BBC News Online*, 3 November 2006. http://news.bbc.co.uk/1/hi/programmes/click_online/6112754.stm (3/11/2006).

Joseph Smarr. Technical and Privacy Challenges for Integrating FOAF into Existing Applications. Presented at 1st Workshop on Friend of a Friend, Social Networking and the Semantic Web, September 2004.

C. S. De Souza and J. Preece. A Framework for Analyzing and Understanding Online Communities. *Interacting with Computers, The Interdisciplinary Journal of Human-Computer Interaction*, 2004.

Dale Spender. *Nattering on the Net - Women, Power and Cyberspace.* Spinifex Press Ltd, North Melbourne, Australia, 1995.

Tom Stoppard. *Rosencrantz and Guildenstern Are Dead.* Random House, 1967.

Frederic Stutzman. An Evolution of Identity-Sharing Behaviour in Social Network Communities. *International Digital Media and Arts Association Journal*, 2006. In Press.

Clifford Tatum. Deconstructing Google bombs: A breach of symbolic power or just a goofy prank? *First Monday*, 10(10), October 2005. http://firstmonday.org/issues/issue10_10/tatum/index.html (05/02/2007).

Amie Thomasson. *Fiction and Metaphysics*. Cambridge University Press, Cambridge, 1998.

John Tulloch and Henry Jenkins. *Science Fiction Audiences: Watching 'Doctor Who' and 'Star Trek'*. Routledge, London, 1995.

Nicole Twiss. Place [stat] back the NC-17 option for FanFiction.net. Petitiononline.com, 2002. http://www.petitiononline.com/ff1234/petition.html (13/11/2006).

United States Government. Children's Online Privacy Protection Act. United States Legal Code, 1998. http://www.ftc.gov/ogc/coppa1.htm (03/09/06).

United States Government. Deleting Online Predators Act, 2006. http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.5319: (15/12/2006).

Various Forum Posters. Qui-Gon Jinn: Being a Jedi Never Looked so Good (excerpts). Webpage, 1999. http://www.qui-gonline.org/began.htm (25/10/2006).

Thomas Vander Wal. Presentation, 2007. Presentation given at De Montfort University, slides available at http://www.ioct.dmu.ac.uk/tnn/assets/VanderWalDMU07.pdf (21/09/2007).

Duncan Watts and Steven Strogatz. Collective Dynamics of 'Small World' networks. *Nature*, 393:440 – 442, 1998.

Etienne Wenger. *Communities of Practice: Learning, Meaning and Identity*. Cambridge University Press, 1997.

Steve Whittaker, Ellen Isaacs, and Vicky O'Day. Widening the Net: Workshop Report on the Theory and Practice of Physical and Network Communities. *SIGCHI Bulletin*, 29(3), July 1997.

Wikipedia (Various). Wikipedia:Manual of Style (writing about fiction). Wiki, 27 jun 2007. http://en.wikipedia.org/wiki/Wikipedia:Manual_of_Style_%28writing_about_-fiction%29#What.27s_wrong_with_an_in-universe_perspective.3F (27/06/07).

Ken Williams and Rafael A. Calvo. A Framework for Text Categorization. In *7th Australasian Document Computing Symposium*, Sydney, 2002.

BBC Online Staff Writer. Potter World Lives Online. *BBC News Online*, 2003. http://news.bbc.co.uk/1/hi/technology/3004136.stm (09/05/2005).

Bohdan S. Wynar and Arlene G. Taylor. *Introduction to Cataloging and Classification*. Libraries Unlimited, 8th edition, 1992.

Jun Zheng, Nathan Bos, Judith S. Olson, and Gary M. Olson. Trust without touch: jump-start trust with social chat. In *CHI '01 Extended Abstracts on Human Factors in Computing Systems*, pages 293 – 294, Seattle, Washington, 2001. ACM Press.

Mark Zuckerberg. An Open Letter from Mark Zuckerberg. Weblog, 8 September 2006. http://blog.facebook.com/blog.php?post=2208562130 (30/01/2007).

Part VI

Appendices

Appendix A

Online Writers Survey

Appendix B

Questionnaire Results

B.1 Log Results

B.2 Basic Results

Appendix C

LiveJournal Network Groups Shared Interests

C.1 Network Groups Surrounded Node 'F'

Table C.1: Shared interests of Nodes within Community Groups with Central Node 'F'

Group	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
1				Magic	3	33.3	Magic	3	37.5
				Ancient History	2	22.2	Ancient History	2	25.0
				Demons	2	22.2	Demons	2	25.0
				Mythology	2	22.2	Mythology	2	25.0
				Vampires	2	22.2	Vampires	2	25.0
	-	/5		5/5	/9		5/5	/8	
							Community Nodes: Watcherverse		
2	Stargate	3	42.9				Slash	3	50.0
	Astronomy	2	28.6				Stargate	3	50.0
	BDSM	2	28.6				Writing	3	50.0
	Books	2	28.6				BDSM	2	33.3
	Boxing	2	28.6				Books	2	33.3
	Callum Keith Rennie	2	28.6				Callum Keith Rennie	2	33.3
	CSI	2	28.6				CSI	2	33.3
	DVDs	2	28.6				DVDs	2	33.3

Continued on next page

Group	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
	Fantasy	2	28.6				Fanfiction	2	33.3
	Farscape	2	28.6				Fantasy	2	33.3
	House MD	2	28.6				Farscape	2	33.3
	Jack/-Daniel	2	28.6				House MD	2	33.3
	Literature	2	28.6				Jack/-Daniel	2	33.3
	Music	2	28.6				Literature	2	33.3
	RayK	2	28.6				Movies	2	33.3
	15/20	/7					15/21	/6	
							Community Nodes: Muses_a_Plenty		
3	Camra	2	40.0	Camra	2	25.0	Writing	3	60.0
	Douglas Coupland	2	40.0	Creativity	2	25.0	Creativity	2	40.0
	Film Societies	2	40.0	Douglas Coupland	2	25.0	Experimental Travel	2	40.0
	Flanders and Swann	2	40.0	Experimental Travel	2	25.0	Hampshire	2	40.0
	Haruki Murakami	2	40.0	Film Societies	2	25.0	Jhonen Vasquez	2	40.0
	Jan Svankmajer	2	40.0	Flanders and Swann	2	25.0	Kent	2	40.0
	Jeff Noon	2	40.0	Hampshire	2	25.0	Modern Art	2	40.0
	Jeunet et Caro	2	40.0	Haruki Murakami	2	25.0	Monochrome	2	40.0
	Len Lye	2	40.0	Hypertext	2	25.0	Nanowrimo	2	40.0
	Michael Nyman	2	40.0	Jan Svankmajer	2	25.0	Southampton	2	40.0
	Mornington Crescent	2	40.0	Jeff Noon	2	25.0	Things	2	40.0

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Group	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
	Nanni Moretti	2	40.0	Jeunet et Caro	2	25.0			
	Nigel Slater	2	40.0	Jhonen Vasquez	2	25.0			
	Norman McLaren	2	40.0	Kent	2	25.0			
	Peter Greenway	2	40.0	Len Lyre	2	25.0			
	15/21	/5		15/34	/8		11/11	/5	
							Community Nodes: Soton_Writing		
4	Duncan/-Methos	5	100	Highlander	10	100	Highlander	9	100
	Highlander	5	100	Methos	10	100	Methos	9	100
	Methos	5	100	Slash	9	90.0	Slash	8	88.9
	Peter Wingfield	5	100	Peter Wingfield	8	80.0	Fanfiction	7	77.8
	Slash	5	100	Duncan/-Methos	6	60.0	Writing	7	77.8
	Firefly	4	80.0	Fanfiction	6	60.0	Kronos	6	66.7
	Books	3	60.0	Firefly	6	60.0	Peter Wingfield	6	66.7
	Brokeback Mountain	3	60.0	Fantasy	5	50.0	Vampires	6	66.7
	Cats	3	60.0	Kronos	5	50.0	Books	5	55.6
	Due South	3	60.0	Vampires	5	50.0	Fantasy	5	55.6
	Duncan MacLeod	3	60.0	Writing	5	50.0	Immortals	5	55.6
	Fanfiction	3	60.0	Books	4	40.0	Mythology	5	55.6
	House	3	60.0	Doctor Who	4	40.0	Amanda	4	44.4
	Kronos	3	60.0	Duncan MacLeod	4	40.0	Byron	4	44.4
	Mary Renault	3	60.0	Mythology	4	40.0	Celtic	4	44.4
	15/81	/5		15/121	/10		15/104	/9	
							Community Nodes: Highlander_LJ		

Continued on next page

Group	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
5				Anime	4	57.1			
				Babylon 5	4	57.1			
				Manga	4	57.1			
				Utena	4	57.1			
				Books	3	42.9			
				Gaming	3	42.9			
				Gema	3	42.9			
				Linux	3	42.9			
				MST3K	3	42.9			
				Sailor Moon	3	42.9			
				Aqua	2	28.6			
				Atheism	2	28.6			
				Azumanga Daioh	2	28.6			
				BBC Micro	2	28.6			
				Beef	2	28.6			
	-	/3		15/65	/7				
6	Reading	3	75.0	Slash	6	66.7	Slash	3	86.7
	Slash	3	75.0	Writing	5	55.6	Reading	2	53.3
	Writing	3	75.0	Reading	4	44.4	Writing	7	46.7
	BDSM	3	75.0	Stargate Atlantis	4.44	25.0	Angel	6	40.0
	Books	2	50.0	Books	3	33.3	Books	6	40.0
	Computer Games	2	50.0	Dragons	3	33.3	Buffy the Vampire Slayer	5	33.3
	Fanfic	2	50.0	Fairy Tales	3	33.3	Harry Potter	5	33.3
	Fantasy	2	50.0	Fanfic	3	33.3	Mythology	5	33.3
	Firefly	2	50.0	Fantasy Fiction	3	33.3	Science Fiction	5	33.3
	History	2	50.0	History	3	33.3	Terry Pratchett	4	26.7
	Mythology	2	50.0	Mythology	3	33.3	Babylon 5	4	26.7
	Science Fiction	2	50.0	SGA	3	33.3	Fanfiction	4	26.7

Continued on next page

Group	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
	Stargate Atlantis	2	50.0	The West Wing	3	25.0	Highlander	4	26.7
				Animals	2	22.2	Stargate Atlantis	4	26.7
				Babylon 5	2	22.2	X-Men	4	26.7
	13/13	/4		15/28	/9		15/70	/15	
							Community Nodes: Connotations, London_Slashers		

C.2 Network Groups Surrounded Node 'C'

Table C.2: Shared interests of Nodes within Community Groups with Central Node 'C'

Area	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
1	Enterprise	11	84.6	Star Trek	21	75.0	Star Trek	18	78.3
	Scott Bakula	10	76.9	Enterprise	18	64.3	Enterprise	12	52.2
	Slash	10	76.9	Malcolm Reed	15	53.6	Malcolm Reed	11	47.8
	Dominic Keating	9	69.2	Dominic Keating	14	50.0	Slash	11	47.8
	Malcolm Reed	9	69.2	Slash	14	50.0	Writing	11	47.8
	Star Trek	9	69.2	Writing	14	50.0	Dominic Keating	10	43.5
	Trip Tucker	7	53.8	Scott Bakula	13	46.4	Scott Bakula	10	43.5
	Archer/-Reed	6	46.2	Firefly	11	39.3	Firefly	8	34.8
	Firefly	6	46.2	Fanfiction	10	35.7	Trip Tucker	8	34.8
	Jonathan Archer	6	46.2	Trip Tucker	10	35.7	Archer/-Reed	7	30.4
	Writing	6	46.2	Connor Trinneer	9	32.1	Fanfiction	7	30.4

Continued on next page

Area	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
	Conner Trinneer	5	38.5	Fanfic	9	32.1	Quantum Leap	7	30.4
	Fanfic	5	38.5	Archer/-Reed	8	28.6	Connor Trinneer	6	26.1
	Fan Fiction	5	38.5	Harry Potter	8	28.6	Doctor Who	6	26.1
	Quantum Leap	5	38.5	Doctor Who	7	25.0	Fanfic	6	26.1
	15/95	/13		15/161	/28		15/124	/23	
							Community Nodes: Metasoap		
2	Doctor Who	19	86.4				Doctor Who	27	87.1
	Books	10	45.5				David Tennant	14	45.2
	David Tennant	10	45.5				Books	12	38.7
	Fanfiction	10	45.5				Fanfiction	12	38.7
	Harry Potter	9	40.9				Reading	10	32.3
	Reading	9	40.9				Science Fiction	10	32.3
	Science Fiction	9	40.9				The Doctor	10	32.3
	Buffy	8	36.4				Buffy	9	29.0
	Firefly	8	36.4				Firefly	9	29.0
	Star Wars	8	36.4				Harry Potter	9	29.0
	Writing	8	36.4				Rose Tyler	9	29.0
	Angel	7	31.8				Slash	9	29.0
	Lord of the Rings	7	31.8				Christopher Eccleston	8	25.8
	Slash	7	31.8				Fanfic	8	25.8
	Terry Pratchett	7	31.8				Writing	8	25.8
	15/166	/22					15/195	/31	

Continued on next page

Area	Level 1			Level 2			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%	Interests	Nodes	%
							Community Nodes: DW_Recs, DoctorWho_Eps, LifeOnMartha, Time_and_Chips, DWCanon_Fodder, New_Who,		
3	Stargate SG-1	9	50.0				Slash	15	57.7
	Firefly	7	38.9				Firefly	12	46.2
	Stargate Atlantis	7	38.9				Stargate Atlantis	12	46.2
	Battlestar Galactica	6	33.3				Fanfic	11	42.3
	Fan Fiction	6	33.3				Rodney McKay	11	42.3
	NCIS	6	33.3				Stargate	11	42.3
	Slash	6	33.3				Enterprise	10	38.5
	Angel	5	27.8				Stargate SG-1	10	38.5
	Buffy	5	27.8				John Sheppard	9	34.6
	Stargate	5	27.8				Writing	9	34.6
	Stargate: Atlantis	5	27.8				Angel	8	30.8
	Doctor Who	4	22.2				Star Trek	8	30.8
	Fanfic	4	22.2				Stargate: Atlantis	8	30.8
	Fanfiction	4	22.2				Buffy	7	26.9
	Movies	4	22.2				David Hewlett	7	26.9
	15/64	/18					15/102	/26	
							Community Nodes: McKay_Sheppard, Advent_Atlantis		
Nodes too tightly packed to access interest list window for Area 4									

C.3 Network Groups Surrounded Node 'W'

Table C.3: Shared interests of Nodes within Community Groups with Central Node 'W'

Area	Level 1			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%
1	Webcomics	35	55.6	Webcomics	32	57.1
	Writing	34	54.0	Writing	29	51.8
	Comics	31	49.2	Comics	27	48.2
	Science Fiction	22	34.9	Science Fiction	18	32.1
	Fantasy	19	30.2	Fantasy	17	30.4
	Movies	18	28.6	Reading	17	30.4
	Reading	18	28.6	Movies	16	28.6
	Drawing	17	27.0	Drawing	15	26.8
	Music	16	25.4	Music	15	26.8
	Anime	15	23.8	Anime	14	25.0
	Cartoons	15	23.8	RPGs	14	25.0
	RPGs	15	23.8	MST3K	13	23.2
	Books	14	22.2	Books	12	21.4
	Computers	13	20.6	Cartoons	12	21.4
	Cooking	13	20.6	Cooking	11	19.6
	15/283	/63		15/289	/56	
				Community Nodes: Snarkoleptics, brggen-johnstark		
2	Reading	5	71.4	Reading	9	75.0
	Science Fiction	5	71.4	Science Fiction	9	75.0
	Tezcat	5	71.4	Tezcat	8	66.7
	Books	4	57.1	Cheese	6	50.0
	Cheese	4	57.1	Books	6	50.0
	Chicago	4	57.1	Cats	5	41.7
	Evanston	4	57.1	Chicago	5	41.7
	Firefly	4	57.1	Computers	5	41.7
	Gardening	4	57.1	Conventions	5	41.7
	Monty Python	4	57.1	Firefly	5	41.7
	Babylon 5	4	57.1	Bacon	4	33.3
	Capricon	3	42.9	Icons	4	33.3
	Computers	3	42.9	Duckon	4	33.3
	Icons	3	42.9	Evanston	4	33.3
	Conventions	3	42.9	Fandom	4	33.3

Continued on next page

Area	Level 1			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%
	15/78	/7		15/106	/12	
				Community Nodes: Tazcat_Chat		

C.4 Network Groups Surrounded Node 'S'

Table C.4: Shared interests of Nodes within Community Groups with Central Node 'S'

Area	Level 1			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%
1	Barbelith	14	50.4	Barbelith	16	43.2
	Grant Morrison	6	21.4	Grant Morrison	8	21.6
	Joycore	6	21.4	Comics	7	18.9
	Writing	6	21.4	Joycore	7	18.9
	Alan Moore	5	17.9	Writing	7	18.9
	Comics	5	17.9	Art	6	16.2
	Food	5	17.9	Alan Moore	5	13.5
	Politics	5	17.9	Dancing	5	13.5
	Art	4	14.3	Food	5	13.5
	BDSM	4	14.3	Politics	5	13.5
	Cheese	4	14.3	BDSM	4	10.8
	Cooking	4	14.3	Books	4	10.8
	Dancing	4	14.3	Cheese	4	10.8
	Feminism	4	14.3	Cooking	4	10.8
	Painting	4	14.3	Dianna Wynn Jones	4	10.8
	15/107	/28		15/143	/37	
				Community Nodes: Barbelith_Mod		
2	Douglas Coupland	11	78.6	Douglas Coupland	14	77.8
	Art	6	42.9	Books	8	44.4
	Books	6	42.9	Art	7	38.9
	Canada	6	42.9	Canada	7	38.9
	Music	5	35.7	The Simpsons	6	33.3
	The Simpsons	5	35.7	Coupland	5	27.8
	Writing	5	35.7	Love	5	27.8
	Buffy	4	28.6	Music	5	27.8

Continued on next page

Area	Level 1			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%
	Coffee	4	28.6	Travel	5	27.8
	Coupland	4	28.6	Writing	5	27.8
	Firefly	4	28.6	Buffy	4	22.2
	Love	4	28.6	Coffee	4	22.2
	Pink Floyd	4	28.6	Firefly	4	22.2
	Poetry	4	28.6	Life After God	4	22.2
	Travel	4	28.6	People Watching	4	22.2
	15/138	/14		15/174	/18	
				Community Nodes: Microsurfs		
3	EBM	11	42.3	Music	11	50.0
	Industrial	11	42.3	Books	8	44.4
	Music	11	42.3	Art	7	38.9
	Cats	11	42.3	Canada	7	38.9
	Boots	8	30.8	The Simpsons	6	33.3
	Clubbing	8	30.8	Coupland	5	27.8
	Metal	8	30.8	Love	5	27.8
	Piercings	8	30.8	Music	5	27.8
	Reading	8	30.8	Travel	5	27.8
	Books	7	26.9	Writing	5	27.8
	Computers	7	26.9	Buffy	4	22.2
	Films	7	26.9	Coffee	4	22.2
	Goth	7	26.9	Firefly	4	22.2
	PVC	7	26.9	Life After God	4	22.2
	Slimelight	7	26.9	People Watching	4	22.2
	15/138	/14		15/174	/18	
				Community Nodes: RocSocPhotos		
4	Monochrome	18	40.9	Monochrome	15	45.5
	Books	16	36.4	Books	12	36.4
	Reading	15	34.1	Reading	11	33.3
	Writing	14	31.8	Writing	11	33.3
	Cats	13	29.5	Cats	10	30.3
	Computers	12	27.3	Computers	8	24.2
	Music	11	25.0	Music	8	24.2
	Cheese	10	22.7	Chocolate	7	21.2
	Chocolate	10	22.7	London	7	21.2
	London	9	20.5	Spodding	7	21.2

Continued on next page

Area	Level 1			Community Journal Level		
	Interests	Nodes	%	Interests	Nodes	%
	Science Fiction	9	20.5	Cheese	6	18.2
	Spodding	8	18.2	Cooking	6	18.2
	Cinema	7	15.9	Movies	6	18.2
	Cooking	7	15.9	Real Ale	6	18.2
	History	7	15.9	Science Fiction	6	18.2
	15/264	/44		15/207	/33	
				Community Spods_in_Exile, Loos_Company	Nodes:	
5	Alcohol	3	60.0			
	Computers	3	60.0			
	Linux	3	60.0			
	Slimelight	3	60.0			
	Backstage Crew	2	40.0			
	Batfink	2	40.0			
	Beer	2	40.0			
	Bill Hicks	2	40.0			
	Biting	2	40.0			
	Bouncing	2	40.0			
	C	2	40.0			
	Cats	2	40.0			
	Comedy	2	40.0			
	Cooking	2	40.0			
	Covenant	2	40.0			
	15/35	/5				
6	Writing	3	50.0			
	Hampshire	2	33.3			
	Reading	2	33.3			
	Singing	2	33.3			
	Southampton	2	33.3			
	5/5	/6				

Appendix D

Vocabulary Used for Categorisation Within Surveyed Fiction Archives

Table D.1: Tags, Categories and Warnings Used Within the Archives

Tag Concept	Archive Count	Variants	Term	Type	Area	Words
Non–Consensual Sex	14	9	Borrowed (Other)	Content	Violence	Multiple
BDSM	14	7	Borrowed (Other)	Content	Sex	Acronym
Humour	14	2	Borrowed (Lit)	Genre	Not Content	Single
Hurt/Comfort	13	5	Developed	Genre/-Content	Violence	Single
Romance	13	1	Borrowed (Lit)	Genre	Not Content	Single
Alternate Universe	12	5	Developed	Genre	Not Content	Multiple
Slash	11	5	Developed	Genre/-Content	Sex	Single
Character Death	11	3	Developed	Content	Violence	Multiple
Crossover	11	2	Developed	Genre	Not Content	Single
Drama	11	1	Borrowed (Lit)	Genre	Not Content	Single

Continued on next page

Tag Concept	Archive Count	Versions	Term	Type	Area	Words
Plot, What Plot	10	4	Developed	Genre	Sex	Acronym
Poetry	10	3	Borrowed (Lit)	Type	Not Content	Single
Action/Adventure	9	3	Borrowed (Lit)	Genre	Not Content	Multiple
First Time	9	3	Borrowed (Other)	Content	Sex	Multiple
Angst	9	1	Borrowed (Lit)	Genre/-Content	Other	Single
Challenge	8	2	Developed	Genre	Not Content	Single
Het	7	3	Developed	Genre/-Content	Sex	Single
Pre-Relationship	7	2	Developed	Genre/-Content	Sex	Multiple
Gen	7	2	Developed	Genre/-Content	Other	Single
Episode Related	7	2	Developed	Genre/-Content	Other	Multiple
Series	7	1	Borrowed (Lit)	Type	Not Content	Single
Holiday	7	1	Borrowed (Lit)	Genre	Not Content	Single
Filk	6	3	Developed	Type	Not Content	Single
Language	6	3	Borrowed (Other)	Content	Language	Single
Drabble	6	2	Developed	Type	Not Content	Single
Multiple Partners	6	2	Developed	Content	Sex	Multiple
Violence	6	1	Borrowed (Other)	Content	Violence	Single
No Warning	5	2	Developed	Content	Other	Multiple
Parody	5	1	Borrowed (Lit)	Genre	Not Content	Single
Established Relationship	5	1	Developed	Content	Sex	Multiple

Continued on next page

Tag Concept	Archive Count	Versions	Term	Type	Area	Words
Song Fic	4	3	Developed	Genre/-Content	Other	Multiple
Point of View	4	3	Borrowed (Lit)	Genre	Not Content	Acronym
Adult Themes	4	3	Borrowed (Other)	Content	Other	Multiple
Valentine's Day	4	2	Borrowed (Other)	Content	Other	Multiple
Other	4	2	Developed	Content	Other	Single
Male Pregnancy	4	2	Developed	Genre/-Content	Other	Multiple
Future Story	4	2	Developed	Genre	Not Content	Multiple
Christmas	4	1	Borrowed (Other)	Content	Other	Single
Smarm	4	1	Developed	Genre/-Content	Other	Single
Bestiality	4	1	Borrowed (Other)	Content	Sex	Single
Sexual Content	3	3	Borrowed (Other)	Content	Sex	Multiple
Chan	3	3	Developed	Content	Sex	Single
Missing Scene	3	2	Developed	Genre/-Content	Other	Multiple
Horror	3	1	Borrowed (Lit)	Genre	Not Content	Single
Halloween	3	1	Borrowed (Other)	Content	Other	Single
Incest	3	1	Borrowed (Other)	Content	Other	Single
Extreme Violence	3	1	Borrowed (Other)	Content	Violence	Single
Friendship	3	1	Developed	Content	Other	Single
Dark	3	1	Developed	Genre	Not Content	Single
Round Robin	2	2	Developed	Type	Not Content	Multiple

Continued on next page

Tag Concept	Archive Count	Versions	Term	Type	Area	Words
Drama-Angst	2	2	Borrowed (Lit)	Genre	Not Content	Multiple
Drugs	2	2	Borrowed (Other)	Content	Harmful	Single
Fetish/Kink	2	2	Borrowed (Other)	Content	Sex	Multiple
Vignette	2	1	Borrowed (Lit)	Type	Not Content	Single
Teleplay	2	1	Borrowed (Lit)	Type	Not Content	Single
Thoughts	2	1	Borrowed (Other)	Genre	Not Content	Single
Adventure	2	1	Borrowed (Lit)	Genre	Not Content	Single
Action	2	1	Borrowed (Lit)	Genre	Not Content	Single
Mystery	2	1	Borrowed (Lit)	Type	Not Content	Single
Fixit	2	1	Developed	Genre/-Content	Other	Single
Character Study	2	1	Borrowed (Lit)	Genre	Not Content	Multiple
Suspense	2	1	Borrowed (Lit)	Genre	Not Content	Single
New Year	2	1	Borrowed (Other)	Content	Other	Multiple
Partner Betrayal	2	1	Developed	Content	Other	Multiple
Memorial Day	2	1	Borrowed (Other)	Content	Other	Single
Kidnapping	2	1	Borrowed (Other)	Content	Violence	Single
Thanksgiving	2	1	Borrowed (Other)	Content	Other	Single
Fourth of July	2	1	Borrowed (Other)	Content	Other	Single
Child Abuse	2	1	Borrowed (Other)	Content	Violence	Multiple

Continued on next page

Tag Concept	Archive Count	Versions	Term	Type	Area	Words
Torture	2	1	Borrowed (Other)	Content	Violence	Single
Graphic Violence	2	1	Borrowed (Other)	Content	Violence	Multiple
Graphic Sex	2	1	Borrowed (Other)	Content	Sex	Multiple
Easter	2	1	Borrowed (Other)	Content	Other	Single
Scripted Format	1	1	Borrowed (Lit)	Type	Not Content	Multiple
Epic	1	1	Borrowed (Lit)	Type	Not Content	Single
Essay	1	1	Borrowed (Lit)	Type	Not Content	Single
Comic/Manga	1	1	Borrowed (Lit)	Source	Not Content	Multiple
TV-Show/Anime	1	1	Borrowed (Lit)	Source	Not Content	Multiple
Movie/Anime	1	1	Borrowed (Lit)	Source	Not Content	Multiple
Book	1	1	Borrowed (Lit)	Source	Not Content	Single
Game	1	1	Borrowed (Other)	Source	Not Content	Single
International Stories	1	1	Developed	Language	Not Content	Multiple
Ecchi	1	1	Borrowed (Other)	Genre	Not Content	Single
Supernatural	1	1	Borrowed (Lit)	Genre	Not Content	Single
Improv	1	1	Borrowed (Lit)	Genre	Not Content	Single
Cross Genre	1	1	Developed	Genre	Not Content	Single
1st Person Point Of View	1	1	Borrowed (Lit)	Genre	Not Content	Multiple
MSTing (Mystery Science Theatre)	1	1	Developed	Genre	Not Content	Acronym

Continued on next page

Tag Concept	Archive Count	Versions	Term	Type	Area	Words
Sci-Fi	1	1	Borrowed (Lit)	Genre	Not Content	Multiple
Hentai	1	1	Borrowed (Other)	Genre	Not Content	Single
CYOA (Choose Your Own Adventure)	1	1	Borrowed (Lit)	Genre	Not Content	Acronym
Senslash Fun	1	1	Developed	Genre	Not Content	Multiple
Jammies	1	1	Developed	Fandom Dependent	Other	Single
Meridian Fix	1	1	Developed	Genre	Not Content	Multiple
Case	1	1	Borrowed (Other)	Genre/-Content	Other	Single
Wishverse	1	1	Developed	Fandom Dependent	Not Content	Single
Violent Sex	1	1	Borrowed (Other)	Content	Sex	Multiple
Addiction	1	1	Borrowed (Other)	Content	Harmful	Single
WAFF (Warm and Fuzzy Feelings)	1	1	Developed	Content	Other	Acronym
Withheld	1	1	Developed	Content	Other	Single
Vampires	1	1	Borrowed (Other)	Content	Other	Single
Suicide	1	1	Borrowed (Other)	Content	Violence	Single
Unusual Sexual Situation	1	1	Borrowed (Other)	Content	Sex	Multiple
Slavery	1	1	Borrowed (Other)	Content	Violence	Single
Slash/Het	1	1	Developed	Content	Sex	Multiple
Character Betrayal	1	1	Developed	Content	Other	Multiple
Hope	1	1	Borrowed (Other)	Content	Other	Single

Continued on next page

Tag Concept	Archive Count	Versions	Term	Type	Area	Words
Comfort	1	1	Borrowed (Other)	Content	Sex	Single
Lime	1	1	Developed	Content	Sex	Single
Lemon	1	1	Developed	Content	Sex	Single
Intense Situations	1	1	Borrowed (Other)	Content	Other	Multiple
Domestic Abuse	1	1	Borrowed (Other)	Content	Violence	Multiple
Disturbing Images	1	1	Borrowed (Other)	Content	Other	Multiple
Homophobia	1	1	Borrowed (Other)	Content	Hate	Multiple
Homicide	1	1	Borrowed (Other)	Content	Violence	Single
OOC (Out of Character)	1	1	Developed	Content	Other	Acronym
OF (Original Fiction)	1	1	Developed	Content	Other	Acronym
OC-Submission (Original Character)	1	1	Developed	Genre	Not Content	Acronym
Sap	1	1	Borrowed (Other)	Content	Other	Single
Sad	1	1	Borrowed (Other)	Content	Other	Single
Minor Character Death	1	1	Developed	Content	Violence	Single
Lust	1	1	Borrowed (Other)	Content	Sex	Single
Ghosts	1	1	Borrowed (Other)	Content	Other	Single
Random	1	1	Developed	Content	Other	Single
Mutilation	1	1	Developed	Content	Violence	Single
Badfic	1	1	Developed	Genre/-Content	Other	Single
Gen/Het	1	1	Developed	Content	Sex	Multiple
Denial	1	1	Developed	Genre/-Content	Other	Single

Continued on next page

Tag Concept	Archive Count	Versions	Term	Type	Area	Words
Hurt	1	1	Borrowed (Other)	Content	Violence	Single
(Specific Sexual Practices	7	7	Borrowed (Other)	Content	Sex	Single)

Appendix E

Fan Online Persona Vocabulary

E.1 Fan Online Persona v0.2 OWL Specification

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY foaf "http://xmlns.com/foaf/0.1/#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY wordnet "http://xmlns.com/wordnet/1.6/">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY media "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media#">
<!ENTITY base "http://interaction.ecs.soton.ac.uk/ir/projects/ontofic/
    apps/fop/#">
]>

<rdf:RDF
 xmlns:foaf="&foaf;"
 xmlns:dc="&dc;"
 xmlns:xsd="&xsd;"
 xmlns:wordnet="&wordnet;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>

<owl:Ontology rdf:about="&base;">
<rdfs:label>fop</rdfs:label>
<owl:versionInfo>0.12</owl:versionInfo>
<owl:imports rdf:resource="http://xmlns.com/foaf/0.1/"/>
</owl:Ontology>
```

```
<!-- Main Classes -->

<owl:Class rdf:ID="Persona">
  <rdfs:subClassOf rdf:resource="&foaf;Person" />
  <rdfs:label>Persona</rdfs:label>
  <rdfs:comment>This class represents persona</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="EDomain">
  <rdfs:subClassOf rdf:resource="&wordnet;domain" />
  <rdfs:label>eDomain</rdfs:label>
  <rdfs:comment>A digital domain</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Fandom">
  <rdfs:subClassOf rdf:resource="&base;EDomain" />
  <rdfs:label>Fandom</rdfs:label>
  <rdfs:comment>Fandom</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="NomDe">
  <rdfs:label>NomDe</rdfs:label>
  <rdfs:comment>A Name</rdfs:comment>
</owl:Class>

<!-- Name Properties -->

<owl:ObjectProperty rdf:ID="name">
  <rdfs:domain rdf:resource="&base;NomDe" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <owl:equivalentClass rdf:resource="&foaf;name" />
  <rdfs:label>name</rdfs:label>
</owl:ObjectProperty>

<!-- Domain Properties -->

<owl:ObjectProperty rdf:ID="has-context">
  <rdfs:domain rdf:resource="&owl;Thing" />
  <rdfs:range rdf:resource="&base;EDomain" />
  <rdfs:label>Has Context</rdfs:label>
</owl:ObjectProperty>

<!-- Media Classes -->

<owl:Class rdf:ID="MyMedia">
  <owl:complementOf rdf:resource="&base;Media" />
  <rdfs:subClassOf rdf:resource="&foaf;Document" />
  <rdfs:subClassOf rdf:resource="&base;eDomain" />
  <owl:equivalentClass rdf:resource="&media;MediaRegion" />
  <rdfs:label>My Media</rdfs:label>
  <rdfs:comment>This class represents an item of media that was created
```

```
    by the Persona</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Media">
  <owl:complementOf rdf:resource="&base;MyMedia" />
  <rdfs:subClassOf rdf:resource="&foaf;Document" />
  <rdfs:subClassOf rdf:resource="&base;eDomain" />
  <owl:equivalentClass rdf:resource="&media;MediaRegion" />
  <rdfs:label>Media</rdfs:label>
  <rdfs:comment>This class represents an item of media that was not
    created by the Persona</rdfs:comment>
</owl:Class>

<!-- Media Items -->

<owl:Class rdf:about="&base;Image">
  <owl:equivalentClass rdf:resource="&foaf;Image" />
  <rdfs:subClassOf rdf:resource="&base;MyMedia" />
  <rdfs:subClassOf rdf:resource="&base;Media" />
  <rdfs:label>Image</rdfs:label>
</owl:Class>

<owl:Class rdf:about="&base;Manip">
  <rdfs:subClassOf rdf:resource="&base;Image" />
  <rdfs:label>Image Manipulation</rdfs:label>
  <rdfs:comment>An image-manipulation</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Illo">
  <rdfs:subClassOf rdf:resource="&base;Image" />
  <rdfs:label>Illustration</rdfs:label>
  <rdfs:comment>An illustration</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Text">
  <rdfs:subClassOf rdf:resource="&base;MyMedia" />
  <rdfs:subClassOf rdf:resource="&base;Media" />
  <rdfs:label>Text</rdfs:label>
  <rdfs:comment>A item of text</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Essay">
  <rdfs:subClassOf rdf:resource="&base;Text" />
  <rdfs:label>Essay</rdfs:label>
  <rdfs:comment>An essay item</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Fic">
  <rdfs:subClassOf rdf:resource="&base;Text" />
  <rdfs:label>Fic</rdfs:label>
  <rdfs:comment>An work of fiction</rdfs:comment>
```

```
</owl:Class>

<owl:Class rdf:about="&base;FilkLyrics">
  <rdfs:subClassOf rdf:resource="&base;Text" />
  <rdfs:label>Filk Lyrics</rdfs:label>
  <rdfs:comment>The lyrics of a filk song</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Vid">
  <rdfs:subClassOf rdf:resource="&base;MyMedia" />
  <rdfs:subClassOf rdf:resource="&base;Media" />
  <rdfs:label>Vid</rdfs:label>
  <rdfs:comment>A multimedia media item</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Audio">
  <rdfs:subClassOf rdf:resource="&base;MyMedia" />
  <rdfs:subClassOf rdf:resource="&base;Media" />
  <rdfs:label>Audio</rdfs:label>
  <rdfs:comment>A audio media item</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;AudioFic">
  <rdfs:subClassOf rdf:resource="&base;Audio" />
  <rdfs:label>Audio Fic</rdfs:label>
  <rdfs:comment>The audio recording of a fic</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Filk">
  <rdfs:subClassOf rdf:resource="&base;Audio" />
  <rdfs:label>Filk</rdfs:label>
  <rdfs:comment>The recording of a filk song</rdfs:comment>
</owl:Class>

<!-- Groups and Collections -->

<owl:Class rdf:about="&base;Archive">
  <rdfs:subClassOf rdf:resource="&base;eDomain" />
  <rdfs:label>Archive</rdfs:label>
  <rdfs:comment>Archive of media</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="SubscribedGroup">
  <rdfs:subClassOf rdf:resource="&foaf;Group" />
  <rdfs:subClassOf rdf:resource="&base;eDomain" />
  <rdfs:label>Community Group/List/Journal/Forum</rdfs:label>
  <rdfs:comment>A group or community of which the persona is a member</
    rdfs:comment>
</owl:Class>

<owl:ObjectProperty rdf:ID="administrates">
```

```
  <rdfs:domain rdf:resource="&foaf;Person" />
  <rdfs:range rdf:resource="&foaf;Group" />
  <rdfs:label>Administrates</rdfs:label>
  <rdfs:comment>A group which the persona administrates</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="subscribed_to">
  <rdfs:domain rdf:resource="&foaf;Person" />
  <rdfs:range rdf:resource="&foaf;Group" />
  <rdfs:label>Administrates</rdfs:label>
  <rdfs:comment>A group which the persona administrates</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="group_restrictions">
  <rdfs:domain rdf:resource="&foaf;Group" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:label>Group Restrictions</rdfs:label>
  <rdfs:comment>The membership restrictions of a group</rdfs:comment>
</owl:ObjectProperty>

<!-- Trust -->

<owl:Class rdf:about="&base;Compurgation">
  <rdfs:comment>A statement and list of persona who would back up that
    statement. The term comes from the historic practice of having people
    speak for you in the absence of evidence during a trial.</rdfs:comment
    >
  <rdfs:label>Compurgation</rdfs:label>
</owl:Class>

<owl:Class rdf:about="&base;Knights">
  <rdfs:subClassOf rdf:resource="&foaf;Group" />
  <rdfs:comment>Group of personas who would vouch for the veracity of a
    specific statement by and about the persona. The term comes from the
    historical term "knights of the post", semi-proffesional oathhelpers/
    character witnesses.</rdfs:comment>
  <rdfs:label>Knights</rdfs:label>
</owl:Class>

<!-- Trust Properties -->

<owl:ObjectProperty rdf:ID="claim">
  <rdfs:domain rdf:resource="&base;Persona" />
  <rdfs:range rdf:resource="&base;Compurgation" />
  <rdfs:label>Claim</rdfs:label>
  <rdfs:comment>A claim being made as true and with verification by other
     people</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="compurgation-statement">
  <rdfs:domain rdf:resource="&base;Compurgation" />
```

```
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:label>Statment</rdfs:label>
  <rdfs:comment>A statement claimed as true</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="compurgation-maker">
  <rdfs:domain rdf:resource="&base;Compurgation" />
  <rdfs:range rdf:resource="&base;Persona" />
  <rdfs:label>Statemant Maker</rdfs:label>
  <rdfs:comment>Another person who claiming a given statement about them
    is true</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="compurgation-vouch-level">
  <rdfs:domain rdf:resource="&base;Compurgation" />
  <rdfs:range rdf:resource="&base;VouchLevel" />
  <rdfs:label>Vouch Level</rdfs:label>
  <rdfs:comment>How much the respondent confirms or disputes the
    statement made</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="will-vouch">
  <rdfs:domain rdf:resource="&base;Compurgation" />
  <rdfs:range rdf:resource="&base;Knights" />
  <rdfs:label>Will Vouch</rdfs:label>
  <rdfs:comment>Those who, it is believed, will vouch for the varacity of
     the given statement</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="response-to">
  <rdfs:domain rdf:resource="&base;Persona" />
  <rdfs:range rdf:resource="&base;Compurgation" />
  <rdfs:label>Response To</rdfs:label>
  <rdfs:comment>A response made to a statement another person has claimed
     as true</rdfs:comment>
</owl:ObjectProperty>

<!-- Reviews and Recs -->

<owl:Class rdf:ID="Rating">
  <rdfs:label>Rating</rdfs:label>
  <rdfs:comment>This class represents rating</rdfs:comment>
  <rdfs:subClassOf rdf:resource="&wordnet;assessment" />
</owl:Class>

<owl:Class rdf:about="&base;VouchLevel">
  <rdfs:subClassOf rdf:resource="&base;Rating" />
  <rdfs:label>VouchLevel</rdfs:label>
  <rdfs:comment>This class represents the level to which the respondent
    confirms or disputes a given statement</rdfs:comment>
</owl:Class>
```

```
<owl:Class rdf:about="&base;TechAccuracy">
  <rdfs:subClassOf rdf:resource="&base;Rating" />
  <rdfs:label>Technical Accuracy</rdfs:label>
  <rdfs:comment>This class represents the technical accuracy rating</
    rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Originality">
  <rdfs:subClassOf rdf:resource="&base;Rating" />
  <rdfs:label>Originality</rdfs:label>
  <rdfs:comment>This class represents the originality rating</
    rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Engagement">
  <rdfs:subClassOf rdf:resource="&base;Rating" />
  <rdfs:label>Engagement</rdfs:label>
  <rdfs:comment>This class represents the engagement rating</rdfs:comment
    >
</owl:Class>

<owl:Class rdf:about="&base;CanonAccuracy">
  <rdfs:subClassOf rdf:resource="&base;Rating" />
  <rdfs:label>Canon Accuracy</rdfs:label>
  <rdfs:comment>This class represents how closely the source canon is
    followed</rdfs:comment>
</owl:Class>

<owl:Class rdf:about="&base;Characterisation">
  <rdfs:subClassOf rdf:resource="&base;Rating" />
  <rdfs:label>Characterisation</rdfs:label>
  <rdfs:comment>This class represents how closely the characterisation
    within the source canon is followed</rdfs:comment>
</owl:Class>

<!-- Rate and Rec Properties -->

<owl:ObjectProperty rdf:ID="has-rating-value">
  <rdfs:domain rdf:resource="&base;Rating" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:label>Rating</rdfs:label>
  <rdfs:comment>The rating given to an item</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-rating-max">
  <rdfs:domain rdf:resource="&base;Rating" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:label>Rating Maximum</rdfs:label>
  <rdfs:comment>The maximum rating possible in that rating system</
    rdfs:comment>
```

```
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-rating-min">
  <rdfs:domain rdf:resource="&base;Rating" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:label>Rating Minimum</rdfs:label>
  <rdfs:comment>The minimum rating possible in that rating system</
    rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="recommends">
  <rdfs:domain rdf:resource="&foaf;Person" />
  <rdfs:range rdf:resource="&foaf;Media" />
  <rdfs:label>Recommends</rdfs:label>
  <rdfs:comment>An item of media which the persona recommends</
    rdfs:comment>
</owl:ObjectProperty>


<!-- Community Properties -->

<owl:ObjectProperty rdf:ID="com_type">
  <rdfs:domain>
  <owl:Class>
    <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;SubscribesTo"/>
      <owl:Class rdf:about="&base;IsAdminOf"/>
    </owl:unionOf>
  </owl:Class>
  </rdfs:domain>
    <rdfs:range>
      <owl:DataRange>
        <owl:oneOf rdf:parseType="Resource">
          <rdf:rest rdf:parseType="Resource">
            <rdf:rest rdf:parseType="Resource">
              <rdf:first rdf:datatype="&xsd;string">ML</rdf:first>
              <rdf:rest rdf:parseType="Resource">
                <rdf:rest rdf:resource="&rdf;nil"/>
                <rdf:first rdf:datatype="&xsd;string">BB</rdf:first>
              </rdf:rest>
            </rdf:rest>
            <rdf:first rdf:datatype="&xsd;string">Blog</rdf:first>
          </rdf:rest>
          <rdf:first rdf:datatype="&xsd;string">IRC</rdf:first>
        </owl:oneOf>
      </owl:DataRange>
    </rdfs:range>
  <rdfs:label>Community Type</rdfs:label>
  <rdfs:comment>Type of computer mediated interaction</rdfs:comment>
</owl:ObjectProperty>
```

```
<owl:ObjectProperty rdf:ID="has_list_mod">
  <rdfs:domain>
  <owl:Class>
    <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;SubscribedGroup"/>
      <owl:Class rdf:about="&base;IsAdminOf"/>
    </owl:unionOf>
  </owl:Class>
  </rdfs:domain>
  <rdfs:range rdf:resource="&foaf;Person" />
  <rdfs:label>Has List Mom</rdfs:label>
  <rdfs:comment>This class represents the list mod/administrator of a
    list or archive</rdfs:comment>
</owl:ObjectProperty>

<!-- Archive & Document Properties -->

<owl:ObjectProperty rdf:ID="archived_at">
  <rdfs:label>Archived At</rdfs:label>
  <rdfs:comment>The archive at which the document is archived</
    rdfs:comment>
  <rdfs:domain rdf:resource="&foaf;Document" />
  <rdfs:range rdf:resource="&base;Archive" />
  <owl:inverseOf rdf:resource="&base;archived_at" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:about="&base;archive_contains">
  <rdfs:label>Archived Contains</rdfs:label>
  <rdfs:comment>The archive at which the document is archived</
    rdfs:comment>
  <rdfs:domain rdf:resource="&base;Archive" />
  <rdfs:range rdf:resource="&foaf;Document" />
  <owl:inverseOf rdf:resource="&base;archived_at" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has_archivist">
  <rdfs:domain rdf:resource="&base;Archive" />
  <rdfs:range rdf:resource="&foaf;Person" />
  <rdfs:comment>The maintainer/administrator of an archive</rdfs:comment>
  <rdfs:label>Archivist</rdfs:label>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has_beta">
  <rdfs:domain rdf:resource="&foaf;Document" />
  <rdfs:range rdf:resource="&foaf;Person" />
  <rdfs:label>Beta/Editor</rdfs:label>
  <rdfs:comment>Editor, beta or other form of proof-reader</rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="have-created">
  <rdfs:domain rdf:resource="&foaf;Person" />
```

```
  <rdfs:range rdf:resource="&base;eDomain" />
  <owl:equivalentClass rdf:resource="&foaf;maker" />
  <rdfs:comment>Things created by the persona</rdfs:comment>
  <rdfs:label>Created</rdfs:label>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="created_by">
  <rdfs:domain rdf:resource="&base;eDomain" />
  <rdfs:range rdf:resource="&foaf;Person" />
  <rdfs:comment>The person who created the item</rdfs:comment>
  <rdfs:label>Created By</rdfs:label>
</owl:ObjectProperty>

</rdf:RDF>
```

Listing E.1: Fan Online Persona OWL Specification

Appendix F

OntoMedia RDF Examples

F.1 Media Reuse and Changing Meanings

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/MediaExample#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY omm  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:ome="&ome;"
   xmlns:omm="&omm;">


<!-- Contexts -->

<rdf:Description rdf:about="#Context1">
  <rdfs:label>Context 1</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>
```

```
<rdf:Description rdf:about="#Context2">
  <rdfs:label>Context 2</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>


<!-- Timelines -->

<rdf:Description rdf:about="#Timeline1">
  <rdfs:label>Context 1 Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Timeline2">
  <rdfs:label>Context 2 Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>


<!-- Events -->

<rdf:Description rdf:about="#EventA">
  <rdfs:label>Event A</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Context1" />
  <ome:has-occurrence rdf:resource="#OccurrenceA" />
</rdf:Description>

<rdf:Description rdf:about="#EventB">
  <rdfs:label>Event B</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Context1" />
</rdf:Description>

<rdf:Description rdf:about="#EventX">
  <rdfs:label>Event X</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Context2" />
</rdf:Description>
```

```
<rdf:Description rdf:about="#EventY">
  <rdfs:label>Event Y</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Context2" />
</rdf:Description>

<rdf:Description rdf:about="#EventZ">
  <rdfs:label>Event Z</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Context2" />
</rdf:Description>


<!-- Occurrences -->

<rdf:Description rdf:about="#OccurrenceA">
  <rdfs:label>Occurrence A-dash</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Timeline1" />
  <ome:occurrence-of rdf:resource="#EventA" />
  <ome:preceeds rdf:resource="#OccurrenceB" />
  <omm:has-expression rdf:resource="#BlueClip1" />
</rdf:Description>

<rdf:Description rdf:about="#OccurrenceB">
  <rdfs:label>Occurrence B-dash</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Timeline1" />
  <ome:occurrence-of rdf:resource="#EventB" />
  <ome:follows rdf:resource="#OccurrenceA" />
  <omm:has-expression rdf:resource="#GreenPurpleClip" />
</rdf:Description>

<rdf:Description rdf:about="#OccurrenceX">
  <rdfs:label>Occurrence X-dash</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Timeline2" />
  <ome:occurrence-of rdf:resource="#EventX" />
  <ome:preceeds rdf:resource="#OccurrenceY" />
  <omm:has-expression rdf:resource="#GreenClip" />
```

```
</rdf:Description>

<rdf:Description rdf:about="#OccurrenceY">
  <rdfs:label>Occurrence Y-dash</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Timeline2" />
  <ome:occurrence-of rdf:resource="#EventY" />
  <ome:preceeds rdf:resource="#OccurrenceZ" />
  <ome:follows rdf:resource="#OccurrenceX" />
  <omm:has-expression rdf:resource="#BlueClip2" />
</rdf:Description>

<rdf:Description rdf:about="#OccurrenceZ">
  <rdfs:label>Occurrence Z-dash</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Timeline2" />
  <ome:occurrence-of rdf:resource="#EventZ" />
  <ome:follows rdf:follows="#OccurrenceY" />
  <omm:has-expression rdf:resource="#PurpleClip" />
</rdf:Description>


<!-- Media -->

<rdf:Description rdf:about="#MediaSource1a">
  <rdfs:label>Multimedia Source 1a</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaRegion" />
  </rdf:type>
  <omm:has-subregion rdf:resource="#BlueClip1Pointer" />
</rdf:Description>


<rdf:Description rdf:about="#MediaSource1b">
  <rdfs:label>Multimedia Source 1b</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaRegion" />
  </rdf:type>
  <omm:has-subregion rdf:resource="#GreenPurpleClipPointer" />
</rdf:Description>

<rdf:Description rdf:about="#MediaSource2">
  <rdfs:label>Multimedia Source 2</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaRegion" />
  </rdf:type>
  <omm:has-subregion rdf:resource="#BlueClip2Pointer" />
```

```
  <omm:has-subregion rdf:resource="#PurpleClipPointer" />
  <omm:has-subregion rdf:resource="#GreenClipPointer" />
</rdf:Description>


<!-- Media Pointers -->

<rdf:Description rdf:about="#Source1aPointer">
  <rdfs:label>Media Source 1a</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#MediaSource1a" />
</rdf:Description>

<rdf:Description rdf:about="#Source1bPointer">
  <rdfs:label>Media Source 1b</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#MediaSource1b" />
</rdf:Description>

<rdf:Description rdf:about="#Source2Pointer">
  <rdfs:label>Media Source 2</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#MediaSource2" />
</rdf:Description>

<rdf:Description rdf:about="#BlueClip1Pointer">
  <rdfs:label>Blue Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#BlueClip1" />
</rdf:Description>

<rdf:Description rdf:about="#BlueClip2Pointer">
  <rdfs:label>Blue Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#BlueClip2" />
</rdf:Description>

<rdf:Description rdf:about="#GreenClipPointer">
  <rdfs:label>Green Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
```

```
  </rdf:type>
  <omm:has-region rdf:resource="#GreenClip" />
</rdf:Description>

<rdf:Description rdf:about="#PurpleClipPointer">
  <rdfs:label>Purple Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#PurpleClip" />
</rdf:Description>

<rdf:Description rdf:about="#GreenPurpleClipPointer">
  <rdfs:label>Green/Purple Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#GreenPurpleClip" />
</rdf:Description>

<rdf:Description rdf:about="#GreenPurpleSection1Pointer">
  <rdfs:label>Green/Purple Clip: Section 1</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#GreenPurpleSubClip1" />
</rdf:Description>

<rdf:Description rdf:about="#GreenPurpleSection2Pointer">
  <rdfs:label>Green/Purple Clip: Section 2</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;RegionPointer" />
  </rdf:type>
  <omm:has-region rdf:resource="#GreenPurpleSubClip2" />
</rdf:Description>


<!-- Media Areas -->

<rdf:Description rdf:about="#BlueClip1">
  <rdfs:label>Blue Clip (Source 1)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaAtom" />
  </rdf:type>
  <omm:is-subregion-of rdf:resource="#Source1aPointer" />
  <omm:has-derivation rdf:resource="#BlueClip2" />
  <omm:is-expression-of rdf:resource="#OccurrenceA" />
</rdf:Description>

<rdf:Description rdf:about="#BlueClip2">
  <rdfs:label>Blue Clip (Source 2)</rdfs:label>
```

```
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaAtom" />
  </rdf:type>
  <omm:is-subregion-of rdf:resource="#Source2Pointer" />
  <omm:is-derivation-of rdf:resource="#BlueClip2" />
  <omm:is-expression-of rdf:resource="#OccurrenceY" />
</rdf:Description>

<rdf:Description rdf:about="#GreenClip">
  <rdfs:label>Green Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaAtom" />
  </rdf:type>
  <omm:is-subregion-of rdf:resource="#Source2Pointer" />
  <omm:is-derivation-of rdf:resource="#GreenPurpleSubClip1" />
  <omm:is-expression-of rdf:resource="#OccurrenceX" />
</rdf:Description>

<rdf:Description rdf:about="#PurpleClip">
  <rdfs:label>Purple Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaAtom" />
  </rdf:type>
  <omm:is-subregion-of rdf:resource="#Source2Pointer" />
  <omm:is-derivation-of rdf:resource="#GreenPurpleSubClip2" />
  <omm:is-expression-of rdf:resource="#OccurrenceZ" />
</rdf:Description>

<rdf:Description rdf:about="#GreenPurpleClip">
  <rdfs:label>Green/Purple Clip</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaAtom" />
  </rdf:type>
  <omm:is-subregion-of rdf:resource="#Source1bPointer" />
  <omm:has-subregion rdf:resource="#GreenPurpleSection1Pointer" />
  <omm:has-subregion rdf:resource="#GreenPurpleSection2Pointer" />
  <omm:is-expression-of rdf:resource="#OccurrenceB" />
</rdf:Description>

<rdf:Description rdf:about="#GreenPurpleSubClip1">
  <rdfs:label>Green/Purple Clip: Section 1</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omm;MediaAtom" />
  </rdf:type>
  <omm:is-subregion-of rdf:resource="#GreenPurpleClipPointer" />
  <omm:has-derivation rdf:resource="#GreenClip" />
</rdf:Description>

<rdf:Description rdf:about="#GreenPurpleSubClip2">
  <rdfs:label>Green/Purple Clip: Section 2</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&omm;MediaAtom" />
  </rdf:type>
  <omm:is-subregion-of rdf:resource="#GreenPurpleClipPointer" />
  <omm:has-derivation rdf:resource="#PurpleClip" />
</rdf:Description>

</rdf:RDF>
```

Listing F.1: OntoMedia: Media Reuse and Changing Meanings

F.2 *M*A*S*H* Universe

```
?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/MASHExample#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22_rdf_syntax_ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf_schema#">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    ontomedia#">
<!ENTITY locspec "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    locspec#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:ome="&ome;"
   xmlns:locspec="&locspec;">

<!-- OWL Class -->

  <owl:Class rdf:ID="Dresses">
    <rdfs:label>Dresses</rdfs:label>
    <rdfs:comment>Dresses</rdfs:comment>
    <rdfs:subClassOf rdf:resource="#Attire" />
  </owl:Class>

  <owl:Class rdf:ID="Nightwear">
    <rdfs:label>Nightwear</rdfs:label>
    <rdfs:comment>Nightwear</rdfs:comment>
    <rdfs:subClassOf rdf:resource="#Attire" />
  </owl:Class>

  <owl:Class rdf:ID="Promotion">
    <rdfs:label>Promotion</rdfs:label>
    <rdfs:comment>Promotion</rdfs:comment>
    <rdfs:subClassOf rdf:resource="#Transformation" />
  </owl:Class>

<!-- LocSpecs -->

<rdf:Description rdf:about="#IMDB!DonaldSutherland">
  <rdfs:label>Donald Sutherland on IMDB</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&locspec;Location_Specifier" />
```

```
  </rdf:type>
  <locspec:pointer rdf:resource="http://www.imdb.com/name/nm0000661/" />
</rdf:Description>

<rdf:Description rdf:about="#IMDB!ElliottGould">
  <rdfs:label>Elliott Gould on IMDB</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&locspec;Location_Specifier" />
  </rdf:type>
  <locspec:pointer rdf:resource="http://www.imdb.com/name/nm0001285/" />
</rdf:Description>

<rdf:Description rdf:about="#IMDB!SallyKellerman">
  <rdfs:label>Sally Kellerman on IMDB</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&locspec;Location_Specifier" />
  </rdf:type>
  <locspec:pointer rdf:resource="http://www.imdb.com/name/nm0001419/" />
</rdf:Description>

<rdf:Description rdf:about="#IMDB!GaryBurghoff">
  <rdfs:label>Gary Burghoff on IMDB</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&locspec;Location_Specifier" />
  </rdf:type>
  <locspec:pointer rdf:resource="http://www.imdb.com/name/nm0121400/" />
</rdf:Description>

<rdf:Description rdf:about="#IMDB!AlanAlda">
  <rdfs:label>Alan Alda on IMDB</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&locspec;Location_Specifier" />
  </rdf:type>
  <locspec:pointer rdf:resource="http://www.imdb.com/name/nm0000257/" />
</rdf:Description>

<rdf:Description rdf:about="#IMDB!WayneRogers">
  <rdfs:label>Wayne Rogers on IMDB</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&locspec;Location_Specifier" />
  </rdf:type>
  <locspec:pointer rdf:resource="http://www.imdb.com/name/nm0737257/" />
</rdf:Description>

<rdf:Description rdf:about="#IMDB!LorettaSwit">
  <rdfs:label>Loretta Swit on IMDB</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&locspec;Location_Specifier" />
  </rdf:type>
  <locspec:pointer rdf:resource="http://www.imdb.com/name/nm0842794/" />
</rdf:Description>
```

```
<!-- Beings -->

<rdf:Description rdf:about="#HawkActor1">
  <rdfs:label>Donald Sutherland</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Being" />
  </rdf:type>
  <ome:locspec_ref rdf:resource="#IMDB!DonaldSutherland" />
  <ome:exists_in rdf:resource="#RealLife" />
  <ome:portrayed rdf:resource="#Movie!Hawkeye" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#HawkActor2">
  <rdfs:label>Alan Alda</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Being" />
  </rdf:type>
  <ome:locspec_ref rdf:resource="#IMDB!AlanAlda" />
  <ome:exists_in rdf:resource="#RealLife" />
  <ome:portrayed rdf:resource="#Series!Hawkeye" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#TrapperActor1">
  <rdfs:label>Elliott Gould</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Being" />
  </rdf:type>
  <ome:locspec_ref rdf:resource="#IMDB!ElliottGould" />
  <ome:exists_in rdf:resource="#RealLife" />
  <ome:portrayed rdf:resource="#Movie!Trapper" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#TrapperActor2">
  <rdfs:label>Wayne Rogers</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Being" />
  </rdf:type>
  <ome:locspec_ref rdf:resource="#IMDB!WayneRogers" />
  <ome:exists_in rdf:resource="#RealLife" />
  <ome:portrayed rdf:resource="#Series!Trapper" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>
```

```
<rdf:Description rdf:about="#HotLipsActor1">
  <rdfs:label>Sally Kellerman</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Being" />
  </rdf:type>
  <ome:locspec_ref rdf:resource="#IMDB!SallyKellerman" />
  <ome:exists_in rdf:resource="#RealLife" />
  <ome:portrayed rdf:resource="#Movie!MajorH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#HotLipsActor2">
  <rdfs:label>Loretta Swit</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Being" />
  </rdf:type>
  <ome:locspec_ref rdf:resource="#IMDB!LorettaSwit" />
  <ome:exists_in rdf:resource="#RealLife" />
  <ome:portrayed rdf:resource="#Series!MajorH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#RadarActor">
  <rdfs:label>Gary Burghoff</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Being" />
  </rdf:type>
  <ome:locspec_ref rdf:resource="#IMDB!GaryBurghoff" />
  <ome:exists_in rdf:resource="#RealLife" />
  <ome:portrayed rdf:resource="#Movie!Radar" />
  <ome:portrayed rdf:resource="#Series!Radar" />
  <ome:portrayed rdf:resource="#WORielly" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<!-- Characters -->

<rdf:Description rdf:about="#Movie!Hawkeye">
  <rdfs:label>Hawkeye</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Movie" />
  <ome:contained_by rdf:resource="#BFPierce" />
  <ome:portrayed_by rdf:resource="#HawkActor1" />
  <ome:has_bond rdf:resource="#Hawkeye_Trapper" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_BFPierce" />
```

```
  <ome:has_trait rdf:resource="#Employ_4077MedicCapt" />
  <ome:is_shadow_of rdf:resource="#Book!Hawkeye" />
  <ome:has_shadow rdf:resource="#Series!Hawkeye" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Series!Hawkeye">
  <rdfs:label>Hawkeye</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:contained_by rdf:resource="#BFPierce" />
  <ome:portrayed_by rdf:resource="#HawkActor2" />
  <ome:has_bond rdf:resource="#Hawkeye_Trapper" />
  <ome:has_bond rdf:resource="#Hawkeye_BJ" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_BFPierce" />
  <ome:has_trait rdf:resource="#Employ_4077ChiefSurgeon" />
  <ome:has_trait rdf:resource="#Employ_4077MedicCapt" />
  <ome:has_trait rdf:resource="#Descrip_Hawkeye" />
  <ome:is_shadow_of rdf:resource="#Movie!Hawkeye" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Book!Hawkeye">
  <rdfs:label>Hawkeye</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Books" />
  <ome:contained_by rdf:resource="#BFPierce" />
  <ome:has_bond rdf:resource="#Hawkeye_Trapper" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_BFPierce" />
  <ome:has_trait rdf:resource="#Employ_4077MedicCapt" />
  <ome:has_shadow rdf:resource="#Movie!Hawkeye" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Mulcahy">
  <rdfs:label>Mulcahy</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH" />
  <ome:contains rdf:resource="#Series!Mulcahy" />
  <ome:contains rdf:resource="#Movie!Mulcahy" />
```

```
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_JMulcahy" />
  <ome:has_trait rdf:resource="#Gender_Male" />
  <ome:has_trait rdf:resource="#Species_HomoSapiens" />
  <ome:has_trait rdf:resource="#State_Corporeal" />
  <ome:has_trait rdf:resource="#State_Living" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specialised</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Series!Mulcahy">
  <rdfs:label>Father Mulcahy</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:contained_by rdf:resource="#Mulcahy" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_FMulcahy" />
  <ome:has_trait rdf:resource="#Employ_4077ChaplinLt" />
  <ome:has_trait rdf:resource="#Employ_4077ChaplinCapt" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Movie!Mulcahy">
  <rdfs:label>Father Mulcahy</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Movie" />
  <ome:contained_by rdf:resource="#Mulcahy" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_JMulcahy" />
  <ome:has_trait rdf:resource="#Employ_4077ChaplinLt" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Movie!Trapper">
  <rdfs:label>Trapper</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Movie" />
  <ome:contained_by rdf:resource="#JMcIntyre" />
  <ome:portrayed_by rdf:resource="#TrapperActor1" />
  <ome:has_bond rdf:resource="#Hawkeye_Trapper" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_JMcIntyre" />
  <ome:has_trait rdf:resource="#Employ_4077MedicCapt" />
```

```
  <ome:has_shadow rdf:resource="#Series!Trapper" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#JMcIntyre">
  <rdfs:label>John McIntyre</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH" />
  <ome:contains rdf:resource="#Series!Trapper" />
  <ome:contains rdf:resource="#Movie!Trapper" />
  <ome:contained_by rdf:resource="#4077Docs" />
  <ome:contained_by rdf:resource="#Swamprats1" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_bond rdf:resource="#Hawkeye_Trapper" />
  <ome:has_trait rdf:resource="#Name_JMcIntyre" />
  <ome:has_trait rdf:resource="#Employ_4077MedicCapt" />
  <ome:has_trait rdf:resource="#Descrip_Trapper" />
  <ome:has_trait rdf:resource="#Gender_Male" />
  <ome:has_trait rdf:resource="#Species_HomoSapiens" />
  <ome:has_trait rdf:resource="#State_Corporeal" />
  <ome:has_trait rdf:resource="#State_Living" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specialised</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Book!MajorH">
  <rdfs:label>M Houlihan</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Books" />
  <ome:contained_by rdf:resource="#MHoulihan" />
  <ome:has_bond rdf:resource="#Hawkeye_Trapper" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_MHoulihan" />
  <ome:has_trait rdf:resource="#Employ_4077Nurse" />
  <ome:has_shadow rdf:resource="#Movie!MajorH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specilised</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Series!MajorH">
  <rdfs:label>M Houlihan</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:portrayed_by rdf:resource="#HotLipsActor2" />
```

```
  <ome:contained_by rdf:resource="#MHoulihan" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_MHoulihan" />
  <ome:has_trait rdf:resource="#Employ_4077ChiefNurse" />
  <ome:is_shadow_of rdf:resource="#Movie!MajorH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Movie!Frank">
  <rdfs:label>F Burns</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Movie" />
  <ome:contained_by rdf:resource="#FBurns" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_FBurns" />
  <ome:has_trait rdf:resource="#Employ_4077MedicMaj" />
  <ome:is_shadow_of rdf:resource="#Book!Frank" />
  <ome:has_shadow rdf:resource="#Series!Frank" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Series!Frank">
  <rdfs:label>F Burns</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:contained_by rdf:resource="#FBurns" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_FBurns" />
  <ome:has_trait rdf:resource="#Employ_4077MedicMaj" />
  <ome:is_shadow_of rdf:resource="#Movie!Frank" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Tuttle">
  <rdfs:label>J Tuttle</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:has_trait rdf:resource="#State_Noncorporeal" />
  <ome:has_trait rdf:resource="#State_NonExistent" />
  <ome:has_trait rdf:resource="#Name_JTuttle" />
  <ome:has_trait rdf:resource="#Descrip_TuttleDescrip" />
  <ome:has_projected_trait rdf:resource="#Gender_Male" />
```

```
  <ome:has_projected_trait rdf:resource="#Species_HomoSapiens" />
  <ome:has_projected_trait rdf:resource="#State_Living" />
  <ome:has_observed_trait rdf:resource="#State_NonExistent" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Series!Klinger">
  <rdfs:label>Klinger</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:place_of_citizenship rdf:resource="#USA" />
  <ome:has_trait rdf:resource="#Name_MKlinger" />
  <ome:has_trait rdf:resource="#Employ_4077ClerkCorp" />
  <ome:has_trait rdf:resource="#Employ_4077ClerkSarge" />
  <ome:has_trait rdf:resource="#State_Corporeal" />
  <ome:has_trait rdf:resource="#State_Living" />
  <ome:has_trait rdf:resource="#Species_HomoSapiens" />
  <ome:has_trait rdf:resource="#Gender_Male" />
  <ome:wears_type rdf:resource="#Dress" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Movie!Blake">
  <rdfs:label>H Blake</rdfs:label>
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<!-- Items -->
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  <ome:allows_existance_of rdf:resource="#Series!Blake" />
  <ome:allows_existance_of rdf:resource="#Series!MajorH" />
  <ome:allows_existance_of rdf:resource="#Series!Hawkeye" />
  <ome:allows_existance_of rdf:resource="#Series!Radar" />
  <ome:allows_existance_of rdf:resource="#Series!Frank" />
  <ome:allows_existance_of rdf:resource="#Series!Trapper" />
  <ome:allows_existance_of rdf:resource="#Series!Mulcahy" />
  <ome:allows_existance_of rdf:resource="#Series!Potter" />
  <ome:allows_existance_of rdf:resource="#Tuttle" />
  <ome:allows_existance_of rdf:resource="#Series!BJ" />
  <ome:allows_existance_of rdf:resource="#Series!Klinger" />
  <ome:allows_existance_of rdf:resource="#Series!Winchester" />
  <ome:allows_existance_of rdf:resource="#Series!Kellye" />
  <ome:allows_existance_of rdf:resource="#Series!Freedman" />
  <ome:allows_existance_of rdf:resource="#PostOp" />
  <ome:allows_existance_of rdf:resource="#OfficersClub" />
  <ome:allows_existance_of rdf:resource="#RosiesBar" />
  <ome:allows_existance_of rdf:resource="#Op" />
  <ome:allows_existance_of rdf:resource="#PreOp" />
  <ome:allows_existance_of rdf:resource="#Orphanage" />
  <ome:allows_existance_of rdf:resource="#Stable" />
  <ome:allows_existance_of rdf:resource="#Cesspool" />
  <ome:allows_existance_of rdf:resource="#MotorPool" />
  <ome:allows_existance_of rdf:resource="#GeneratorShed" />
  <ome:allows_existance_of rdf:resource="#StorageShed" />
  <ome:allows_existance_of rdf:resource="#OfficersLatrine" />
  <ome:allows_existance_of rdf:resource="#ClerksOffice" />
  <ome:allows_existance_of rdf:resource="#COsOffice" />
  <ome:allows_existance_of rdf:resource="#Kitchen" />
  <ome:allows_existance_of rdf:resource="#MessTent" />
  <ome:allows_existance_of rdf:resource="#NursesTent" />
  <ome:allows_existance_of rdf:resource="#VIPTent" />
  <ome:allows_existance_of rdf:resource="#KlingersTent" />
  <ome:allows_existance_of rdf:resource="#MulcahysTent" />
  <ome:allows_existance_of rdf:resource="#ColonalsTent" />
  <ome:allows_existance_of rdf:resource="#HoulihansTent" />
  <ome:allows_existance_of rdf:resource="#BasketballCourt" />
  <ome:allows_existance_of rdf:resource="#ChopperPad" />
  <ome:allows_existance_of rdf:resource="#Minefield" />
  <ome:allows_existance_of rdf:resource="#Office" />
  <ome:allows_existance_of rdf:resource="#Infirmary" />
  <ome:allows_existance_of rdf:resource="#COsOffice" />
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  <ome:is_spin_off_of rdf:resource="#MASH!Movie" />
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<!-- Groups -->
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  </rdf:type>
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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  <ome:has_number_of_parts>2</ome:has_number_of_parts>
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<rdf:Description rdf:about="#USMilitary">
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  <rdf:type>
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  </rdf:type>
  <ome:has_bond rdf:resource="#Oath" />
  <ome:contains rdf:resource="#USArmy" />
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<rdf:Description rdf:about="#USArmy">
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  <ome:contains rdf:resource="#MASHUnit" />
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  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

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  </rdf:type>
  <ome:contains rdf:resource="#BFPierce" />
  <ome:contains rdf:resource="#FBurns" />
  <ome:contains rdf:resource="#HBlake" />
```

```
  <ome:contains rdf:resource="#JMcIntyre" />
  <ome:contains rdf:resource="#Series!BJ" />
  <ome:contained_by rdf:resource="#MASHUnit" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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  </rdf:type>
  <ome:contains rdf:resource="#MHoulihan" />
  <ome:contains rdf:resource="#Series!Kellye" />
  <ome:contained_by rdf:resource="#MASHUnit" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#MASHUnit">
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  <rdf:type>
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  </rdf:type>
  <ome:has_trait rdf:resource="#Name_4077MASH" />
  <ome:contains rdf:resource="#4077Docs" />
  <ome:contains rdf:resource="#4077Nurses" />
  <ome:contained_by rdf:resource="#USArmy" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<rdf:Description rdf:about="#Swamprats1">
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  <ome:has_number_of_parts>3</ome:has_number_of_parts>
  <ome:contains rdf:resource="#BFPierce" />
  <ome:contains rdf:resource="#JMcIntyre" />
  <ome:contains rdf:resource="#FBurns" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<rdf:Description rdf:about="#Swamprats2">
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  <rdf:type>
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  </rdf:type>
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  <ome:has_occurrence rdf:resource="#SwapResidents2" />
  <ome:has_number_of_parts>3</ome:has_number_of_parts>
  <ome:contains rdf:resource="#BFPierce" />
  <ome:contains rdf:resource="#Series!BJ" />
  <ome:contains rdf:resource="#FBurns" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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  <ome:has_number_of_parts>3</ome:has_number_of_parts>
  <ome:contains rdf:resource="#BFPierce" />
  <ome:contains rdf:resource="#Series!BJ" />
  <ome:contains rdf:resource="#Series!Winchester" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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  </rdf:type>
  <ome:governs rdf:resource="#USA" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<!-- Professions -->

<rdf:Description rdf:about="#CompanyClerk">
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  </rdf:type>
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#USArmyDoctor">
  <rdfs:label>US Army Doctor</rdfs:label>
  <rdf:type>
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  <ome:carries_title rdf:resource="#Name_Doctor" />
  <ome:works_for rdf:resource="#USArmy" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#USArmyShrink">
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  </rdf:type>
  <ome:carries_title rdf:resource="#Name_Doctor" />
  <ome:works_for rdf:resource="#USArmy" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#USArmyNurse">
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  <ome:carries_title rdf:resource="#Name_Nurse" />
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  </rdf:type>
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  <ome:works_for rdf:resource="#CatholicChurch" />
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<rdf:Description rdf:about="#USArmyCaptain">
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  <ome:works_for rdf:resource="#USArmy" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#USArmy1stLt">
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  </rdf:type>
  <ome:carries_title rdf:resource="#Name_FirstLt" />
  <ome:works_for rdf:resource="#USArmy" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#USArmyCommendant">
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  </rdf:type>
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  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#USArmyLtCol">
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  </rdf:type>
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  <ome:works_for rdf:resource="#USArmy" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#USArmyMajor">
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<rdf:Description rdf:about="#USArmyColonel">
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  </rdf:type>
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
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  <rdf:type>
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  </rdf:type>
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  <ome:works_for rdf:resource="#USArmy" />
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<rdf:Description rdf:about="#USArmyCorp">
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  </rdf:type>
  <ome:carries_title rdf:resource="#Name_Corporel" />
  <ome:works_for rdf:resource="#USArmy" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<!-- Traits -->

<!-- Age -->

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  </rdf:type>
  <ome:birthday>1924</ome:birthday>
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<!-- Employment -->

<rdf:Description rdf:about="#Employ_4077ChaplinCapt">
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  <rdf:type>
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  </rdf:type>
  <ome:has_profession rdf:resource="#USArmyCaptain" />
  <ome:has_profession rdf:resource="#CatholicPriest" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Employ_4077Nurse">
  <rdfs:label>4077 Nurse (1st Lt)</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:has_profession rdf:resource="#USArmyNurse" />
  <ome:has_profession rdf:resource="#USArmy1stLt" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Employ_4077Commander1">
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  <rdf:type>
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  </rdf:type>
  <ome:has_profession rdf:resource="#USArmyDoctor" />
  <ome:has_profession rdf:resource="#USArmyCommendant" />
  <ome:has_profession rdf:resource="#USArmyLtCol" />
  <ome:responsible_for rdf:resource="#MASHUnit" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<rdf:Description rdf:about="#Employ_4077ChaplinLt">
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  </rdf:type>
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  <ome:has_profession rdf:resource="#USArmy1stLt" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<rdf:Description rdf:about="#Employ_4077MedicMaj">
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  <rdf:type>
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  </rdf:type>
  <ome:has_profession rdf:resource="#USArmyDoctor" />
  <ome:has_profession rdf:resource="#USArmyMajor" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Employ_4077MedicCapt">
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  </rdf:type>
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  <ome:has_profession rdf:resource="#USArmyCaptain" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Employ_4077Commander2">
  <rdfs:label>4077 Commander (2)</rdfs:label>
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  </rdf:type>
  <ome:has_profession rdf:resource="#USArmyDoctor" />
  <ome:has_profession rdf:resource="#USArmyCommendant" />
  <ome:has_profession rdf:resource="#USArmyColonel" />
  <ome:responsible_for rdf:resource="#MASHUnit" />
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  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Employ_4077ChiefSurgen">
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  <rdf:type>
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  </rdf:type>
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  <ome:responsible_for rdf:resource="#4077Docs" />
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  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Employ_4077ChiefNurse">
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  </rdf:type>
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  <ome:responsible_for rdf:resource="#4077Nurses" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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  <rdf:type>
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  </rdf:type>
  <ome:has_profession rdf:resource="#CompanyClerk" />
  <ome:responsible_for rdf:resource="#USArmySarge" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Employ_4077ClerkCorp">
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  </rdf:type>
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<rdf:Description rdf:about="#Employ_ArmyPsychiatrist">
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  </rdf:type>
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  <ome:has_profession rdf:resource="#USArmyMajor" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<!-- Faith -->

<rdf:Description rdf:about="#Faith_CatholicChurch">
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  </rdf:type>
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  <ome:abstractness>generic</ome:abstractness>
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```
</rdf:Description>

<!-- Gender -->

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  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#Gender_Female">
  <rdfs:label>Female</rdfs:label>
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    <owl:Class rdf:about="&ome;Gender" />
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<!-- Names -->

<rdf:Description rdf:about="#Name_Sargeant">
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  <rdf:type>
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  </ome:name>
  <ome:given_name>
    <rdf:Seq>
      <rdf:li>Kealani</rdf:li>
      <rdf:li>Kellye</rdf:li>
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  </ome:given_name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<!-- Physical Description -->

<rdf:Description rdf:about="#Descrip_Tuttle">
  <rdfs:label>Tuttle Description</rdfs:label>
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    <owl:Class rdf:about="&ome;Character_Description" />
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  </rdf:type>
  <ome:description rdf:resource="#Descrip_195lbs" />
  <ome:description rdf:resource="#Descrip_6'4" />
  <ome:description rdf:resource="#Descrip_HazelEyes" />
  <ome:description rdf:resource="#Descrip_AuburnHair" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Descrip_Hawkeye">
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  <ome:description rdf:resource="#Descrip_BlueEyes" />
  <ome:description rdf:resource="#Descrip_ShortDarkHair" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Descrip_Trapper">
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  <ome:description rdf:resource="#Descrip_ShortCurleyBlondHair" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<rdf:Description rdf:about="#Descrip_BJ">
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  </rdf:type>
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  <ome:description rdf:resource="#Descrip_ShortBlondHair" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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</rdf:Description>

<rdf:Description rdf:about="#Dark_Brown">
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  <rdf:type>
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#Blond">
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Auburn">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Colour" />
  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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<rdf:Description rdf:about="#Blue">
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</rdf:Description>

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<rdf:Description rdf:about="#Descrip_6'4">
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  </rdf:type>
  <ome:axis>height</ome:axis>
  <ome:unit>Inches</ome:unit>
  <ome:has-trait rdf:resource="Value_76" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Descrip_195lbs">
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  </rdf:type>
  <ome:axis>weight</ome:axis>
  <ome:unit>Pounds</ome:unit>
  <ome:has-trait rdf:resource="Value_195" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Short">
  <rdfs:label>Short</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Style" />
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Curley">
  <rdfs:label>Curley</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Type" />
  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<!-- Species -->

<rdf:Description rdf:about="#Species_HomoSapiens">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Species" />
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<!-- State -->

<rdf:Description rdf:about="#State_Living">
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  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#State_NonExistent">
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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</rdf:Description>

<rdf:Description rdf:about="#State_Corporeal">
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  <rdf:type>
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#State_Noncorporeal">
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<!-- Value -->

<rdf:Description rdf:about="#Value_76">
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  </rdf:type>
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  <ome:value>195</ome:value>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<!-- Physical Item -->

<rdf:Description rdf:about="#TheStill">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Physical_Item" />
  </rdf:type>
  <ome:location rdf:resource="#Swamp" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<!-- Body Parts -->

<rdf:Description rdf:about="#Descrip_BrownEyes">
  <rdfs:label>Brown Eyes</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Eyes" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Brown" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Descrip_BlueEyes">
  <rdfs:label>Blue Eyes</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Eyes" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Blue" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Descrip_HazelEyes">
  <rdfs:label>Hazel Eyes</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&ome;Eyes" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Hazel" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#Descrip_ShortBlondHair">
  <rdfs:label>Short Blond Hair</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Head_Hair" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Short" />
  <ome:has-trait rdf:resource="#Blond" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Descrip_AuburnHair">
  <rdfs:label>Auburn Hair</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Head_Hair" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Auburn" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Descrip_ShortDarkHair">
  <rdfs:label>Short Dark Hair</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Head_Hair" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Short" />
  <ome:has-trait rdf:resource="#Dark_Brown" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Descrip_ShortCurleyBlondHair">
  <rdfs:label>Short Curley Blond Hair</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Head_Hair" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Short" />
  <ome:has-trait rdf:resource="#Curley" />
  <ome:has-trait rdf:resource="#Blond" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>
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<!-- Attire -->

<rdf:Description rdf:about="#RedDressingGownl">
  <rdfs:label>Red Dressing Gown</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&base;Nightwear" />
  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Dress">
  <rdfs:label>Dressn</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&base;Dress" />
  </rdf:type>
  <ome:usually_worn_by rdf:resource="#Gender_Female" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<!-- Occurrence -->

<rdf:Description rdf:about="#BlakeCO">
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  </rdf:type>
  <ome:precedes rdf:resource="#PotterCO" />
  <ome:timeline-ref rdf:resource="#Commanders" />
  <ome:occurrence-of rdf:resource="#HBlake" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<rdf:Description rdf:about="#PotterCO">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:follows rdf:resource="#BlakeCO" />
  <ome:timeline-ref rdf:resource="#Commanders" />
  <ome:occurrence-of rdf:resource="#Series!Potter" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#RadarClerk">
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  <rdf:type>
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```
  </rdf:type>
  <ome:precedes rdf:resource="#KlingerClerk" />
  <ome:timeline-ref rdf:resource="#Clerks" />
  <ome:occurrence-of rdf:resource="#WORielly" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#KlingerClerk">
  <rdfs:label>Klinger Clerk</rdfs:label>
  <rdf:type>
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  </rdf:type>
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  <ome:timeline-ref rdf:resource="#Clerks" />
  <ome:occurrence-of rdf:resource="#Series!Klinger" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#SwampResidents3">
  <rdfs:label>Swamp Residents 3</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:follows rdf:resource="#SwampResidents2" />
  <ome:timeline-ref rdf:resource="#SwampResidents" />
  <ome:occurrence-of rdf:resource="#SwampRats3" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<rdf:Description rdf:about="#SwampResidents2">
  <rdfs:label>Swamp Residents 2</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:follows rdf:resource="#SwampResidents1" />
  <ome:precedes rdf:resource="#SwampResidents3" />
  <ome:timeline-ref rdf:resource="#SwampResidents" />
  <ome:occurrence-of rdf:resource="#SwampRats2" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#SwampResidents1">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:follows rdf:resource="#SwampResidents1" />
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```
  <ome:precedes rdf:resource="#SwampResidents3" />
  <ome:timeline-ref rdf:resource="#SwampResidents" />
  <ome:occurrence-of rdf:resource="#SwampRats2" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<!-- Buildings -->

<rdf:Description rdf:about="#Swamp">
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  </rdf:type>
  <ome:has_usual_occupent rdf:resource="#SwampResidents" />
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:has-trait rdf:resource="#Name_TheSwamp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="MASH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#OfficersClub">
  <rdfs:label>Officers Club</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#RosiesBar">
  <rdfs:label>Rosie's Bar</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#SouthKorea" />
  <ome:adjacent_to rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Orphanage">
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  </rdf:type>
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  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#Stable">
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  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Cesspool">
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  <rdf:type>
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  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#MotorPool">
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  <rdf:type>
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  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#GeneratorShed">
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  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
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  <ome:abstractness>Specific</ome:abstractness>
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<rdf:Description rdf:about="#StorageShed">
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  <rdf:type>
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  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#OfficersLatrine">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Kitchen">
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  <rdf:type>
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  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#MessTent">
  <rdfs:label>Mess Tent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>
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  <rdfs:label>Nurse's Tent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:has_usual_occupent rdf:resource="#4077Nurses" />
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#VIPTent">
  <rdfs:label>VIP Tent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#KlingersTent">
  <rdfs:label>Klinger's Tent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:has_usual_occupent rdf:resource="#Series!Klinger" />
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#MulcaheysTent">
  <rdfs:label>Mulcahey's Tent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:has_usual_occupent rdf:resource="#Mulcahey" />
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>
```

```
<rdf:Description rdf:about="#ColonalsTent">
  <rdfs:label>Colonal's Tent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:has_usual_occupent rdf:resource="#Commanders" />
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#HoulihansTent">
  <rdfs:label>Houlihan's Tent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:has_usual_occupent rdf:resource="#MHoulihan" />
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Office">
  <rdfs:label>Office</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Infirmary">
  <rdfs:label>Infirmary</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>
```

```
<rdf:Description rdf:about="#PostOp">
  <rdfs:label>Post-Op</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Room" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#Infirmary" />
  <ome:adjacent_to rdf:resource="#Op" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Op">
  <rdfs:label>Opperating Theatre</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Room" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#Infirmary" />
  <ome:adjacent_to rdf:resource="#PostOp" />
  <ome:adjacent_to rdf:resource="#PreOp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#PreOp">
  <rdfs:label>Pre-Op</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Room" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#Infirmary" />
  <ome:adjacent_to rdf:resource="#Op" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#ClerkOffice">
  <rdfs:label>Clerk's Office</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Room" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#Office" />
  <ome:adjacent_to rdf:resource="#COsOffice" />
  <ome:has_usual_occupent rdf:resource="#Clerks" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
```

```
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#COsOffice">
  <rdfs:label>Clerk's Office</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Room" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#Office" />
  <ome:adjacent_to rdf:resource="#ClerkOffice" />
  <ome:has_usual_occupent rdf:resource="#Commanders" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#4077Camp">
  <rdfs:label>4077Camp</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Area" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#SouthKorea" />
  <ome:adjacent_to rdf:resource="#MineField" />
  <ome:has-part rdf:resource="#OfficersClub" />
  <ome:has-part rdf:resource="#Stable" />
  <ome:has-part rdf:resource="#Cesspool" />
  <ome:has-part rdf:resource="#MotorPool" />
  <ome:has-part rdf:resource="#GeneratorShed" />
  <ome:has-part rdf:resource="#StorageShed" />
  <ome:has-part rdf:resource="#OfficersLatrine" />
  <ome:has-part rdf:resource="#Kitchen" />
  <ome:has-part rdf:resource="#MessTent" />
  <ome:has-part rdf:resource="#NursesTent" />
  <ome:has-part rdf:resource="#VIPTent" />
  <ome:has-part rdf:resource="#KlingersTent" />
  <ome:has-part rdf:resource="#MulcaheysTent" />
  <ome:has-part rdf:resource="#ColonalsTent" />
  <ome:has-part rdf:resource="#HoulihansTent" />
  <ome:has-part rdf:resource="#ChopperPad" />
  <ome:has-part rdf:resource="#BasketballCourt" />
  <ome:has-part rdf:resource="#Office" />
  <ome:has-part rdf:resource="#Infirmary" />
  <ome:exists_in rdf:resource="#MASH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#NorthKorea">
  <rdfs:label>North Korea</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&ome;Area" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#Korea" />
  <ome:adjacent_to rdf:resource="#SouthKorea" />
  <ome:exists_in rdf:resource="#MASH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#SouthKorea">
  <rdfs:label>South Korea</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Area" />
  </rdf:type>
  <ome:is-located-in rdf:resource="#Korea" />
  <ome:adjacent_to rdf:resource="#SouthKorea" />
  <ome:exists_in rdf:resource="#MASH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#MineField">
  <rdfs:label>Mine Field</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Area" />
  </rdf:type>
  <ome:adjacent_to rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#ChopperPad">
  <rdfs:label>Chopper Pad</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Area" />
  </rdf:type>
  <ome:adjacent_to rdf:resource="#4077Camp" />
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#BasketballCourt">
  <rdfs:label>Basketball Court</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Area" />
  </rdf:type>
  <ome:is-part-of rdf:resource="#4077Camp" />
  <ome:is-located-in rdf:resource="#4077Camp" />
```

```
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Korea">
  <rdfs:label>Korea</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Country" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:has-part rdf:resource="#NorthKorea" />
  <ome:has-part rdf:resource="#SouthKorea" />
</rdf:Description>

<rdf:Description rdf:about="#USA">
  <rdfs:label>USA</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Country" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Name_USA" />
  <ome:exists_in rdf:resource="#MASH" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<!-- Timelines -->

<rdf:Description rdf:about="#Commanders">
  <rdfs:label>Commanders Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Clerks">
  <rdfs:label>Clerks Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#SwampResidents">
```

```
  <rdfs:label>Swamp Residents Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
  <ome:exists_in rdf:resource="#MASH!Series" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<!-- Events -->

<rdf:Description rdf:about="#Peace">
  <rdfs:label>Korean police action ends</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Loss" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#KoreanPoliceAction" />
  <ome:involves rdf:resource="#UN" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#GoingHome">
  <rdfs:label>Returning to the States</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Air_Travel" />
  </rdf:type>
  <ome:from rdf:resource="#Korea" />
  <ome:from rdf:resource="#USA" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specialised</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#KlingerPromotion">
  <rdfs:label>Klinger is promoted</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Promotion" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Series!Klinger" />
  <ome:involves rdf:resource="#MASHUnit" />
  <ome:from rdf:resource="#USArmyCorporal" />
  <ome:to rdf:resource="#USArmySarge" />
  <ome:spoiler_rating>Key</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#MulcahyPromotion">
  <rdfs:label>Father Mulcahy promoted</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Promotion" />
  </rdf:type>
```

```
  <ome:has_subject_entity rdf:resource="#Series!Mulcahy" />
  <ome:involves rdf:resource="#MASHUnit" />
  <ome:from rdf:resource="#USArmy1stLt" />
  <ome:to rdf:resource="#USArmyCaptain" />
  <ome:spoiler_rating>Key</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#BlakeDeath">
  <rdfs:label>Blake Killed</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Series!Blake" />
  <ome:from rdf:resource="#State_Living" />
  <ome:to rdf:resource="#State_Dead" />
  <ome:spoiler_rating>Spoiler</ome:spoiler_rating>
  <ome:abstractness>Specific</ome:abstractness>
</rdf:Description>

</rdf:RDF>
```

Listing F.2: OntoMedia: M*A*S*H. (Note: This uses the first version of the OntoMedia ontology.)

F.3 'We Can Remember it for you Wholesale' by Philip K. Dick

```
?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/WholesaleExample#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    ontomedia#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:ome="&ome;">

<!-- OWL Classes -->

<owl:Class rdf:ID="#Wholesale:Technician">
    <rdfs:comment>This class represents a memory technicion</rdfs:comment
    >
    <rdfs:label>Memory Technicion</rdfs:label>
    <rdfs:subClassOf rdf:resource="&ome;Healthcare" />
</owl:Class>

<owl:Class rdf:ID="#Rekal_Package">
    <rdfs:comment>This class represents a package of physical evidence
    offered by Rekal</rdfs:comment>
    <rdfs:label>Rekal Package</rdfs:label>
    <rdfs:subClassOf rdf:resource="&ome;Physical_Item" />
</owl:Class>

<owl:Class rdf:ID="#Rekal_Product">
    <rdfs:comment>This class represents a product offered by Rekal</
    rdfs:comment>
    <rdfs:label>Rekal Product</rdfs:label>
    <rdfs:subClassOf rdf:resource="&ome;Abstract_Item" />
</owl:Class>

<owl:Class rdf:ID="#Treatment">
    <rdfs:comment>This class represents a treatment</rdfs:comment>
    <rdfs:label>Treatment</rdfs:label>
    <rdfs:subClassOf rdf:resource="&ome;Abstract_Item" />
```

```
</owl:Class>

<owl:Class rdf:ID="#Memory_Removal_Treatment">
    <rdfs:comment>This class represents a treatment to remove memories</
    rdfs:comment>
    <rdfs:label>Memory Removal Treatment</rdfs:label>
    <rdfs:subClassOf rdf:resource="#Treatment" />
</owl:Class>

<owl:Class rdf:ID="#Memory_Implant_Treatment">
    <rdfs:comment>This class represents a treatment to implant memories</
    rdfs:comment>
    <rdfs:label>Memory Implant Treatment</rdfs:label>
    <rdfs:subClassOf rdf:resource="#Treatment" />
</owl:Class>

<!-- Contexts -->

<rdf:Description rdf:about="#RealLife">
  <rdfs:label>Real Life</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Universe">
  <rdfs:label>Wholesale Universe</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:has-shadow rdf:resource="#TotalRecall!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#TotalRecall!Universe">
  <rdfs:label>Total Recall Universe</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:is-shadow-of rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<!-- Characters -->

<rdf:Description rdf:about="#Wholesale!DouglasQuail">
  <rdfs:label>Douglas Quail</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-bond rdf:resource="#Wholesale!Marriage1" />
  <ome:has-trait rdf:resource="#Wholesale!Char1" />
  <ome:has-trait rdf:resource="#Gender!Male" />
```

```
  <ome:has-trait rdf:resource="#Wholesale!DQuailAssassin" />
  <ome:has-trait rdf:resource="#Wholesale!GoToMars" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:has-observed-trait rdf:resource="#Wholesale!QuailClark" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:contained_by rdf:resource="#Wholesale!AlienAllience" />
  <ome:contained_by rdf:resource="#Wholesale!QuailMarriage" />
  <ome:contained_by rdf:resource="#Wholesale!QuailHousehold" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!DouglasQuail#1">
  <rdfs:label>Douglas Quail on Mars</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Char1" />
  <ome:has-trait rdf:resource="#Gender!Male" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:has-location rdf:resource="#Mars" />
  <ome:is_potentiality_of rdf:resource="#Wholesale!DouglasQuail" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Lowe">
  <rdfs:label>Lowe</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Char4" />
  <ome:has-trait rdf:resource="#Wholesale!RekalLabTech" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Keeler">
  <rdfs:label>Keeler</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Char5" />
  <ome:has-trait rdf:resource="#Wholesale!RekalLabTech" />
```

```
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!MartianPolitician">
  <rdfs:label>Martian Politician</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:contained_by rdf:resource="#Wholesale!MartianParty" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!YoungDoug">
  <rdfs:label>Young Doug</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Char1" />
  <ome:has-trait rdf:resource="#Gender!Male" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:has-trait rdf:resource="#Wholesale!SaveTheWorld" />
  <ome:has-trait rdf:resource="#NineYearsOld" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Shrink">
  <rdfs:label>Interplan Shrink</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!InterplanPsyche" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
</rdf:Description>

<rdf:Description rdf:about="#Interplan_Brass">
  <rdfs:label>Reality</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!InterplanRank" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#KirstenQuail">
  <rdfs:label>Kirsten Quail</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-bond rdf:resource="#Wholesale!Marriage2" />
  <ome:has-trait rdf:resource="#Wholesale!Char2" />
  <ome:has-trait rdf:resource="#Gender!Female" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:contained_by rdf:resource="#Wholesale!QuailMarriage" />
  <ome:contained_by rdf:resource="#Wholesale!QuailHousehold" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!KirstenQuail#1">
  <rdfs:label>Reality</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Char2" />
  <ome:has-trait rdf:resource="#Gender!Female" />
  <ome:has-trait rdf:resource="#Wholesale!KQuailAgent" />
  <ome:has-projected-trait rdf:resource="#Wholesale!KQuailCover" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:contained_by rdf:resource="#Wholesale!QuailMarriage" />
  <ome:contained_by rdf:resource="#Wholesale!QuailHousehold" />
  <ome:is_potentiality_of rdf:resource="#Wholesale!KirstenQuail" />
  <ome:is rdf:resource="#Wholesale!Theory1" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!McClain">
  <rdfs:label>Reality</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Original_Character" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Char3" />
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```
  <ome:has-trait rdf:resource="#Gender!Male" />
  <ome:has-trait rdf:resource="#State!Living" />
  <ome:has-trait rdf:resource="#Wholesale!RekalRank" />
  <ome:has-trait rdf:resource="#State!Corporeal" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<!-- Bonds -->

<rdf:Description rdf:about="#Wholesale!AlienAllience">
  <rdfs:label>Alien Allience</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Allience" />
  </rdf:type>
  <ome:contains rdf:resource="#Wholesale!DouglasQuail" />
  <ome:contains rdf:resource="#Wholesale!Aliens" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Deal">
  <rdfs:label>The Deal</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Deal" />
  </rdf:type>
  <ome:condition rdf:resource="#Wholesale!InterplanDeal" />
  <ome:condition rdf:resource="#Wholesale!QuailDeal" />
  <ome:dealmaker rdf:resource="#Wholesale!Interplan" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!InterplanDeal">
  <rdfs:label>Interplan Pledge</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Pledge" />
  </rdf:type>
  <ome:will-not-do rdf:resource="#E25" />
  <ome:pledger rdf:resource="#Wholesale!Interplan" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!QuailDeal">
  <rdfs:label>Interplan Pledge</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Pledge" />
  </rdf:type>
```

```
  <ome:will-do rdf:resource="#E19" />
  <ome:will-do rdf:resource="#E26" />
  <ome:pledgee rdf:resource="#Wholesale!Interplan" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Marriage1">
  <rdfs:label>Doug Pledge to Kirsten</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Pledge" />
  </rdf:type>
  <ome:will-bond-to rdf:resource="#Wholesale!KirstenQuail" />
  <ome:pledger rdf:resource="#Wholesale!DouglasQuail" />
  <ome:pledgee rdf:resource="#Wholesale!KirstenQuail" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Marriage2">
  <rdfs:label>Kirsten Pledge to Doug</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Pledge" />
  </rdf:type>
  <ome:will-bond-to rdf:resource="#Wholesale!DouglasQuail" />
  <ome:pledger rdf:resource="#Wholesale!KirstenQuail" />
  <ome:pledgee rdf:resource="#Wholesale!DouglasQuail" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<!-- Culture -->

<rdf:Description rdf:about="#Refund">
  <rdfs:label>Refund</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Money" />
  </rdf:type>
  <ome:is_owned_by rdf:resource="#Wholesale!Rekal" />
  <ome:contains rdf:resource="#Wholesale!Currency" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<!-- Groups -->

<rdf:Description rdf:about="#Wholesale!Bodyguards">
  <rdfs:label>Bodyguards</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Group" />
  </rdf:type>
```

```
  <ome:has_number_of_parts>15</ome:has_number_of_parts>
  <ome:has-trait rdf:resource="#Wholesale!GuardPolitician" />
  <ome:contains rdf:resource="#Wholesale!Gun" />
  <ome:has-location rdf:resource="#Mars" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Aliens">
  <rdfs:label>Aliens</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Group" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!TakeOverTheWorld" />
  <ome:contains rdf:resource="#Wholesale!AlienInvaders" />
  <ome:contained_by rdf:resource="#Wholesale!AlienAllience" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!InterplanTeam">
  <rdfs:label>Interplan Team</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Bonded_Group" />
  </rdf:type>
  <ome:has_number_of_parts>2</ome:has_number_of_parts>
  <ome:has-trait rdf:resource="#Wholesale!PreventMemories" />
  <ome:contains rdf:resource="#Wholesale!InterplanCops" />
  <ome:has-location rdf:resource="#QuailHouse" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!AlienInvaders">
  <rdfs:label>Alien Invaders</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Bonded_Group" />
  </rdf:type>
  <ome:owns rdf:resource="#Wholesale!Earth" />
  <ome:has-trait rdf:resource="#Wholesale!TakeOverTheWorld" />
  <ome:order_of_magnitude>3</ome:order_of_magnitude>
  <ome:contained_by rdf:resource="#Wholesale!Aliens" />
  <ome:has-location rdf:resource="#Wholesale!Earth" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>
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```
<rdf:Description rdf:about="#Wholesale!QuailMarriage">
  <rdfs:label>Quail Marriage</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Partnership" />
  </rdf:type>
  <ome:has_bond rdf:resource="#Wholesale!Marriage1" />
  <ome:has_bond rdf:resource="#Wholesale!Marriage2" />
  <ome:contains rdf:resource="#Wholesale!DouglasQuail" />
  <ome:contains rdf:resource="#Wholesale!KirstenQuail" />
  <ome:contains rdf:resource="#Wholesale!KirstenQuail#1" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!QuailHousehold">
  <rdfs:label>Quail Household</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Household" />
  </rdf:type>
  <ome:contains rdf:resource="#Wholesale!DouglasQuail" />
  <ome:contains rdf:resource="#Wholesale!KirstenQuail" />
  <ome:contains rdf:resource="#Wholesale!KirstenQuail#1" />
  <ome:has-location rdf:resource="#QuailHouse" />
  <ome:spoiler_rating>nitpick</ome:spoiler_rating>
  <ome:abstractness>nitpick</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Emigration_Bureau">
  <rdfs:label>Emigration Bureau</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Organisation" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Emigration" />
  <ome:contained_by rdf:resource="#Wholesale!Government" />
  <ome:spoiler_rating>nitpick</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!MartianParty">
  <rdfs:label>Martian Party</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Organisation" />
  </rdf:type>
  <ome:contains rdf:resource="#Wholesale!MartianPolitician" />
  <ome:spoiler_rating>nitpick</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
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```
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  <rdfs:label>Interplan</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Organisation" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!InterplanName" />
  <ome:contained_by rdf:resource="#Wholesale!Government" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Rekal">
  <rdfs:label>Rekal</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Company" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!RekalName" />
  <ome:owns rdf:resource="#refund" />
  <ome:location rdf:resource="#US!Chicago" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Interplan">
  <rdfs:label>Earth Government</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Government" />
  </rdf:type>
  <ome:contains rdf:resource="#Wholesale!Interplan" />
  <ome:contains rdf:resource="#Wholesale!Emigration_Bureau" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<!-- Knowledge -->

<rdf:Description rdf:about="#Wholesale!UltimateFantasy">
  <rdfs:label>Ultimate Fantasy</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Fact" />
  </rdf:type>
  <ome:is rdf:resource="#Wholesale!RekalProduct2" />
  <ome:is rdf:resource="#E24" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>
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<rdf:Description rdf:about="#Wholesale!Memory1">
  <rdfs:label>Memory of Visit to Mars</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Memory" />
  </rdf:type>
  <ome:contained_by rdf:resource="#Wholesale!RekalProduct1" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Memory2">
  <rdfs:label>Memory of being Interplan Agent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Memory" />
  </rdf:type>
  <ome:location rdf:resource="#Mars" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Memory3">
  <rdfs:label>Memory of being Assasinating Martian Politician</rdfs:label
    >
  <rdf:type>
    <owl:Class rdf:about="&ome;Memory" />
  </rdf:type>
  <ome:subject rdf:resource="#E8" />
  <ome:location rdf:resource="#Mars" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Memory4">
  <rdfs:label>Memory of Memory Removal</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Memory" />
  </rdf:type>
  <ome:subject rdf:resource="#E26" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Memory5">
  <rdfs:label>Memory of Saving Earth</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Memory" />
  </rdf:type>
  <ome:subject rdf:resource="#E24" />
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```
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Theory1">
  <rdfs:label>Suspicion about Kirsten Quail</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Theory" />
  </rdf:type>
  <ome:is rdf:resource="#Wholesale!KirstenQuail#1" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<!-- Professions -->

<rdf:Description rdf:about="#Wholesale!RekalCEO">
  <rdfs:label>Rekal CEO</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Clerical" />
  </rdf:type>
  <ome:works-for rdf:resource="#Wholesale!Rekal" />
  <ome:location rdf:resource="#US!Chicago" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Emigration_Clerk">
  <rdfs:label>Emigration Clerk</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Clerical" />
  </rdf:type>
  <ome:works-for rdf:resource="#Wholesale!Emigration_Bureau" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Wife">
  <rdfs:label>Wife</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Domestic" />
  </rdf:type>
  <ome:projected-at rdf:resource="#Wholesale!DouglasQuail" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>
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```
<rdf:Description rdf:about="#Wholesale!InterplanCops">
  <rdfs:label>Interplan Cops</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Law_Enforcement" />
  </rdf:type>
  <ome:works-for rdf:resource="#Wholesale!Interplan" />
  <ome:location rdf:resource="#US!Chicago" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!InterplanRank">
  <rdfs:label>Interplan Rank</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Law_Enforcement" />
  </rdf:type>
  <ome:works-for rdf:resource="#Wholesale!Interplan" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!InterplanAgent">
  <rdfs:label>Interplan Special Agent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Special_Services" />
  </rdf:type>
  <ome:works-for rdf:resource="#Wholesale!Interplan" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!SS1">
  <rdfs:label>Government Assassin</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Special_Services" />
  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Psychiatrist">
  <rdfs:label>Psychiatrist</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Doctor" />
  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
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```
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!MemTech">
  <rdfs:label>Memory Tech</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="#Wholesale:Technician" />
  </rdf:type>
  <ome:works-for rdf:resource="#Wholesale!Rekal" />
  <ome:location rdf:resource="#Wholesale!RekalBuilding " />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!InterplanSpy">
  <rdfs:label>Interplan Spy</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Intelligencer" />
  </rdf:type>
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
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<rdf:Description rdf:about="#Wholesale!Hero">
  <rdfs:label>Hero</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<!-- Traits -->

<!-- Age -->

<rdf:Description rdf:about="#NineYearsOld">
  <rdfs:label>Age 9</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Age" />
  </rdf:type>
  <ome:age>9</ome:age>
</rdf:Description>

<!-- Employment -->

<rdf:Description rdf:about="#Wholesale!QuailClark">
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  <rdfs:label>Clark</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
  </rdf:type>
  <ome:has_profession rdf:resource="#Wholesale!Emigration_Clerk" />
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<rdf:Description rdf:about="#Wholesale!DQuailAssassin">
  <rdfs:label>Assassin</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
  </rdf:type>
  <ome:has_profession rdf:resource="#Wholesale!SS1" />
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<rdf:Description rdf:about="#Wholesale!IsAHero">
  <rdfs:label>Hero</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
  </rdf:type>
  <ome:has_profession rdf:resource="#Wholesale!Hero" />
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<rdf:Description rdf:about="#Wholesale!DQuailAgent">
  <rdfs:label>Special Agent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
  </rdf:type>
  <ome:observed_profession rdf:resource="#Wholesale!InterplanAgent" />
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<rdf:Description rdf:about="#Wholesale!InterplanRank">
  <rdfs:label>Interplan Top Brass</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:has_profession rdf:resource="#Wholesale!InterplanRank" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!RekalLabTech">
  <rdfs:label>Memory Technicion</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:has_profession rdf:resource="#Wholesale!MemTech" />
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<rdf:Description rdf:about="#Wholesale!KQuailAgent">
  <rdfs:label>Special Agent</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
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  </rdf:type>
  <ome:has_profession rdf:resource="#Wholesale!InterplanAgent" />
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<rdf:Description rdf:about="#Wholesale!KQuailCover">
  <rdfs:label>Agent Undercover as Wife</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
  </rdf:type>
  <ome:projected_profession rdf:resource="#Wholesale!DouglasQuail" />
  <ome:projected_at rdf:resource="#Wholesale!Wife" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!RekalRank">
  <rdfs:label>Rekal Top Brass</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
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  <ome:has_profession rdf:resource="#Wholesale!RekalCEO" />
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<rdf:Description rdf:about="#Wholesale!InterplanPsyche">
  <rdfs:label>Interplan Phyche</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Employment" />
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  <ome:has_profession rdf:resource="#Wholesale!Psychiatrist" />
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<!-- Gender -->

<rdf:Description rdf:about="#Gender!Male">
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  <rdf:type>
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</rdf:Description>

<rdf:Description rdf:about="#Gender!Female">
  <rdfs:label>Female</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gender" />
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</rdf:Description>

<!-- Motivation -->

<rdf:Description rdf:about="#Wholesale!GuardPolitician">
  <rdfs:label>Guard Politician</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Motivation" />
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  </rdf:type>
  <ome:has_neg_motivation rdf:resource="#E30" />
  <ome:is_owned_by rdf:resource="#Wholesale!Bodyguards" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!QuailDead">
  <rdfs:label>Kill Quail</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Motivation" />
  </rdf:type>
  <ome:has_motivation rdf:resource="#E25" />
  <ome:priority>high</ome:priority>
  <ome:is_owned_by rdf:resource="#Wholesale!Interplan" />
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<rdf:Description rdf:about="#Wholesale!GoToMars">
  <rdfs:label>Visit Mars</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Motivation" />
  </rdf:type>
  <ome:has_motivation rdf:resource="#E7" />
  <ome:priority>high</ome:priority>
  <ome:is_owned_by rdf:resource="#Wholesale!DouglasQuail" />
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<rdf:Description rdf:about="#Wholesale!QuailStayingAlive">
  <rdfs:label>Stay Alive</rdfs:label>
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    <owl:Class rdf:about="&ome;Motivation" />
  </rdf:type>
  <ome:has_neg_motivation rdf:resource="#E25" />
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  <ome:is_owned_by rdf:resource="#Wholesale!DouglasQuail" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!SaveTheWorld">
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  </rdf:type>
  <ome:has_neg_motivation rdf:resource="#E27" />
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  <ome:is_owned_by rdf:resource="#Wholesale!DouglasQuail" />
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<rdf:Description rdf:about="#Wholesale!TakeOverTheWorld">
  <rdfs:label>Take Over the World</rdfs:label>
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  </rdf:type>
  <ome:has_motivation rdf:resource="#E27" />
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  <ome:priority>high</ome:priority>
  <ome:is_owned_by rdf:resource="#Wholesale!Aliens" />
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<rdf:Description rdf:about="#Wholesale!PreventMemories">
  <rdfs:label>Prevent Memories</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Motivation" />
  </rdf:type>
  <ome:has_neg_motivation rdf:resource="#E15" />
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  <ome:is_owned_by rdf:resource="#Wholesale!InterplanTeam" />
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<!-- Names -->

<rdf:Description rdf:about="#Wholesale!Char1">
  <rdfs:label>Douglas Quail</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:given_name>
    <rdf:Seq>
      <rdf:li>Douglas</li>
      <rdf:li>Quail</li>
    </rdf:Seq>
  </ome:given_name>
  <ome:name>
    <rdf:Seq>
      <rdf:li>Mr</li>
      <rdf:li>Douglas</li>
      <rdf:li>Quail</li>
    </rdf:Seq>
  </ome:name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#MarsName">
  <rdfs:label>Mars</rdfs:label>
  <rdf:type>
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  <ome:given_name>Mars</ome:given_name>
  <ome:name>Mars</ome:name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#EarthName">
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```

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  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
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  <ome:given_name>Earth</ome:given_name>
  <ome:name>Earth</ome:name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<rdf:Description rdf:about="#Wholesale!NarkidrineName">
  <rdfs:label>Narkidrine</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:given_name>Narkidrine</ome:given_name>
  <ome:name>Narkidrine</ome:name>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Char4">
  <rdfs:label>Lowe</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:given_name>Lowe</ome:given_name>
  <ome:name>Lowe</ome:name>
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<rdf:Description rdf:about="#Wholesale!Emigration">
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  <rdf:type>
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  </rdf:type>
  <ome:name>West Coast Emigration Bureau</ome:name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Char5">
  <rdfs:label>Keeler</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:given_name>Keeler </ome:given_name>
  <ome:name>Keeler </ome:name>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!SneakyPete">
  <rdfs:label>Sneaky-Pete</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
```

```
  <ome:given_name>Sneaky-Pete</ome:given_name>
  <ome:name>Sneaky-Pete</ome:name>
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<rdf:Description rdf:about="#Wholesale!Pack3Name">
  <rdfs:label>Package 3</rdfs:label>
  <rdf:type>
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  </rdf:type>
  <ome:name>Package 3</ome:name>
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<rdf:Description rdf:about="#Wholesale!Pack62Name">
  <rdfs:label>Package 62</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:name>Package 62</ome:name>
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<rdf:Description rdf:about="#Wholesale!SneakyPete">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:given_name>Sneaky-Pete</ome:given_name>
  <ome:name>Sneaky-Pete</ome:name>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Char2">
  <rdfs:label>Kirsten Quail</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:given_name>
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      <rdf:li>Kirsten</li>
      <rdf:li>Quail</li>
    </rdf:Seq>
  </ome:given_name>
  <ome:name>
    <rdf:Seq>
      <rdf:li>Mrs</li>
      <rdf:li>Kirsten</li>
      <rdf:li>Quail</li>
    </rdf:Seq>
  </ome:name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
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  <ome:name>Chicago</ome:name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!RekalName">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:name>Rekal, Incorporated</ome:name>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Char3">
  <rdfs:label>Mr McClane</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Name" />
  </rdf:type>
  <ome:given_name>McClane</ome:given_name>
  <ome:name>
    <rdf:Seq>
      <rdf:li>Mr</li>
      <rdf:li>McClane</li>
    </rdf:Seq>
  </ome:name>
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#NewYorkName">
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  <rdf:type>
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  <ome:given_name>New York</ome:given_name>
  <ome:name>New York</ome:name>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
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<!-- State of Being -->

<rdf:Description rdf:about="#State!Living">
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```

```
    <owl:Class rdf:about="&ome;State_Being" />
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<rdf:Description rdf:about="#State!Dead">
  <rdfs:label>Dead</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;State_Being" />
  </rdf:type>
</rdf:Description>

<!-- State of Form -->

<rdf:Description rdf:about="#State!Corporeal">
  <rdfs:label>Corporeal</rdfs:label>
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    <owl:Class rdf:about="&ome;State_Form" />
  </rdf:type>
</rdf:Description>

<!-- Abstract Items -->

<rdf:Description rdf:about="#Wholesale!RekalProduct1">
  <rdfs:label>Secret Agent on Mars Memory</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="#Rekal_Product" />
  </rdf:type>
  <ome:contains rdf:resource="#Wholesale!3Package" />
  <ome:contains rdf:resource="#Wholesale!62Package" />
  <ome:contains rdf:resource="#Wholesale!Memory1" />
  <ome:contains rdf:resource="#Wholesale!MemoryAlteration1" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!RekalProduct2">
  <rdfs:label>Ultimate Fantasy Memory</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="#Rekal_Product" />
  </rdf:type>
  <ome:is rdf:resource="#Wholesale!UltimateFantasy" />
  <ome:contains rdf:resource="#Wholesale!MemoryAlteration2" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!MemoryAlteration1">
  <rdfs:label>Secret Service Memory Implantation</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="#Memory_Implant_Treatment" />
  </rdf:type>
```

```
  <ome:contained_by rdf:resource="#Wholesale!RekalProduct1" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!MemoryAlteration2">
  <rdfs:label>Ultimate Fantasy Memory Implantation</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="#Memory_Implant_Treatment" />
  </rdf:type>
  <ome:contained_by rdf:resource="#Wholesale!RekalProduct2" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<!-- Physical Items -->

<rdf:Description rdf:about="#Wholesale!Currency">
  <rdfs:label>Currency</rdfs:label>
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  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Narkidrine">
  <rdfs:label>Narkidrine</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Psychotrope" />
  </rdf:type>
  <ome:has-trait rdf:resource="#NarkidrineName" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
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<rdf:Description rdf:about="#Wholesale!InterplanAfterDouglasQuail">
  <rdfs:label>Interplan Trying to Kill Douglas Quail</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Physical_Obstacle" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!QuailDead" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
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<rdf:Description rdf:about="#Wholesale!3Package">
  <rdfs:label>Package 3: Trip to Mars</rdfs:label>
```

```
  <rdf:type>
    <owl:Class rdf:about="#Rekal_Package" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!Package3Name" />
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  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
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<rdf:Description rdf:about="#Wholesale!3Package">
  <rdfs:label>Package 62: Secret Interplan Spy</rdfs:label>
  <rdf:type>
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  </rdf:type>
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  <ome:contained_by rdf:resource="#Wholesale!RekalProduct1" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Gun">
  <rdfs:label>Sneaky Pete Gun</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Weapon" />
  </rdf:type>
  <ome:has-trait rdf:resource="#Wholesale!SneakyPeteName" />
  <ome:contained_by rdf:resource="#Wholesale!Bodyguards" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<!-- Occurrences -->

<rdf:Description rdf:about="#E2N">
  <rdfs:label>Mars Dreams (Narrative)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#E1N" />
  <ome:timeline_ref rdf:resource="#Wholesale!Narrative" />
  <ome:occurrence_of rdf:resource="#E2" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<rdf:Description rdf:about="#E2C">
  <rdfs:label>Mars Dreams (Chronology)</rdfs:label>
```

```
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#E1C" />
  <ome:follows rdf:resource="#E26C" />
  <ome:timeline_ref rdf:resource="#Wholesale!Chronology" />
  <ome:occurrence_of rdf:resource="#E2" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<rdf:Description rdf:about="#E3N">
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  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#E4N" />
  <ome:follows rdf:resource="#E1N" />
  <ome:timeline_ref rdf:resource="#Wholesale!Narrative" />
  <ome:occurrence_of rdf:resource="#E3" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
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<rdf:Description rdf:about="#E3C">
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  <rdf:type>
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  </rdf:type>
  <ome:precedes rdf:resource="#E4C" />
  <ome:follows rdf:resource="#E21C" />
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  <ome:occurrence_of rdf:resource="#E3" />
  <ome:has-location rdf:resource="#US!Chicago" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
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<rdf:Description rdf:about="#E4C">
  <rdfs:label>Doug buys Rekal Package (Chronology)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#E5C" />
  <ome:follows rdf:resource="#E3C" />
  <ome:timeline_ref rdf:resource="#Wholesale!Chronology" />
  <ome:occurrence_of rdf:resource="#E4" />
  <ome:has-location rdf:resource="#Wholesale!RekalBuilding" />
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```

```
  <ome:abstractness>detail</ome:abstractness>
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<rdf:Description rdf:about="#E5N">
  <rdfs:label>Doug undergoes Rekal Treatment (Narrative)</rdfs:label>
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  <ome:follows rdf:resource="#E20C" />
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    Chronology)</rdfs:label>
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  <ome:follows rdf:resource="#E8C" />
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<rdf:Description rdf:about="#E29C">
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  <ome:occurrence_of rdf:resource="#E29" />
  <ome:contained_by rdf:resource="#E17C" />
</rdf:Description>

<rdf:Description rdf:about="#E12C">
  <rdfs:label>Douglas gets rest of refund from Rekal (Chronology)</
```

```
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:follows rdf:resource="#E11C" />
  <ome:timeline_ref rdf:resource="#Wholesale!Chronology" />
  <ome:occurrence_of rdf:resource="#E12" />
  <ome:contained_by rdf:resource="#E10C" />
</rdf:Description>

<rdf:Description rdf:about="#E4N">
  <rdfs:label>Douglas Quail buys Rekal package (Narrative)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#E5N" />
  <ome:follows rdf:resource="#E3N" />
  <ome:timeline_ref rdf:resource="#Wholesale!Narrative" />
  <ome:occurrence_of rdf:resource="#E4" />
</rdf:Description>

<rdf:Description rdf:about="#E1N">
  <rdfs:label>Morning routine (Narrative)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#E3N" />
  <ome:follows rdf:resource="#E2N" />
  <ome:timeline_ref rdf:resource="#Wholesale!Narrative" />
  <ome:occurrence_of rdf:resource="#E1" />
</rdf:Description>

<rdf:Description rdf:about="#E1C">
  <rdfs:label>Morning routine (Chronology)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#E3C" />
  <ome:follows rdf:resource="#E2C" />
  <ome:timeline_ref rdf:resource="#Wholesale!Chronology" />
  <ome:occurrence_of rdf:resource="#E1" />
</rdf:Description>

<!-- Locations -->

<rdf:Description rdf:about="#Wholesale!RekalBuilding">
  <rdfs:label>Rekal Building</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:spoiler_rating>nitpick</ome:spoiler_rating>
```

```
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!QuailHouse">
  <rdfs:label>Quail House</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:spoiler_rating>nitpick</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!InterplanHQ">
  <rdfs:label>Interplan HQ</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Building" />
  </rdf:type>
  <ome:spoiler_rating>nitpick</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Park">
  <rdfs:label>Park</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Area" />
  </rdf:type>
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
  <ome:is_located_in rdf:resource="#US!Chicago" />
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#US!Chicago">
  <rdfs:label>Chicago, US</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;City" />
  </rdf:type>
  <ome:has-trait rdf:resource="#ChicagoName" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#US!NewYork">
  <rdfs:label>New York, US</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;City" />
  </rdf:type>
```

```
  <ome:has-trait rdf:resource="#NewYorkName" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Mars">
  <rdfs:label>Mars</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;World" />
  </rdf:type>
  <ome:has-trait rdf:resource="#MarsName" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Earth">
  <rdfs:label>Earth</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;World" />
  </rdf:type>
  <ome:has-trait rdf:resource="#EarthName" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Earth">
  <rdfs:label>Earth</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;World" />
  </rdf:type>
  <ome:has-trait rdf:resource="#EarthName" />
  <ome:is_owned_by rdf:resource="Wholesale!AlienInvaders" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>generic</ome:abstractness>
  <ome:exists_in rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<!-- Timelines -->

<rdf:Description rdf:about="#Wholesale!Chronology">
  <rdfs:label>Wholesale Chronology Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
  <ome:relates_to rdf:resource="#Wholesale!Universe" />
</rdf:Description>

<rdf:Description rdf:about="#Wholesale!Narrative">
```

```
  <rdfs:label>Wholesale Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<!-- Events -->

<!-- Action -->

<rdf:Description rdf:about="#E22">
  <rdfs:label>E22 - Douglas Quail undergoes Rekal treatment</rdfs:label>
  <rdfs:summary>Douglas Quail undergoes Rekal treatment</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Action" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!Lowe" />
      <rdf:li rdf:resource="#Wholesale!Keeler" />
      <rdf:li rdf:resource="#Wholesale!InterplanBrass" />
      <rdf:li rdf:resource="#Wholesale!Shrink" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!RekalProduct2" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E22C" />
  <ome:has_occurrence rdf:resource="#E22N" />
  <ome:contains rdf:resource="#E23" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E14">
  <rdfs:label>E14 - Douglas Quail questioned by Interplan Agents</
    rdfs:label>
  <rdfs:summary>Douglas Quail questioned by Interplan Agents</
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Action" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_subject_entity rdf:resource="#Wholesale!InterplanTeam" />
  <ome:final_event rdf:resource="#E17" />
  <ome:has_occurrence rdf:resource="#E14C" />
  <ome:has_occurrence rdf:resource="#E14N" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E24">
```

```
  <rdfs:label>E24 - Douglas Quail saves world from alien invaders</
    rdfs:label>
  <rdfs:summary>Douglas Quail saves world from alien invaders</
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Action" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="#Wholesale!AlienInvaders" />
  <ome:has_subject_entity rdf:resource="#Wholesale!YoungDoug" />
  <ome:is rdf:resource="#Wholesale!UltimateFantasy" />
  <ome:postcondition rdf:resource="#Wholesale!AlienAllience" />
  <ome:has_occurrence rdf:resource="#E24C" />
  <ome:has_occurrence rdf:resource="#E24N" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E5">
  <rdfs:label>E5 - Douglas Quail undergoes Rekal treatment</rdfs:label>
  <rdfs:summary>Douglas Quail undergoes Rekal treatment</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Action" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!Lowe" />
      <rdf:li rdf:resource="#Wholesale!Keeler" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!MemoryAlteration1" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E5C" />
  <ome:has_occurrence rdf:resource="#E5N" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
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<!-- Violence -->

<rdf:Description rdf:about="#E8">
  <rdfs:label>E8 - Assasinates leader of Martian Political Group</
    rdfs:label>
  <rdfs:summary>Assasinates leader of Martian Political Group</
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Violence" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="#Wholesale!MartianPolitician" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:initial_event rdf:resource="#E7" />
  <ome:final_event rdf:resource="#E30" />
```

```
  <ome:contains rdf:resource="#E30" />
  <ome:has_occurrence rdf:resource="#E8C" />
  <ome:has_occurrence rdf:resource="#E8N" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E25">
  <rdfs:label>E25 - Quail killed by Interplan</rdfs:label>
  <rdfs:summary>Quail killed by Interplan</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Violence" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="#State!Dead" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:involves rdf:resource="#Wholesale!Interplan" />
  <ome:precondition rdf:resource="#State!Living" />
  <ome:postcondition rdf:resource="#State!Dead" />
  <ome:has_occurrence rdf:resource="#E25D" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E29">
  <rdfs:label>E29 - Douglas Quail fights Interplan Agents</rdfs:label>
  <rdfs:summary>Douglas Quail fights Interplan Agents</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Violence" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="Wholesale!InterplanTeam" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:caused_by rdf:resource="#E15" />
  <ome:contains rdf:resource="#E28" />
  <ome:contained_by rdf:resource="#E17" />
  <ome:has_occurrence rdf:resource="#E29C" />
  <ome:has_occurrence rdf:resource="#E29N" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E30">
  <rdfs:label>E30 - Martian politician dies</rdfs:label>
  <rdfs:summary>Martian politician dies</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Violence" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="#State!Dead" />
  <ome:has_subject_entity rdf:resource="#Wholesale!MartianPolitician" />
  <ome:precondition rdf:resource="#State!Living" />
  <ome:postcondition rdf:resource="#State!Dead" />
  <ome:contained_by rdf:resource="#E8" />
```

```
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
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<!-- Gain -->

<rdf:Description rdf:about="#E4">
  <rdfs:label>E4 - Douglas Quail buys Rekal package</rdfs:label>
  <rdfs:summary>Douglas Quail buys Rekal package</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!Rekal" />
      <rdf:li rdf:resource="#Wholesale!McClain" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!RekalProduct1" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E4C" />
  <ome:has_occurrence rdf:resource="#E4N" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E6">
  <rdfs:label>E6 - Douglas Quail regains memories of being on Mars</
    rdfs:label>
  <rdfs:summary>Douglas Quail regains memories of being on Mars</
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves rdf:resource="#Mars" />
  <ome:has_object_entity>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!Memory1" />
      <rdf:li rdf:resource="#Wholesale!Memory2" />
    </rdf:Bag>
  </ome:has_object_entity>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E6C" />
  <ome:has_occurrence rdf:resource="#E6N" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
</rdf:Description>

<rdf:Description rdf:about="#E9">
  <rdfs:label>E9 - Realises wife might be Interplan Agent</rdfs:label>
  <rdfs:summary>Realises wife might be Interplan Agent</rdfs:summary>
  <rdf:type>
```

```
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!KirstenQuail" />
      <rdf:li rdf:resource="#Wholesale!Interplan" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!Theory1" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E9C" />
  <ome:has_occurrence rdf:resource="#E9N" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E12">
  <rdfs:label>E12 - Douglas gets rest of refund from Rekal</rdfs:label>
  <rdfs:summary>Douglas gets rest of refund from Rekal</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!DouglasQuail" />
      <rdf:li rdf:resource="#Wholesale!McClain" />
      <rdf:li rdf:resource="#Wholesale!Rekal" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Refund" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E12C" />
  <ome:has_occurrence rdf:resource="#E12N" />
  <ome:contained_by rdf:resource="#E10" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E31">
  <rdfs:label>E31 - Obstacle: Interplan after Douglas Quail</rdfs:label>
  <rdfs:summary>Obstacle: Interplan after Douglas Quail</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="#Wholesale!
    InterplanAfterDouglasQuail" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>
```

```
<rdf:Description rdf:about="#E28">
  <rdfs:label>E28 - Douglas Quail gains gun</rdfs:label>
  <rdfs:summary>Douglas Quail gains gun</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves rdf:resource="#Wholesale!InterplanTeam" />
  <ome:has_object_entity rdf:resource="#Wholesale!Gun" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E28C" />
  <ome:has_occurrence rdf:resource="#E28N" />
  <ome:contained_by rdf:resource="#E29" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E18">
  <rdfs:label>E18 - Douglas Quail makes deal with Interplan</rdfs:label>
  <rdfs:summary>Douglas Quail makes deal with Interplan</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves rdf:resource="#Wholesale!Interplan" />
  <ome:has_object_entity rdf:resource="#Wholesale!Deal" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:causes rdf:resources="#E32" />
  <ome:has_occurrence rdf:resource="#E18C" />
  <ome:has_occurrence rdf:resource="#E18N" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E27">
  <rdfs:label>E27 - Alien Invaders take over earth</rdfs:label>
  <rdfs:summary>Alien Invaders take over earth</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:precondition rdf:resource="#Earth" />
  <ome:postcondition rdf:resource="Wholesale#Earth" />
  <ome:involves rdf:resource="#Wholesale!Aliens" />
  <ome:has_object_entity rdf:resource="#Wholesale!AlienInvaders" />
  <ome:has_subject_entity rdf:resource="#Earth" />
  <ome:has_occurrence rdf:resource="#E27D" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
</rdf:Description>

<rdf:Description rdf:about="#E20">
  <rdfs:label>E20 - Douglas Quail is analysied by Interplan Psychiatrist<
    /rdfs:label>
  <rdfs:summary>Douglas Quail is analysied by Interplan Psychiatrist</
```

```
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!Shrink" />
      <rdf:li rdf:resource="#Wholesale!Interplan" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!UltimateFantasy" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E20C" />
  <ome:has_occurrence rdf:resource="#E20N" />
  <ome:contained_by rdf:resource="#E22" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E15">
  <rdfs:label>E15 - Douglas Quail remembers assasinating Martian
    Politician</rdfs:label>
  <rdfs:summary>Douglas Quail remembers assasinating Martian Politician</
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!MartianPolitician" />
      <rdf:li rdf:resource="#Wholesale!SS1" />
      <rdf:li rdf:resource="#Mars" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!Memory3" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:causes rdf:resource="#E31" />
  <ome:has_occurrence rdf:resource="#E15C" />
  <ome:has_occurrence rdf:resource="#E15N" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E23">
  <rdfs:label>E23 - Douglas Quail remembers having saved the world from
    aliens</rdfs:label>
  <rdfs:summary>Douglas Quail remembers having saved the world from
    aliens</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
```

```
  <ome:precondition rdf:resource="#Earth" />
  <ome:postcondition rdf:resource="Wholesale#Earth" />
  <ome:involves rdf:resource="#Wholesale!Narkidrine" />
  <ome:has_object_entity rdf:resource="#Wholesale!Memory5" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E23C" />
  <ome:has_occurrence rdf:resource="#E23N" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E16">
  <rdfs:label>E16 - Douglas Quail remembers having is memories altered</
    rdfs:label>
  <rdfs:summary>Douglas Quail remembers having is memories altered</
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves rdf:resource="#Wholesale!Interplan" />
  <ome:has_object_entity rdf:resource="#Wholesale!Memory4" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E16C" />
  <ome:has_occurrence rdf:resource="#E16N" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E2">
  <rdfs:label>E2 - Douglas Quail dreams of being on Mars</rdfs:label>
  <rdfs:summary>Douglas Quail dreams of being on Mars</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!DouglasQuail#1" />
      <rdf:li rdf:resource="#Mars" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!GoToMars" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E2C" />
  <ome:has_occurrence rdf:resource="#E2N" />
  <ome:contained_by rdf:resource="#E1" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<!-- Introduction -->
```

```
<rdf:Description rdf:about="#E1">
  <rdfs:label>E1 - Morning routine</rdfs:label>
  <rdfs:summary>Morning routine</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Introduction" />
  </rdf:type>
  <ome:has_subject_entity>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!DouglasQuail" />
      <rdf:li rdf:resource="#Wholesale!Wholesale!KirstenQuail" />
    </rdf:Bag>
  </ome:has_subject_entity>
  <ome:involves rdf:resource="#QuailHoushold" />
  <ome:contains rdf:resource="#E2" />
  <ome:has_occurrence rdf:resource="#E1C" />
  <ome:has_occurrence rdf:resource="#E1N" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<!-- Loss -->

<rdf:Description rdf:about="#E13">
  <rdfs:label>E13 - Kirsten leaves Douglas</rdfs:label>
  <rdfs:summary>Kirsten leaves Douglas</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Loss" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!DouglasQuail" />
      <rdf:li rdf:resource="#Wholesale!KirstenQuail" />
      <rdf:li rdf:resource="#Wholesale!QuailMarriage" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity rdf:resource="#Wholesale!Marriage2" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E13C" />
  <ome:has_occurrence rdf:resource="#E13N" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
</rdf:Description>

<rdf:Description rdf:about="#E32">
  <rdfs:label>E32 - Obstacle: Interplan after Douglas Quail</rdfs:label>
  <rdfs:summary>Obstacle: Interplan after Douglas Quail</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Loss" />
  </rdf:type>
  <ome:has_object_entity rdf:resource="#Wholesale!
    InterplanAfterDouglasQuail" />
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
```

```
  <ome:involves rdf:resource="#QuailHoushold" />
  <ome:caused_by rdf:resource="#E18" />
  <ome:spoiler_rating>spoiler</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E26">
  <rdfs:label>E26 - Douglas Quail has his memories of events on Mars
    removed</rdfs:label>
  <rdfs:summary>Douglas Quail has his memories of events on Mars removed<
    /rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Loss" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!Interplan" />
      <rdf:li rdf:resource="#Wholesale!Memory1" />
      <rdf:li rdf:resource="#Wholesale!Memory2" />
      <rdf:li rdf:resource="#Wholesale!Memory3" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_object_entity>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!Memory1" />
      <rdf:li rdf:resource="#Wholesale!Memory2" />
      <rdf:li rdf:resource="#Wholesale!Memory3" />
    </rdf:Bag>
  </ome:has_object_entity>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:has_occurrence rdf:resource="#E26C" />
  <ome:has_occurrence rdf:resource="#E26N" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>


<!-- Travel -->

<rdf:Description rdf:about="#E3">
  <rdfs:label>E3 - Douglas Quail goes to Rekal</rdfs:label>
  <rdfs:summary>Douglas Quail goes to Rekal</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Terrain_Travel" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:to rdf:resource="#Wholesale!RekalBuilding" />
  <ome:from rdf:resource="#Wholesale!QuailHouse" />
  <ome:has_occurrence rdf:resource="#E3C" />
  <ome:has_occurrence rdf:resource="#E3N" />
  <ome:spoiler_rating>fact</ome:spoiler_rating>
```

```
</rdf:Description>

<rdf:Description rdf:about="#E10">
  <rdfs:label>E10 - Douglas Quail goes home</rdfs:label>
  <rdfs:summary>Douglas Quail goes home</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Terrain_Travel" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:to rdf:resource="#Wholesale!QuailHouse" />
  <ome:from rdf:resource="#Wholesale!RekalBuilding" />
  <ome:contains rdf:resource="#E11" />
  <ome:contains rdf:resource="#E12" />
  <ome:has_occurrence rdf:resource="#E10C" />
  <ome:has_occurrence rdf:resource="#E10N" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E11">
  <rdfs:label>E11 - Douglas Quail returns to Rekal</rdfs:label>
  <rdfs:summary>Douglas Quail returns to Rekal</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Terrain_Travel" />
  </rdf:type>
  <ome:involves>
    <rdf:Bag>
      <rdf:li rdf:resource="#Wholesale!DouglasQuail" />
      <rdf:li rdf:resource="#Wholesale!Rekal" />
    </rdf:Bag>
  </ome:involves>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:to rdf:resource="#Wholesale!RekalBuilding" />
  <ome:from rdf:resource="#US!Chicago" />
  <ome:contained_by rdf:resource="#E10" />
  <ome:has_occurrence rdf:resource="#E11C" />
  <ome:has_occurrence rdf:resource="#E11N" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E17">
  <rdfs:label>E17 - Douglas Quail escapes Interplan Agents</rdfs:label>
  <rdfs:summary>Douglas Quail escapes Interplan Agents</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Terrain_Travel" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:involes rdf:resource="#Wholesale!InterplanTeam" />
  <ome:to rdf:resource="#Wholesale!Park" />
  <ome:from rdf:resource="#Wholesale!QuailHouse" />
```

```
  <ome:contains rdf:resource="#E29" />
  <ome:has_occurrence rdf:resource="#E17C" />
  <ome:has_occurrence rdf:resource="#E17N" />
  <ome:spoiler_rating>key</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E19">
  <rdfs:label>E19 - Douglas Quail goes to main Interplan barracks</
    rdfs:label>
  <rdfs:summary>Douglas Quail goes to main Interplan barracks</
    rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Terrain_Travel" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:to rdf:resource="#Wholesale!InterplanHQ" />
  <ome:from rdf:resource="#Wholesale!Park" />
  <ome:has_occurrence rdf:resource="#E19C" />
  <ome:has_occurrence rdf:resource="#E19N" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E21">
  <rdfs:label>E21 - Douglas Quail goes to Rekal</rdfs:label>
  <rdfs:summary>Douglas Quail goes to Rekal</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Terrain_Travel" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:to rdf:resource="#Wholesale!RekalBuilding" />
  <ome:from rdf:resource="#Wholesale!InterplanHQ" />
  <ome:has_occurrence rdf:resource="#E21C" />
  <ome:has_occurrence rdf:resource="#E21N" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
  <ome:abstractness>detail</ome:abstractness>
</rdf:Description>

<rdf:Description rdf:about="#E7">
  <rdfs:label>E7 - Douglas Quail travels to Mars</rdfs:label>
  <rdfs:summary>Douglas Quail travels to Mars</rdfs:summary>
  <rdf:type>
    <owl:Class rdf:about="&ome;Space_Travel" />
  </rdf:type>
  <ome:has_subject_entity rdf:resource="#Wholesale!DouglasQuail" />
  <ome:to rdf:resource="#Mars" />
  <ome:from rdf:resource="#Earth" />
  <ome:has_occurrence rdf:resource="#E7C" />
  <ome:has_occurrence rdf:resource="#E7N" />
  <ome:spoiler_rating>main</ome:spoiler_rating>
```

```
  <ome:abstractness>specific</ome:abstractness>
</rdf:Description>

</rdf:RDF>
```

Listing F.3: OntoMedia: We Can Remember it for you Wholesale. (Note: This uses the first version of the OntoMedia ontology.)

F.4 OntoMedia Module Examples

F.4.1 OntoMedia Expression Examples Expanded

F.4.1.1 OntoMedia Expression Example: Relative Position of Overlapping Occurrences on a Timeline

```
<!-- Timeline -->

<rdf:Description rdf:about="#Timeline">
  <rdfs:label>Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<!-- Events -->

<rdf:Description rdf:about="#Event1">
  <rdfs:label>Event 1</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <initial-event rdf:resource="#Event2" />
  <final-event rdf:resource="#Event3" />
  <ome:has-occurrence rdf:resource="#Occurrence1" />
</rdf:Description>

<rdf:Description rdf:about="#Event2">
  <rdfs:label>Event 2</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:has-occurrence rdf:resource="#Occurrence2" />
</rdf:Description>

<rdf:Description rdf:about="#Event3">
  <rdfs:label>Event 3</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:has-occurrence rdf:resource="#Occurrence3" />
</rdf:Description>

<rdf:Description rdf:about="#EventA">
  <rdfs:label>Event A</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
```

```
  <initial-event rdf:resource="#EventX" />
  <final-event rdf:resource="#EventY" />
  <ome:has-occurrence rdf:resource="#OccurrenceA" />
</rdf:Description>

<rdf:Description rdf:about="#EventX">
  <rdfs:label>Event X</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:has-occurrence rdf:resource="#OccurrenceX" />
</rdf:Description>

<rdf:Description rdf:about="#EventY">
  <rdfs:label>Event Y</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Event" />
  </rdf:type>
  <ome:has-occurrence rdf:resource="#OccurrenceY" />
</rdf:Description>

<!-- Occurrences -->

<rdf:Description rdf:about="#Occurrence1">
  <rdfs:label>Occurrence 1</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Timeline" />
  <ome:is-occurrence-of rdf:resource="#Event1" />
</rdf:Description>

<rdf:Description rdf:about="#OccurrenceA">
  <rdfs:label>Occurrence A</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#Timeline" />
  <ome:is-occurrence-of rdf:resource="#EventA" />
</rdf:Description>

<rdf:Description rdf:about="#Occurrence2">
  <rdfs:label>Occurrence 2</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#OccurrenceX" />
  <ome:timeline-ref rdf:resource="#Timeline" />
  <ome:is-occurrence-of rdf:resource="#Event2" />
</rdf:Description>
```

```
<rdf:Description rdf:about="#Occurrence3">
  <rdfs:label>Occurrence 3</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:follows rdf:resource="#OccurrenceY" />
  <ome:timeline-ref rdf:resource="#Timeline" />
  <ome:is-occurrence-of rdf:resource="#Event3" />
</rdf:Description>

<rdf:Description rdf:about="#OccurrenceX">
  <rdfs:label>Occurrence X</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:follows rdf:resource="#Occurrence2" />
  <ome:timeline-ref rdf:resource="#Timeline" />
  <ome:is-occurrence-of rdf:resource="#EventX" />
</rdf:Description>

<rdf:Description rdf:about="#OccurrenceY">
  <rdfs:label>Occurrence Y</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:precedes rdf:resource="#Occurrence3" />
  <ome:timeline-ref rdf:resource="#Timeline" />
  <ome:is-occurrence-of rdf:resource="#EventY" />
</rdf:Description>
```

Listing F.4: OntoMedia Expression Example: Relative Position of Occurrences on a Timeline

F.4.1.2 OntoMedia Expression Example: Time Dilation (Full)

```
<!-- Context -->

<rdf:Description rdf:about="#BalladHaloJones">
  <rdfs:label>The Complete Ballad of Halo Jones</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<!-- Character -->

<rdf:Description rdf:about="#HJ_HaloJones">
  <rdfs:label>Halo Jones.Halo Jones</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#BalladHaloJones" />
</rdf:Description>

<!-- Group -->

<rdf:Description rdf:about="#HJ_BetaPlatoon">
  <rdfs:label>Halo Jones.BetaPlatoon</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Bonded-Group" />
  </rdf:type>
  <ome:contained-by rdf:resource="#EarthArmy" />
  <ome:contains rdf:resource="#HJ_HaloJones" />
  <ome:exists-in rdf:resource="#BalladHaloJones" />
</rdf:Description>

<rdf:Description rdf:about="#HJ_TarantulaArmy">
  <rdfs:label>Halo Jones.Tarantula Army</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Bonded-Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#BalladHaloJones" />
</rdf:Description>

<!-- Event -->

<rdf:Description rdf:about="#HJ_CrushMission1">
  <rdfs:label>Halo Jones.The Crush (Mission 1)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omea;Violence" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#HJ_BetaPlatoon" />
  <ome:has-object-entity rdf:resource="#HJ_TarantulaArmy" />
```

```
  <ome:has-occurrence rdf:resource="#HJ_JonesCrushMission1" />
  <ome:has-occurrence rdf:resource="##HJ_ChronCrushMission1" />
</rdf:Description>

<!-- Timeline -->

<rdf:Description rdf:about="#HJ_Jones_TL">
  <rdfs:label>Halo Jones.Halo Jones' Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Timeline" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#HJ_Chronology_TL">
  <rdfs:label>Halo Jones.Chronology Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Timeline" />
  </rdf:type>
</rdf:Description>

<!-- Occurrences -->

<rdf:Description rdf:about="#HJ_JonesCrushMission1">
  <rdfs:label>Halo Jones.The Crush (Mission 1) Jones Timeline</rdfs:label
    >
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:occurrence-of rdf:resource="#HJ_CrushMission1" />
  <ome:timeline-ref rdf:resource="#HJ_Jones_TL" />
  <ome:has-duration rdf:resource="#5Mins" />
</rdf:Description>

<rdf:Description rdf:about="#HJ_ChronCrushMission1">
  <rdfs:label>Halo Jones.The Crush (Mission 1) Chronology Timeline</
    rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:occurrence-of rdf:resource="#HJ_CrushMission1" />
  <ome:timeline-ref rdf:resource="#HJ_Chronology_TL" />
  <ome:has-duration rdf:resource="#2Months" />
</rdf:Description>

<!-- Durations -->

<rdf:Description rdf:about="#5Mins">
  <rdfs:label>5 Minutes</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Dimension" />
  </rdf:type>
```

```
  <ome:has-dimension>length</ome:has-dimension>
  <ome:has-unit rdf:resource="#HJ_Min" />
  <ome:has-value>5</ome:has-value>
</rdf:Description>

<rdf:Description rdf:about="#2Months">
  <rdfs:label>2 Months</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Dimension" />
  </rdf:type>
  <ome:has-dimension>length</ome:has-dimension>
  <ome:has-unit rdf:resource="#HJ_Month" />
  <ome:has-value>2</ome:has-value>
</rdf:Description>

<!-- Time Components -->

<rdf:Description rdf:about="#HJ_Min">
  <rdfs:label>Halo Jones.Minute</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&dat;Minute" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#HJ_Month">
  <rdfs:label>Halo Jones.Month</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&dat;Month" />
  </rdf:type>
</rdf:Description>
```

Listing F.5: OntoMedia Expression Example: Time Dilation (Example from The Ballard of Halo Jones ((Illustration by Ian Gibson), 1991))

F.4.2 OntoMedia Trait Examples Expanded

F.4.2.1 OntoMedia Trait Example: Character Profile (Full)

```
<rdf:Description rdf:about="#JackHarkness">
  <rdfs:label>Captain Jack Harkness</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#DrWho" />
  <omt:has-trait rdf:resource="#Sexuality_ToSame" />
  <omt:has-trait rdf:resource="#Sexuality_ToAnyOther" />
  <omt:has-trait rdf:resource="#Male" />
  <omt:has-trait rdf:resource="#Corporeal" />
  <omt:has-trait rdf:resource="#Alive" />
  <omt:has-trait rdf:resource="#Employment_HeadT3" />
  <omt:has-trait rdf:resource="#Motivate_FindDoc" />
  <omt:has-trait rdf:resource="#Motivate_SaveEarthFromAliens" />
  <omt:has-observed-trait rdf:resource="#Motivate_GetLaid" />
  <omt:has-projected-trait rdf:resource="#Name_CaptJack" />
  <omt:has-projected-trait rdf:resource="#Species_Human" />
</rdf:Description>

<rdf:Description rdf:about="#Sexuality_ToSame">
  <rdfs:label>Attracted to Beings of the Same Gender</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;To-Same-Gender" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Sexuality_ToAnyOther">
  <rdfs:label>Attracted to Beings of Other Genders</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;To-Other-Gender" />
  </rdf:type>
  <omt:likes rdf:resource="#Female" />
  <omt:likes rdf:resource="#Neuter" />
  <omt:likes>
    <rdf:Bag>
      <rdf:li rdf:resource="#Male" />
      <rdf:li rdf:resource="#Female" />
    </rdf:Bag>
  </omt:likes>
</rdf:Description>

<rdf:Description rdf:about="#Employment_HeadT3">
  <rdfs:label>Head of Torchwood 3</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Employment" />
  </rdf:type>
```

```
  <omt:has-profession>
    <rdf:Bag>
      <rdf:li rdf:resource="#Paramilitary" />
      <rdf:li rdf:resource="#Information_Gatherer" />
      <rdf:li rdf:resource="#Management" />
    </rdf:Bag>
  </omt:has-profession>
  <omt:responsible-for rdf:resource="#Torchwood3" />
</rdf:Description>

<rdf:Description rdf:about="#Motivate_FindDoc">
  <rdfs:label>Find the Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Motivation" />
  </rdf:type>
  <omt:has-motivation rdf:resource="#MeetDoctor" />
</rdf:Description>

<rdf:Description rdf:about="#MeetDoc">
  <rdfs:label>Meet the Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Social" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#JackHarkness" />
  <ome:has-object-entity rdf:resource="#Dr9" />
</rdf:Description>

<rdf:Description rdf:about="#Motivate_GetLaid">
  <rdfs:label>Find the Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Motivation" />
  </rdf:type>
  <omt:has-motivation rdf:resource="#GetLaid" />
</rdf:Description>

<rdf:Description rdf:about="#GetLaid">
  <rdfs:label>Get Laid</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Sex" />
  </rdf:type>
  <ome:involves rdf:resource="#JackHarkness" />
</rdf:Description>

<rdf:Description rdf:about="#Motivate_SaveEarthFromAliens">
  <rdfs:label>Find the Doctor</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Motivation" />
  </rdf:type>
  <omt:has-motivation-to-avoid rdf:resource="#AliensTakeOverEarth" />
</rdf:Description>
```

```
<rdf:Description rdf:about="#AliensTakeOverEarth">
  <rdfs:label>Aliens Take over Earth</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#Aliens" />
  <ome:has-object-entity rdf:resource="#Earth" />
  <ome:postcondition rdf:resource="#OwnedEarth" />
</rdf:Description>
```

Listing F.6: OntoMedia Trait Example: Character Profile (Example from Dr Who/Torchwood)

F.4.2.2 OntoMedia Trait Example: Obsticles (Full)

```
<!-- Context -->

<rdf:Description rdf:about="#Reality">
  <rdfs:label>Reality</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#BloodSmoke">
  <rdfs:label>Reality</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <omt:has-trait rdf:resource="#PublicKnowledge" />
</rdf:Description>

<!-- Beings -->

<rdf:Description rdf:about="#NickLea">
  <rdfs:label>Nicholas Lea</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality" />
  <omt:has-trait rdf:resource="#Male" />
  <omt:has-trait rdf:resource="#Corporeal" />
  <omt:has-trait rdf:resource="#Alive" />
  <omt:has-trait rdf:resource="#Employment_Actor" />
  <ome:portrays rdf:resource="#XF_Krycek" />
  <ome:portrays rdf:resource="#HL_Cory" />
  <ome:portrays rdf:resource="#OAT_Vic" />
</rdf:Description>

<!-- Characters -->

<rdf:Description rdf:about="#Huff_Tony">
  <rdfs:label>Huff.TonyFoster</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#BloodSmoke" />
  <omt:has-trait rdf:resource="#Sexuality_ToSame" />
  <omt:has-trait rdf:resource="#Male" />
  <omt:has-trait rdf:resource="#Corporeal" />
  <omt:has-trait rdf:resource="#Alive" />
  <omt:has-trait rdf:resource="#Name_TonyFoster" />
  <omt:has-trait rdf:resource="#Employment_TAD" />
```

```
  <omt:has-trait rdf:resource="#FaciesLee" />
</rdf:Description>

<rdf:Description rdf:about="#Huff_Lee">
  <rdfs:label>Huff.LeeNicholas</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#BloodSmoke" />
  <ome:inspired-by rdf:resource="#NickLea" />
  <omt:has-trait rdf:resource="#Sexuality_ToSame" />
  <omt:has-trait rdf:resource="#Sexuality_ToFemale" />
  <omt:has-projected-trait rdf:resource="#Stright" />
  <omt:has-trait rdf:resource="#Male" />
  <omt:has-trait rdf:resource="#Corporeal" />
  <omt:has-trait rdf:resource="#Alive" />
  <omt:has-trait rdf:resource="#Name_LeeNicholas" />
  <omt:has-trait rdf:resource="#Employment_Actor" />
  <ome:portrays rdf:resource="#JamesTaylorGrant" />
  <omt:has-trait rdf:resource="#FaciesTony" />
</rdf:Description>

<!-- Variations -->

<rdf:Description rdf:about="#Lee1">
  <rdfs:label>Lee</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <omt:has-trait rdf:resource="#Sexuality_ToFemale" />
</rdf:Description>

<rdf:Description rdf:about="#Lee2">
  <rdfs:label>Lee</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <omt:has-trait rdf:resource="#Sexuality_ToSame" />
  <omt:has-trait rdf:resource="#Sexuality_ToFemale" />
</rdf:Description>

<!-- Motivation -->

<rdf:Description rdf:about="#FaciesTony">
  <rdfs:label>Interested in Tony</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Motivation" />
    <owl:Class rdf:about="&omf;Subtext" />
  </rdf:type>
  <omt:has-motivation rdf:resource="#Tony_Lee" />
</rdf:Description>
```

```
<rdf:Description rdf:about="#FaciesLee">
  <rdfs:label>Crush on Lee</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Motivation" />
    <owl:Class rdf:about="&omf;Text" />
  </rdf:type>
  <omt:has-motivation rdf:resource="#Tony_Lee" />
  <omt:has-trait rdf:resource="#LeeNotInterested" />
  <omt:has-trait rdf:resource="#LeeCareer" />
</rdf:Description>

<!-- Obsticles -->

<rdf:Description rdf:about="#LeeCareer">
  <rdfs:label>Effect on Lee's career</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Abstract-Obsticle" />
  </rdf:type>
  <ome:is rdf:resource="#LeeCareerAffected" />
</rdf:Description>

<rdf:Description rdf:about="#LeeNotInterested">
  <rdfs:label>Lee Not Interested</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Abstract-Obsticle" />
  </rdf:type>
  <ome:is rdf:resource="#LeeStraight" />
</rdf:Description>

<!-- Theories and Information -->

<rdf:Description rdf:about="#LeeStraight">
  <rdfs:label>Lee Straight</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omk;Theory" />
  </rdf:type>
  <ome:is rdf:resource="#Lee1" />
</rdf:Description>

<rdf:Description rdf:about="#LeeNotStraight">
  <rdfs:label>Lee Not "Straight"</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omk;Fact" />
  </rdf:type>
  <ome:is rdf:resource="#Lee2" />
</rdf:Description>

<rdf:Description rdf:about="#LeeCareerAffected">
  <rdfs:label>Lee's Career Affected</rdfs:label>
  <rdf:type>
```

```
    <owl:Class rdf:about="&omk;Theory" />
  </rdf:type>
  <ome:is rdf:resource="#RelationshipRevealed" />
</rdf:Description>

<rdf:Description rdf:about="#PublicKnowledge">
  <rdfs:label>Public Knowledge</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Knowledge" />
  </rdf:type>
  <ome:knows rdf:resource="#LeeNotStraight" />
</rdf:Description>

<!-- Events -->

<rdf:Description rdf:about="#RelationshipRevealed">
  <rdfs:label>Lee Outed</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:subject-entity rdf:resource="#Public" />
  <ome:object-entity rdf:resource="#LeeNotStraight" />
  <ome:causes rdf:resource="#LeeLoosesJob" />
</rdf:Description>

<rdf:Description rdf:about="#LeeLoosesJob">
  <rdfs:label>Lee looses Job</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:subject-entity rdf:resource="#Huff_Lee" />
  <ome:from rdf:resource="#Employment_Actor" />
  <ome:to rdf:resource="#Employment_None" />
</rdf:Description>

<!-- Possible Outcome -->

<rdf:Description rdf:about="#Tony_Lee">
  <rdfs:label>Tony and Lee get together</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Partnership" />
  </rdf:type>
  <ome:contains rdf:resource="#Huff_Lee">
  <ome:contains rdf:resource="#Huff_Tony">
</rdf:Description>
```

Listing F.7: OntoMedia Trait Example: Obsticles (Example from the Smoke Series (Huff, 2004 – 2007))

F.4.3 OntoMedia Travel Example Expanded

```
<!-- Character -->

<rdf:Description rdf:about="#SG_DJackson">
  <rdfs:label>Stargate.Daniel Jackson</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
</rdf:Description>

<rdf:Description rdf:about="#SG_JONiell">
  <rdfs:label>Stargate.Jack O'Neill</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
</rdf:Description>

<!-- Means of Travel -->

<rdf:Description rdf:about="#Stargate">
  <rdfs:label>Stargate</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Portal" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
</rdf:Description>

<rdf:Description rdf:about="#Daedalus">
  <rdfs:label>Daedalus Class Spaceship</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ompi;Craft" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
</rdf:Description>

<rdf:Description rdf:about="#F-302">
  <rdfs:label>F-302 Fighter</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ompi;Craft" />
  </rdf:type>
  <ome:contains rdf:resource="#SG_JONiell" />
  <ome:exists-in rdf:resource="#Stargate" />
</rdf:Description>

<!-- SGC to Atlantis -->

<rdf:Description rdf:about="#SG_SGCtoAtlShort">
```

```
  <rdfs:label>Stargate.SG1 to Atlantis (Short Way)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;VoidTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#SG_DJackson" />
  <ome:has-object-entity rdf:resource="#Stargate" />
  <ome:from rdf:resource="#SGC" />
  <ome:to rdf:resource="#Atlantis" />
</rdf:Description>

<rdf:Description rdf:about="#SG_SGCtoAtlLong">
  <rdfs:label>Stargate.SG1 to Atlantis (Long Way)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;AirTravel" />
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:initial-event rdf:resource="#SG_EarthToDeadalus" />
  <ome:final-event rdf:resource="#SG_EarthOrbitToAtlantis" />
  <ome:from rdf:resource="#SGC" />
  <ome:to rdf:resource="#Atlantis" />
</rdf:Description>

<rdf:Description rdf:about="#SG_EarthToDeadalus">
  <rdfs:label>Stargate.Earth to Deadalus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;AirTravel" />
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#F-302" />
  <ome:initial-event rdf:resource="#Atmo" />
  <ome:final-event rdf:resource="#Therm" />
  <ome:from rdf:resource="#Earth" />
  <ome:to rdf:resource="#Deadalus" />
</rdf:Description>

<rdf:Description rdf:about="#SG_EarthOrbitToAtlantis">
  <rdfs:label>Stargate.Earth Orbit to Atlantis Orbit</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#Deadalus" />
  <ome:final-event rdf:resource="#SG_DeadalusToLantea" />
  <ome:from rdf:resource="#EarthOrbit" />
  <ome:to rdf:resource="#AtlOrbit" />
</rdf:Description>

<rdf:Description rdf:about="#SG_DeadalusToLantea">
  <rdfs:label>Stargate.Deadalus to Lantea</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;AirTravel" />
    <owl:Class rdf:about="&omj;SpaceTravel" />
```

```
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#F-302" />
  <ome:initial-event rdf:resource="#LTherm" />
  <ome:final-event rdf:resource="#LAtmo" />
  <ome:from rdf:resource="#Deadalus" />
  <ome:to rdf:resource="#Atlantis" />
</rdf:Description>

<rdf:Description rdf:about="#Atmo">
  <rdfs:label>Earth to Karman Line</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;AirTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#F-302" />
  <ome:from rdf:resource="#Earth" />
  <ome:to rdf:resource="#KarmanLineEarth" />
</rdf:Description>

<rdf:Description rdf:about="#Therm">
  <rdfs:label>Karman Line (Earth) to Deadalus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#F-302" />
  <ome:final-event rdf:resource="#SG_F-302DockDeadalus" />
  <ome:from rdf:resource="#KarmanLineEarth" />
  <ome:to rdf:resource="#Deadalus" />
</rdf:Description>

<rdf:Description rdf:about="#LTherm">
  <rdfs:label>Deadalus to Karman Line (Lantea)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;SpaceTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#F-302" />
  <ome:initial-event rdf:resource="#SG_F-302LeaveDeadalus" />
  <ome:from rdf:resource="#Deadalus" />
  <ome:to rdf:resource="#KarmanLineLantea" />
</rdf:Description>

<rdf:Description rdf:about="#LAtmo">
  <rdfs:label>Karman Line to Lantea</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omj;AirTravel" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#F-302" />
  <ome:from rdf:resource="#KarmanLineLantea" />
  <ome:to rdf:resource="#Atlantis" />
</rdf:Description>

<!-- (Un)Docking -->
```

```
<rdf:Description rdf:about="#SG_F-302DockDeadalus">
  <rdfs:label>Stargate.F-302 Docks On Deadalus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Gain" />
  </rdf:type>
  <ome:final-event rdf:resource="#JBoardD" />
  <ome:has-subject-entity rdf:resource="#Deadalus" />
  <ome:has-object-entity rdf:resource="#F-302" />
</rdf:Description>

<rdf:Description rdf:about="#JBoardD">
  <rdfs:label>Jack Boards the Deadalus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omet;Transference" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#SG_JONiel" />
  <ome:from rdf:resource="#F-302" />
  <ome:to rdf:resource="#Deadalus" />
</rdf:Description>

<rdf:Description rdf:about="#SG_F-302LeaveDeadalus">
  <rdfs:label>Stargate.F-302 Leaves Deadalus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Loss" />
  </rdf:type>
  <ome:initial-event rdf:resource="#JBoardF" />
  <ome:has-subject-entity rdf:resource="#Deadalus" />
  <ome:has-object-entity rdf:resource="#F-302" />
</rdf:Description>

<rdf:Description rdf:about="#JBoardF">
  <rdfs:label>Jack Boards the F-302</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omet;Transference" />
  </rdf:type>
  <ome:has-subject-entity rdf:resource="#SG_JONiel" />
  <ome:from rdf:resource="#Deadalus" />
  <ome:to rdf:resource="#F-302" />
</rdf:Description>

<!-- Places -->

<rdf:Description rdf:about="#Earth">
  <rdfs:label>Earth</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;World" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:adjacent-below rdf:resource="#EarthAtmosphere" />
</rdf:Description>
```

```
<rdf:Description rdf:about="#Lantea">
  <rdfs:label>Lantea</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;World" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
</rdf:Description>

<rdf:Description rdf:about="#EarthAtmosphere">
  <rdfs:label>Earth Atmosphere</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Layer" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:adjacent-above rdf:resource="#Earth" />
  <loc:has-boundary rdf:resource="#KarmanLineEarth" />
</rdf:Description>

<rdf:Description rdf:about="#LanteaAtmosphere">
  <rdfs:label>Lantea Atmosphere</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Layer" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:adjacent-above rdf:resource="#Lantea" />
  <loc:has-boundary rdf:resource="#KarmanLineLantea" />
</rdf:Description>

<rdf:Description rdf:about="#SGC">
  <rdfs:label>Stargate Command</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&aktloc;Building" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:is-located-in rdf:resource="#CheyenneMountain" />
</rdf:Description>

<rdf:Description rdf:about="#Atlantis">
  <rdfs:label>Atlantis</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;City" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
</rdf:Description>

<rdf:Description rdf:about="#KarmanLineEarth">
  <rdfs:label>Karman Line (Earth)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Layer" />
  </rdf:type>
```

```
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:is-boundary-of rdf:resource="#EarthAtmosphere" />
</rdf:Description>

<rdf:Description rdf:about="#KarmanLineLantea">
  <rdfs:label>Karman Line (Lantea)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Layer" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:is-boundary-of rdf:resource="#LanteaAtmosphere" />
</rdf:Description>

<rdf:Description rdf:about="#EarthOrbit">
  <rdfs:label>Earth Orbit</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Orbit" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:orbit-around rdf:resource="#Earth" />
</rdf:Description>

<rdf:Description rdf:about="#AtlOrbit">
  <rdfs:label>Atlantis Orbit</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&loc;Orbit" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Stargate" />
  <loc:orbit-around rdf:resource="#Lantea" />
</rdf:Description>
```

Listing F.8: OntoMedia Travel Example (Examples from Stargate/Stargate: Atlantis)

F.4.4 OntoMedia Name Example Expanded

```
<!-- Characters -->

<rdf:Description rdf:about="#SH_Starsky">
  <rdfs:label>Starsky and Hutch.Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <omt:has-trait rdf:resource="#Name_Starsky" />
</rdf:Description>

<rdf:Description rdf:about="#SH_Hutch">
  <rdfs:label>Starsky and Hutch.HUtch</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <omt:has-trait rdf:resource="#Name_Hutch" />
</rdf:Description>

<!-- Names -->

<rdf:Description rdf:about="#Name_Starsky">
  <rdfs:label>David Micheal Strasky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <nom:has-ordering rdf:resource="#DMS_Professional" />
  <nom:has-ordering rdf:resource="#DMS_Formal" />
  <nom:has-ordering rdf:resource="#DMS_Nick" />
  <nom:has-ordering rdf:resource="#DMS_Birth" />
  <nom:has-ordering rdf:resource="#DMS_Informal" />
  <nom:has-ordering rdf:resource="#DMS_Familier" />
</rdf:Description>

<!-- Name Components -->

<rdf:Description rdf:about="#Starsky">
  <rdfs:label>Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <omt:has-name-component>Starsky</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#David">
  <rdfs:label>David</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
```

```
  <omt:has-name-component>David</nom:has-name-component>
  <nom:has-abrv-component>D.</nom:has-abrv-component>
  <ome:is rdf:resource="#Dave" />
</rdf:Description>

<rdf:Description rdf:about="#Dave">
  <rdfs:label>Dave</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;Nick" />
  </rdf:type>
  <omt:has-name-component>Dave</nom:has-name-component>
  <ome:is rdf:resource="#David" />
</rdf:Description>

<rdf:Description rdf:about="#Micheal">
  <rdfs:label>Micheal</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;Additional-Name" />
  </rdf:type>
  <omt:has-name-component>Micheal</nom:has-name-component>
  <nom:has-abrv-component>M.</nom:has-abrv-component>
</rdf:Description>

<rdf:Description rdf:about="#DetSgt">
  <rdfs:label>Detective Sergeant</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;Title" />
  </rdf:type>
  <nom:has-name-component>Detective Sergeant</nom:has-name-component>
  <nom:has-abrv-component>Det. Sgt.</nom:has-abrv-component>
</rdf:Description>

<rdf:Description rdf:about="#Mr">
  <rdfs:label>Mister</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;Title" />
  </rdf:type>
  <omt:has-name-component>Mister</nom:has-name-component>
  <nom:has-abrv-component>Mr</nom:has-abrv-component>
</rdf:Description>

<rdf:Description rdf:about="#Starsk">
  <rdfs:label>Starsk</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;Nick" />
  </rdf:type>
  <omt:has-name-component>Starsk</nom:has-name-component>
</rdf:Description>


<!-- Name Ordering -->
```

```
<rdf:Description rdf:about="#DMS_Professional">
  <rdfs:label>Det. Sgt. Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
    <trait:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#DetSgt" />
        <rdf:li rdf:resource="#Starsky" />
      </rdf:Seq>
    </trait:has-order>
</rdf:Description>

<rdf:Description rdf:about="#DMS_Formal">
  <rdfs:label>Det. Sgt. David Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
  <trait:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Mr" />
      <rdf:li rdf:resource="#David" />
      <rdf:li rdf:resource="#Starsky" />
    </rdf:Seq>
  </trait:has-order>
</rdf:Description>

<rdf:Description rdf:about="#DMS_Nick">
  <rdfs:label>Starsk</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
  <trait:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Starsk" />
    </rdf:Seq>
  </trait:has-order>
  <omb:used-by rdf:resource="##SH_Hutch" />
</rdf:Description>

<rdf:Description rdf:about="#DMS_Birth">
  <rdfs:label>David Micheal Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
  <trait:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#David" />
      <rdf:li rdf:resource="#Micheal" />
      <rdf:li rdf:resource="#Starsky" />
```

```
    </rdf:Seq>
  </trait:has-order>
</rdf:Description>

<rdf:Description rdf:about="#DMS_Informal">
  <rdfs:label>Dave</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
  <trait:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Dave" />
    </rdf:Seq>
  </trait:has-order>
</rdf:Description>

<rdf:Description rdf:about="#DMS_Familier">
  <rdfs:label>Starsky</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&nom;NameOrdering" />
  </rdf:type>
  <trait:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Starsky" />
    </rdf:Seq>
  </trait:has-order>
</rdf:Description>
```

Listing F.9: OntoMedia Name Example (Example from Starsky and Hutch)

F.5 Calendar Examples

F.5.1 Gregorian Calendar

```
<?xml version="1.0"?>
<?xml-stylesheet href="/xsl/ontomedia.xsl" type="text/xsl"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.contextus.info/entity_store/rdf/calendar/
    gregorian#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY omd  "http://ontomedia.contextus.info/entity_store/owl/misc/date
    #">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY omdd "http://ontomedia.contextus.info/entity_store/rdf/calendar/
    dates#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:omd="&omd;"
   xmlns:omdd="&omdd;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdf:Description rdf:about="#Gregorian_Calendar">
    <rdfs:label>Gregorian Calendar</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Calendar" />
    </rdf:type>
    <omd:has-reference-point rdf:resource="#Gregorian_Dot"/>
  </rdf:Description>

<!-- Reference Point Dates -->

  <rdf:Description rdf:about="#Gregorian_Dot">
    <rdfs:label>Year Dot</rdfs:label>
```

```
    <rdf:type>
      <owl:Class rdf:about="&omd;CalendarReferencePoint" />
    </rdf:type>
    <omd:reference-point-year-minus-one rdf:resource="#1BCE"/>
    <omd:has-date-ordering rdf:resource="#DayOne"/>
  </rdf:Description>

  <rdf:Description rdf:about="#DayOne">
    <rdfs:label>Day One</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Common" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="&omdd;Day_1" />
        <rdf:li rdf:resource="&omdd;Month_1" />
        <rdf:li rdf:resource="&omdd;Year_1CE" />
        <rdf:li rdf:resource="&omdd;CE" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>


  <rdf:Description rdf:about="#1BCE">
    <rdfs:label>Before Year Dot</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Date" />
    </rdf:type>
    <omd:before-reference-point rdf:resource="#Gregorian_Dot"/>
    <omd:has-date-ordering rdf:resource="#DayMinusOne"/>
  </rdf:Description>

  <rdf:Description rdf:about="#DayMinusOne">
    <rdfs:label>Day Minus One</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Common" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="&omdd;Day_31" />
        <rdf:li rdf:resource="&omdd;Month_12" />
        <rdf:li rdf:resource="&omdd;Year_1BCE" />
        <rdf:li rdf:resource="&omdd;BCE" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

</rdf:RDF>
```

Listing F.10: Gregorian Calendar

F.5.2 Gregorian Date Components

```
<?xml version="1.0"?>
<?xml-stylesheet href="/xsl/ontomedia.xsl" type="text/xsl"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.contextus.info/entity_store/rdf/core/
    calendar/dates#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY omd  "http://ontomedia.contextus.info/entity_store/owl/misc/date
    #">
<!ENTITY omdg "http://ontomedia.contextus.info/entity_store/rdf/calendar/
    gregorian#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:omd="&omd;"
   xmlns:omdg="&omdg;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">


<!-- Years -->

  <rdf:Description rdf:about="#Year_1CE">
    <rdfs:label>1</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Year" />
    </rdf:type>
    <omd:has-subdivision-position>1</omd:has-subdivision-position>
    <omd:subdivision-position-relative-to rdf:resource="&omdg;
    Gregorian_Dot" />
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>1</omt:has-value>
  </rdf:Description>
```

```
  <rdf:Description rdf:about="#Year_1BCE">
    <rdfs:label>1</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Year" />
    </rdf:type>
    <omd:has-subdivision-position>-1</omd:has-subdivision-position>
    <omd:subdivision-position-relative-to rdf:resource="&omdg;
   Gregorian_Dot" />
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>1</omt:has-value>
  </rdf:Description>

<!-- Months -->

  <rdf:Description rdf:about="#Month_1">
    <rdfs:label>January</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>1</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>January</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_2">
    <rdfs:label>February</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>2</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>February</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_3">
    <rdfs:label>March</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>3</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>March</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_4">
    <rdfs:label>April</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>4</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
```

```
    <omt:has-value>April</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_5">
    <rdfs:label>May</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>5</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>May</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_6">
    <rdfs:label>June</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>6</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>June</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_7">
    <rdfs:label>July</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>7</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>July</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_8">
    <rdfs:label>August</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>8</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>August</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_9">
    <rdfs:label>September</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>9</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>September</omt:has-value>
```

```
  </rdf:Description>

  <rdf:Description rdf:about="#Month_10">
    <rdfs:label>October</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>10</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>October</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_11">
    <rdfs:label>November</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>11</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>November</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Month_12">
    <rdfs:label>December</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Month" />
    </rdf:type>
    <omd:has-subdivision-position>12</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>December</omt:has-value>
  </rdf:Description>

<!-- Days -->

  <rdf:Description rdf:about="#Day_1">
    <rdfs:label>1st</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>1</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>1st</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_2">
    <rdfs:label>2nd</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>2</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
```

```
    <omt:has-value>2nd</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_3">
    <rdfs:label>3rd</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>3</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>3rd</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_4">
    <rdfs:label>4th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>4</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>4th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_5">
    <rdfs:label>5th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>5</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>5th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_6">
    <rdfs:label>6th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>6</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>6th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_7">
    <rdfs:label>7th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>7</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>7th</omt:has-value>
```

```
</rdf:Description>

<rdf:Description rdf:about="#Day_8">
  <rdfs:label>8th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>8</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>8th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_9">
  <rdfs:label>9th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>9</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>9th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_10">
  <rdfs:label>10th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>10</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>10th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_11">
  <rdfs:label>11th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>11</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>11th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_12">
  <rdfs:label>12th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>12</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>12th</omt:has-value>
</rdf:Description>
```

```
<rdf:Description rdf:about="#Day_13">
  <rdfs:label>13th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>13</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>13th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_14">
  <rdfs:label>14th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>14</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>14th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_15">
  <rdfs:label>15th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>15</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>15th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_16">
  <rdfs:label>16th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>16</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>16th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_17">
  <rdfs:label>17th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>17</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>17th</omt:has-value>
</rdf:Description>
```

```
<rdf:Description rdf:about="#Day_18">
  <rdfs:label>18th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>18</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>18th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_19">
  <rdfs:label>19th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>19</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>19th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_20">
  <rdfs:label>20th</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>20</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>20th</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_21">
  <rdfs:label>21st</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>21</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>21st</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_22">
  <rdfs:label>22nd</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omd;Day" />
  </rdf:type>
  <omd:has-subdivision-position>22</omd:has-subdivision-position>
  <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  <omt:has-value>22nd</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Day_23">
```

```
    <rdfs:label>23rd</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>23</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>23rd</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_24">
    <rdfs:label>24th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>24</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>24th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_25">
    <rdfs:label>25th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>25</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>25th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_26">
    <rdfs:label>26th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>26</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>26th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_27">
    <rdfs:label>27th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>27</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>27th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_28">
    <rdfs:label>28th</rdfs:label>
```

```
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>28</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>28th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_29">
    <rdfs:label>29th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>29</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>29th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_30">
    <rdfs:label>30th</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>30</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>30th</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Day_31">
    <rdfs:label>31st</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;Day" />
    </rdf:type>
    <omd:has-subdivision-position>31</omd:has-subdivision-position>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
    <omt:has-value>31st</omt:has-value>
  </rdf:Description>

<!-- Qualifiers -->

  <rdf:Description rdf:about="#CE">
    <rdfs:label>CE</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;AfterQualifier" />
    </rdf:type>
    <omt:has-value>CE</omt:has-value>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  </rdf:Description>

  <rdf:Description rdf:about="#BCE">
    <rdfs:label>BCE</rdfs:label>
```

```
    <rdf:type>
      <owl:Class rdf:about="&omd;BeforeQualifier" />
    </rdf:type>
    <omt:has-value>BCE</omt:has-value>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  </rdf:Description>

  <rdf:Description rdf:about="#BC">
    <rdfs:label>BC</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;BeforeQualifier" />
    </rdf:type>
    <omt:has-value>BC</omt:has-value>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  </rdf:Description>

  <rdf:Description rdf:about="#AD">
    <rdfs:label>AD</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omd;AfterQualifier" />
    </rdf:type>
    <omt:has-value>AD</omt:has-value>
    <ome:contained-by rdf:resource="&omdg;Gregorian_Calendar"/>
  </rdf:Description>

</rdf:RDF>
```

Listing F.11: Gregorian Date Components

F.6 Cross-Context Examples: Intertextual Relationships

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/IntertextExample#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omc  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:ome="&ome;
   xmlns:omb="&omb;
   xmlns:omc="&omc;">


<!-- Contexts -->

<rdf:Description rdf:about="#Reality">
  <rdfs:label>Reality</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#ChristianBelief">
  <rdfs:label>Christian Belief</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality" />
</rdf:Description>

<rdf:Description rdf:about="#Highlander">
  <rdfs:label>Highlander</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
```

```
</rdf:Description>

<rdf:Description rdf:about="#HighlanderSeries">
  <rdfs:label>Highlander the Series</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Highlander" />
</rdf:Description>

<rdf:Description rdf:about="#HighlanderChristianBelief">
  <rdfs:label>Christian Belief</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <ome:shadow-of rdf:resource="#ChristianBelief" />
</rdf:Description>

<rdf:Description rdf:about="#GoodOmens">
  <rdfs:label>Highlander</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Sandman">
  <rdfs:label>Highlander the Series</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#GreekMythology">
  <rdfs:label>GreekMythology</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Discworld">
  <rdfs:label>Discworld</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>


<!-- Beings -->

<rdf:Description rdf:about="#PeterWingfield">
```

```
  <rdfs:label>Peter Wingfield</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality" />
</rdf:Description>

<rdf:Description rdf:about="#ValentinePelka">
  <rdfs:label>Valentine Pelka</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality" />
</rdf:Description>

<rdf:Description rdf:about="#CB_Death">
  <rdfs:label>Death</rdfs:label>
  <rdfs:comment>'And I looked, and behold a pale horse: and his name that
     sat on him was Death, and Hell followed with him' - Rev 6:8</comment>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#ChristianBelief" />
  <ome:is rdf:resource="#Death" />
</rdf:Description>


<!-- Characters -->

<!-- Greek Mythology -->

<rdf:Description rdf:about="#GM_Orpheus">
  <rdfs:label>Greek Mythology.Orpheus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GreekMythology" />
</rdf:Description>

<rdf:Description rdf:about="#GM_Kronos">
  <rdfs:label>Greek Mythology.Kronos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GreekMythology" />
</rdf:Description>


<!-- Highlander -->

<rdf:Description rdf:about="#HL_Kronos">
```

```
  <rdfs:label>Highlander.Kronos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <ome:shadow-of rdf:resource="#GM_Kronos" />
  <omc:portrayed-by rdf:resource="#ValentinePelka" />
</rdf:Description>

<rdf:Description rdf:about="#HL_Methos">
  <rdfs:label>Highlander.Methos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <omc:portrayed-by rdf:resource="#PeterWingfield" />
</rdf:Description>


<!-- Sandman -->

<rdf:Description rdf:about="#NG_Orpheus">
  <rdfs:label>Sandman.Orpheus</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Sandman" />
  <ome:shadow-of rdf:resource="#GM_Orpheus" />
</rdf:Description>

<rdf:Description rdf:about="#NG_Death">
  <rdfs:label>Sandman.Death</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Sandman" />
  <ome:is rdf:resource="#Death" />
</rdf:Description>


<!-- Good Omens -->

<rdf:Description rdf:about="#GO_Death">
  <rdfs:label>Good Omens.Death</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GoodOmens" />
  <ome:shadow-of rdf:resource="#CB_Death />
  <ome:is rdf:resource="#Death" />"
</rdf:Description>
```

```
<!-- Discworld -->

<rdf:Description rdf:about="#DW_Death">
  <rdfs:label>Discworld.Death</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Discworld" />
  <ome:is rdf:resource="#Death" />"
</rdf:Description>

<rdf:Description rdf:about="#DW_Chaos">
  <rdfs:label>Discworld.Chaos</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Discworld" />
</rdf:Description>


<!-- Groups -->

<rdf:Description rdf:about="#GO_4Horsemen">
  <rdfs:label>Good Omens.Four Horseman of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GoodOmens" />
  <ome:shadow-of rdf:resource="#CB_4Horsemen" />
  <ome:contains rdf:resource="#GO_Death" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<rdf:Description rdf:about="#GO_4Bikers">
  <rdfs:label>Good Omens.Four Moterbikers of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#GoodOmens" />
  <ome:inspired-by rdf:resource="#GO_4Horsemen" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<rdf:Description rdf:about="#CB_4Housemen">
  <rdfs:label>Christain.Four Horseman of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#ChristianBelief" />
```

```
  <ome:contains rdf:resource="#CB_Death" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<rdf:Description rdf:about="#HL_4HorsemenOTA">
  <rdfs:label>Highlander.Four Horseman of the Apocolypse</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderChristianBelief" />
  <ome:shadow-of rdf:resource="#CB_4Horsemen" />
  <ome:inspired-by rdf:resource="#HL_4Horsemen" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<rdf:Description rdf:about="#HL_4Horsemen">
  <rdfs:label>Highlander.4 Horseman</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;BondedGroup" />
  </rdf:type>
  <ome:exists-in rdf:resource="#HighlanderSeries" />
  <ome:contains rdf:resource="#HL_Kronos" />
  <ome:contains rdf:resource="#HL_Methos" />
  <omb:has-number-of-parts rdf:about="4" />
</rdf:Description>

<rdf:Description rdf:about="#DW_4Horsemen">
  <rdfs:label>Discworld.4 Horseman</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Group" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Discworld" />
  <ome:shadow-of rdf:resource="#CB_4Horsemen" />
  <ome:contains rdf:resource="#DW_Death" />
  <ome:contains rdf:resource="#DW_Chaos" />
  <omb:has-number-of-parts rdf:about="5" />
</rdf:Description>


<!-- State -->

<rdf:Description rdf:about="#Death">
  <rdfs:label>The Concept of Death</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Death" />
  </rdf:type>
</rdf:Description>

</rdf:RDF>
```

Listing F.12: OntoMedia: Intertextual Relations

F.7 Scene Description Examples: *Sleeping Beauty* and Related Narratives

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/SleepingBeautyExample#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omn  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:ome="&ome;
   xmlns:omb="&omb;
   xmlns:omn="&omn;
   xmlns:omc="&omt;">


<!-- Contexts -->

<rdf:Description rdf:about="#SleepingBeauty">
  <rdfs:label>Sleeping Beauty</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:inspired-by rdf:resource="#SunMoonTalia" />
</rdf:Description>

<rdf:Description rdf:about="#SunMoonTalia">
  <rdfs:label>Sun, Moon and Talia</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>
```

```
<!-- Timelines -->

<rdf:Description rdf:about="#SB_Timeline">
  <rdfs:label>Sleeping Beauty Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#SMT_Timeline">
  <rdfs:label>Sun, Moon and Talia Narrative Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>


<!-- Characters -->

<!-- Sleeping Beauty -->

<rdf:Description rdf:about="#SB_Princess">
  <rdfs:label>Sleeping Beauty.Princess</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
  <ome:shadow-of rdf:resource="#SMT_Talia" />
</rdf:Description>

<rdf:Description rdf:about="#SB_Prince">
  <rdfs:label>Sleeping Beauty.Prince</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
  <ome:shadow-of rdf:resource="#SMT_King" />
</rdf:Description>


<!-- Sun,Moon and Talia -->

<rdf:Description rdf:about="#SMT_Talia">
  <rdfs:label>Sun, Moon and Talia.Talia</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <omt:has-trait rdf:resource="#SMT_Talia_Name" />
</rdf:Description>
```

```
<rdf:Description rdf:about="#SMT_Twin1">
  <rdfs:label>Sun, Moon and Talia.Twin1</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Twin2">
  <rdfs:label>Sun, Moon and Talia.Twin2</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_King">
  <rdfs:label>Sun, Moon and Talia.King</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <omt:has-trait rdf:resource="#SMT_King_Name" />
</rdf:Description>


<!-- Events -->

<!-- Sleeping Beauty -->

<rdf:Description rdf:about="#SB_Kiss">
  <rdfs:label>Sleeping Beauty.Kiss</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omea;Sex" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
  <ome:causes rdf:resource="#SB_Wake_Up" />
  <ome:has-object-entity rdf:resource="#SB_Princess_lips" />
  <ome:has-subject-entity rdf:resource="#SB_Prince_lips" />
</rdf:Description>

<rdf:Description rdf:about="#SB_Wake_Up">
  <rdfs:label>Sleeping Beauty.Princess Awakes</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SleepingBeauty" />
  <ome:caused_by rdf:resource="#SB_Kiss" />
  <ome:has-subject-entity rdf:resource="#SB_Princess" />
  <ome:from rdf:resource="#Asleep" />
  <ome:to rdf:resource="#Conscious" />
```

```
</rdf:Description>


<!-- Sun Moon Talia -->

<!-- action -->

<rdf:Description rdf:about="#SMT_Kiss">
  <rdfs:label>Sun, Moon and Talia.'Kiss'</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omea;Sex" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <ome:causes rdf:resource="#SMT_Twins" />
  <ome:has-object-entity rdf:resource="#SMT_Talia" />
  <ome:has-subject-entity rdf:resource="#SMT_King" />
</rdf:Description>


<!-- transformation -->

<rdf:Description rdf:about="#SMT_Wake_Up">
  <rdfs:label>Sun, Moon and Talia.Talia Awakes</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <ome:caused_by rdf:resource="#SMT_Splinter_Out" />
  <ome:has-subject-entity rdf:resource="#SMT_Talia" />
  <ome:from rdf:resource="#Asleep" />
  <ome:to rdf:resource="#Conscious" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Splinter_Out">
  <rdfs:label>Sun, Moon and Talia.Splinter</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <ome:initial-event rdf:resourse="#SMT_Remove_Splinter" />
  <ome:final-event rdf:resourse="#SMT_Gain_Splinter" />
  <ome:has-subject-entity rdf:resource="#SMT_Splinter" />
  <ome:from rdf:resource="#SMT_Talia" />
  <ome:to rdf:resource="#SMT_Twins" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Twins_Birth">
  <rdfs:label>Sun, Moon and Talia.Twins Birth</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Transformation" />
  </rdf:type>
```

```
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <ome:has-subject-entity rdf:resource="#SMT_Talia" />
  <ome:from rdf:resource="#SMT_Talia" />
  <ome:to>
    <rdf:Bag>
      <rdf:li rdf:resource="#SMT_Talia" />
      <rdf:li rdf:resource="#SMT_Twin1" />
      <rdf:li rdf:resource="#SMT_Twin2" />
    </rdf:Bag>
  </ome:to>
</rdf:Description>


<!-- loss -->

<rdf:Description rdf:about="#SMT_Remove_Splinter">
  <rdfs:label>Sun, Moon and Talia.Splinter Removed from Talia's Finger</
   rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omel;PhysicalItem" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <ome:causes rdf:resource="#SMT_Wake_Up" />
  <ome:has-object-entity rdf:resource="#SMT_Splinter" />
  <ome:has-subject-entity rdf:resource="#SMT_Talia_Finger" />
</rdf:Description>


<!-- gain -->

<rdf:Description rdf:about="#SMT_Twins">
  <rdfs:label>Sun, Moon and Talia.Twins Concieved</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omeg;Creation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <ome:has-subject-entity>
    <rdf:Bag>
      <rdf:li rdf:resource="#SMT_Twin1" />
      <rdf:li rdf:resource="#SMT_Twin2" />
    </rdf:Bag>
  </ome:has-subject-entity>
</rdf:Description>

<rdf:Description rdf:about="#SMT_Gain_Splinter">
  <rdfs:label>Sun, Moon and Talia.Twins Suck Splinter Out</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omel;PhysicalItem" />
  </rdf:type>
  <ome:exists-in rdf:resource="#SunMoonTalia" />
  <ome:has-object-entity rdf:resource="#SMT_Splinter" />
```

```
  <ome:has-subject-entity>
    <rdf:Bag>
      <rdf:li rdf:resource="#SMT_Twin1" />
      <rdf:li rdf:resource="#SMT_Twin2" />
    </rdf:Bag>
  </ome:has-subject-entity>
</rdf:Description>


<!-- Occurrences -->

<!-- Sleeping Beauty -->

<rdf:Description rdf:about="#SB_Kiss_NT">
  <rdfs:label>Prince Kisses Sleeping Beauty</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#SB_Timeline" />
  <ome:occurrence-of rdf:resource="#SB_Kiss" />
</rdf:Description>

<rdf:Description rdf:about="#SB_Wake_Up_NT">
  <rdfs:label>Sleeping Beauty Wakes Up</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#SB_Timeline" />
  <ome:occurrence-of rdf:resource="#SB_Wake_Up" />
  <ome:follows rdf:resource="#SB_Kiss_NT" />
</rdf:Description>


<!-- Sun, Moon and Talia -->

<rdf:Description rdf:about="#SMT_Kiss_NT">
  <rdfs:label>King 'Kisses' Talia</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#SMT_Timeline" />
  <ome:occurrence-of rdf:resource="#SMT_Kiss" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Wake_Up_NT">
  <rdfs:label>Talia Wakes Up</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#SMT_Timeline" />
  <ome:occurrence-of rdf:resource="#SMT_Wake_Up" />
```

```
  <ome:follows rdf:resource="#SMT_Splinter_Out_NT" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Splinter_Out_NT">
  <rdfs:label>Splinter Removed From Talia's Finger</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#SMT_Timeline" />
  <ome:occurrence-of rdf:resource="#SMT_Splinter_Out" />
  <ome:follows rdf:resource="#SMT_Twins_Birth_NT" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Twins_Birth_NT">
  <rdfs:label>Twins Born</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#SMT_Timeline" />
  <ome:occurrence-of rdf:resource="#SMT_Twins_Birth" />
  <ome:follows rdf:resource="#SMT_Twins_NT" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Twins_NT">
  <rdfs:label>Twins Concieved</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#SMT_Timeline" />
  <ome:occurrence-of rdf:resource="#SMT_Twins" />
  <ome:follows rdf:resource="#SMT_Kiss_NT" />
</rdf:Description>


<!-- Traits -->

<!-- names -->

<rdf:Description rdf:about="#SMT_King_Name">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <omt:has-name rdf:resource="#SMT_FullName_King" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Talia_Name">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <omt:has-name rdf:resource="#SMT_FullName_King" />
</rdf:Description>
```

```
<!-- name orders -->

<rdf:Description rdf:about="#SMT_FullName_King">
  <rdf:type>
    <owl:Class rdf:about="&omn;Full" />
  </rdf:type>
  <omn:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#SMT_Title_King" />
    </rdf:Seq>
  </omn:has-order>
</rdf:Description>

<rdf:Description rdf:about="#SMT_FullName_Talia">
  <rdf:type>
    <owl:Class rdf:about="&omn;Full" />
  </rdf:type>
  <omn:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#SMT_PrimaryName_Talia" />
    </rdf:Seq>
  </omn:has-order>
</rdf:Description>

<!-- Components -->

<rdf:Description rdf:about="#SMT_Title_King">
  <rdfs:label>King</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omn;Title" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#SMT_PrimaryName_Talia">
  <rdfs:label>Talia</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omn;Primary-Name" />
  </rdf:type>
</rdf:Description>


<!-- state-->

<rdf:Description rdf:about="#Asleep">
  <rdfs:label>Asleep</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Asleep" />
  </rdf:type>
</rdf:Description>
```

```
<rdf:Description rdf:about="#Conscious">
  <rdfs:label>Conscious</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omt;Conscious" />
  </rdf:type>
</rdf:Description>


<!-- Body Parts -->

<rdf:Description rdf:about="#SB_Prince_lips">
  <rdfs:label>Sleeping Beauty.Prince's Lips</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ombp;Lips" />
  </rdf:type>
  <ome:contained_by rdf:resource="#SB_Prince" />
  <ome:exists-in rdf:resource="#SleepingBeauty" />
</rdf:Description>

<rdf:Description rdf:about="#SB_Princess_lips">
  <rdfs:label>Sleeping Beauty.Princess's Lips</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ombp;Lips" />
  </rdf:type>
  <ome:contained_by rdf:resource="#SB_Princess" />
  <ome:exists-in rdf:resource="#SleepingBeauty" />
</rdf:Description>

<rdf:Description rdf:about="#SMT_Talia_Finger">
  <rdfs:label>Sleeping Beauty.Princess's Lips</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ombp;Fingers" />
  </rdf:type>
  <ome:contained_by rdf:resource="#SMT_Talia" />
  <ome:exists-in rdf:resource="#SunMoonTalia" />
</rdf:Description>


<!-- other -->

<rdf:Description rdf:about="#SMT_Splinter">
  <rdfs:label>Splinter of Flax</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Physical-Item" />
  </rdf:type>
  <omt:has-description rdf:resource="#Flax" />
</rdf:Description>

<rdf:Description rdf:about="#Flax">
  <rdfs:label>Flax</rdfs:label>
```

```
  <rdf:type>
    <owl:Class rdf:about="&omt;Material" />
  </rdf:type>
  <rdf:seeAlso rdf:resource="http://www.wordnet-online.com/flax_family.
    shtml" />
</rdf:Description>

</rdf:RDF>
```

Listing F.13: OntoMedia: Sleeping Beauty and Related Narratives

F.8 Interpretation Examples: *X-Files* Krycek-Mulder Kiss

```
<!-- Contexts -->

<rdf:Description rdf:about="#XFiles">
  <rdfs:label>X-Files</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:has-shadow rdf:resource="#XFiles-MKSlash" />
</rdf:Description>

<rdf:Description rdf:about="#XFiles-MKSlash">
  <rdfs:label>X-Files (M/K Slash Googles)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:shadow-of rdf:resource="#XFiles" />
</rdf:Description>

<rdf:Description rdf:about="#XFiles-MKGen">
  <rdfs:label>X-Files (Gen Googles)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
  <ome:shadow-of rdf:resource="#XFiles" />
</rdf:Description>

<!-- Timeline -->

<rdf:Description rdf:about="#XFilesTL">
  <rdfs:label>X-Files Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#XFilesSlashTL">
  <rdfs:label>X-Files Slashers Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#XFilesGenTL">
  <rdfs:label>X-Files Gen Timeline</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Timeline" />
  </rdf:type>
</rdf:Description>
```

```
<!-- Characters -->

<rdf:Description rdf:about="#XF_Mulder">
  <rdfs:label>X-Files.Fox Mulder</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#XFiles" />
</rdf:Description>

<rdf:Description rdf:about="#XF_Krycek">
  <rdfs:label>X-Files.Fox Mulder</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#XFiles" />
</rdf:Description>

<!-- Events -->

<rdf:Description rdf:about="#XF_TRatBKissAmbig">
  <rdfs:label>X-Files.Kiss (The Red and the Black)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omea;Sex" />
    <owl:Class rdf:about="&ome;Social" />
    <owl:Class rdf:about="&omf;Interpretation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#XFiles" />
  <ome:has-object-entity rdf:resource="#XF_Mulder-Face-Cheek-Right" />
  <ome:has-subject-entity rdf:resource="#XF_Krycek-lips" />
</rdf:Description>

<rdf:Description rdf:about="#XF_TRatBKissInnocent">
  <rdfs:label>X-Files.Kiss (The Red and the Black)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Social" />
    <owl:Class rdf:about="&omf;Interpretation" />
  </rdf:type>
  <ome:exists-in rdf:resource="#XFiles" />
  <ome:has-object-entity rdf:resource="#XF_Mulder-Face-Cheek-Right" />
  <ome:has-subject-entity rdf:resource="#XF_Krycek-lips" />
</rdf:Description>

<rdf:Description rdf:about="#XF_TRatBKissSlashverse">
  <rdfs:label>X-Files.Kiss (The Red and the Black)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Sex" />
  </rdf:type>
  <ome:exists-in rdf:resource="#XFiles-MKSlash" />
  <ome:has-object-entity rdf:resource="#XF_Mulder-Face-Cheek-Right" />
```

```
  <ome:has-subject-entity rdf:resource="#XF_Krycek-lips" />
</rdf:Description>

<rdf:Description rdf:about="#XF_TRatBKissGenverse">
  <rdfs:label>X-Files.Kiss (The Red and the Black)</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Social" />
  </rdf:type>
  <ome:exists-in rdf:resource="#XFiles-MKGen" />
  <ome:has-object-entity rdf:resource="#XF_Mulder-Face-Cheek-Right" />
  <ome:has-subject-entity rdf:resource="#XF_Krycek-lips" />
</rdf:Description>

<!-- Occurrences -->

<rdf:Description rdf:about="#XF_TRatBKiss_XFTL">
  <rdfs:label>Krycek Kisses Mulder</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#XFilesTL" />
  <ome:occurrence-of>
    <rdf:Alt>
      <rdf:li rdf:resource="#XF_TRatBKissAmbig" />
      <rdf:li rdf:resource="#XF_TRatBKissInnocent" />
    </rdf:Alt>
  </ome:occurrence-of>
</rdf:Description>

<rdf:Description rdf:about="#XF_TRatBKiss_XFSLTL">
  <rdfs:label>Krycek Kisses Mulder</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#XF_TRatBKissSlashverse" />
  <ome:occurrence-of rdf:resource="#XFilesSlashTL" />
</rdf:Description>

<rdf:Description rdf:about="#XF_TRatBKiss_XFSHTL">
  <rdfs:label>Krycek Kisses Mulder</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Occurrence" />
  </rdf:type>
  <ome:timeline-ref rdf:resource="#XFilesGenTL" />
  <ome:occurrence-of rdf:resource="#XF_TRatBKissGenverse" />
</rdf:Description>
```

Listing F.14: OntoMedia: Alternate Interpretations of a Kiss

Appendix G

OntoMedia OWL Descriptions

G.1 OntoMedia Expression

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
  <!ENTITY locspec      "http://ontomedia.ecs.soton.ac.uk/ontologies/misc
    /locspec#">
  <!ENTITY omt          "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/
    common/trait#">
  <!ENTITY dat          "http://ontomedia.ecs.soton.ac.uk/ontologies/misc
    /date#">
]>



<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xmlns:locspec="&locspec;"
   xmlns:dat="&dat;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">
```

```
  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia Core</rdfs:label>
    <dc:title xml:lang="en">OntoMedia Core</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-05-03</dct:created>
    <owl:versionInfo>0.32</owl:versionInfo>
  </owl:Ontology>

<!-- Core -->

  <owl:Class rdf:ID="Expression">
    <rdfs:label>Expression</rdfs:label>
    <rdfs:comment>This class represents a piece of information conveyed
    through a media</rdfs:comment>
   <!--  <rdfs:subClassOf rdf:resource="#Content" /> -->
  </owl:Class>

  <!-- Linking Properties -->

  <owl:ObjectProperty rdf:ID="is-linked-to">
    <rdfs:label>Is Linked To</rdfs:label>
    <rdfs:comment>This property indicates that there is some type of link
     between the named Expressions</rdfs:comment>
    <owl:inverseOf rdf:resource="#is-linked-to"/>
    <rdfs:domain rdf:resource="#Expression"/>
    <rdfs:range rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="is-not-linked-to">
    <rdfs:label>Is Not Linked To</rdfs:label>
    <rdfs:comment>This property indicates that there is some no link
    between the named Expressions</rdfs:comment>
    <owl:inverseOf rdf:resource="#is-not-linked-to"/>
    <rdfs:domain rdf:resource="#Expression"/>
    <rdfs:range rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="contains">
    <rdfs:label>Contains</rdfs:label>
    <rdfs:comment>This property indicates that one expression contains
    the other</rdfs:comment>
```

```
    <owl:inverseOf rdf:resource="#contained-by"/>
    <rdfs:subPropertyOf rdf:resource="&base;is-linked-to" />
    <rdfs:range rdf:resource="#Expression"/>
    <rdfs:domain rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="contained-by">
    <rdfs:label>Contained By</rdfs:label>
    <rdfs:comment>This property indicates that one expression is
    contained by the other</rdfs:comment>
    <owl:inverseOf rdf:resource="#contains"/>
    <rdfs:subPropertyOf rdf:resource="&base;is-linked-to" />
    <rdfs:range rdf:resource="#Expression"/>
    <rdfs:domain rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <!-- Is the thing -->

  <owl:ObjectProperty rdf:ID="is">
    <rdfs:label>Is</rdfs:label>
    <rdfs:comment>This property indicates that the expression is exactly
    the same as another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;is-linked-to" />
    <owl:inverseOf rdf:resource="#is"/>
    <rdfs:domain rdf:resource="#Expression"/>
    <rdfs:range rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="is-not">
    <rdfs:label>Is Not</rdfs:label>
    <rdfs:comment>This property indicates that the expression is entirely
     different to another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;is-not-linked-to" />
    <owl:inverseOf rdf:resource="#is-not"/>
    <rdfs:domain rdf:resource="#Expression"/>
    <rdfs:range rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <!-- Is similar/related to the thing -->

  <owl:ObjectProperty rdf:ID="has-variant">
    <rdfs:label>Has Variant</rdfs:label>
    <rdfs:comment>This property indicates that the expression is a
    variation of another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;is-linked-to" />
    <owl:inverseOf rdf:resource="has-variant"/>
    <rdfs:range rdf:resource="#Expression"/>
    <rdfs:domain rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-shadow">
```

```
    <rdfs:label>Has Shadow</rdfs:label>
    <rdfs:comment>This property indicates that the expression is a
    variation on another, very similar but not exactly the same. For
    example the different interpretations of the same character</
    rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;has-variant" />
    <owl:inverseOf rdf:resource="#is-shadow-of"/>
    <rdfs:range rdf:resource="#Expression"/>
    <rdfs:domain rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="is-shadow-of">
    <rdfs:label>Is Shadow Of</rdfs:label>
    <rdfs:comment>This property indicates that the expression is a
    variation on another, very similar but not exactly the same. For
    example the different interpretations of the same character</
    rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;has-variant" />
    <owl:inverseOf rdf:resource="#has-shadow"/>
    <rdfs:range rdf:resource="#Expression"/>
    <rdfs:domain rdf:resource="#Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-spin-off">
    <rdfs:label>Has Spin Off</rdfs:label>
    <rdfs:comment>This property indicates that the expression has
    developed from another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;has-variant" />
    <owl:inverseOf rdf:resource="#is-spin-off-of"/>
    <rdfs:domain rdf:resource="#Item"/>
    <rdfs:range rdf:resource="#Item"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="is-spin-off-of">
    <rdfs:label>Is Spin Off Of</rdfs:label>
    <rdfs:comment>This property indicates that the expression has
    developed from another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;has-variant" />
    <owl:inverseOf rdf:resource="#has-spin-off"/>
   <rdfs:domain rdf:resource="#Item"/>
   <rdfs:range rdf:resource="#Item"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="inspired-by">
    <rdfs:label>Inspired By</rdfs:label>
    <rdfs:comment>This property indicates that the expression was
    inspired by another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;has-variant" />
    <owl:inverseOf rdf:resource="#inspired"/>
    <rdfs:domain rdf:resource="#Expression"/>
    <rdfs:range rdf:resource="#Expression"/>
```

```
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="inspired">
  <rdfs:label>Inspired</rdfs:label>
  <rdfs:comment>This property indicates that the expression inspired
  another</rdfs:comment>
  <rdfs:subPropertyOf rdf:resource="&base;has-variant" />
  <owl:inverseOf rdf:resource="#inspired-by"/>
  <rdfs:domain rdf:resource="#Expression"/>
  <rdfs:range rdf:resource="#Expression"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="is-potentially">
  <rdfs:label>Is Potentially</rdfs:label>
  <rdfs:subPropertyOf rdf:resource="&base;has-variant" />
  <rdfs:range rdf:resource="#Expression"/>
  <rdfs:domain rdf:resource="#Expression"/>
  <rdfs:comment>This property indicates that the expression is
  potentially another. For example, it may be a possible future version<
  /rdfs:comment>
</owl:ObjectProperty>

<!-- Entities -->

<owl:Class rdf:ID="Entity">
  <rdfs:label>Entity</rdfs:label>
  <rdfs:comment>A thing</rdfs:comment>
  <rdfs:subClassOf rdf:resource="#Expression" />
</owl:Class>

<!-- Entity Subclasses -->

<!-- Items -->

<owl:Class rdf:ID="Item">
  <rdfs:comment>This class represents an entity which may participate
  in an event within the media. An Item may be abstract or physical</
  rdfs:comment>
  <rdfs:label>Item</rdfs:label>
  <rdfs:subClassOf rdf:resource="#Entity" />
</owl:Class>


<owl:Class rdf:ID="Physical-Item">
  <rdfs:comment>This class represents a physical entity which may
  participate in an event within the media</rdfs:comment>
  <rdfs:label>Physical Item</rdfs:label>
  <rdfs:subClassOf rdf:resource="#Item" />
</owl:Class>

<owl:Class rdf:ID="Abstract-Item">
```

```
    <rdfs:comment>This class represents an abstract entity which may
    participate in an event within the media</rdfs:comment>
    <rdfs:label>Abstract Item</rdfs:label>
    <rdfs:subClassOf rdf:resource="#Item" />
  </owl:Class>

  <!-- Abstract-Item Subclases -->

  <owl:Class rdf:ID="Context">
    <rdfs:comment>This class represents the context in which an event or
    entity exists</rdfs:comment>
    <rdfs:label>Context</rdfs:label>
    <rdfs:subClassOf rdf:resource="#Abstract-Item" />
  </owl:Class>

  <owl:Class rdf:ID="Collection">
    <rdfs:comment>This class represents a collection of entities</
    rdfs:comment>
    <rdfs:label>Collection</rdfs:label>
    <rdfs:subClassOf rdf:resource="#Abstract-Item" />
  </owl:Class>

 <!-- Context Properties -->

  <owl:ObjectProperty rdf:ID="allows-existence-of">
    <rdfs:comment>This class represents that the desired expression may
    exist within the context</rdfs:comment>
    <rdfs:label>Allows Existence Of</rdfs:label>
    <rdfs:domain rdf:resource="&base;Context" />
    <owl:inverseOf rdf:resource="&base;exists-in"/>
    <rdfs:range rdf:resource="&base;Expression"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="exists-in">
    <rdfs:comment>This class represents that the expression exists within
     the related context</rdfs:comment>
    <rdfs:label>Exists In</rdfs:label>
    <rdfs:domain rdf:resource="&base;Expression"/>
    <owl:inverseOf rdf:resource="&base;allows-existence-of"/>
    <rdfs:range rdf:resource="&base;Context"/>
  </owl:ObjectProperty>


  <!-- Temporal -->

  <owl:Class rdf:ID="Timeline">
    <rdfs:comment>This class contains a sequence of occurring events</
    rdfs:comment>
    <rdfs:label>Timeline</rdfs:label>
    <rdfs:subClassOf rdf:resource="#Entity" />
  </owl:Class>
```

```
<owl:Class rdf:ID="Occurrence">
  <rdfs:comment>This class represents a single occurrence of an event,
  placing it at a position in a timeline</rdfs:comment>
  <rdfs:label>Occurrence</rdfs:label>
  <rdfs:subClassOf rdf:resource="#Entity" />
</owl:Class>

<!-- Temporal Properties -->

<owl:ObjectProperty rdf:ID="timeline-ref">
  <rdfs:label>Timeline Reference</rdfs:label>
  <rdfs:comment>Reference to the Timeline that the Occurrence exists on
  </rdfs:comment>
  <rdfs:range rdf:resource="#Timeline"/>
  <rdfs:domain rdf:resource="#Occurrence"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="occurrence-of">
  <rdfs:label>Occurrence Of</rdfs:label>
  <rdfs:comment>This property defines any the event that the occurrence
   relates to</rdfs:comment>
  <owl:inverseOf rdf:resource="#has-occurrence"/>
  <rdfs:domain rdf:resource="#Occurrence"/>
  <rdfs:range rdf:resource="#Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="precedes">
  <rdfs:label>Precedes</rdfs:label>
  <rdfs:comment>This property defines the occurrence which immediately
  follows this occurrence</rdfs:comment>
  <rdfs:range rdf:resource="#Occurrence"/>
  <rdfs:domain rdf:resource="#Occurrence"/>
  <owl:inverseOf rdf:resource="#follows"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="follows">
  <rdfs:label>Follows</rdfs:label>
  <rdfs:comment>Follows specifies the occurrence that happens after the
   referencing occurrence</rdfs:comment>
  <rdfs:range rdf:resource="#Occurrence"/>
  <rdfs:domain rdf:resource="#Occurrence"/>
  <owl:inverseOf rdf:resource="#precedes"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="concurrent">
  <rdfs:label>Concurrent Within</rdfs:label>
  <rdfs:comment>The period of the occurence is exactly the same time
  and length as the referenced occurence</rdfs:comment>
  <rdfs:range rdf:resource="#Occurrence"/>
  <rdfs:domain rdf:resource="#Occurrence"/>
```

```
</owl:ObjectProperty>

<!-- Time References -->

<owl:ObjectProperty rdf:ID="TAQ">
  <rdfs:label>Period Terminal Limit</rdfs:label>
  <rdfs:comment>Terminus Ante Quem (Limit Before Which): The latest
  date that the period the event covers could have happened</
  rdfs:comment>
  <rdfs:domain rdf:resource="#Occurrence"/>
  <rdfs:range rdf:resource="&dat;Date"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="TPQ">
  <rdfs:label>Temporal Start</rdfs:label>
  <rdfs:comment>The time/date/temporal reference for the start of the
  event</rdfs:comment>
  <rdfs:range rdf:resource="&dat;Date"/>
  <rdfs:domain rdf:resource="#Occurrence"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="StartTime">
  <rdfs:label>Temporal End</rdfs:label>
  <rdfs:comment>The time/date/temporal reference for the start of the
  event</rdfs:comment>
  <rdfs:domain rdf:resource="#Occurrence"/>
  <rdfs:range rdf:resource="&dat;Date"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="EndTime">
  <rdfs:label>Period Initial Limit</rdfs:label>
  <rdfs:comment>The time/date/temporal reference for the end of the
  event</rdfs:comment>
  <rdfs:range rdf:resource="&dat;Date"/>
  <rdfs:domain rdf:resource="#Occurrence"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="DisceteTime">
  <rdfs:label>Time/Date</rdfs:label>
  <rdfs:comment>The time/date/temporal reference for the the event</
  rdfs:comment>
  <rdfs:domain rdf:resource="#Occurrence"/>
  <rdfs:range rdf:resource="&dat;Date"/>
</owl:ObjectProperty>

<owl:FunctionalProperty rdf:ID="has-duration">
  <rdfs:label>Duration of Occurrence</rdfs:label>
  <rdfs:comment>This property specifies the duration of the occurrence<
  /rdfs:comment>
  <rdfs:domain rdf:resource="#Occurrence"/>
  <rdfs:range>
```

```
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="&locspec;LocSpec"/>
        <owl:Class rdf:about="&omt;Dimension"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:range>
</owl:FunctionalProperty>

<!-- Links to Media are now all in the media.owl file! -->

<!-- Events -->

<owl:Class rdf:ID="Event">
  <rdfs:label>Event</rdfs:label>
  <rdfs:comment>This property defines an event</rdfs:comment>
  <rdfs:subClassOf rdf:resource="#Expression" />
</owl:Class>

<!-- Event Properties -->

<owl:ObjectProperty rdf:ID="final-event">
  <rdfs:domain rdf:resource="#Event"/>
  <rdfs:range rdf:resource="#Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="initial-event">
  <rdfs:comment
  >the first event which begins this sequence</rdfs:comment>
  <rdfs:domain rdf:resource="#Event"/>
  <rdfs:range rdf:resource="#Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-subject-entity">
  <rdfs:label>Has Subject Entity</rdfs:label>
  <rdfs:comment>This property specifies the entity which carries out
  the aim of the event</rdfs:comment>
  <rdfs:domain rdf:resource="#Event"/>
  <rdfs:range rdf:resource="#Entity"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-object-entity">
  <rdfs:label>Has Object Entity</rdfs:label>
  <rdfs:comment>This property specifies the entity which is the target
  of the event</rdfs:comment>
  <rdfs:range rdf:resource="#Entity"/>
  <rdfs:domain rdf:resource="#Event"/>
</owl:ObjectProperty>


<owl:ObjectProperty rdf:ID="has-occurrence">
```

```
    <rdfs:label>Has occurrence</rdfs:label>
    <rdfs:comment>This property defines any occurrences of this event</
   rdfs:comment>
    <rdfs:range rdf:resource="#Occurrence"/>
    <rdfs:domain rdf:resource="#Event" />
    <owl:inverseOf rdf:resource="#occurrence-of"/>
  </owl:ObjectProperty>

  <owl:FunctionalProperty rdf:ID="summary">
    <rdfs:label>Summary</rdfs:label>
    <rdfs:domain rdf:resource="#Event"/>
    <rdfs:range rdf:resource="&rdfs;Literal"/>
    <rdfs:comment>This property is a plain-text summery of what occurs in
     the event</rdfs:comment>
  </owl:FunctionalProperty>

  <owl:ObjectProperty rdf:ID="precondition">
    <rdfs:label>Precondition</rdfs:label>
    <rdfs:comment>This property is a state that must exist before the
   event can occur</rdfs:comment>
    <rdfs:range>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="#Entity"/>
          <owl:Class rdf:about="#Event"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:range>
    <rdfs:domain rdf:resource="#Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="postcondition">
    <rdfs:label>Postcondition</rdfs:label>
    <rdfs:range>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="#Entity"/>
          <owl:Class rdf:about="#Event"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:range>
    <rdfs:comment>This property contains the state which should occur as
   a consequence of this event</rdfs:comment>
    <rdfs:domain rdf:resource="#Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="involves">
    <rdfs:label>Involves</rdfs:label>
    <rdfs:comment>This property specifies the entities involved in this
   event. Note that this includes the subject and object.</rdfs:comment>
    <rdfs:range rdf:resource="#Entity"/>
```

```
  <rdfs:domain rdf:resource="#Event"/>
  <owl:inverseOf rdf:resource="#involved-in" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="involved-in">
  <rdfs:label>Involved In</rdfs:label>
  <rdfs:comment>This property specifies the events involved in by this
  entity. Note that this includes the subject and object.</rdfs:comment>
  <rdfs:range rdf:resource="#Event"/>
  <rdfs:domain rdf:resource="#Entity"/>
  <owl:inverseOf rdf:resource="#involves" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="causes">
  <rdfs:label>Causes</rdfs:label>
  <rdfs:comment>This property indicates the instigating factor of an
  event, whether it be an item, event, or collection.</rdfs:comment>
  <rdfs:range>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="#Event"/>
        <owl:Class rdf:about="#Entity"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:range>
  <rdfs:domain>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="#Event"/>
        <owl:Class rdf:about="#Entity"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:domain>
  <owl:inverseOf rdf:resource="#caused-by"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="caused-by">
  <rdfs:label>Caused By</rdfs:label>
  <rdfs:comment>This property indicates the instigating factor of an
  event, whether it be an item, event, or collection.</rdfs:comment>
  <rdfs:range>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="#Event"/>
        <owl:Class rdf:about="#Entity"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:range>
  <rdfs:domain>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
```

```
        <owl:Class rdf:about="#Event"/>
        <owl:Class rdf:about="#Entity"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:domain>
  <owl:inverseOf rdf:resource="#causes"/>
</owl:ObjectProperty>


<!-- Event Subclasses -->


<owl:Class rdf:ID="Gain">
  <rdfs:label>Gain</rdfs:label>
  <rdfs:subClassOf rdf:resource="#Event" />
  <rdfs:comment>This event class results in an overall increase of the
  entities related to the primary subject or subjects of the event</
  rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Introduction">
  <rdfs:label>Introduction</rdfs:label>
  <rdfs:comment>This event class denotes the introduction of an entity
  to the media</rdfs:comment>
  <rdfs:subClassOf rdf:resource="#Event" />
</owl:Class>

<owl:Class rdf:ID="Loss">
  <rdfs:label>Loss</rdfs:label>
  <rdfs:comment>This event class results in an overall reduction of the
   entities related to the primary subject or subjects of the event</
  rdfs:comment>
  <rdfs:subClassOf rdf:resource="#Event" />
</owl:Class>

<owl:Class rdf:ID="Transformation">
  <rdfs:comment>This event class results in no gain or loss of
  attributes or entities, merely alteration</rdfs:comment>
  <rdfs:label>Transformation</rdfs:label>
  <rdfs:subClassOf rdf:resource="#Event" />
</owl:Class>

<owl:Class rdf:ID="Action">
  <rdfs:comment>This event class describes an action sequence (ie no
  plot)</rdfs:comment>
  <rdfs:label>Action</rdfs:label>
  <rdfs:subClassOf rdf:resource="#Event" />
</owl:Class>

<owl:Class rdf:ID="Social">
  <rdfs:comment>This event class describes a sequence focusing on
```

```
    social, interpersonal and personal emotional elements</rdfs:comment>
     <rdfs:label>Social</rdfs:label>
     <rdfs:subClassOf rdf:resource="#Event" />
  </owl:Class>

  <!-- Transformation Properties -->

  <owl:ObjectProperty rdf:ID="from">
    <rdfs:label>From</rdfs:label>
    <rdfs:comment>This property specifies the entity which is being
    transformed</rdfs:comment>
    <rdfs:range rdf:resource="#Entity" />
    <rdfs:domain rdf:resource="#Transformation" />
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="to">
    <rdfs:label>To</rdfs:label>
    <rdfs:comment>This property specifies the resultant entity</
    rdfs:comment>
    <rdfs:range rdf:resource="#Entity" />
    <rdfs:domain rdf:resource="#Transformation" />
  </owl:ObjectProperty>


  <!-- Unsorted -->
<!--

  <owl:ObjectProperty rdf:ID="expresses">
    <rdfs:domain rdf:resource="#Expressible"/>
    <rdfs:range rdf:resource="#Expression"/>
  </owl:ObjectProperty>
-->

</rdf:RDF>
```

Listing G.1: OntoMedia Expression

G.2 OntoMedia Space

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space#">
<!ENTITY aktloc "http://signage.ecs.soton.ac.uk/ontologies/location#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:aktloc="&aktloc;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Space Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Space Representation</dc:title>
 <dc:description xml:lang="en">The OntoMedia Space representation denotes
     areas of landscape. Expands on the AKT location ontology</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/expression"/>
</owl:Ontology>

  <owl:Class rdf:about="&base;Space">
    <rdfs:label>Space</rdfs:label>
    <rdfs:comment>This property is to be used to describe a space</
```

```
  rdfs:comment>
   <rdfs:subClassOf rdf:resource="&ome;Entity"/>
   <rdfs:subClassOf rdf:resource="&aktloc;Abstract-Space"/>
</owl:Class>

<owl:Class rdf:ID="Level_Traversing_Space">
   <rdfs:label>Level Traversing Space</rdfs:label>
   <rdfs:comment>This class is used to represent a space which traverses
    levels</rdfs:comment>
   <rdfs:subClassOf rdf:resource="#Space" />
</owl:Class>

<!-- Enclosed spaces -->

<owl:Class rdf:ID="Vessel">
   <rdfs:subClassOf rdf:resource="&aktloc;Enclosed-Space"/>
   <rdfs:label>Vessel</rdfs:label>
   <rdfs:comment>This property is to be used to describe a vessel</
  rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Portal">
   <rdfs:subClassOf rdf:resource="&aktloc;Enclosed-Space"/>
   <rdfs:label>Portal</rdfs:label>
   <rdfs:comment>This property is to be used to describe a portal i.e
  doorway, stargate</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Container">
   <rdfs:subClassOf rdf:resource="&aktloc;Enclosed-Space"/>
   <rdfs:label>Container</rdfs:label>
   <rdfs:comment>This property is to be used to describe a container</
  rdfs:comment>
</owl:Class>

<!-- Unenclosed Spaces -->


<owl:Class rdf:ID="Region">
   <rdfs:subClassOf rdf:resource="&aktloc;Open-Space"/>
   <rdfs:label>Region</rdfs:label>
   <rdfs:comment>This property is to be used to describe a region</
  rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="World">
   <rdfs:subClassOf rdf:resource="&aktloc;Open-Space"/>
   <rdfs:label>World</rdfs:label>
   <rdfs:comment>This property is to be used to describe a world, planet
  , moon or other similar body</rdfs:comment>
</owl:Class>
```

```
<owl:Class rdf:ID="Orbit">
  <rdfs:subClassOf rdf:resource="&aktloc;Open-Space"/>
  <rdfs:label>Orbit</rdfs:label>
  <rdfs:comment>This property is to be used to describe the path of an
  orbiting object</rdfs:comment>
</owl:Class>

 <owl:Class rdf:ID="Galaxy">
   <rdfs:subClassOf rdf:resource="&aktloc;Open-Space"/>
   <rdfs:label>Galaxy</rdfs:label>
   <rdfs:comment>This property is to be used to describe a galaxy</
  rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Universe">
  <rdfs:subClassOf rdf:resource="&aktloc;Open-Space"/>
  <rdfs:label>Universe</rdfs:label>
  <rdfs:comment>This property is to be used to describe a universe</
  rdfs:comment>
</owl:Class>

<!-- Urban Areas -->

<owl:Class rdf:ID="Urban_Area">
  <rdfs:subClassOf rdf:resource="&aktloc;Open-Space"/>
  <rdfs:label>Urban Area</rdfs:label>
  <rdfs:comment>This property is to be used to describe an urban area</
  rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Village">
  <rdfs:subClassOf rdf:resource="#Urban_Area"/>
  <rdfs:label>Village</rdfs:label>
  <rdfs:comment>This property is to be used to describe a village space
  </rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="City">
  <rdfs:subClassOf rdf:resource="#Urban_Area"/>
  <rdfs:label>City</rdfs:label>
  <rdfs:comment>This property is to be used to describe a city space</
  rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Metropolis">
  <rdfs:subClassOf rdf:resource="#Urban_Area"/>
  <rdfs:label>Metropolis</rdfs:label>
  <rdfs:comment>This property is to be used to describe a metropolis</
  rdfs:comment>
</owl:Class>
```

```
<owl:Class rdf:ID="Capital">
  <rdfs:subClassOf rdf:resource="#Metropolis"/>
  <rdfs:label>Capital</rdfs:label>
  <rdfs:comment>This property is to be used to describe a Capital city<
 /rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Town">
  <rdfs:subClassOf rdf:resource="#Urban_Area"/>
  <rdfs:label>Town</rdfs:label>
  <rdfs:comment>This property is to be used to describe a town</
 rdfs:comment>
</owl:Class>

<!-- Regions -->

<owl:Class rdf:ID="Layer">
  <rdfs:subClassOf rdf:resource="&base;Region"/>
  <rdfs:label>Layer</rdfs:label>
  <rdfs:comment>This property is to be used to describe a region that
 forms a layer</rdfs:comment>
</owl:Class>

<!-- Aquatic -->

<owl:Class rdf:ID="Aquatic">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Aquatic Region</rdfs:label>
  <rdfs:comment>This property is to be used to describe an aquatic
 region</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Pool">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Pool</rdfs:label>
  <rdfs:comment>This property is to be used to describe a pool region</
 rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Lake">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Lake</rdfs:label>
  <rdfs:comment>This property is to be used to describe a lake region</
 rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Sea">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Sea</rdfs:label>
  <rdfs:comment>This property is to be used to describe a sea region</
```

```
  rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Ocean">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Ocean</rdfs:label>
  <rdfs:comment>This property is to be used to describe an ocean region
  </rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Stream">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Stream</rdfs:label>
  <rdfs:comment>This property is to be used to describe a stream region
  </rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="River">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>River</rdfs:label>
  <rdfs:comment>This property is to be used to describe a river region<
  /rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Estuary">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Estuary</rdfs:label>
  <rdfs:comment>This property is to be used to describe an estuary
  region</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Puddle">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Puddle</rdfs:label>
  <rdfs:comment>This property is to be used to describe a puddle region
  </rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Pond">
  <rdfs:subClassOf rdf:resource="#Aquatic"/>
  <rdfs:label>Pond</rdfs:label>
  <rdfs:comment>This property is to be used to describe a man-made pond
   region</rdfs:comment>
</owl:Class>

<!-- Arboreal -->

<owl:Class rdf:ID="Arboreal">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Arboreal</rdfs:label>
  <rdfs:comment>This property is to be used to describe an arboreal
```

```
  region</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Copse">
  <rdfs:subClassOf rdf:resource="#Arboreal"/>
  <rdfs:label>Copse</rdfs:label>
  <rdfs:comment>This property is to be used to describe a copse region<
  /rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Forest">
  <rdfs:subClassOf rdf:resource="#Arboreal"/>
  <rdfs:label>Forest</rdfs:label>
  <rdfs:comment>This property is to be used to describe a forested
  region</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Orchard">
  <rdfs:subClassOf rdf:resource="#Arboreal"/>
  <rdfs:label>Orchard</rdfs:label>
  <rdfs:comment>This property is to be used to describe a cultivated
  orchard region</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Wood">
  <rdfs:subClassOf rdf:resource="#Arboreal"/>
  <rdfs:label>Wood</rdfs:label>
  <rdfs:comment>This property is to be used to describe a wooded region
  </rdfs:comment>
</owl:Class>

<!-- Hydrated -->

<owl:Class rdf:ID="Hydrated">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Hydrated</rdfs:label>
  <rdfs:comment>This property is to be used to describe a very damp
  region</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Marsh">
  <rdfs:subClassOf rdf:resource="#Hydrated"/>
  <rdfs:label>Marsh</rdfs:label>
  <rdfs:comment>This property is to be used to describe a marshy region
  </rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Swamp">
  <rdfs:subClassOf rdf:resource="#Hydrated"/>
  <rdfs:label>Swamp</rdfs:label>
  <rdfs:comment>This property is to be used to describe a swampy region
```

```
  </rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Bog">
  <rdfs:subClassOf rdf:resource="#Hydrated"/>
  <rdfs:label>Bog</rdfs:label>
  <rdfs:comment>This property is to be used to describe a boggy region<
  /rdfs:comment>
</owl:Class>

<!-- Arable -->

<owl:Class rdf:ID="Arable">
  <rdfs:subClassOf rdf:resource="#Region"/>
</owl:Class>

<owl:Class rdf:ID="Field">
  <rdfs:subClassOf rdf:resource="#Arable"/>
</owl:Class>

<!-- Areas -->

<owl:Class rdf:ID="Area">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Area</rdfs:label>
  <rdfs:comment>This property is to be used to describe a specific area
  </rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Ledge">
  <rdfs:subClassOf rdf:resource="#Area"/>
  <rdfs:label>Ledge</rdfs:label>
  <rdfs:comment>This property is to be used to describe a ledge i.e on
  the mountain wall</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Lot">
  <rdfs:subClassOf rdf:resource="#Area"/>
  <rdfs:label>Lot</rdfs:label>
  <rdfs:comment>This property is to be used to describe a lot of land</
  rdfs:comment>
</owl:Class>

<!-- Mountainous -->

<owl:Class rdf:ID="Mountain">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Mountain</rdfs:label>
  <rdfs:comment>This property is to be used to describe a mountain</
  rdfs:comment>
</owl:Class>
```

```
<owl:Class rdf:ID="Volcano">
  <rdfs:subClassOf rdf:resource="#Mountain"/>
  <rdfs:label>Volcano</rdfs:label>
  <rdfs:comment>This property is to be used to describe a volcano</
 rdfs:comment>
</owl:Class>

<!-- Other Regions -->

<owl:Class rdf:ID="Continent">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Continent</rdfs:label>
  <rdfs:comment>This property is to be used to describe a continent</
 rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Mountain_Range">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Mountain Range</rdfs:label>
  <rdfs:comment>This property is to be used to describe a continious
 mountainous region</rdfs:comment>
</owl:Class>

<owl:Class rdf:ID="Country">
  <rdfs:subClassOf rdf:resource="#Region"/>
  <rdfs:label>Country</rdfs:label>
  <rdfs:comment>This property is to be used to describe a country</
 rdfs:comment>
</owl:Class>

<!-- 2D Spaces -->

<owl:Class rdf:ID="Surface_Space">
  <rdfs:subClassOf rdf:resource="#Space"/>
  <rdfs:label>Surface Space</rdfs:label>
  <rdfs:comment>This property is to be used to describe the surface of
 a object</rdfs:comment>

</owl:Class>

<owl:Class rdf:ID="Biological_Surface_Space">
  <rdfs:subClassOf rdf:resource="#Surface_Space"/>
  <rdfs:label>Biological Surface Space</rdfs:label>
  <rdfs:comment>This property is to be used to describe the surface of
 a biological object</rdfs:comment>
</owl:Class>

<!-- properties -->

<owl:ObjectProperty rdf:ID="has-dividing-item">
```

```
    <rdfs:label>Has Dividing Item</rdfs:label>
    <rdfs:comment>This property is to be used to describe an item used to
     divide a portal</rdfs:comment>
    <rdfs:domain rdf:resource="#Portal"/>
    <rdfs:range rdf:resource="&ome;Item"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="adjacent-below">
    <rdfs:subPropertyOf rdf:resource="#adjacent-to"/>
    <rdfs:label>Adjacent Below</rdfs:label>
    <rdfs:comment>This property is to be used to describe an adjacent
    Abstract Space which is below the other</rdfs:comment>
    <owl:inverseOf rdf:resource="#adjacent-above" />
    <rdfs:domain rdf:resource="#&aktloc;Abstract-Space"/>
    <rdfs:range rdf:resource="&aktloc;Abstract-Space"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="adjacent-above">
    <rdfs:subPropertyOf rdf:resource="#adjacent-to"/>
    <rdfs:label>Adjacent Above</rdfs:label>
    <rdfs:comment>This property is to be used to describe an adjacent
    Abstract Space which is above the other</rdfs:comment>
    <owl:inverseOf rdf:resource="#adjacent-below" />
    <rdfs:domain rdf:resource="#&aktloc;Abstract-Space"/>
    <rdfs:range rdf:resource="&aktloc;Abstract-Space"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="orbit-around">
    <rdfs:subPropertyOf rdf:resource="#adjacent-to"/>
    <rdfs:label>Orbit Around</rdfs:label>
    <rdfs:comment>This property is to be used to describe an adjacent
    Abstract Space which describes an orbit around the other</rdfs:comment
    >
    <owl:inverseOf rdf:resource="#adjacent-below" />
    <rdfs:domain rdf:resource="#&aktloc;Abstract-Space"/>
    <rdfs:range rdf:resource="&aktloc;Abstract-Space"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="is-boundary-of">
    <rdfs:subPropertyOf rdf:resource="&aktloc;is-located-in"/>
    <rdfs:label>Is Boundary Of</rdfs:label>
    <rdfs:comment>This property is to be used to describe an Abstract
    Space of which the region is the boundary</rdfs:comment>
    <owl:inverseOf rdf:resource="#has-boundry" />
    <rdfs:domain rdf:resource="#&aktloc;Abstract-Space"/>
    <rdfs:range rdf:resource="&aktloc;Abstract-Space"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-boundary">
    <rdfs:subPropertyOf rdf:resource="&aktloc;is-located-in"/>
    <rdfs:label>Has Boundary</rdfs:label>
```

```
    <rdfs:comment>This property is to be used to describe an Abstract
    Space which is the boundary of the Abstract Space</rdfs:comment>
    <owl:inverseOf rdf:resource="#has-boundry" />
    <rdfs:domain rdf:resource="#&aktloc;Abstract-Space"/>
    <rdfs:range rdf:resource="&aktloc;Abstract-Space"/>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.2: OntoMedia Space

G.3 OntoMedia Media

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media
    #">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
  <!ENTITY ome    "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
  <!ENTITY geom   "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/
    geometry#">
]>



<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia Media Representation</rdfs:label>
    <dc:title xml:lang="en">OntoMedia Media Representation</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-05-10</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
  </owl:Ontology>

  <!-- A default media item -->

  <owl:Class rdf:ID="MediaAtom">
    <rdfs:subClassOf rdf:resource="#MediaRegion" />
```

```
  <rdfs:label>MonoMedia Item</rdfs:label>
  <rdfs:comment>This class represents a single monomedia item (such as
  text or audio)</rdfs:comment>
</owl:Class>

<!-- MediaRegion -->

<owl:Class rdf:ID="MediaRegion">
  <rdfs:label>Media Region</rdfs:label>
  <rdfs:comment>This class represents a region within a media item.
  This may be any possible portion of the media (e.g. a frame set or a
  pixel range)</rdfs:comment>
</owl:Class>

<owl:ObjectProperty rdf:ID="has-subregion">
  <rdfs:label>has subregion</rdfs:label>
  <rdfs:comment>This property specifies any regions which are within
  this region</rdfs:comment>
  <rdfs:domain rdf:resource="#MediaRegion" />
  <rdfs:range rdf:resource="#RegionPointer" />
  <owl:inverseOf rdf:resource="#is-subregion-of" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="is-subregion-of">
  <rdfs:label>is subregion of</rdfs:label>
  <rdfs:comment>This property specifies any regions which are within
  this region</rdfs:comment>
  <rdfs:domain rdf:resource="#MediaRegion" />
  <rdfs:range rdf:resource="#RegionPointer" />
  <owl:inverseOf rdf:resource="#has-subregion" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="relates-to">
  <rdfs:label>relates to</rdfs:label>
  <rdfs:comment>This property specifies any related regions. For
  example, textual versions of audio.</rdfs:comment>
  <rdfs:domain rdf:resource="#MediaRegion" />
  <rdfs:range rdf:resource="#MediaRegion" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-shared-source">
  <rdfs:label>relates to</rdfs:label>
  <rdfs:comment>This property specifies any related regions which share
   source material</rdfs:comment>
  <rdfs:domain rdf:resource="#MediaRegion" />
  <rdfs:range rdf:resource="#MediaRegion" />
  <owl:inverseOf rdf:resource="#has-shared-source" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-derivation">
  <rdfs:label>relates to</rdfs:label>
```

```
    <rdfs:comment>This property specifies related regions where one has
    been derived from the other.</rdfs:comment>
    <rdfs:domain rdf:resource="#MediaRegion" />
    <rdfs:range rdf:resource="#MediaRegion" />
    <owl:inverseOf rdf:resource="#is-derived-from" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="is-derived-from">
    <rdfs:label>relates to</rdfs:label>
    <rdfs:comment>This property specifies related regions where one has
    been derived from the other.</rdfs:comment>
    <rdfs:domain rdf:resource="#MediaRegion" />
    <rdfs:range rdf:resource="#MediaRegion" />
    <owl:inverseOf rdf:resource="#has-derivation" />
</owl:ObjectProperty>

<!-- RegionPointer -->

<owl:Class rdf:ID="RegionPointer">
    <rdfs:label>RegionPointer</rdfs:label>
    <rdfs:comment>This class defines a reference to a region, along with
    any layout or location information.</rdfs:comment>
</owl:Class>

<owl:ObjectProperty rdf:ID="has-shape">
    <rdfs:label>has shape</rdfs:label>
    <rdfs:domain rdf:resource="#RegionPointer" />
    <rdfs:range rdf:resource="&geom;Shape" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-locspec">
    <rdfs:label>has locspec</rdfs:label>
    <rdfs:domain rdf:resource="#RegionPointer" />
    <rdfs:range rdf:resource="#LocSpec" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-region">
    <rdfs:label>has region</rdfs:label>
    <rdfs:domain rdf:resource="#RegionPointer" />
    <rdfs:range rdf:resource="#MediaRegion" />
</owl:ObjectProperty>

<!-- LocSpec -->

<owl:class rdf:ID="LocSpec">
    <rdfs:label>LocSpec</rdfs:label>
    <rdfs:comment>This class represents a location or non-geometric
    region within a medium</rdfs:comment>
</owl:class>

<owl:DatatypeProperty rdf:ID="uri">
```

```
  <rdfs:label>uri</rdfs:label>
  <rdfs:domain rdf:resource="#LocSpec" />
  <rdfs:range rdf:resource="&xsd;anyURI" />
  <rdfs:comment>This property specifies the URI of the media</
 rdfs:comment>
</owl:DatatypeProperty>

<owl:ObjectProperty rdf:ID="has-range">
    <rdfs:label>has range</rdfs:label>
    <rdfs:domain rdf:resource="#LocSpec" />
    <rdfs:range rdf:resource="#Range" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-area">
      <rdfs:label>has area</rdfs:label>
      <rdfs:domain rdf:resource="#LocSpec" />
      <rdfs:range rdf:resource="#Shape" />
</owl:ObjectProperty>

<!-- Value -->
<owl:class rdf:ID="Value">
  <rdfs:comment>This class provides a simple pairing of a value and a
 unit</rdfs:comment>
</owl:class>

<owl:DatatypeProperty rdf:ID="value">
  <rdfs:label>value</rdfs:label>
  <rdfs:domain rdf:resource="#Value" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:comment>This property specifies a value</rdfs:comment>
</owl:DatatypeProperty>

<owl:DatatypeProperty rdf:ID="unit">
  <rdfs:label>unit</rdfs:label>
  <rdfs:domain rdf:resource="#Value" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:comment>This property specifies the unit of a value</
 rdfs:comment>
</owl:DatatypeProperty>

<!-- Range -->

<owl:class rdf:ID="Range">
  <rdfs:comment>This class represents a portion of a medium denoted by
 a start point and a length</rdfs:comment>
</owl:class>

<owl:ObjectProperty rdf:ID="offset">
  <rdfs:label>offset</rdfs:label>
  <rdfs:domain rdf:resource="#Range" />
  <rdfs:range rdf:resource="&ome;Value" />
```

```
    <rdfs:comment>This property specifies the offset into a region</
    rdfs:comment>
  </owl:ObjectProperty>

  <owl:DatatypeProperty rdf:ID="length">
    <rdfs:label>length</rdfs:label>
    <rdfs:domain rdf:resource="#Range" />
    <rdfs:range rdf:resource="&ome;Value" />
    <rdfs:comment>This property specifies the length of a range</
    rdfs:comment>
  </owl:DatatypeProperty>


  <!-- PageRange -->

  <owl:class rdf:ID="PageRange">
    <rdfs:subClassOf rdf:resource="#Range" />
  </owl:class>


  <!-- CharRange -->

  <owl:class rdf:ID="CharRange">
    <rdfs:subClassOf rdf:resource="#Range" />
  </owl:class>

  <!-- VideoRange -->

  <owl:class rdf:ID="VideoRange">
    <rdfs:subClassOf rdf:resource="#Range" />
  </owl:class>

  <!-- AudioRange -->

  <owl:class rdf:ID="AudioRange">
    <rdfs:subClassOf rdf:resource="#Range" />
  </owl:class>

<!-- Links between Media and Semantic Information -->

  <owl:ObjectProperty rdf:ID="is-expression-of">
    <rdfs:label>has expression</rdfs:label>
    <rdfs:comment>This property specifies any semantic information
    contained within this region</rdfs:comment>
    <rdfs:domain rdf:resource="#MediaRegion" />
    <rdfs:range rdf:resource="&ome;Expression" />
  </owl:ObjectProperty>

  <owl:FunctionalProperty rdf:ID="has-expression">
    <rdfs:label>Occurs</rdfs:label>
    <rdfs:comment>This property specifies the region of media in when an
```

```
    event occurrence happens</rdfs:comment>
     <rdfs:range rdf:resource="&ome;Expression"/>
     <rdfs:domain rdf:resource="#MediaRegion"/>
   </owl:FunctionalProperty>

   <owl:FunctionalProperty rdf:ID="start-point">
     <rdfs:label>Start point in Media</rdfs:label>
     <rdfs:comment>This property specifies the point in the media at which
      the event occurrence starts happening</rdfs:comment>
     <rdfs:domain rdf:resource="#Occurrence"/>
     <rdfs:range rdf:resource="&locspec;LocSpec"/>
   </owl:FunctionalProperty>

   <owl:ObjectProperty rdf:ID="end-point">
     <rdfs:label>End Point in Media</rdfs:label>
     <rdfs:comment>This property specifies the point in the media at which
      the event occurrence stops happening</rdfs:comment>
     <rdfs:range rdf:resource="&locspec;LocSpec"/>
     <rdfs:domain rdf:resource="#Occurrence"/>
   </owl:ObjectProperty>

   <owl:ObjectProperty rdf:ID="MediaTPQ">
     <rdfs:label>Media Start Period Limit</rdfs:label>
     <rdfs:comment>This property specifies the earliest point in the media
      at which the event occurrence could have happened</rdfs:comment>
     <rdfs:range rdf:resource="&locspec;LocSpec"/>
     <rdfs:comment>Terminus Post Quem (Limit After Which): The earliest
     point that the period the event covers could be said to be happening</
     rdfs:comment>
     <rdfs:domain rdf:resource="#Occurrence"/>
   </owl:ObjectProperty>

   <owl:ObjectProperty rdf:ID="MediaTAQ">
     <rdfs:label>Media End Period Limit</rdfs:label>
     <rdfs:comment>Terminus Ante Quem (Limit Before Which): The latest
     point that the period the event covers could have happened</
     rdfs:comment>
     <rdfs:domain rdf:resource="#Occurrence"/>
     <rdfs:range rdf:resource="&locspec;LocSpec"/>
   </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.3: OntoMedia Media

G.4 OntoMedia Being

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY loc "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space#">
<!ENTITY know "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/detail/
    know#">
<!ENTITY nom "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY dat "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/date#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY foaf "http://xmlns.com/foaf/0.1/#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omt="&omt;"
 xmlns:omfb="&omfb;"
 xmlns:loc="&loc;"
 xmlns:know="&know;"
 xmlns:nom="&nom;"
 xmlns:dat="&dat;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xmlns:foaf="&foaf;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Being Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Being Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
```

```
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.25</owl:versionInfo>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/expression"/>
 <owl:imports rdf:resource="http://xmlns.com/foaf/0.1/"/>
</owl:Ontology>

<!-- Beings -->

<owl:Class rdf:ID="Being">
  <owl:equivalentClass rdf:resource="&foaf;Person" />
  <rdfs:subClassOf rdf:resource="&ome;Entity" />
  <rdfs:comment>This class represents an Entity with a personality</
    rdfs:comment>
  <rdfs:label>Being</rdfs:label>
</owl:Class>

<!-- Being Classes -->

<owl:Class rdf:ID="Proto-Being">
  <rdfs:subClassOf rdf:resource="&base;Being" />
  <rdfs:comment>This class represents something that may develop into a
    being for cases where the being/item divide isn't clear</rdfs:comment>
  <rdfs:label>Proto-Being</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Character">
  <rdfs:subClassOf rdf:resource="&base;Being" />
  <rdfs:comment>This class represents an fictionalised contruction of an
    entity with a personality</rdfs:comment>
  <rdfs:label>Character</rdfs:label>
</owl:Class>

<!-- Groups -->

<owl:Class rdf:ID="Group">
  <owl:equivalentClass rdf:resource="&foaf;Group" />
  <rdfs:subClassOf rdf:resource="&ome;Collection" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="&ome;contains" />
      <owl:allValuesFrom>
        <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Being" />
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          <owl:Class rdf:about="&base;Group" />
        </owl:unionOf>
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class represents a group of beings</rdfs:comment>
  <rdfs:label>Group</rdfs:label>
</owl:Class>

<!-- Group Classes -->

<owl:Class rdf:ID="Community">
  <rdfs:subClassOf rdf:resource="&base;Group" />
  <rdfs:comment>This class represents a community</rdfs:comment>
  <rdfs:label>Community</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Organisation">
  <owl:equivalentClass rdf:resource="&foaf;Organization" />
  <rdfs:subClassOf rdf:resource="&base;Group" />
  <rdfs:comment>This class represents an organisation</rdfs:comment>
  <rdfs:label>Organisation</rdfs:label>
</owl:Class>

<!-- Community Classes -->

<owl:Class rdf:ID="Household">
  <rdfs:subClassOf rdf:resource="&base;Community" />
  <rdfs:comment>This class represents a household</rdfs:comment>
  <rdfs:label>Household</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Bonded-Group">
  <rdfs:subClassOf rdf:resource="&base;Community" />
  <rdfs:comment>This class represents a bonded group</rdfs:comment>
  <rdfs:label>Bonded Group</rdfs:label>
</owl:Class>

<!-- Bonded Group Classes -->

<owl:Class rdf:ID="Partnership">
  <rdfs:subClassOf rdf:resource="&base;Bonded-Group" />
  <rdfs:comment>This class represents a partnership</rdfs:comment>
  <rdfs:label>Partnership</rdfs:label>
</owl:Class>

<!-- Organisation Classes -->

<owl:Class rdf:ID="Company">
  <rdfs:subClassOf rdf:resource="&base;Organisation" />
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  <rdfs:comment>This class represents a company</rdfs:comment>
  <rdfs:label>Company</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Government">
  <rdfs:subClassOf rdf:resource="&base;Organisation" />
  <rdfs:comment>This class represents a governing group</rdfs:comment>
  <rdfs:label>Government</rdfs:label>
</owl:Class>

<!-- Bonds -->

<owl:Class rdf:ID="Bond">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents a bond that exists between beings
    or groups of beings</rdfs:comment>
  <rdfs:label>Bond</rdfs:label>
</owl:Class>

<!-- Bond Classes -->

<owl:Class rdf:ID="Pledge">
  <rdfs:subClassOf rdf:resource="&base;Bond" />
  <rdfs:comment>This class represents a promise that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Pledge</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Deal">
  <rdfs:subClassOf rdf:resource="&base;Bond" />
  <rdfs:comment>This class represents a deal that exists between beings
    or groups of beings</rdfs:comment>
  <rdfs:label>Deal</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Enmity">
  <rdfs:subClassOf rdf:resource="&base;Bond" />
  <rdfs:comment>This class represents an enmity that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Enmity</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Alliance">
  <rdfs:subClassOf rdf:resource="&base;Bond" />
  <rdfs:comment>This class represents an alliance that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Alliance</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Family">
  <rdfs:subClassOf rdf:resource="&base;Bond" />
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```
  <rdfs:comment>This class represents a family bond that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Family Bond</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Possession">
  <rdfs:subClassOf rdf:resource="&base;Bond" />
  <rdfs:comment>This class represents a the bond between two entities
    where one claims ownership of the other</rdfs:comment>
  <rdfs:label>Possession</rdfs:label>
</owl:Class>

<!-- Alliance Classes -->

<owl:Class rdf:ID="Friendship">
  <rdfs:subClassOf rdf:resource="&base;Alliance" />
  <rdfs:comment>This class represents an friendship that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Friendship</rdfs:label>
</owl:Class>


<!-- Family Bonds -->

<owl:Class rdf:ID="Blood">
  <rdfs:subClassOf rdf:resource="&base;Family" />
  <rdfs:comment>This class represents a blood bond that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Blood Family Bond</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Adopted">
  <rdfs:subClassOf rdf:resource="&base;Family" />
  <rdfs:comment>This class represents an adopted bond that exists between
     beings or groups of beings</rdfs:comment>
  <rdfs:label>Adopted Family Bond</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Foster">
  <rdfs:subClassOf rdf:resource="&base;Family" />
  <rdfs:comment>This class represents a foster bond that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Foster Family Bond</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Step">
  <rdfs:subClassOf rdf:resource="&base;Family" />
  <rdfs:comment>This class represents a step bond that exists between
    beings or groups of beings</rdfs:comment>
  <rdfs:label>Step Family Bond</rdfs:label>
</owl:Class>
```

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<!-- Professions -->

<owl:Class rdf:ID="Profession">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents a profession</rdfs:comment>
  <rdfs:label>Profession</rdfs:label>
</owl:Class>

<!-- Illnesses, Injuries etc -->

<owl:Class rdf:ID="Mental-Illness">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents a mental illness</rdfs:comment>
  <rdfs:label>Mental Illness</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Physical-Illness">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents a physical illness</rdfs:comment>
  <rdfs:label>Physical Illness</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Physical-Injury">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents a physical injury</rdfs:comment>
  <rdfs:label>Physical Injury</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Emotional-Crisis">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents a emotional crisis</rdfs:comment>
  <rdfs:label>Emotional Crisis</rdfs:label>
</owl:Class>

<!-- Properties -->

<!-- Being Properties -->

  <owl:ObjectProperty rdf:ID="has-emotional-health">
    <rdfs:label>Emotional Health</rdfs:label>
    <rdfs:comment>This property specifies the emotional well-being of a
   being</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Being"/>
    <rdfs:range rdf:resource="&base;Emotional-Crisis"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-crisis">
    <rdfs:subPropertyOf rdf:resource="&base;has-emotional-health" />
    <rdfs:label>Has Crisis</rdfs:label>
    <rdfs:comment>This property specifies the emotional crisis of a being
```

```
  </rdfs:comment>
   <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range rdf:resource="&ome;Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-mental-disorder">
   <rdfs:label>Mental Health</rdfs:label>
   <rdfs:comment>This property specifies the emotional well-being of a
  being</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range rdf:resource="&base;Mental-Illness"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-physical-injury">
   <rdfs:label>Physical Injury</rdfs:label>
   <rdfs:comment>This property specifies the emotional well-being of a
  being</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range rdf:resource="&base;Physical-Injury"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-physical-illness">
   <rdfs:label>Physical Illness</rdfs:label>
   <rdfs:comment>This property specifies the emotional well-being of a
  being</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range rdf:resource="&base;Physical-Illness"/>
</owl:ObjectProperty>

<owl:FunctionalProperty rdf:ID="place-of-birth">
   <rdfs:label>Place of Birth</rdfs:label>
   <rdfs:comment>This property specifies the place the being was born or
    created</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range rdf:resource="&loc;Space"/>
</owl:FunctionalProperty>

<owl:ObjectProperty rdf:ID="place_of_citizenship">
   <rdfs:label>Place of Citizenship</rdfs:label>
   <rdfs:comment>This property specifies the place that the being is a
  citizan of</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range rdf:resource="&loc;Space"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="speaks">
   <rdfs:label>Speaks</rdfs:label>
   <rdfs:comment>This property specifies a language spoken by the being
  </rdfs:comment>
   <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range rdf:resource="&know;Language"/>
```

```
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="speaks-fluently">
  <rdfs:subPropertyOf rdf:resource="&base;speaks" />
  <rdfs:label>Speaks Fluently</rdfs:label>
  <rdfs:comment>This property specifies a language spoken fluently by
  the being</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Being"/>
  <rdfs:range rdf:resource="&know;Language"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="speaks-basic">
  <rdfs:subPropertyOf rdf:resource="&base;speaks" />
  <rdfs:label>Speaks Basic</rdfs:label>
  <rdfs:comment>This property specifies a language spoken at a basic
  level by the being</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Being"/>
  <rdfs:range rdf:resource="&know;Language"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="speaks-pidgin">
  <rdfs:subPropertyOf rdf:resource="&base;speaks" />
  <rdfs:label>Speaks Pidgin</rdfs:label>
  <rdfs:comment>This property specifies a language almost spoken by the
   being</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Being"/>
  <rdfs:range rdf:resource="&know;Language"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="reads">
  <rdfs:label>Reads</rdfs:label>
  <rdfs:comment>This property specifies a language or alphabet read by
  the being</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Being"/>
  <rdfs:range rdf:resource="&know;Alphabet"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="writes">
  <rdfs:label>Writes</rdfs:label>
  <rdfs:comment>This property specifies a language or alphabet read by
  the being</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Being"/>
  <rdfs:range rdf:resource="&know;Alphabet"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="wears">
  <rdfs:label>Wears</rdfs:label>
  <rdfs:comment>This property specifies an item worn by the being</
  rdfs:comment>
  <rdfs:domain rdf:resource="&ome;Physical-Item"/>
  <rdfs:range rdf:resource="&know;Alphabet"/>
```

```
 </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="wears-type">
    <rdfs:label>Wears Type</rdfs:label>
    <rdfs:comment>This property specifies a class of items worn by the
   being</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Being"/>
   <rdfs:range>
   <owl:Restriction>
   <owl:onProperty rdf:resource="&rdf;hasParent" />
   <owl:allValuesFrom>
   <owl:Class>
       <owl:unionOf rdf:parseType="Collection">
     <owl:Class rdf:about="&ome;Physical-Item"/>
 </owl:unionOf>
   </owl:Class>
   </owl:allValuesFrom>
   </owl:Restriction>
   </rdfs:range>
 </owl:ObjectProperty>


<!-- Family Properties -->

  <owl:ObjectProperty rdf:ID="is-relation-of">
    <rdfs:label>Is Relation Of</rdfs:label>
    <rdfs:comment>This property specifies that the Being is the child of
    the specified Being</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Family"/>
    <rdfs:range rdf:resource="&base;Being"/>
    <owl:inverseOf rdf:resource="#is-relation-of"/>
 </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="is-child-of">
    <rdfs:label>Is Child Of</rdfs:label>
    <rdfs:comment>This property specifies that the being is the child of
    the specified being</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;is-relation-of"/>
    <rdfs:domain rdf:resource="&base;Family"/>
    <rdfs:range rdf:resource="&base;Being"/>
    <owl:inverseOf rdf:resource="#is-parent-of"/>
 </owl:ObjectProperty>

 <owl:ObjectProperty rdf:ID="is-parent-of">
    <rdfs:label>Is Parent Of</rdfs:label>
    <rdfs:comment>This property specifies that the being is the parent
   of the specified being</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;is-relation-of"/>
    <rdfs:domain rdf:resource="&base;Family"/>
    <rdfs:range rdf:resource="&base;Being"/>
    <owl:inverseOf rdf:resource="#is-child-of"/>
```

```
  </owl:ObjectProperty>

   <owl:ObjectProperty rdf:ID="in-loco-parentis">
     <rdfs:label>In Loco Parentis</rdfs:label>
     <rdfs:comment>This property specifies that the being is acting in
    loco parentis of the specified being</rdfs:comment>
     <rdfs:subPropertyOf rdf:resource="&base;is-relation-of"/>
     <rdfs:domain rdf:resource="&base;Family"/>
     <rdfs:range rdf:resource="&base;Being"/>
     <owl:inverseOf rdf:resource="#has-loco-parentis"/>
  </owl:ObjectProperty>

   <owl:ObjectProperty rdf:ID="has-loco-parentis">
     <rdfs:label>Has Loco Parentis</rdfs:label>
     <rdfs:comment>This property specifies that the specified being
    acting in loco parentis of the being</rdfs:comment>
     <rdfs:subPropertyOf rdf:resource="&base;is-relation-of"/>
     <rdfs:domain rdf:resource="&base;Family"/>
     <rdfs:range rdf:resource="&base;Being"/>
     <owl:inverseOf rdf:resource="#in-loco-parentis"/>
  </owl:ObjectProperty>

   <owl:ObjectProperty rdf:ID="sibling-of">
     <rdfs:label>Sibling Of</rdfs:label>
     <rdfs:comment>This property specifies that the being is a sibling of
    the specified being</rdfs:comment>
     <rdfs:subPropertyOf rdf:resource="&base;is-relation-of"/>
     <rdfs:domain rdf:resource="&base;Family"/>
     <rdfs:range rdf:resource="&base;Being"/>
     <owl:inverseOf rdf:resource="#sibling-of"/>
  </owl:ObjectProperty>

<!-- Health Properties -->

  <owl:ObjectProperty rdf:ID="rehabilitated">
    <rdfs:label>Rehabilitated</rdfs:label>
    <rdfs:comment>This property specifies a rehabilitation event</
   rdfs:comment>
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Physical-Injury"/>
          <owl:Class rdf:about="&base;Physical-Illness"/>
          <owl:Class rdf:about="&base;Mental-Illness"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="treated">
```

```
    <rdfs:label>Treated</rdfs:label>
    <rdfs:comment>This property specifies a treatment event</rdfs:comment
    >
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Physical-Injury"/>
          <owl:Class rdf:about="&base;Physical-Illness"/>
          <owl:Class rdf:about="&base;Emotional-Crisis"/>
          <owl:Class rdf:about="&base;Mental-Illness"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="recovered">
    <rdfs:label>Recovered</rdfs:label>
    <rdfs:comment>This property specifies a recovery event</rdfs:comment>
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Physical-Injury"/>
          <owl:Class rdf:about="&base;Physical-Illness"/>
          <owl:Class rdf:about="&base;Emotional-Crisis"/>
          <owl:Class rdf:about="&base;Mental-Illness"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="cured">
    <rdfs:label>Cured</rdfs:label>
    <rdfs:comment>This property specifies a cure event</rdfs:comment>
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Physical-Injury"/>
          <owl:Class rdf:about="&base;Physical-Illness"/>
          <owl:Class rdf:about="&base;Mental-Illness"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="diagnosed">
    <rdfs:label>Diagnosed</rdfs:label>
    <rdfs:comment>This property specifies a diagnosis event</rdfs:comment
    >
```

```
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Physical-Injury"/>
          <owl:Class rdf:about="&base;Physical-Illness"/>
          <owl:Class rdf:about="&base;Emotional-Crisis"/>
          <owl:Class rdf:about="&base;Mental-Illness"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="entered-remission">
    <rdfs:label>Entered Remission</rdfs:label>
    <rdfs:comment>This property specifies an entering remission event</
    rdfs:comment>
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Physical-Illness"/>
          <owl:Class rdf:about="&base;Mental-Illness"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="resolved">
    <rdfs:label>Resolved</rdfs:label>
    <rdfs:comment>This property specifies a crisis resolution event</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Emotional-Crisis"/>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

<!-- Group Properties -->

  <owl:ObjectProperty rdf:ID="has-number-of-parts">
    <rdfs:label>Has Number Of Parts</rdfs:label>
    <rdfs:comment>This property specifies the number of parts contained
    by the collection</rdfs:comment>
    <rdfs:domain rdf:resource="&ome;Collection"/>
    <rdfs:range rdf:resource="&rdfs;Literal"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="carries-title">
    <rdfs:label>Carries Title</rdfs:label>
    <rdfs:comment>This property specifies a title which can be used by
    any members of the group</rdfs:comment>
    <rdfs:domain>
```

```
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="&base;Profession"/>
        <owl:Class rdf:about="&base;Group"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:domain>
  <rdfs:range rdf:resource="&omt;Name"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="carries-uniform">
  <rdfs:label>Carries Uniform</rdfs:label>
  <rdfs:comment>This property specifies a uniform which is worn by any
  members of the group</rdfs:comment>
  <rdfs:domain>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="&base;Profession"/>
        <owl:Class rdf:about="&base;Group"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:domain>
  <rdfs:range rdf:resource="&ome;Physical-Item"/>
</owl:ObjectProperty>

 <owl:ObjectProperty rdf:ID="of-type">
   <rdfs:label>Of Type</rdfs:label>
   <rdfs:comment>This property specifies a class of items of which the
  group or collection is made</rdfs:comment>
  <rdfs:domain>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Group"/>
    <owl:Class rdf:about="&ome;Collection"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:domain>
  <rdfs:range>
  <owl:Restriction>
  <owl:onProperty rdf:resource="&rdf;hasParent" />
  <owl:allValuesFrom>
  <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
    <owl:Class rdf:about="&ome;Item"/>
    <owl:Class rdf:about="&base;Being"/>
    <owl:Class rdf:about="&loc;Space"/>
</owl:unionOf>
  </owl:Class>
  </owl:allValuesFrom>
  </owl:Restriction>
  </rdfs:range>
```

```
</owl:ObjectProperty>

 <owl:ObjectProperty rdf:ID="governs">
  <rdfs:label>Governs</rdfs:label>
  <rdfs:comment>This property specifies a class of items of which the
  group or collection is made</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Government"/>
  <rdfs:range>
  <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
    <owl:Class rdf:about="&base;Group"/>
    <owl:Class rdf:about="&loc;Space"/>
</owl:unionOf>
  </owl:Class>
  </rdfs:range>
   <owl:inverseOf rdf:resource="#governed-by"/>
</owl:ObjectProperty>

 <owl:ObjectProperty rdf:ID="governed-by">
  <rdfs:label>Governed By</rdfs:label>
  <rdfs:comment>This property specifies a class of items of which the
  group or collection is made</rdfs:comment>
  <rdfs:domain>
  <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
    <owl:Class rdf:about="&base;Group"/>
    <owl:Class rdf:about="&loc;Space"/>
</owl:unionOf>
  </owl:Class>
  </rdfs:domain>
  <rdfs:range rdf:resource="&base;Government"/>
   <owl:inverseOf rdf:resource="#governs"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="uses">
  <rdfs:label>Uses</rdfs:label>
  <rdfs:comment>This property specifies an entity typically used by the
   refering entity</rdfs:comment>
  <rdfs:domain>
  <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
    <owl:Class rdf:about="&base;Being"/>
    <owl:Class rdf:about="&base;Group"/>
    <owl:Class rdf:about="&base;Profession"/>
    <owl:Class rdf:about="&ome;Context"/>
      </owl:unionOf>
  </owl:Class>
  </rdfs:domain>
  <rdfs:range>
  <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
```

```
      <owl:Class rdf:about="&nom;NameOrdering"/>
      <owl:Class rdf:about="&dat;Calendar"/>
      <owl:Class rdf:about="&ome;Physical-Item"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="used-by">
    <rdfs:label>Used By</rdfs:label>
    <rdfs:comment>This property specifies who/what an entity is typically
     used by</rdfs:comment>
    <rdfs:domain>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&nom;NameOrdering"/>
      <owl:Class rdf:about="&dat;Calendar"/>
      <owl:Class rdf:about="&ome;Physical-Item"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;Being"/>
      <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&base;Profession"/>
      <owl:Class rdf:about="&ome;Context"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>


<!-- Profession Properties -->

  <owl:ObjectProperty rdf:ID="works-for">
    <rdfs:label>Works For</rdfs:label>
    <rdfs:comment>This property represents the entity being worked for</
   rdfs:comment>
    <rdfs:domain rdf:resource="&base;Profession"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&base;Being"/>
      <owl:Class rdf:about="&base;Profession"/>
  </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>
```

```
<!-- Bond Properties -->


<!-- Pledges -->

  <owl:ObjectProperty rdf:ID="have-bonded-to">
    <rdfs:label>Have Bonded To</rdfs:label>
    <rdfs:comment>This property represents a pledge that the entity has a
     bond with the named entity</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Pledge"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&know;Culture"/>
      <owl:Class rdf:about="&base;Profession"/>
      <owl:Class rdf:about="&base;Being"/>
  </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="have-not-bonded-to">
    <rdfs:label>Have Not Bonded To</rdfs:label>
    <rdfs:comment>This property represents a pledge that the entity does
    not have a bond with the named entity</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Pledge"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&know;Culture"/>
      <owl:Class rdf:about="&base;Profession"/>
      <owl:Class rdf:about="&base;Being"/>
  </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="have-done">
    <rdfs:label>Have Done</rdfs:label>
    <rdfs:comment>This property represents a pledge that the entity has
    done the named thing</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Pledge"/>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="have-not-done">
    <rdfs:label>Have Not Done</rdfs:label>
    <rdfs:comment>This property represents a pledge that the entity has
```

```
  not done the named thing</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Pledge"/>
   <rdfs:range rdf:resource="&ome;Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="is-a">
   <rdfs:label>Is A</rdfs:label>
   <rdfs:comment>This property represents a pledge that the entity is
  the named thing</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Pledge"/>
   <rdfs:range rdf:resource="&ome;Entity"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="is-not-a">
   <rdfs:label>Is Not A</rdfs:label>
   <rdfs:comment>This property represents a pledge that the entity is
  not the named thing</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Pledge"/>
   <rdfs:range rdf:resource="&ome;Entity"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="will-bond-to">
   <rdfs:label>Will Bond To</rdfs:label>
   <rdfs:comment>This property represents a pledge that the entity will
  bond with the named entity</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Pledge"/>
   <rdfs:range>
   <owl:Class>
       <owl:unionOf rdf:parseType="Collection">
     <owl:Class rdf:about="&base;Group"/>
     <owl:Class rdf:about="&know;Culture"/>
     <owl:Class rdf:about="&base;Profession"/>
     <owl:Class rdf:about="&base;Being"/>
</owl:unionOf>
   </owl:Class>
   </rdfs:range>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="will-not-bond-to">
   <rdfs:label>Will Not Bond To</rdfs:label>
   <rdfs:comment>This property represents a pledge that the entity will
  not have a bond with the named entity</rdfs:comment>
   <rdfs:domain rdf:resource="&base;Pledge"/>
   <rdfs:range>
   <owl:Class>
       <owl:unionOf rdf:parseType="Collection">
     <owl:Class rdf:about="&base;Group"/>
     <owl:Class rdf:about="&know;Culture"/>
     <owl:Class rdf:about="&base;Profession"/>
     <owl:Class rdf:about="&base;Being"/>
</owl:unionOf>
```

```
  </owl:Class>
  </rdfs:range>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="will-do">
  <rdfs:label>Will Do</rdfs:label>
  <rdfs:comment>This property represents a pledge that the entity will
  do the named thing</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Pledge"/>
  <rdfs:range rdf:resource="&ome;Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="will-not-do">
  <rdfs:label>Will Not Do</rdfs:label>
  <rdfs:comment>This property represents a pledge that the entity will
  not do the named thing</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Pledge"/>
  <rdfs:range rdf:resource="&ome;Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="pledge-maker">
  <rdfs:label>Pledge Maker</rdfs:label>
  <rdfs:comment>This property the entity making the pledge</
  rdfs:comment>
  <rdfs:domain rdf:resource="&base;Pledge"/>
  <rdfs:range>
  <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
    <owl:Class rdf:about="&base;Group"/>
    <owl:Class rdf:about="&base;Being"/>
</owl:unionOf>
  </owl:Class>
  </rdfs:range>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="pledge-reciever">
  <rdfs:label>Pledged Reciever</rdfs:label>
  <rdfs:comment>This property represents the reciever of the pledge</
  rdfs:comment>
  <rdfs:domain rdf:resource="&base;Pledge"/>
  <rdfs:range>
  <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
    <owl:Class rdf:about="&base;Group"/>
    <owl:Class rdf:about="&know;Knowledge"/>
    <owl:Class rdf:about="&loc;Space"/>
    <owl:Class rdf:about="&base;Being"/>
</owl:unionOf>
  </owl:Class>
  </rdfs:range>
</owl:ObjectProperty>
```

```
<!-- Deal Properties -->

  <owl:ObjectProperty rdf:ID="deal-conditions">
    <rdfs:label>Deal Conditions</rdfs:label>
    <rdfs:comment>This property specifies the conditions of the deal</
   rdfs:comment>
    <rdfs:domain rdf:resource="&base;Deal"/>
    <rdfs:range rdf:resource="&base;Pledge"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="dealbroker">
    <rdfs:label>Deal Broker</rdfs:label>
    <rdfs:comment>This property specifies the broker of the deal</
   rdfs:comment>
    <rdfs:domain rdf:resource="&base;Deal"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&base;Being"/>
  </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="dealmaker">
    <rdfs:label>Deal Broker</rdfs:label>
    <rdfs:comment>This property specifies the broker of the deal</
   rdfs:comment>
    <rdfs:domain rdf:resource="&base;Deal"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&base;Being"/>
  </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>


 <!-- Possession Properties -->

   <owl:ObjectProperty rdf:ID="owns">
     <rdfs:label>Owns</rdfs:label>
     <rdfs:comment>This property specifies the ownership of an entity</
   rdfs:comment>
     <rdfs:domain rdf:resource="&base;Possession"/>
     <rdfs:range rdf:resource="&ome;Entity"/>
  </owl:ObjectProperty>
```

```
   <owl:ObjectProperty rdf:ID="owned-by">
     <rdfs:label>Owns</rdfs:label>
     <rdfs:comment>This property specifies ownership by an entity</
    rdfs:comment>
     <rdfs:domain rdf:resource="&base;Possession"/>
     <rdfs:range rdf:resource="&ome;Entity"/>
  </owl:ObjectProperty>

<!-- Acting -->

  <owl:ObjectProperty rdf:ID="portrays">
    <rdfs:label>Portrays</rdfs:label>
    <rdfs:comment>This property specifies what entity or event is being
    portrayed</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&ome;is-linked-to" />
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&base;Being"/>
            <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&base;Character"/>
            <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
     <owl:inverseOf rdf:resource="&omfb;portrayed-by"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="voiced-by">
    <rdfs:label>Voiced By</rdfs:label>
    <rdfs:comment>This property specifies what the entity or event is
    being portrayed by</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;portrays" />
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&base;Being"/>
```

```
            <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&base;Being"/>
            <owl:Class rdf:about="&base;Group"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
     <owl:inverseOf rdf:resource="#voices"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="voices">
    <rdfs:label>Voices</rdfs:label>
    <rdfs:comment>This property specifies what entity or event is being
    portrayed</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&base;portrays" />
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&base;Being"/>
            <owl:Class rdf:about="&base;Group"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&base;Being"/>
            <owl:Class rdf:about="&base;Group"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
     <owl:inverseOf rdf:resource="#voiced-by"/>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.4: OntoMedia Being

G.5 OntoMedia Trait

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omm "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media#">
<!ENTITY loc "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space#">
<!ENTITY omb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY nom "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY dat "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/date#">
<!ENTITY portal "http://www.aktors.org/ontology/portal#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omm="&omm;"
 xmlns:omb="&omb;"
 xmlns:nom="&nom;"
 xmlns:dat="&dat;"
 xmlns:loc="&loc;"
 xmlns:portal="&portal;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Trait Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Trait Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
```

```
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>


<!-- Traits -->

<owl:Class rdf:ID="Trait">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents the characteristics that describe
    an Entity</rdfs:comment>
  <rdfs:label>Trait</rdfs:label>
</owl:Class>


<owl:Class rdf:ID="Being-Trait">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-projected-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-observed-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class represents the characteristics that describe a
     Character Entity</rdfs:comment>
  <rdfs:label>Character Trait</rdfs:label>
</owl:Class>
```

```
<!-- Trait Types -->

<owl:Class rdf:ID="Name">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the name or equivilent designation
    of an Entity</rdfs:comment>
  <rdfs:label>Name</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Gender">
  <owl:equivalentClass rdf:resource="&portal;Gender" />
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the gender of an Entity</
    rdfs:comment>
  <rdfs:label>Gender</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ethnicity">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the ethnicity of an Entity</
    rdfs:comment>
  <rdfs:label>Ethnicity</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Species">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the species of an Entity</
    rdfs:comment>
  <rdfs:label>Species</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Age">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the age of an Entity</rdfs:comment>
  <rdfs:label>Age</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Description">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the physical description of an
    Entity</rdfs:comment>
  <rdfs:label>Description</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Motivation">
```

```
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the motivation of an Entity</
    rdfs:comment>
  <rdfs:label>Motivation</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Employment">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the employment or other type of job
     undertaken by an Entity</rdfs:comment>
  <rdfs:label>Employment</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="State-Of-Form">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the state of form of an Entity</
    rdfs:comment>
  <rdfs:label>State of Form</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="State-Of-Being">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the state of being of an Entity</
    rdfs:comment>
  <rdfs:label>State of Being</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="State-Of-Consciousness">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the state of consciousness of an
    Entity</rdfs:comment>
  <rdfs:label>State of Consciousness</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Value">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:comment>This class represents the value of an Entity</
    rdfs:comment>
  <rdfs:label>Value</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Knowledge">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents things known by an Entity</
    rdfs:comment>
```

```
  <rdfs:label>Knowledge</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Link">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents links between this and other
    Entities</rdfs:comment>
  <rdfs:label>Link</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ordering">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents an ordering of Entities</
    rdfs:comment>
  <rdfs:label>Ordering</rdfs:label>
</owl:Class>

<!-- Character Trait Types -->

<owl:Class rdf:ID="Sexuality">
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the sexual preference or
    preferences of a Character Entity</rdfs:comment>
  <rdfs:label>Sexuality</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Kink">
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the sexual kinks or fetishes of a
    Character Entity. This is distinct from and in addition to a Character
     Entities' sexuality.</rdfs:comment>
  <rdfs:label>Kink</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Faith">
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents the religious or spiritual
    preference or preferences of a Character Entity</rdfs:comment>
  <rdfs:label>Faith</rdfs:label>
</owl:Class>


<!-- States of Being -->

<owl:Class rdf:ID="Alive">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Being" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-trait" />
```

```
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-projected-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-observed-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class describes an Entity which is alive</
    rdfs:comment>
  <rdfs:label>Living</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Dead" />
  <owl:disjointWith rdf:resource="&base;Undead" />
  <owl:disjointWith rdf:resource="&base;NonExistent" />
  <owl:disjointWith rdf:resource="&base;Inanimate" />
  <owl:disjointWith rdf:resource="&base;Unknown" />
  <owl:disjointWith rdf:resource="&base;Unprovable" />
</owl:Class>

<owl:Class rdf:ID="Dead">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Being" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-projected-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
```

```
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-observed-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class describes an Entity which is dead</
   rdfs:comment>
  <rdfs:label>Dead</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Alive" />
  <owl:disjointWith rdf:resource="&base;Undead" />
  <owl:disjointWith rdf:resource="&base;NonExistent" />
  <owl:disjointWith rdf:resource="&base;Inanimate" />
  <owl:disjointWith rdf:resource="&base;Unknown" />
  <owl:disjointWith rdf:resource="&base;Unprovable" />
</owl:Class>

<owl:Class rdf:ID="Undead">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Being" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Character">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-projected-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Character">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-observed-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Character">
        </owl:Class>
      </owl:allValuesFrom>
```

```
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class describes an Entity which is undead</
   rdfs:comment>
  <rdfs:label>Undead</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Alive" />
  <owl:disjointWith rdf:resource="&base;Dead" />
  <owl:disjointWith rdf:resource="&base;NonExistent" />
  <owl:disjointWith rdf:resource="&base;Inanimate" />
  <owl:disjointWith rdf:resource="&base;Unknown" />
  <owl:disjointWith rdf:resource="&base;Unprovable" />
</owl:Class>

<owl:Class rdf:ID="NonExistent">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Being" />
  <rdfs:comment>This class describes an Entity which does not exist</
   rdfs:comment>
  <rdfs:label>Non-Existent</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Alive" />
  <owl:disjointWith rdf:resource="&base;Undead" />
  <owl:disjointWith rdf:resource="&base;Dead" />
  <owl:disjointWith rdf:resource="&base;Inanimate" />
  <owl:disjointWith rdf:resource="&base;Unknown" />
  <owl:disjointWith rdf:resource="&base;Unprovable" />
</owl:Class>

<owl:Class rdf:ID="Inanimate">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Being" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&ome;Physical-Item">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-projected-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&ome;Physical-Item">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-observed-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&ome;Physical-Item">
```

```
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class describes an Entity which exists but is not,
   never was or never can be alive</rdfs:comment>
  <rdfs:label>Inanimate</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Alive" />
  <owl:disjointWith rdf:resource="&base;Undead" />
  <owl:disjointWith rdf:resource="&base;NonExistent" />
  <owl:disjointWith rdf:resource="&base;Dead" />
  <owl:disjointWith rdf:resource="&base;Unknown" />
  <owl:disjointWith rdf:resource="&base;Unprovable" />
</owl:Class>

<owl:Class rdf:ID="Unprovable">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Being" />
  <rdfs:comment>This class describes an Entity those state of existance
   cannot be proved</rdfs:comment>
  <rdfs:label>Unprovable</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Alive" />
  <owl:disjointWith rdf:resource="&base;Undead" />
  <owl:disjointWith rdf:resource="&base;Dead" />
  <owl:disjointWith rdf:resource="&base;Inanimate" />
  <owl:disjointWith rdf:resource="&base;NonExistent" />
  <owl:disjointWith rdf:resource="&base;Unknown" />
</owl:Class>

<owl:Class rdf:ID="Unknown">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Being" />
  <rdfs:comment>This class describes an Entity those state of existance
   is not unknown but is theoretically provable</rdfs:comment>
  <rdfs:label>Unknown</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Alive" />
  <owl:disjointWith rdf:resource="&base;Undead" />
  <owl:disjointWith rdf:resource="&base;Dead" />
  <owl:disjointWith rdf:resource="&base;Inanimate" />
  <owl:disjointWith rdf:resource="&base;NonExistent" />
  <owl:disjointWith rdf:resource="&base;Unprovable" />
</owl:Class>

<!-- States of Form -->

<owl:Class rdf:ID="Corporeal">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Form" />
  <rdfs:comment>This class describes an Entity which is corporeal</
   rdfs:comment>
  <rdfs:label>Corporeal</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Incorporeal" />
</owl:Class>
```

```
<owl:Class rdf:ID="Incorporeal">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Form" />
  <rdfs:comment>This class describes an Entity which is incorporeal</
    rdfs:comment>
  <rdfs:label>Incorporeal</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Corporeal" />
</owl:Class>

<!-- States of Consciousness -->

<owl:Class rdf:ID="Conscious">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Consciousness" />
  <rdfs:comment>This class describes an Entity which is conscious</
    rdfs:comment>
  <rdfs:label>Conscious</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Asleep" />
  <owl:disjointWith rdf:resource="&base;Unresponsive" />
  <owl:disjointWith rdf:resource="&base;Instinctual" />
</owl:Class>

<owl:Class rdf:ID="Altered">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Consciousness" />
  <rdfs:comment>This class describes an Entity whose consciousness is not
     in its normal state</rdfs:comment>
  <rdfs:label>Altered Consciousness</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Instinctual">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Consciousness" />
  <rdfs:comment>This class describes an Entity that is working at a
    totally instinctual/subconscious level</rdfs:comment>
  <rdfs:label>Instinctual/Subconscious</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Unresponsive" />
  <owl:disjointWith rdf:resource="&base;Conscious" />
</owl:Class>

<owl:Class rdf:ID="Asleep">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Consciousness" />
  <rdfs:comment>This class describes an Entity which is asleep</
    rdfs:comment>
  <rdfs:label>Asleep</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Conscious" />
</owl:Class>

<owl:Class rdf:ID="Unconscious">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Consciousness" />
  <rdfs:comment>This class describes an Entity which is unconscious</
    rdfs:comment>
  <rdfs:label>Unconscious</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Conscious" />
</owl:Class>
```

```
<owl:Class rdf:ID="Unresponsive">
  <rdfs:subClassOf rdf:resource="&base;State-Of-Consciousness" />
  <rdfs:comment>This class describes an Entity which is totally
    unresponsive to external stimuli i.e. coma</rdfs:comment>
  <rdfs:label>Unresponsive</rdfs:label>
  <owl:disjointWith rdf:resource="&base;Conscious" />
  <owl:disjointWith rdf:resource="&base;Instinctual" />
</owl:Class>


<!-- Gender -->

<owl:Class rdf:ID="Female">
  <rdfs:subClassOf rdf:resource="&base;Gender" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-projected-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-observed-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class represents the female gender</rdfs:comment>
  <rdfs:label>Female</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Male">
  <rdfs:subClassOf rdf:resource="&base;Gender" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-trait" />
```

```
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-projected-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-observed-trait" />
      <owl:allValuesFrom>
        <owl:Class rdf:about="&omb;Being">
        </owl:Class>
      </owl:allValuesFrom>
    </owl:Restriction>
  </rdfs:subClassOf>
  <rdfs:comment>This class represents the male gender</rdfs:comment>
  <rdfs:label>Male</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Neuter">
  <rdfs:subClassOf rdf:resource="&base;Gender" />
  <rdfs:comment>This class represents the neuter gender</rdfs:comment>
  <rdfs:label>Neuter</rdfs:label>
</owl:Class>

<!-- Sexual Preference -->

<owl:Class rdf:ID="To-Same-Gender">
  <rdfs:subClassOf rdf:resource="&base;Sexuality" />
  <rdfs:comment>This class represents the sexual preference or
    preferences of a Character Entity to other Entities which share the
    same gender trait. This might not be exclusive.</rdfs:comment>
  <rdfs:label>To Same Gender</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="To-Other-Gender">
  <rdfs:subClassOf rdf:resource="&base;Sexuality" />
  <rdfs:comment>This class represents the sexual preference or
    preferences of a Character Entity to other Entities which have a
    different gender trait. This might not be exclusive.</rdfs:comment>
  <rdfs:label>To Other Gender</rdfs:label>
</owl:Class>
```

```
<!-- Description -->

<owl:Class rdf:ID="Distinguishing-Mark">
  <rdfs:subClassOf rdf:resource="&base;Description" />
  <rdfs:comment>This class represents a distinguishing mark</rdfs:comment
    >
  <rdfs:label>Distinguishing Mark</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Colour">
  <rdfs:subClassOf rdf:resource="&base;Description" />
  <rdfs:comment>This class represents colours</rdfs:comment>
  <rdfs:label>Colour</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Dimension">
  <rdfs:subClassOf rdf:resource="&base;Description" />
  <rdfs:comment>This class represents a dimension</rdfs:comment>
  <rdfs:label>Dimension</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Build">
  <rdfs:subClassOf rdf:resource="&base;Description" />
  <rdfs:comment>This class represents a physical build type</rdfs:comment
    >
  <rdfs:label>Build</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Style">
  <rdfs:subClassOf rdf:resource="&base;Description" />
  <rdfs:comment>This class represents a style type</rdfs:comment>
  <rdfs:label>Style</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Material">
  <rdfs:subClassOf rdf:resource="&base;Description" />
  <rdfs:comment>This class represents a type of material</rdfs:comment>
  <rdfs:label>Material</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Type">
  <rdfs:subClassOf rdf:resource="&base;Description" />
  <rdfs:comment>This class represents a type</rdfs:comment>
  <rdfs:label>Type</rdfs:label>
</owl:Class>

<!-- Obstacle Classes -->

<owl:Class rdf:ID="Physical-Obstacle">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
```

```
  <rdfs:comment>This class represents a physical problem or obsticle</
    rdfs:comment>
  <rdfs:label>Physical Obstacle</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Abstract-Obstacle">
  <rdfs:subClassOf rdf:resource="&base;Trait" />
  <rdfs:subClassOf rdf:resource="&base;Being-Trait" />
  <rdfs:comment>This class represents an abstract problem or obsticle</
    rdfs:comment>
  <rdfs:label>Abstract Obstacle</rdfs:label>
</owl:Class>

<!-- Value Classes -->

<owl:Class rdf:ID="AbstractComponent">
  <rdfs:subClassOf rdf:resource="&base;Value" />
  <rdfs:comment>This class represents a component part of an abstract
    item</rdfs:comment>
  <rdfs:label>Abstract Component</rdfs:label>
</owl:Class>

<!-- General Properties -->

  <owl:ObjectProperty rdf:ID="has-trait">
    <rdfs:label>Has Trait</rdfs:label>
    <rdfs:comment>This property specifies a general trait which belongs
    to an Entity</rdfs:comment>
    <rdfs:domain rdf:resource="&ome;Entity"/>
    <rdfs:range rdf:resource="&base;Trait"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-projected-trait">
    <rdfs:label>Has Projected Trait</rdfs:label>
    <rdfs:comment rdf:datatype="&xsd;sting">This property specifies a
    trait which is projected by Entity to other Entities</rdfs:comment>
    <rdfs:domain rdf:resource="&ome;Entity"/>
    <rdfs:range rdf:resource="&base;Trait"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-observed-trait">
    <rdfs:label>Has Observed Trait</rdfs:label>
    <rdfs:comment>This property specifies a trait which belongs to an
    Entity and is known outside the Context in which the Entity exists but
     not by other Entities within the Context i.e the audience knows</
    rdfs:comment>
    <rdfs:domain rdf:resource="&ome;Entity"/>
    <rdfs:range rdf:resource="&base;Trait"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="projected-at">
```

```
    <rdfs:label>Projected At</rdfs:label>
    <rdfs:comment>This property specifies the Entity or Entities at which
     the related trait is projected at</rdfs:comment>
    <rdfs:domain>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
         <owl:Class rdf:about="&base;Trait"/>
         <owl:Class rdf:about="&omb;Profession"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Entity"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="not-projected-at">
    <rdfs:label>Not Projected At</rdfs:label>
    <rdfs:comment>This property specifies the Entity or Entities at which
     the related trait is not projected at</rdfs:comment>
    <rdfs:domain>
    <owl:Class>
  <owl:unionOf rdf:parseType="Collection">
     <owl:Class rdf:about="&base;Trait"/>
     <owl:Class rdf:about="&omb;Profession"/>
  </owl:unionOf>
    </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="&ome;Entity"/>
  </owl:ObjectProperty>

<!-- Age Properties -->

  <owl:FunctionalProperty rdf:ID="has-age">
    <rdfs:label>Age</rdfs:label>
    <rdfs:comment>This property specifies the age of the entity</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Age"/>
    <rdfs:range rdf:resource="&base;Value"/>
  </owl:FunctionalProperty>

  <owl:FunctionalProperty rdf:ID="has-birthday">
    <rdfs:label>Birthday</rdfs:label>
    <rdfs:comment>This property specifies the date of birth or creation
    of the entity</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Age"/>
    <rdfs:range rdf:resource="&dat;Date"/>
  </owl:FunctionalProperty>


<!-- Name Properties -->

  <owl:ObjectProperty rdf:ID="has-name">
```

```
    <rdfs:label>Given Name</rdfs:label>
    <rdfs:comment>This property specifies the full name of the entity</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Name"/>
    <rdfs:range rdf:resource="&nom;Name-Ordering"/>
  </owl:ObjectProperty>

<!-- Sexuality and Kink Properties -->

  <owl:ObjectProperty rdf:ID="likes">
    <rdfs:label>Likes</rdfs:label>
    <rdfs:comment>This property specifies the 'likes' of the Character.
    Has domain of To-Other-Gender but not To-Same-Gender because same
    gender implies a match whereas since there are three genders 'other'
    gender gives you a choice of possibles.</rdfs:comment>
    <rdfs:domain>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;To-Other-Gender"/>
      <owl:Class rdf:about="&base;Kink"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Entity"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="requires">
    <rdfs:label>Requires</rdfs:label>
    <rdfs:comment>This property specifies a fetish of the Character </
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Kink"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Entity"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

<!-- Description Properties -->

  <owl:ObjectProperty rdf:ID="has-description">
```

```
    <rdfs:label>Has Description</rdfs:label>
    <rdfs:comment>This property specifies a description of the entity</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Description"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&rdfs;Literal"/>
      <owl:Class rdf:about="&base;Description"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-feature">
    <rdfs:subPropertyOf rdf:resource="&base;has-description" />
    <rdfs:label>Has Feature</rdfs:label>
    <rdfs:comment>This property specifies a physical feature of the
    entity</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Description"/>
    <rdfs:range rdf:resource="&ome;Physical-Item"/>
  </owl:ObjectProperty>

<!-- Distinguishing Mark Properties -->

  <owl:ObjectProperty rdf:ID="mark-gained">
    <rdfs:label>Mark Gained</rdfs:label>
    <rdfs:comment>This property specifies the event at which the
    distinguishing mark of the entity was gained</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Distinguishing-Mark"/>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="mark-location">
    <rdfs:label>Mark Location</rdfs:label>
    <rdfs:comment>This property specifies the location of a
    distinguishing mark</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Distinguishing-Mark"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&loc;Space"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
    <owl:inverseOf rdf:resource="has-marking"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="mark-location-type">
    <rdfs:label>Mark Location</rdfs:label>
```

```
    <rdfs:comment>This property specifies the location of a
    distinguishing mark</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Distinguishing-Mark"/>
    <rdfs:range>
    <owl:Restriction>
    <owl:onProperty rdf:resource="&rdf;hasParent" />
    <owl:allValuesFrom>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&loc;Space"/>
  </owl:unionOf>
    </owl:Class>
    </owl:allValuesFrom>
    </owl:Restriction>
    </rdfs:range>
  </owl:ObjectProperty>

<!-- Dimension Properties -->

  <owl:FunctionalProperty rdf:ID="has-dimension">
    <rdfs:label>Dimension</rdfs:label>
    <rdfs:comment>This property specifies the dimension</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Dimension"/>
    <rdfs:range>
      <owl:DataRange>
        <owl:oneOf rdf:parseType="Resource">
          <rdf:first>X</rdf:first>
          <rdf:rest rdf:parseType="Resource">
            <rdf:first>Y</rdf:first>
            <rdf:rest rdf:parseType="Resource">
              <rdf:rest rdf:parseType="Resource">
                <rdf:first>length</rdf:first>
                <rdf:rest rdf:parseType="Resource">
                  <rdf:first>width</rdf:first>
                  <rdf:rest rdf:parseType="Resource">
                    <rdf:rest rdf:parseType="Resource">
                      <rdf:first>weight</rdf:first>
                      <rdf:rest rdf:parseType="Resource">
                        <rdf:rest rdf:resource="&rdf;nil"/>
                        <rdf:first>mass</rdf:first>
                      </rdf:rest>
                    </rdf:rest>
                    <rdf:first>height</rdf:first>
                  </rdf:rest>
                </rdf:rest>
              </rdf:rest>
              <rdf:first>Z</rdf:first>
            </rdf:rest>
          </rdf:rest>
        </owl:oneOf>
```

```
      </owl:DataRange>
    </rdfs:range>
    <rdf:type rdf:resource="&owl;DatatypeProperty"/>
  </owl:FunctionalProperty>

  <owl:FunctionalProperty rdf:ID="has-unit">
    <rdfs:label>Unit</rdfs:label>
    <rdfs:comment>This property specifies the units for the dimension or
    value</rdfs:comment>
    <rdfs:domain>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&base;Value"/>
      <owl:Class rdf:about="&base;Dimension"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&dat;Date-Component"/>
      <owl:Class rdf:about="&rdfs;Literal"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:FunctionalProperty>

  <owl:FunctionalProperty rdf:ID="has-locspec-description">
    <rdfs:label>Unit</rdfs:label>
    <rdfs:comment>This property specifies the units for the dimension</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Dimension"/>
    <rdfs:range rdf:resource="&omm;spc"/>
  </owl:FunctionalProperty>

 <!-- Motivation Properties -->

  <owl:ObjectProperty rdf:ID="has-motivation">
    <rdfs:label>Has Motivation</rdfs:label>
    <rdfs:comment>This property specifies an event whose occurrence is
    desired</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Motivation"/>
    <rdfs:range rdf:resource="&ome;Event"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-motivation-to-avoid">
    <rdfs:label>Has Motivation</rdfs:label>
    <rdfs:comment>This property specifies an event whose occurrence is
    not wanted</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Motivation"/>
    <rdfs:range rdf:resource="&ome;Event"/>
```

```
  </owl:ObjectProperty>

  <owl:FunctionalProperty rdf:ID="has-priority">
    <rdfs:range>
      <owl:DataRange>
        <owl:oneOf rdf:parseType="Resource">
          <rdf:rest rdf:parseType="Resource">
            <rdf:rest rdf:parseType="Resource">
              <rdf:first>low</rdf:first>
              <rdf:rest rdf:parseType="Resource">
                <rdf:rest rdf:resource="&rdf;nil"/>
                <rdf:first>longterm</rdf:first>
              </rdf:rest>
            </rdf:rest>
            <rdf:first>medium</rdf:first>
          </rdf:rest>
          <rdf:first>high</rdf:first>
        </owl:oneOf>
      </owl:DataRange>
    </rdfs:range>
    <rdfs:comment>Priority of motivation</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Motivation"/>
    <rdf:type rdf:resource="&owl;DatatypeProperty"/>
  </owl:FunctionalProperty>

<!-- Employment Properties -->

  <owl:ObjectProperty rdf:ID="has-profession">
    <rdfs:label>Has Profession</rdfs:label>
    <rdfs:comment>This property specifies the profession of an Entity</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Employment"/>
    <rdfs:range rdf:resource="&omb;Profession"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-projected-profession">
    <rdfs:label>Has Projected Profession</rdfs:label>
    <rdfs:comment>This property specifies a profession which is projected
     by Entity to other Entities</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Employment"/>
    <rdfs:range rdf:resource="&omb;Profession"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-observed-profession">
    <rdfs:label>Has Observed Profession</rdfs:label>
    <rdfs:comment>This property specifies a profession which belongs to
    an Entity and is known outside the Context in which the Entity exists
    but not by other Entities within the Context i.e the audience knows</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Employment"/>
    <rdfs:range rdf:resource="&omb;Profession"/>
```

```
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="responsible-for">
    <rdfs:label>Responsible For</rdfs:label>
    <rdfs:comment>This property specifies the entities for which the
   Entity is responsible for</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Employment"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&omb;Group"/>
      <owl:Class rdf:about="&omb;Character"/>
      <owl:Class rdf:about="&omb;Profession"/>
      <owl:Class rdf:about="&base;Employment"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="responsible-for-type">
    <rdfs:label>Responsible For Type</rdfs:label>
    <rdfs:comment>This property specifies the types of entities for which
     the Entity is responsible for</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Employment"/>
    <rdfs:range>
    <owl:Restriction>
    <owl:onProperty rdf:resource="&rdf;hasParent" />
    <owl:allValuesFrom>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&omb;Group"/>
      <owl:Class rdf:about="&omb;Character"/>
      <owl:Class rdf:about="&omb;Profession"/>
      <owl:Class rdf:about="&base;Employment"/>
  </owl:unionOf>
    </owl:Class>
    </owl:allValuesFrom>
    </owl:Restriction>
    </rdfs:range>
  </owl:ObjectProperty>

<!-- Value -->

  <owl:ObjectProperty rdf:ID="has-value">
    <rdfs:label>Has Value</rdfs:label>
    <rdfs:comment>This property specifies a value of the property or
    entity</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Value"/>
    <rdfs:range rdf:resource="&rdfs;Literal"/>
  </owl:ObjectProperty>
```

```
  <owl:ObjectProperty rdf:ID="order_of_magnitude">
    <rdfs:label>Order of Magnitude</rdfs:label>
    <rdfs:comment>This property specifies the order of magnitude of the
    value. Useful list: http://chemistry.berkeley.edu/links/weights/powers
    .html</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Value"/>
    <rdfs:range rdf:resource="&rdfs;Literal"/>
  </owl:ObjectProperty>

<!-- Knows and Owns Properties -->

  <owl:ObjectProperty rdf:ID="knows">
    <rdfs:label>Knows</rdfs:label>
    <rdfs:comment>This property specifies something known by the
    character</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Knowledge"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Abstract-Item"/>
      <owl:Class rdf:about="&omb;Character"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Timeline"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-bond">
    <rdfs:label>Has Bond</rdfs:label>
    <rdfs:comment>This property specifies a bond which a character has</
    rdfs:comment>
    <rdfs:domain rdf:resource="&base;Link"/>
    <rdfs:range rdf:resource="&omb;Bond"/>
  </owl:ObjectProperty>

<!-- Ordering Properties -->

  <owl:ObjectProperty rdf:ID="has-order">
      <rdfs:label>Has Order</rdfs:label>
      <rdfs:comment>This property specifies the order that the linked
    components go in</rdfs:comment>
      <rdfs:domain rdf:resource="&base;Ordering"/>
      <rdfs:range rdf:resource="&rdf;Seq"/>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.5: OntoMedia Trait

G.6 OntoMedia Profession

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY loc "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space#">
<!ENTITY omea "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    action#">
<!ENTITY omb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    profession#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omea="&omea;"
 xmlns:omt="&omt;"
 xmlns:omb="&omb;"
 xmlns:loc="&loc;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>Profession Extension</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Profession Ontology</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) Profession
    Extension has been designed to describe general profession categories.
    </dc:description>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dct:created>2006-04-05</dct:created>
 <owl:versionInfo>0.1</owl:versionInfo>
</owl:Ontology>
```

```
<!-- Events -->

<owl:Class rdf:ID="GainJob">
  <rdfs:subClassOf rdf:resource="&ome;Gain" />
  <rdfs:comment>This class represents a being gaining a job or prossesion
    </rdfs:comment>
  <rdfs:label>Gain Job/Employment</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="LoseJob">
  <rdfs:subClassOf rdf:resource="&ome;Loss" />
  <rdfs:comment>This class represents a being losing a job or profession<
    /rdfs:comment>
  <rdfs:label>Lose Job/Employment</rdfs:label>
</owl:Class>

<!-- Main Classes -->

<owl:Class rdf:ID="Clerical">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents clerical professions</rdfs:comment>
  <rdfs:label>Clerical</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Criminal">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on illegal
    activities</rdfs:comment>
  <rdfs:label>Criminal</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Domestic">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents domestic professions</rdfs:comment>
  <rdfs:label>Domestic</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Education">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on educational
    activities</rdfs:comment>
  <rdfs:label>Education</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Enforcement">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents enforcement professions</
    rdfs:comment>
  <rdfs:label>Enforcement</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Entertainment">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on entertaining
    activities</rdfs:comment>
  <rdfs:label>Entertainment</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Governance">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions involved in government<
    /rdfs:comment>
  <rdfs:label>Governance</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Healthcare">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on healthcare
    activities</rdfs:comment>
  <rdfs:label>Healthcare</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Information_Services">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on information
    related activities</rdfs:comment>
  <rdfs:label>Information Services</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Manual">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents manual professions</rdfs:comment>
  <rdfs:label>Manual</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Religious">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on religious
    activities</rdfs:comment>
  <rdfs:label>Religious</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Rural">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents rural professions</rdfs:comment>
  <rdfs:label>Rural</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Trade">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on trading
```

```
    activities</rdfs:comment>
  <rdfs:label>Trade</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Unemployed">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents a lack of employment</rdfs:comment>
  <rdfs:label>Unemployed</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Volunteer">
  <rdfs:subClassOf rdf:resource="&omb;Profession" />
  <rdfs:comment>This class represents professions based on volunteer
    activities</rdfs:comment>
  <rdfs:label>Volunteer</rdfs:label>
</owl:Class>

<!-- Clerical -->

<owl:Class rdf:ID="Management">
  <rdfs:subClassOf rdf:resource="&base;Clerical" />
  <rdfs:comment>This class represents professions based on management
    activities</rdfs:comment>
  <rdfs:label>Manager</rdfs:label>
</owl:Class>

<!-- Education -->

<owl:Class rdf:ID="Student">
  <rdfs:subClassOf rdf:resource="&base;Education" />
  <rdfs:comment>This class represents professions based on learning
    activities</rdfs:comment>
  <rdfs:label>Student</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Teacher">
  <rdfs:subClassOf rdf:resource="&base;Education" />
  <rdfs:comment>This class represents professions based on teaching
    activities</rdfs:comment>
  <rdfs:label>Teacher</rdfs:label>
</owl:Class>

<!-- Enforcement -->

<owl:Class rdf:ID="Law_Enforcement">
  <rdfs:subClassOf rdf:resource="&base;Enforcement" />
  <rdfs:comment>This class represents professions based on enforcing the
    legal code of the region</rdfs:comment>
  <rdfs:label>Law Enforcement</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="RegionalCops">
  <rdfs:subClassOf rdf:resource="&base;Law_Enforcement" />
  <rdfs:comment>This class represents professions based on enforcing the
    legal code of a country at a regional level</rdfs:comment>
  <rdfs:label>Regional Law Enforcement</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="NationalCops">
  <rdfs:subClassOf rdf:resource="&base;Law_Enforcement" />
  <rdfs:comment>This class represents professions based on enforcing the
    legal code of a country at a national level</rdfs:comment>
  <rdfs:label>National Law Enforcement</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="InternationalCops">
  <rdfs:subClassOf rdf:resource="&base;Law_Enforcement" />
  <rdfs:comment>This class represents professions based on enforcing
    international legal codes or legal codes at an international level</
    rdfs:comment>
  <rdfs:label>International Law Enforcement</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Military">
  <rdfs:subClassOf rdf:resource="&base;Enforcement" />
  <rdfs:comment>This class represents professions based on military
    activities</rdfs:comment>
  <rdfs:label>Military</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Regular_Military">
  <rdfs:subClassOf rdf:resource="&base;Military" />
  <rdfs:comment>This class represents professions based within the
    regular military</rdfs:comment>
  <rdfs:label>Regular Military</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Paramilitary">
  <rdfs:subClassOf rdf:resource="&base;Military" />
  <rdfs:comment>This class represents professions based on paramilitary
    activities</rdfs:comment>
  <rdfs:label>Paramilitary</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Special_Services">
  <rdfs:subClassOf rdf:resource="&base;Military" />
  <rdfs:comment>This class represents professions based on more irregular
     or unusual military activities</rdfs:comment>
  <rdfs:label>Special Services</rdfs:label>
</owl:Class>

<!-- Entertainment -->
```

```
<owl:Class rdf:ID="Acting">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on acting</
    rdfs:comment>
  <rdfs:label>Acting</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="VoiceActing">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on voice acting</
    rdfs:comment>
  <rdfs:label>Voice Acting</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Artist">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions relating to the
    creation of works of art</rdfs:comment>
  <rdfs:label>Artist</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Backstage_Crew">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on the backstage/
    behind the scenes professions</rdfs:comment>
  <rdfs:label>Backstage Crew</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Dancer">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on dancing</
    rdfs:comment>
  <rdfs:label>Dancer</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Musician">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on performing
    music with a instrament</rdfs:comment>
  <rdfs:label>Musician</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Composer">
  <rdfs:subClassOf rdf:resource="&base;Musician" />
  <rdfs:comment>This class represents professions based on the
    composition of music</rdfs:comment>
  <rdfs:label>Composer</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Singer">
```

```
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on performing
    music with the voice</rdfs:comment>
  <rdfs:label>Singer</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Writer">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on writing text</
    rdfs:comment>
  <rdfs:label>Writer</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Poet">
  <rdfs:subClassOf rdf:resource="&base;Entertainment" />
  <rdfs:comment>This class represents professions based on writing poetry
    </rdfs:comment>
  <rdfs:label>Poet</rdfs:label>
</owl:Class>

<!-- Healthcare -->

<owl:Class rdf:ID="Doctor">
  <rdfs:subClassOf rdf:resource="&base;Healthcare" />
  <rdfs:comment>This class represents professions of doctor</rdfs:comment
    >
  <rdfs:label>Doctor</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Nurse">
  <rdfs:subClassOf rdf:resource="&base;Healthcare" />
  <rdfs:comment>This class represents the nursing profession</
    rdfs:comment>
  <rdfs:label>Nurse</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Midwife">
  <rdfs:subClassOf rdf:resource="&base;Healthcare" />
  <rdfs:comment>This class represents the midwifery professions</
    rdfs:comment>
  <rdfs:label>Midwife</rdfs:label>
</owl:Class>

<!-- Information Services -->

<owl:Class rdf:ID="Archivist">
  <rdfs:subClassOf rdf:resource="&base;Information_Services" />
  <rdfs:comment>This class represents professions relating to the
    archiving and presevation of information</rdfs:comment>
  <rdfs:label>Archivist</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Information_Gatherer">
  <rdfs:subClassOf rdf:resource="&base;Information_Services" />
  <rdfs:comment>This class represents professions relating to the
    gathering of information</rdfs:comment>
  <rdfs:label>Information Gatherer</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Intelligencer">
  <rdfs:subClassOf rdf:resource="&base;Information_Gatherer" />
  <rdfs:comment>This class represents professions relating to the illicit
     gathering and processing of information i.e. spy</rdfs:comment>
  <rdfs:label>Intelligencer</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Researcher">
  <rdfs:subClassOf rdf:resource="&base;Information_Gatherer" />
  <rdfs:comment>This class represents professions relating to research</
    rdfs:comment>
  <rdfs:label>Researcher</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torturer">
  <rdfs:subClassOf rdf:resource="&base;Information_Gatherer" />
  <rdfs:comment>This class represents professions relating to the
    gathering of informaton through "cruel and unusual" coercion</
    rdfs:comment>
  <rdfs:label>Torturer</rdfs:label>
</owl:Class>

<!-- Manual -->

<owl:Class rdf:ID="Skilled">
  <rdfs:subClassOf rdf:resource="&base;Manual" />
  <rdfs:comment>This class represents professions relating to skilled
    manual labour</rdfs:comment>
  <rdfs:label>Manual (Skilled)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Unskilled">
  <rdfs:subClassOf rdf:resource="&base;Manual" />
  <rdfs:comment>This class represents professions relating to unskilled
    manual labour</rdfs:comment>
  <rdfs:label>Manual (Unskilled)</rdfs:label>
</owl:Class>

<!-- Medical Properties -->

  <owl:ObjectProperty rdf:ID="specialisation">
    <rdfs:label>Subject</rdfs:label>
    <rdfs:comment>This property specifies a subject</rdfs:comment>
```

```
    <rdfs:domain rdf:resource="&base;Healthcare"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&omb;Mental-Illness"/>
      <owl:Class rdf:about="&omb;Physical-Illness"/>
      <owl:Class rdf:about="&omb;Physical-Injury"/>
      <owl:Class rdf:about="&omb;Emotional-Crisis"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

<!-- Educational Properties -->

  <owl:ObjectProperty rdf:ID="subject">
    <rdfs:label>Subject</rdfs:label>
    <rdfs:comment>This property specifies a subject</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Education"/>
    <rdfs:range rdf:resource="&ome;Expression"/>
  </owl:ObjectProperty>

<!-- Trade -->

  <owl:ObjectProperty rdf:ID="product">
    <rdfs:label>Product</rdfs:label>
    <rdfs:comment>This property specifies a product</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Trade"/>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&omb;Character"/>
      <owl:Class rdf:about="&ome;Item"/>
      <owl:Class rdf:about="&loc;Space"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.6: OntoMedia Profession

G.7 OntoMedia Bestiary

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY loc "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space#">
<!ENTITY omea "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    action#">
<!ENTITY omb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    critters#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omea="&omea;"
 xmlns:omt="&omt;"
 xmlns:omb="&omb;"
 xmlns:loc="&loc;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>Creatures and Monsters Extension</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Creatures and Monsters Ontology</
    dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe creatures, monsters and beasts.</dc:description>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dct:created>2006-04-05</dct:created>
 <owl:versionInfo>0.1</owl:versionInfo>
</owl:Ontology>
```

```
<!-- Main Classes -->

<owl:Class rdf:ID="Biological">
  <rdfs:subClassOf rdf:resource="&omt;Species" />
  <rdfs:comment>This class represents a biologically reproduced species</
    rdfs:comment>
  <rdfs:label>Biological</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Artificial">
  <rdfs:subClassOf rdf:resource="&omt;Species" />
  <rdfs:comment>This class represents an artificially created species</
    rdfs:comment>
  <rdfs:label>Artificial</rdfs:label>
</owl:Class>

<!-- Artificial -->

<owl:Class rdf:ID="Android">
  <rdfs:subClassOf rdf:resource="&base;Artificial" />
  <rdfs:comment>This class represents a humanoid robot/automaton</
    rdfs:comment>
  <rdfs:label>Android</rdfs:label>
</owl:Class>

<!-- Biological -->

<owl:Class rdf:ID="Bestial">
  <rdfs:subClassOf rdf:resource="&base;Biological" />
  <rdfs:comment>This class represents species with purely bestial form</
    rdfs:comment>
  <rdfs:label>Bestial</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Humanoid">
  <rdfs:subClassOf rdf:resource="&base;Biological" />
  <rdfs:comment>This class represents species with purely humanoid form</
    rdfs:comment>
  <rdfs:label>Humanoid</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hybrid">
  <rdfs:subClassOf rdf:resource="&base;Biological" />
  <rdfs:comment>This class represents species with a hybrid or variable
    form</rdfs:comment>
  <rdfs:label>Hybrid</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Vegetative">
  <rdfs:subClassOf rdf:resource="&base;Biological" />
```

```
  <rdfs:comment>This class represents species with a vegetatation-based
    form</rdfs:comment>
  <rdfs:label>Vegetative</rdfs:label>
</owl:Class>

<!-- Bestial -->

<owl:Class rdf:ID="Avian">
  <rdfs:subClassOf rdf:resource="&base;Bestial" />
  <rdfs:comment>This class represents species with an avian form</
    rdfs:comment>
  <rdfs:label>Avian</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Equine">
  <rdfs:subClassOf rdf:resource="&base;Bestial" />
  <rdfs:comment>This class represents species with an equine form</
    rdfs:comment>
  <rdfs:label>Equine</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Serpentine">
  <rdfs:subClassOf rdf:resource="&base;Bestial" />
  <rdfs:comment>This class represents species with an serpentine form</
    rdfs:comment>
  <rdfs:label>Serpentine</rdfs:label>
</owl:Class>

<!-- Humanoid -->

<owl:Class rdf:ID="Dwarven">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents dwarven species</rdfs:comment>
  <rdfs:label>Dwarven</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Elven">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents elven species</rdfs:comment>
  <rdfs:label>Elven</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="DarkElven">
  <rdfs:subClassOf rdf:resource="&base;Elven" />
  <rdfs:comment>This class represents dark elven species</rdfs:comment>
  <rdfs:label>Dark Elven</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Faerie">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents faerie species</rdfs:comment>
```

```
  <rdfs:label>Faerie</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Giant">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents giant species</rdfs:comment>
  <rdfs:label>Giant</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hobbit">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents hobbit species</rdfs:comment>
  <rdfs:label>Hobbit</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Nymph">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents nymph species</rdfs:comment>
  <rdfs:label>Nymph</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Orc">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents orc species</rdfs:comment>
  <rdfs:label>Orc</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Troll">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents troll species</rdfs:comment>
  <rdfs:label>Troll</rdfs:label>
</owl:Class>

<!-- Hybrid -->

<owl:Class rdf:ID="BestialHybrid">
  <rdfs:subClassOf rdf:resource="&base;Hybrid" />
  <rdfs:comment>This class represents hybrid of bestial species</
    rdfs:comment>
  <rdfs:label>Bestial Hybrid</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="HumanHeadedHybrid">
  <rdfs:subClassOf rdf:resource="&base;Hybrid" />
  <rdfs:comment>This class represents hybrid of bestial species but with
    a humanoid head</rdfs:comment>
  <rdfs:label>Human-Headed Hybrid</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="HumanoidHybrid">
  <rdfs:subClassOf rdf:resource="&base;Hybrid" />
```

```
  <rdfs:comment>This class represents hybrid of humanoid species</
    rdfs:comment>
  <rdfs:label>Humanoid Hybrid</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="HumanoidBestialHybrid">
  <rdfs:subClassOf rdf:resource="&base;Hybrid" />
  <rdfs:comment>This class represents hybrid of bestial and humanoid
    species</rdfs:comment>
  <rdfs:label>Human-Bestial Hybrid</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="HumanoidVeggieHybrid">
  <rdfs:subClassOf rdf:resource="&base;Hybrid" />
  <rdfs:comment>This class represents hybrid of humanoid and vegitatative
     species</rdfs:comment>
  <rdfs:label>Human-Vegitation Hybrid</rdfs:label>
</owl:Class>

<!-- SPECIFIC CLASSES -->

<!-- Avian -->

<owl:Class rdf:ID="Phoenix">
  <rdfs:subClassOf rdf:resource="&base;Avian" />
  <rdfs:comment>This class represents phoenix species</rdfs:comment>
  <rdfs:label>Phoenix</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Roc">
  <rdfs:subClassOf rdf:resource="&base;Avian" />
  <rdfs:comment>This class represents roc species</rdfs:comment>
  <rdfs:label>Roc</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Thunderbird">
  <rdfs:subClassOf rdf:resource="&base;Avian" />
  <rdfs:comment>This class represents thunderbird species</rdfs:comment>
  <rdfs:label>Thunderbird</rdfs:label>
</owl:Class>

<!-- Equine -->

<owl:Class rdf:ID="Pegasii">
  <rdfs:subClassOf rdf:resource="&base;Equine" />
  <rdfs:comment>This class represents winged/flying equine species</
    rdfs:comment>
  <rdfs:label>Pegasii</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Unicorn">
```

```
  <rdfs:subClassOf rdf:resource="&base;Equine" />
  <rdfs:comment>This class represents single horned equine species</
    rdfs:comment>
  <rdfs:label>Unicorn</rdfs:label>
</owl:Class>

<!-- Serpentine -->

<owl:Class rdf:ID="Dragon">
  <rdfs:subClassOf rdf:resource="&base;Serpentine" />
  <rdfs:comment>This class represents draconian species</rdfs:comment>
  <rdfs:label>Dragon</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Wyrm">
  <rdfs:subClassOf rdf:resource="&base;Serpentine" />
  <rdfs:comment>This class represents wyrm species</rdfs:comment>
  <rdfs:label>Wyrm</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hydra">
  <rdfs:subClassOf rdf:resource="&base;Serpentine" />
  <rdfs:comment>This class represents water-based, multi-headed
    serpentine species</rdfs:comment>
  <rdfs:label>Dragon</rdfs:label>
</owl:Class>

<!-- Elven -->

<owl:Class rdf:ID="Drow">
  <rdfs:subClassOf rdf:resource="&base;DarkElven" />
  <rdfs:comment>This class represents drow species</rdfs:comment>
  <rdfs:label>Drow</rdfs:label>
</owl:Class>

<!-- Faerie -->

<owl:Class rdf:ID="Sidhe">
  <rdfs:subClassOf rdf:resource="&base;Faerie" />
  <rdfs:comment>This class represents sidhe species</rdfs:comment>
  <rdfs:label>Sidhe</rdfs:label>
</owl:Class>

<!-- Nymphs -->

<owl:Class rdf:ID="Dryad">
  <rdfs:subClassOf rdf:resource="&base;Hamadryad" />
  <rdfs:comment>This class represents tree (oak) nymphs</rdfs:comment>
  <rdfs:label>Dryad</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Helead">
  <rdfs:subClassOf rdf:resource="&base;Nymph" />
  <rdfs:comment>This class represents fen nymphs</rdfs:comment>
  <rdfs:label>Helead</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hamadryad">
  <rdfs:subClassOf rdf:resource="&base;Nymph" />
  <rdfs:comment>This class represents tree nymphs</rdfs:comment>
  <rdfs:label>Hamadryad</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Meliae">
  <rdfs:subClassOf rdf:resource="&base;Hamadryad" />
  <rdfs:comment>This class represents tree (ash) nymphs</rdfs:comment>
  <rdfs:label>Meliae</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Naiads">
  <rdfs:subClassOf rdf:resource="&base;Nymph" />
  <rdfs:comment>This class represents fresh water nymphs</rdfs:comment>
  <rdfs:label>Naiads</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Okeanids">
  <rdfs:subClassOf rdf:resource="&base;Nymph" />
  <rdfs:comment>This class represents water, mostly salty, nymphs</
    rdfs:comment>
  <rdfs:label>Okeanids</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Oreads">
  <rdfs:subClassOf rdf:resource="&base;Nymph" />
  <rdfs:comment>This class represents mountain and grotto nymphs</
    rdfs:comment>
  <rdfs:label>Oreads</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Lampades">
  <rdfs:subClassOf rdf:resource="&base;Nymph" />
  <rdfs:comment>This class represents underworld nymphs</rdfs:comment>
  <rdfs:label>Lampades</rdfs:label>
</owl:Class>

<!-- Giants -->

<owl:Class rdf:ID="Titan">
  <rdfs:subClassOf rdf:resource="&base;Giant" />
  <rdfs:comment>This class represents titans</rdfs:comment>
  <rdfs:label>Titan</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Cyclops">
  <rdfs:subClassOf rdf:resource="&base;Titan" />
  <rdfs:comment>This class represents one-eyed titans or the one-eyes
    giants descended from them</rdfs:comment>
  <rdfs:label>Cyclops</rdfs:label>
</owl:Class>

<!-- Orcs -->

<owl:Class rdf:ID="Goblin">
  <rdfs:subClassOf rdf:resource="&base;Orc" />
  <rdfs:comment>This class represents goblins</rdfs:comment>
  <rdfs:label>Goblin</rdfs:label>
</owl:Class>

<!-- Beast Hybrid -->

<owl:Class rdf:ID="Basilisk">
  <rdfs:subClassOf rdf:resource="&base;BestialHybrid" />
  <rdfs:comment>This class represents basilisks</rdfs:comment>
  <rdfs:label>Basilisk</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Chimera">
  <rdfs:subClassOf rdf:resource="&base;BestialHybrid" />
  <rdfs:comment>This class represents chimerae</rdfs:comment>
  <rdfs:label>Chimera</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Cockatrix">
  <rdfs:subClassOf rdf:resource="&base;BestialHybrid" />
  <rdfs:comment>This class represents cockatrice</rdfs:comment>
  <rdfs:label>Cockatrix/Cockatrice</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Gryphon">
  <rdfs:subClassOf rdf:resource="&base;BestialHybrid" />
  <rdfs:comment>This class represents gryphons</rdfs:comment>
  <rdfs:label>Gryphon</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hippogryph">
  <rdfs:subClassOf rdf:resource="&base;BestialHybrid" />
  <rdfs:comment>This class represents hippogryphs</rdfs:comment>
  <rdfs:label>Hippogryph</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ki-lin">
  <rdfs:subClassOf rdf:resource="&base;BestialHybrid" />
  <rdfs:comment>This class represents Ki-lins</rdfs:comment>
```

```
  <rdfs:label>Ki-lin</rdfs:label>
</owl:Class>

<!-- Human Headed Beast Hybrid -->

<owl:Class rdf:ID="Manticore">
  <rdfs:subClassOf rdf:resource="&base;HumanHeadedHybrid" />
  <rdfs:comment>This class represents manticores</rdfs:comment>
  <rdfs:label>Manticore</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Sphinx">
  <rdfs:subClassOf rdf:resource="&base;HumanHeadedHybrid" />
  <rdfs:comment>This class represents sphinx</rdfs:comment>
  <rdfs:label>Sphinx</rdfs:label>
</owl:Class>

<!-- Human-Beast Hybrid -->

<owl:Class rdf:ID="Centaur">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents centaurs</rdfs:comment>
  <rdfs:label>Centaurs</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Gorgon">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents gorgons</rdfs:comment>
  <rdfs:label>Gorgon</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Harpy">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents harpys</rdfs:comment>
  <rdfs:label>Harpy</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Kitsune">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents kitsune</rdfs:comment>
  <rdfs:label>Kinsune</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Merfolk">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents merfolk</rdfs:comment>
  <rdfs:label>Merfolk</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Minotaur">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
```

```
  <rdfs:comment>This class represents minotaurs</rdfs:comment>
  <rdfs:label>Minotaur</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Naga">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents naga</rdfs:comment>
  <rdfs:label>Naga</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Satyr">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents satyr</rdfs:comment>
  <rdfs:label>Satyr</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Shapeshifter">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents shapeshifters</rdfs:comment>
  <rdfs:label>Merfolk</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Siran">
  <rdfs:subClassOf rdf:resource="&base;HumanoidBestialHybrid" />
  <rdfs:comment>This class represents sirans</rdfs:comment>
  <rdfs:label>Siran</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Lycanthrope">
  <rdfs:subClassOf rdf:resource="&base;Shapeshifter" />
  <rdfs:comment>This class represents lycanthrope</rdfs:comment>
  <rdfs:label>Lycanthrope</rdfs:label>
</owl:Class>

<!-- Default Humans -->

<owl:Class rdf:ID="HomoSapiens">
  <rdfs:subClassOf rdf:resource="&base;Humanoid" />
  <rdfs:comment>This class represents humans</rdfs:comment>
  <rdfs:label>Human</rdfs:label>
</owl:Class>

<!-- Hybrid Properties -->

  <owl:ObjectProperty rdf:ID="composition">
    <rdfs:domain rdf:resource="&base;Hybrid"/>
    <rdfs:range>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&ome;PhysicalItem"/>
          <owl:Class rdf:about="&omt;Species"/>
```

```
        </owl:unionOf>
      </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.7: OntoMedia Profession

G.8 OntoMedia Physical Items

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    physitem#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omt="&omt;"
 xmlns:omb="&omb;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>Physical Items Extension</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Physical Items Ontology</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) Physical
    Items has been designed to describe physical objects.</dc:description>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dct:created>2006-04-05</dct:created>
 <owl:versionInfo>0.1</owl:versionInfo>
</owl:Ontology>

<!-- Classes -->

<owl:Class rdf:ID="Attire">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
  <rdfs:comment>This class represents an item of clothing</rdfs:comment>
```

```
  <rdfs:label>Attire</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Weapon">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
  <rdfs:comment>This class represents a weapon</rdfs:comment>
  <rdfs:label>Weapon</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="BodyPart">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
  <rdfs:comment>This class represents a part of a biological organism</
    rdfs:comment>
  <rdfs:label>Body Part</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Consumables">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
  <rdfs:comment>This class represents physical objects with are intended
    to be eaten or drunk</rdfs:comment>
  <rdfs:label>Consumables</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Craft">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
  <rdfs:comment>This class represents physical objects which can be used
    for transportantion</rdfs:comment>
  <rdfs:label>Craft</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Toy">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
  <rdfs:comment>This class represents physical objects intended for play<
    /rdfs:comment>
  <rdfs:label>Toy</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="AdultToy">
  <rdfs:subClassOf rdf:resource="&ome;Physical-Item" />
  <rdfs:comment>This class represents physical objects intended for "play
    " between consenting adults</rdfs:comment>
  <rdfs:label>"Toy"</rdfs:label>
</owl:Class>

<!-- Properties -->

<owl:ObjectProperty rdf:ID="usually_worn_for">
  <rdfs:domain rdf:resource="&base;Attire" />
  <rdfs:range rdf:resource="&ome;Event"/>
</owl:ObjectProperty>
```

```
<owl:ObjectProperty rdf:ID="usually_worn_by">
  <rdfs:domain rdf:resource="&base;Attire" />
  <rdfs:range>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="&omb;Group"/>
        <owl:Class rdf:about="&omb;Being"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:range>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="usually_used_for">
  <rdfs:domain rdf:resource="&ome;Physical-Item" />
  <rdfs:range rdf:resource="&ome;Event"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="usually_used_by">
  <rdfs:domain rdf:resource="&ome;Physical-Item" />
  <rdfs:range>
    <owl:Class>
      <owl:unionOf rdf:parseType="Collection">
        <owl:Class rdf:about="&omb;Group"/>
        <owl:Class rdf:about="&omb;Being"/>
      </owl:unionOf>
    </owl:Class>
  </rdfs:range>
</owl:ObjectProperty>



</rdf:RDF>
```

Listing G.8: OntoMedia Physical Items

G.9 OntoMedia Property Extensions

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omm "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omm="&omm;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Expression Property Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Expression Property Representation</
    dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/expression"/>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/media"/>
</owl:Ontology>
```

```
<!-- Expression Properties -->

  <owl:Class rdf:ID="Expression-Properties">
    <rdfs:label>Expression Properties</rdfs:label>
    <rdfs:comment>This class represents additional properties</
   rdfs:comment>
    <rdfs:subClassOf rdf:resource="&ome;Expression" />
  </owl:Class>


<!-- Expression Properties Extensions -->

  <owl:Class rdf:ID="Accuracy-Rating-Properties">
    <rdfs:label>Accuracy Rating Properties</rdfs:label>
    <rdfs:comment>This class represents accuracy of the information</
   rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Expression-Properties" />
  </owl:Class>

  <owl:Class rdf:ID="Abstract-Rating-Properties">
    <rdfs:label>Abstract Rating Properties</rdfs:label>
    <rdfs:comment>This class represents abstractness of the information</
   rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Expression-Properties" />
  </owl:Class>

<!-- Accuracy Classes -->

  <owl:Class rdf:ID="Accurate">
    <rdfs:label>Accurate</rdfs:label>
    <rdfs:comment>This class represents the concept of an accurate value<
   /rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Accuracy-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Approximate" />
  </owl:Class>

  <owl:Class rdf:ID="Approximate">
    <rdfs:label>Approximate</rdfs:label>
    <rdfs:comment>This class represents the concept of an approximate
   value</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Accuracy-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Accurate" />
  </owl:Class>

<!-- Absract Classes -->

  <owl:Class rdf:ID="Generic">
    <rdfs:label>Generic</rdfs:label>
    <rdfs:comment>This class represents the concept of generic
   information</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Abstract-Rating-Properties" />
```

```
    <owl:disjointWith rdf:resource="&base;Specialised" />
    <owl:disjointWith rdf:resource="&base;Specific" />
    <owl:disjointWith rdf:resource="&base;Detail" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>

  <owl:Class rdf:ID="Specialised">
    <rdfs:label>Specialised</rdfs:label>
    <rdfs:comment>This class represents the concept of a specialised
    information</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Abstract-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Generic" />
    <owl:disjointWith rdf:resource="&base;Specific" />
    <owl:disjointWith rdf:resource="&base;Detail" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>

  <owl:Class rdf:ID="Specific">
    <rdfs:label>Specific</rdfs:label>
    <rdfs:comment>This class represents the concept of specific
    information</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Abstract-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Generic" />
    <owl:disjointWith rdf:resource="&base;Specialised" />
    <owl:disjointWith rdf:resource="&base;Detail" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>

  <owl:Class rdf:ID="Detail">
    <rdfs:label>Detail</rdfs:label>
    <rdfs:comment>This class represents the concept of a detail</
    rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Abstract-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Generic" />
    <owl:disjointWith rdf:resource="&base;Specialised" />
    <owl:disjointWith rdf:resource="&base;Specific" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>

  <owl:Class rdf:ID="Nitpick">
    <rdfs:label>Nitpick</rdfs:label>
    <rdfs:comment>This class represents the concept of a nitpick</
    rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Abstract-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Generic" />
    <owl:disjointWith rdf:resource="&base;Specialised" />
    <owl:disjointWith rdf:resource="&base;Specific" />
    <owl:disjointWith rdf:resource="&base;Detail" />
  </owl:Class>
```

```
</rdf:RDF>
```

Listing G.9: OntoMedia Expression Properties

G.10 OntoMedia Weapons

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ompi "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    physitem#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    weapon#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omt="&omt;"
 xmlns:ompi="&ompi;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>Weapon Extension</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Weapon Ontology</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) Weapon
    Extension has been designed to describe weapons.</dc:description>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dct:created>2006-03-30</dct:created>
 <owl:versionInfo>0.1</owl:versionInfo>
</owl:Ontology>

<!-- Distance -->

<owl:Class rdf:ID="Hand2Hand">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents a weapons used in hand to hand
```

```
    fighting</rdfs:comment>
  <rdfs:label>Hand2Hand</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="ShortRange">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents a weapons used at short range
    fighting</rdfs:comment>
  <rdfs:label>Short Range</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="LongRange">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents a weapons used at long range
    fighting</rdfs:comment>
  <rdfs:label>Long Range</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="IntercontinentalRange">
  <rdfs:subClassOf rdf:resource="&base;LongRange" />
  <rdfs:comment>This class represents an intercontinental weapons</
    rdfs:comment>
  <rdfs:label>Intercontinental</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="OrbitalRange">
  <rdfs:subClassOf rdf:resource="&base;LongRange" />
  <rdfs:comment>This class represents an orbital weapons</rdfs:comment>
  <rdfs:label>Orbital</rdfs:label>
</owl:Class>

<!-- Type -->

<owl:Class rdf:ID="Projectile">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents a weapons intended to throw or
    propelled objects at the target</rdfs:comment>
  <rdfs:label>Projectile</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Beam">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents a weapons intended to emit a beam
    at a target</rdfs:comment>
  <rdfs:label>Beam</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Melee">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents a weapons intended as physical
    extension of the users body and directly hit targets</rdfs:comment>
```

```
  <rdfs:label>Non Projectile</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Powered">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents a weapons which has some form of
    propulsion system.</rdfs:comment>
  <rdfs:label>Powered</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Guided">
  <rdfs:subClassOf rdf:resource="&ompi;Powered" />
  <rdfs:comment>This class represents a weapons which can be guided or
    programmed to hit a specific target.</rdfs:comment>
  <rdfs:label>Guided</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Biological">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents biological weapons.</rdfs:comment>
  <rdfs:label>Biological Weapon</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Chemical">
  <rdfs:subClassOf rdf:resource="&ompi;Weapon" />
  <rdfs:comment>This class represents chemical weapons.</rdfs:comment>
  <rdfs:label>Chemical Weapon</rdfs:label>
</owl:Class>

<!-- Basics -->

<owl:Class rdf:ID="Gun">
  <rdfs:subClassOf rdf:resource="&base;Projectile" />
  <rdfs:comment>This class represents weapons which propel objects
    through the explosive release of gas</rdfs:comment>
  <rdfs:label>Gun</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="ParticleGun">
  <rdfs:subClassOf rdf:resource="&base;Beam" />
  <rdfs:comment>This class represents weapons which send out a energy or
    other zappy thing rather than a physical object</rdfs:comment>
  <rdfs:label>Particle Gun</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Bow">
  <rdfs:subClassOf rdf:resource="&base;Projectile" />
  <rdfs:comment>This class represents weapons that propels objects
    through stored potential energy</rdfs:comment>
  <rdfs:label>Bow</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Sword">
  <rdfs:subClassOf rdf:resource="&base;Melee" />
  <rdfs:comment>This class represents swords</rdfs:comment>
  <rdfs:label>Sword</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Pike">
  <rdfs:subClassOf rdf:resource="&base;Melee" />
  <rdfs:comment>This class represents can openers on sticks</rdfs:comment
    >
  <rdfs:label>Pike</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Dagger">
  <rdfs:subClassOf rdf:resource="&base;Melee" />
  <rdfs:comment>This class represents daggers</rdfs:comment>
  <rdfs:label>Dagger</rdfs:label>
</owl:Class>

<!-- Guns -->

<owl:Class rdf:ID="Rifle">
  <rdfs:subClassOf rdf:resource="&base;Gun" />
  <rdfs:subClassOf rdf:resource="&base;ParticleGun" />
  <rdfs:comment>This class represents a big gun with rifling in the
    barrel</rdfs:comment>
  <rdfs:label>Rifle</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Pistol">
  <rdfs:subClassOf rdf:resource="&base;Gun" />
  <rdfs:subClassOf rdf:resource="&base;ParticleGun" />
  <rdfs:comment>This class represents a small gun</rdfs:comment>
  <rdfs:label>Pistol</rdfs:label>
</owl:Class>

<!-- Bow -->

<owl:Class rdf:ID="Crossbow">
  <rdfs:subClassOf rdf:resource="&base;Bow" />
  <rdfs:comment>This class represents crossbows</rdfs:comment>
  <rdfs:label>Crossbow</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Longbow">
  <rdfs:subClassOf rdf:resource="&base;Bow" />
  <rdfs:comment>This class represents longbows</rdfs:comment>
  <rdfs:label>Longbow</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Asymetricalbow">
  <rdfs:subClassOf rdf:resource="&base;Bow" />
  <rdfs:comment>This class represents asymetrical bows</rdfs:comment>
  <rdfs:label>Asymetric Bow</rdfs:label>
</owl:Class>

<!-- Sword -->

<owl:Class rdf:ID="OneHanded">
  <rdfs:subClassOf rdf:resource="&base;Sword" />
  <rdfs:comment>This class represents swords designed to be used one
    handed</rdfs:comment>
  <rdfs:label>One Handed Sword</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="TwoHanded">
  <rdfs:subClassOf rdf:resource="&base;Sword" />
  <rdfs:comment>This class represents swords designed to be used two
    handed</rdfs:comment>
  <rdfs:label>Two Handed Sword</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Bastard">
  <rdfs:subClassOf rdf:resource="&base;Sword" />
  <rdfs:comment>This class represents swords designed to be used with one
     and a half hands</rdfs:comment>
  <rdfs:label>Bastard Sword</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Short">
  <rdfs:subClassOf rdf:resource="&base;Sword" />
  <rdfs:comment>This class represents short swords</rdfs:comment>
  <rdfs:label>Short Sword</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Katana">
  <rdfs:subClassOf rdf:resource="&base;Sword" />
  <rdfs:comment>This class represents Katana</rdfs:comment>
  <rdfs:label>Katana</rdfs:label>
</owl:Class>


<!-- traits -->

<owl:Class rdf:ID="EdgeType">
  <rdfs:subClassOf rdf:resource="&omt;Type" />
  <rdfs:comment>This class represents the type of edge that a weapon has<
    /rdfs:comment>
  <rdfs:label>Weapon Edge Type</rdfs:label>
</owl:Class>
```

```
<!-- Properties -->

<owl:ObjectProperty rdf:ID="has-edge">
    <rdfs:label>Has Edge</rdfs:label>
    <rdfs:comment>This property specifies the starting entity of the
    transformation</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Sharp"/>
    <rdfs:range rdf:resource="&base;EdgeType"/>
</owl:ObjectProperty>



</rdf:RDF>
```

Listing G.10: OntoMedia Weapons

G.11 OntoMedia Knowledge

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/detail/
    know#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Knowledge Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Knowledge Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>

<!-- Knowledge Classes -->

<owl:Class rdf:ID="Information">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents information</rdfs:comment>
  <rdfs:label>Information</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Culture">
  <rdfs:subClassOf rdf:resource="&ome;Abstract-Item" />
  <rdfs:comment>This class represents culture</rdfs:comment>
  <rdfs:label>Culture</rdfs:label>
</owl:Class>

<!-- Knowledge Types -->

<owl:Class rdf:ID="Theory">
  <rdfs:subClassOf rdf:resource="&base;Information" />
  <rdfs:comment>This class represents theories</rdfs:comment>
  <rdfs:label>Theory</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Fact">
  <rdfs:subClassOf rdf:resource="&base;Information" />
  <rdfs:comment>This class represents facts</rdfs:comment>
  <rdfs:label>Fact</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Memory">
  <rdfs:subClassOf rdf:resource="&base;Information" />
  <rdfs:comment>This class represents memories</rdfs:comment>
  <rdfs:label>Memory</rdfs:label>
</owl:Class>

<!-- Culture Classes -->

<owl:Class rdf:ID="Language">
  <rdfs:subClassOf rdf:resource="&base;Culture" />
  <rdfs:comment>This class represents language</rdfs:comment>
  <rdfs:label>Language</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Alphabet">
  <rdfs:subClassOf rdf:resource="&base;Culture" />
  <rdfs:comment>This class represents an alphabet, syllabry or way of
    visually representing a language</rdfs:comment>
  <rdfs:label>Alphabet</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Beliefs">
  <rdfs:subClassOf rdf:resource="&base;Culture" />
  <rdfs:comment>This class represents cultural or religious beliefs</
    rdfs:comment>
  <rdfs:label>Beliefs</rdfs:label>
</owl:Class>

<!-- Belief Classes -->
```

```
<owl:Class rdf:ID="Religion">
  <rdfs:subClassOf rdf:resource="&base;Beliefs" />
  <rdfs:comment>This class represents religious beliefs</rdfs:comment>
  <rdfs:label>Religion</rdfs:label>
</owl:Class>

<!-- Culture Properties -->

<owl:ObjectProperty rdf:ID="symbolises">
    <rdfs:label>Symbolises</rdfs:label>
    <rdfs:comment>This property specifies a language symbolised by the
    alphabet</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Alphabet"/>
    <rdfs:range rdf:resource="&base;Language"/>
    <owl:inverseOf rdf:resource="represented-by"/>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="represented-by">
    <rdfs:label>Represented/Symbolised By</rdfs:label>
    <rdfs:comment>This property specifies the alphabet, syllabry or other
     way of visually representing a language</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Language"/>
    <rdfs:range rdf:resource="&base;Alphabet"/>
    <owl:inverseOf rdf:resource="symbolises"/>
</owl:ObjectProperty>

</rdf:RDF>
```

Listing G.11: OntoMedia Knowledge

G.12 OntoMedia Basic Human Body Parts

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/detail/
    physio/human_body_part#">
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omm "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media#">
<!ENTITY loc "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space#">
<!ENTITY ompi "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    physitem#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omm="&omm;"
 xmlns:loc="&loc;"
 xmlns:ompi="&ompi;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>

<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Body Part Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Basic Humanoid Body Parts
    Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>
```

```
<!-- Body Parts -->

<owl:Class rdf:ID="Humanoid-Body-Part">
  <rdfs:subClassOf rdf:resource="&ompi;BodyPart" />
  <rdfs:comment>Parts of a humanoid body</rdfs:comment>
  <rdfs:label>Humanoid Body Parts</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Humanoid-Surface-Space">
  <rdfs:subClassOf rdf:resource="&loc;Biological_Surface_Space" />
  <rdfs:comment>Parts of a humanoid surface</rdfs:comment>
  <rdfs:label>Humanoid Surface Space</rdfs:label>
</owl:Class>

<!-- Area -->

<owl:Class rdf:ID="External-Body-Parts">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Body-Parts" />
  <rdfs:comment>External parts of a humanoid body</rdfs:comment>
  <rdfs:label>External Body Parts</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Internal-Body-Parts">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Body-Parts" />
  <rdfs:comment>Internal parts of a humanoid body</rdfs:comment>
  <rdfs:label>Internal Body Parts</rdfs:label>
</owl:Class>

<!-- External Parts -->


<owl:Class rdf:ID="Body">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The body</rdfs:comment>
  <rdfs:label>Body</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Head">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The head</rdfs:comment>
  <rdfs:label>Head</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Head-Hair">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Head hair</rdfs:comment>
  <rdfs:label>Head Hair</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Facial-Hair">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
```

```
  <rdfs:comment>Facial hair</rdfs:comment>
  <rdfs:label>Facial Hair</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Beard">
  <rdfs:subClassOf rdf:resource="&base;Facial-Hair" />
  <rdfs:comment>Beard</rdfs:comment>
  <rdfs:label>Beard</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Mustache">
  <rdfs:subClassOf rdf:resource="&base;Facial-Hair" />
  <rdfs:comment>Mustache</rdfs:comment>
  <rdfs:label>Mustache</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Sideburns">
  <rdfs:subClassOf rdf:resource="&base;Facial-Hair" />
  <rdfs:comment>Sideburns</rdfs:comment>
  <rdfs:label>Sideburns</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Eyes">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Eyes</rdfs:comment>
  <rdfs:label>Eyes</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Eye-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Left eye</rdfs:comment>
  <rdfs:label>Eye (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Eye-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Right eye</rdfs:comment>
  <rdfs:label>Eye (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Nose">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The nose</rdfs:comment>
  <rdfs:label>Nose</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Mouth">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The Mouth</rdfs:comment>
  <rdfs:label>Mouth</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Lips">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The Lips</rdfs:comment>
  <rdfs:label>Lips</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Lip-Upper">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The upper lip</rdfs:comment>
  <rdfs:label>Lip (Upper)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Lip-Lower">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The surface of the neck</rdfs:comment>
  <rdfs:label>Lip (Lower)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Tongue">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The Tongue</rdfs:comment>
  <rdfs:label>Tongue</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ears">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The ears</rdfs:comment>
  <rdfs:label>Ears</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ear-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left ear</rdfs:comment>
  <rdfs:label>Ear (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ear-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right ear</rdfs:comment>
  <rdfs:label>Ear (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Neck">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The neck</rdfs:comment>
  <rdfs:label>Neck</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Chest">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
```

```
  <rdfs:comment>The chest</rdfs:comment>
  <rdfs:label>Chest</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Nipple-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left nipple</rdfs:comment>
  <rdfs:label>Nipple (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Nipple-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right nipple</rdfs:comment>
  <rdfs:label>Nipple (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Body-Hair">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Body hair</rdfs:comment>
  <rdfs:label>Body Hair</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Back">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Back</rdfs:comment>
  <rdfs:label>Back</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Shoulder-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left shoulder</rdfs:comment>
  <rdfs:label>Shoulder (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left arm</rdfs:comment>
  <rdfs:label>Arm (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Left-Upper">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The upper, left arm</rdfs:comment>
  <rdfs:label>Upper Arm (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Elbow-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left elbow</rdfs:comment>
  <rdfs:label>Elbow (Left)</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Arm-Left-Lower">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The lower, left arm</rdfs:comment>
  <rdfs:label>Lower Arm (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Wrist_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left wrist</rdfs:comment>
  <rdfs:label>Wrist (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hand_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left hand</rdfs:comment>
  <rdfs:label>Hand (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Thumb_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left thumb</rdfs:comment>
  <rdfs:label>Thumb (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Index_Finger_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left index finger</rdfs:comment>
  <rdfs:label>Index Finger (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Middle_Finger_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The light middle finger</rdfs:comment>
  <rdfs:label>Middle Finger (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ring_Finger_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left ring finger</rdfs:comment>
  <rdfs:label>Ring Finger (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Little_Finger_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left little finger</rdfs:comment>
  <rdfs:label>Little Finger (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Shoulder-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
```

```
  <rdfs:comment>The right shoulder</rdfs:comment>
  <rdfs:label>Shoulder (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right arm</rdfs:comment>
  <rdfs:label>Arm (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Right-Upper">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The upper, right arm</rdfs:comment>
  <rdfs:label>Upper Arm (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Elbow-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right elbow</rdfs:comment>
  <rdfs:label>Elbow (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Right-Lower">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The lower, right arm</rdfs:comment>
  <rdfs:label>Lower Arm (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Wrist_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right wrist</rdfs:comment>
  <rdfs:label>Wrist (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hand_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right hand</rdfs:comment>
  <rdfs:label>Hand (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Thumb_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right thumb</rdfs:comment>
  <rdfs:label>Thumb (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Index_Finger_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right index finger</rdfs:comment>
  <rdfs:label>Index Finger (Right)</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Middle_Finger_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right middle finger</rdfs:comment>
  <rdfs:label>Middle Finger (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ring_Finger_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right ring finger</rdfs:comment>
  <rdfs:label>Ring Finger (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Little_Finger_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right little finger</rdfs:comment>
  <rdfs:label>Little Finger (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Abdomen">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The abdomen</rdfs:comment>
  <rdfs:label>Abdomen</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Navel">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The navel</rdfs:comment>
  <rdfs:label>Navel</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hips">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The hips</rdfs:comment>
  <rdfs:label>Hips</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hip-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left hip</rdfs:comment>
  <rdfs:label>Hip (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hip-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right hip</rdfs:comment>
  <rdfs:label>Hip (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Genitals">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
```

```
  <rdfs:comment>The genitals</rdfs:comment>
  <rdfs:label>Genitals</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Backside">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The backside</rdfs:comment>
  <rdfs:label>Backside</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Buttock_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right buttock</rdfs:comment>
  <rdfs:label>Buttock (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Buttock_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left buttock</rdfs:comment>
  <rdfs:label>Buttock (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Anus">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Not the left buttock, not the right buttock but something
     inbetween</rdfs:comment>
  <rdfs:label>Anus</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left leg</rdfs:comment>
  <rdfs:label>Leg (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Left-Upper">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The upper, left leg</rdfs:comment>
  <rdfs:label>Upper Leg (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Knee-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left knee</rdfs:comment>
  <rdfs:label>Knee (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Left-Lower">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The lower, left leg</rdfs:comment>
  <rdfs:label>Lower Leg (Left)</rdfs:label>
```

```
</owl:Class>

<owl:Class rdf:ID="Ankle-Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left ankle</rdfs:comment>
  <rdfs:label>Ankle (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Foot_Left">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The left foot</rdfs:comment>
  <rdfs:label>Foot (Left)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right leg</rdfs:comment>
  <rdfs:label>Leg (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Right-Upper">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The upper, right leg</rdfs:comment>
  <rdfs:label>Upper Leg (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Knee-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right knee</rdfs:comment>
  <rdfs:label>Knee (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Right-Lower">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The lower, right leg</rdfs:comment>
  <rdfs:label>Lower Leg (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Ankle-Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The right ankle</rdfs:comment>
  <rdfs:label>Ankle (Right)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Foot_Right">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>The surface of the right foot</rdfs:comment>
  <rdfs:label>Foot (Right)</rdfs:label>
</owl:Class>

<!-- Internal Body Parts -->
```

```
<owl:Class rdf:ID="Heart">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>An organ used to pump blood around the body</rdfs:comment
    >
  <rdfs:label>Heart</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Blood">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>Liquidy transport medium around a body</rdfs:comment>
  <rdfs:label>Blood</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Liver">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>An organ which breaks down bad stuff and turns good stuff
     into usable good stuff</rdfs:comment>
  <rdfs:label>Liver</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Kidney">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>An organ which filters blood</rdfs:comment>
  <rdfs:label>Kidney</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Appendix">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>An organ which exists to go wrong</rdfs:comment>
  <rdfs:label>Appendix</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Lungs">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>An organ which exchanges nice gasses for unwanted gasses<
    /rdfs:comment>
  <rdfs:label>Lungs</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Brain">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>An organ which processes and interprets electrical
    impulses recieved and thinks it is in control of the rest of the body.
    </rdfs:comment>
  <rdfs:label>Brain</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="InternalSkeleton">
  <rdfs:subClassOf rdf:resource="&base;Internal-Body-Parts" />
  <rdfs:comment>Provides structural integrity</rdfs:comment>
```

```
  <rdfs:label>Skeleton (Internal)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="ExternalSkeleton">
  <rdfs:subClassOf rdf:resource="&base;External-Body-Parts" />
  <rdfs:comment>Provides structural integrity</rdfs:comment>
  <rdfs:label>Skeleton (External)</rdfs:label>
</owl:Class>

<!-- Surface Space -->

<owl:Class rdf:ID="Body-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The body</rdfs:comment>
  <rdfs:label>Body Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Head-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The head</rdfs:comment>
  <rdfs:label>Head Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Neck-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The neck</rdfs:comment>
  <rdfs:label>Neck Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Back-Of-Head-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the back of the head</rdfs:comment>
  <rdfs:label>Back Of The Head Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Face-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the face</rdfs:comment>
  <rdfs:label>Face Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Face-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the left side of the face</rdfs:comment>
  <rdfs:label>Face (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Face-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the right side of the face</rdfs:comment>
  <rdfs:label>Face (Right) Surface</rdfs:label>
```

```
</owl:Class>

<owl:Class rdf:ID="Face-Forehead-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the forehead of the head</rdfs:comment>
  <rdfs:label>Face (Forehead) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Face-Cheek-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the cheek on the left side of the face</
    rdfs:comment>
  <rdfs:label>Face Cheek (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Face-Cheek-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the cheek on the right side of the face</
    rdfs:comment>
  <rdfs:label>Face Cheek (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the torso</rdfs:comment>
  <rdfs:label>Torso Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the left side of the torso</rdfs:comment>
  <rdfs:label>Torso (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the right side of the torso</rdfs:comment>
  <rdfs:label>Torso (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Back-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the back of the torso</rdfs:comment>
  <rdfs:label>Torso Back Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Back-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the back, left side of the torso</
    rdfs:comment>
  <rdfs:label>Torso Back (Left) Surface</rdfs:label>
```

```
</owl:Class>

<owl:Class rdf:ID="Torso-Back-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the back, right side of the face</
    rdfs:comment>
  <rdfs:label>Torso Back (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Front-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the front of the torso</rdfs:comment>
  <rdfs:label>Torso Front Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Front-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the front, left side of the torso</
    rdfs:comment>
  <rdfs:label>Torso Front (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Torso-Front-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the front, right side of the face</
    rdfs:comment>
  <rdfs:label>Torso Front (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Buttock-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the legs Surface</rdfs:comment>
  <rdfs:label>Buttock Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Buttock-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the left buttock</rdfs:comment>
  <rdfs:label>Buttock (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Buttock-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the right buttock</rdfs:comment>
  <rdfs:label>Buttock (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Perineum">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The area between the base of the genitals and the anus</
    rdfs:comment>
```

```
  <rdfs:label>Perineum</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Legs-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the legs</rdfs:comment>
  <rdfs:label>The surface of the legs</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the left leg</rdfs:comment>
  <rdfs:label>Leg (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Left-Upper-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the upper, left leg</rdfs:comment>
  <rdfs:label>Upper Leg (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Left-Lower-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the lower, left leg</rdfs:comment>
  <rdfs:label>Lower Leg (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the right leg</rdfs:comment>
  <rdfs:label>Leg (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Right-Upper-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the upper, right leg</rdfs:comment>
  <rdfs:label>Upper Leg (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Leg-Right-Lower-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the lower, right leg</rdfs:comment>
  <rdfs:label>Lower Leg (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Feet-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the feet</rdfs:comment>
  <rdfs:label>Feet Surface</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Foot_Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the left foot</rdfs:comment>
  <rdfs:label>Foot (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Foot_Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the right foot</rdfs:comment>
  <rdfs:label>Foot (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arms-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the arms</rdfs:comment>
  <rdfs:label>Arms Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the left arm</rdfs:comment>
  <rdfs:label>Arm (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Left-Upper-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the upper, left arm</rdfs:comment>
  <rdfs:label>Upper Arm (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Left-Lower-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the lower, left arm</rdfs:comment>
  <rdfs:label>Lower Arm (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the right arm</rdfs:comment>
  <rdfs:label>Arm (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Right-Upper-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the upper, right arm</rdfs:comment>
  <rdfs:label>Upper Arm (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Arm-Right-Lower-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the lower, right arm</rdfs:comment>
```

```
  <rdfs:label>Lower Arm (Right) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hand_Left-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the left hand</rdfs:comment>
  <rdfs:label>Hand (Left) Surface</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hand_Right-Surface">
  <rdfs:subClassOf rdf:resource="&base;Humanoid-Surface-Space" />
  <rdfs:comment>The surface of the right arm</rdfs:comment>
  <rdfs:label>Hand (Right) Surface</rdfs:label>
</owl:Class>

</rdf:RDF>
```

Listing G.12: OntoMedia Basic Human Body Parts

G.13 OntoMedia Basic Human Body Types Default Instances

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/detail/
    physio/human_body_type#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:omt="&omt;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>

<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Basic Humanoid Body Types</rdfs:label>
</owl:Ontology>

<rdf:Description rdf:about="&base;a-frame">
  <rdfs:label>A-Frame</rdfs:label>
  <rdfs:comment>Also known as "Spoon shape". Weight carried in hip area
    with a small waist and bust.</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;v-frame">
  <rdfs:label>V-Frame</rdfs:label>
  <rdfs:comment>Also known as "Cone shape". Shoulders wider than hips.
    Larger upper body with narrow hips and thin legs.</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;h-frame">
  <rdfs:label>H-Frame</rdfs:label>
  <rdfs:comment>Athletic Description. Has a large waist and shoulders and
     overall is blocky.</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;ruler">
```

```
  <rdfs:label>Ruler</rdfs:label>
  <rdfs:comment>Lean Description. Measurements of chest, waist and hips
    are about the same. .</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;8-frame">
  <rdfs:label>8-Frame</rdfs:label>
  <rdfs:comment>Also known as "Hourglass". Hips and bust are about the
    same size with a narrow waist.</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;oval-frame">
  <rdfs:label>Oval Frame</rdfs:label>
  <rdfs:comment>Also known as "Apple". Average or shorter height. Larger
    bust and thin legs. Gains weight on stomach.</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;ectomorph">
  <rdfs:label>Ectomorph</rdfs:label>
  <rdfs:comment>Slender Description.</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;mesomorph">
  <rdfs:label>Mesomorph</rdfs:label>
  <rdfs:comment>Athletic, muscular Description</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

<rdf:Description rdf:about="&base;endomorph">
  <rdfs:label>Endomorph</rdfs:label>
  <rdfs:comment>Soft, rounded, large Description</rdfs:comment>
  <rdf:type rdf:resource="&omt;Build"/>
</rdf:Description>

</rdf:RDF>
```

Listing G.13: OntoMedia Basic Human Body Types

G.14 OntoMedia Basic Human Eye Colour Default Instances

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/detail/
    physio/human_eye_colour#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:omt="&omt;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>

<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Basic Human Eye Colours</rdfs:label>
</owl:Ontology>

<owl:Class rdf:ID="Human-Eye-Colour">
  <rdfs:subClassOf rdf:resource="&omt;Colour" />
  <rdfs:comment>This class represents colours found in human eyes</
    rdfs:comment>
  <rdfs:label>Human Eye Colour</rdfs:label>
</owl:Class>

<rdf:Description rdf:about="&base;Brown">
  <rdfs:label>Brown</rdfs:label>
  <rdfs:comment>Brown</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Dark-Brown">
  <rdfs:label>Dark Brown</rdfs:label>
  <rdfs:comment>Dark brown</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description  rdf:about="&base;Hazel">
  <rdfs:label>Hazel</rdfs:label>
  <rdfs:comment>Green-Brown</rdfs:comment>
```

```
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description  rdf:about="&base;Amber">
  <rdfs:label>Amber</rdfs:label>
  <rdfs:comment>Russet-Coppery</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description  rdf:about="&base;Green">
  <rdfs:label>Green</rdfs:label>
  <rdfs:comment>Green</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Grey">
  <rdfs:label>Grey</rdfs:label>
  <rdfs:comment>Grey</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Blue">
  <rdfs:label>Blue</rdfs:label>
  <rdfs:comment>Blue</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Pigment-Free">
  <rdfs:label>Pigment Free</rdfs:label>
  <rdfs:comment>Irises totally lacking pigment may appear red/light
    purple for example in albinism.</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Nearly-Black">
  <rdfs:label>Nearly Black</rdfs:label>
  <rdfs:comment>Nearly black. Iris cannot be distinguised from the pupil.
    </rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Eye-Colour"/>
</rdf:Description>

</rdf:RDF>
```

Listing G.14: OntoMedia Basic Human Eye Colours

G.15 OntoMedia Basic Human Hair Colour Default Instances

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/detail/
    physio/human_eye_colour#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:omt="&omt;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>

<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Basic Human Human Colours</rdfs:label>
</owl:Ontology>

<owl:Class rdf:ID="Human-Hair-Colour">
  <rdfs:subClassOf rdf:resource="&omt;Colour" />
  <rdfs:comment>This class represents colours naturally found in human
    hair</rdfs:comment>
  <rdfs:label>Human Hair Colour</rdfs:label>
</owl:Class>

<!-- Black -->

<rdf:Description rdf:about="&base;Black">
  <rdfs:label>Black</rdfs:label>
  <rdfs:comment>Black</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Hair-Colour"/>
</rdf:Description>

<!-- Brown -->

<rdf:Description rdf:about="&base;Brown">
  <rdfs:label>Brunet/Brunette</rdfs:label>
  <rdfs:comment>Brunet/Brunettee</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Hair-Colour"/>
</rdf:Description>
```

```
<rdf:Description rdf:about="&base;Dark-Brown">
  <rdfs:label>Dark Brown</rdfs:label>
  <rdfs:comment>Dark Brown</rdfs:comment>
  <rdf:type rdf:resource="&base;Brown"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Mid-Brown">
  <rdfs:label>Medium Brown</rdfs:label>
  <rdfs:comment>Medium Brown</rdfs:comment>
  <rdf:type rdf:resource="&base;Brown"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Light-Brown">
  <rdfs:label>Light Brown</rdfs:label>
  <rdfs:comment>Light Brown</rdfs:comment>
  <rdf:type rdf:resource="&base;Brown"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Mouse">
  <rdfs:label>Mouse</rdfs:label>
  <rdfs:comment>Mouse</rdfs:comment>
  <rdf:type rdf:resource="&base;Brown"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Chestnut">
  <rdfs:label>Chestnut</rdfs:label>
  <rdfs:comment>Red-Brown</rdfs:comment>
  <rdf:type rdf:resource="&base;Brown"/>
</rdf:Description>

<!-- Blond -->

<rdf:Description rdf:about="&base;Blonde">
  <rdfs:label>Blond/Blonde</rdfs:label>
  <rdfs:comment>Blond/Blonde</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Hair-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Ash-Blonde">
  <rdfs:label>Ash-Blond/Ash-Blonde</rdfs:label>
  <rdfs:comment>Ash-Blond/Ash-Blonde</rdfs:comment>
  <rdf:type rdf:resource="&base;Blonde"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Dirty-Blonde">
  <rdfs:label>Dirty-Blond/Dirty-Blonde</rdfs:label>
  <rdfs:comment>Dirty-Blond/Dirty-Blond</rdfs:comment>
  <rdf:type rdf:resource="&base;Blonde"/>
</rdf:Description>
```

```
<rdf:Description rdf:about="&base;Flaxen">
  <rdfs:label>Flaxen</rdfs:label>
  <rdfs:comment>Flaxen</rdfs:comment>
  <rdf:type rdf:resource="&base;Blonde"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Honey-Blonde">
  <rdfs:label>Honey-Blond/Honey-Blonde</rdfs:label>
  <rdfs:comment>Honey-Blond/Honey-Blonde</rdfs:comment>
  <rdf:type rdf:resource="&base;Blonde"/>
</rdf:Description>

<!-- Red -->

<rdf:Description rdf:about="&base;Red">
  <rdfs:label>Red</rdfs:label>
  <rdfs:comment>Red</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Hair-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Strawberry-Blonde">
  <rdfs:label>Strawberry-Blond/Strawberry-Blonde</rdfs:label>
  <rdfs:comment>Red-Blonde/Red-Blond</rdfs:comment>
  <rdf:type rdf:resource="&base;Blonde"/>
  <rdf:type rdf:resource="&base;Red"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Ginger">
  <rdfs:label>Ginger</rdfs:label>
  <rdfs:comment>Ginger</rdfs:comment>
  <rdf:type rdf:resource="&base;Red"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Auburn">
  <rdfs:label>Auburn</rdfs:label>
  <rdfs:comment>Auburn</rdfs:comment>
  <rdf:type rdf:resource="&base;Red"/>
</rdf:Description>


<!-- Other -->

<rdf:Description rdf:about="&base;Pigment-Free">
  <rdfs:label>Pigment Free</rdfs:label>
  <rdfs:comment>Hair totally lacking pigment may appear white for example
     in albinism.</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Hair-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;Grey">
  <rdfs:label>Grey</rdfs:label>
```

```
  <rdfs:comment>Grey.</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Hair-Colour"/>
</rdf:Description>

<rdf:Description rdf:about="&base;SnP">
  <rdfs:label>Salt and Pepper</rdfs:label>
  <rdfs:comment>Dark/Grey combination</rdfs:comment>
  <rdf:type rdf:resource="&base;Human-Hair-Colour"/>
</rdf:Description>

</rdf:RDF>
```

Listing G.15: OntoMedia Basic Human Hair Colours

G.16 OntoMedia Travel

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    travel#">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    trans#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xmlns:omt="&omt;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Knowledge Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Knowledge Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/expression"/>
</owl:Ontology>

<!-- Travel Classes -->
```

```
<owl:Class rdf:ID="Travel">
  <rdfs:subClassOf rdf:resource="&omt;Transference" />
  <rdfs:comment>This class represents travel</rdfs:comment>
  <rdfs:label>Travel</rdfs:label>
</owl:Class>

<!-- Travel Types Classes -->

<owl:Class rdf:ID="Void-Travel">
  <rdfs:subClassOf rdf:resource="&base;Travel" />
  <rdfs:comment>This class represents travel through or within voids eg.
    space travel, interdimensional travel etc</rdfs:comment>
  <rdfs:label>Void Travel</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Solid-Travel">
  <rdfs:subClassOf rdf:resource="&base;Travel" />
  <rdfs:comment>This class represents travel on or through solid objects<
    /rdfs:comment>
  <rdfs:label>Solid Travel</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Liquid-Travel">
  <rdfs:subClassOf rdf:resource="&base;Travel" />
  <rdfs:comment>This class represents travel on or through liquid</
    rdfs:comment>
  <rdfs:label>Liquid Travel</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Gas-Travel">
  <rdfs:subClassOf rdf:resource="&base;Travel" />
  <rdfs:comment>This class represents travel within gas compounds (
    including air)</rdfs:comment>
  <rdfs:label>Gas Travel</rdfs:label>
</owl:Class>

<!-- Void Travel Classes -->

<owl:Class rdf:ID="Space-Travel">
  <rdfs:subClassOf rdf:resource="&base;Void-Travel" />
  <rdfs:comment>This class represents travel through space</rdfs:comment>
  <rdfs:label>Space Travel</rdfs:label>
</owl:Class>

<!-- Solid Travel Classes -->

<owl:Class rdf:ID="Terrain-Travel">
  <rdfs:subClassOf rdf:resource="&base;Solid-Travel" />
  <rdfs:comment>This class represents travel on a solid object</
    rdfs:comment>
  <rdfs:label>Terrain Travel</rdfs:label>
```

```
</owl:Class>

<owl:Class rdf:ID="Submatter-Travel">
  <rdfs:subClassOf rdf:resource="&base;Solid-Travel" />
  <rdfs:comment>This class represents travel within a solid object</
    rdfs:comment>
  <rdfs:label>Submatter Travel</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Subterranean-Travel">
  <rdfs:subClassOf rdf:resource="&base;Solid-Travel" />
  <rdfs:comment>This class represents travel underground</rdfs:comment>
  <rdfs:label>Subterranean Travel</rdfs:label>
</owl:Class>

<!-- Liquid Travel Classes -->

<owl:Class rdf:ID="Marine-Travel">
  <rdfs:subClassOf rdf:resource="&base;Liquid-Travel" />
  <rdfs:comment>This class represents travel on a liquid</rdfs:comment>
  <rdfs:label>Marine Travel</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Submarine-Travel">
  <rdfs:subClassOf rdf:resource="&base;Liquid-Travel" />
  <rdfs:comment>This class represents travel under the surface of a
    liquid</rdfs:comment>
  <rdfs:label>Submarine Travel</rdfs:label>
</owl:Class>

<!-- Gas Travel Classes -->

<owl:Class rdf:ID="Air-Travel">
  <rdfs:subClassOf rdf:resource="&base;Gas-Travel" />
  <rdfs:comment>This class represents air travel</rdfs:comment>
  <rdfs:label>Air Travel</rdfs:label>
</owl:Class>

</rdf:RDF>
```

Listing G.16: OntoMedia Profession

G.17 OntoMedia Action

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    action#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Knowledge Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Knowledge Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>

<!-- Action Classes -->

<!-- Sex -->

<owl:Class rdf:ID="Sex">
  <rdfs:subClassOf rdf:resource="&ome;Action" />
  <rdfs:comment>This class represents sexual actions</rdfs:comment>
```

```
  <rdfs:label>Sex</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="BDSM">
  <rdfs:subClassOf rdf:resource="#Sex" />
  <rdfs:comment>This class represents sexual acts involving BDSM</
    rdfs:comment>
  <rdfs:label>BDSM</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Sexual-Violence">
  <rdfs:subClassOf rdf:resource="#Violence" />
  <rdfs:subClassOf rdf:resource="#Sex" />
  <rdfs:comment>This class represents actions that involve sexual
    violence</rdfs:comment>
  <rdfs:label>Sexual Violence</rdfs:label>
</owl:Class>

<!-- Violence -->

<owl:Class rdf:ID="Violence">
  <rdfs:subClassOf rdf:resource="&ome;Action" />
  <rdfs:comment>This class represents violent actions</rdfs:comment>
  <rdfs:label>Violence</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Corporal-Punishment">
  <rdfs:subClassOf rdf:resource="#Violence" />
  <rdfs:comment>This class represents punishment inflicted on a being's
    body</rdfs:comment>
  <rdfs:label>Corporal Punishment</rdfs:label>
</owl:Class>

<!-- Food -->

<owl:Class rdf:ID="Ingestion">
  <rdfs:subClassOf rdf:resource="&ome;Action" />
  <rdfs:comment>This class represents ingestion actions i.e. eating,
    drinking, photosynthesis etc. The subject of the action ingests the
    object.</rdfs:comment>
  <rdfs:label>Ingestion</rdfs:label>
</owl:Class>

</rdf:RDF>
```

Listing G.17: OntoMedia Actions

G.18 OntoMedia Gain

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    gain#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Knowledge Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Knowledge Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/expression"/>
</owl:Ontology>

<!-- Gain Classes -->

<owl:Class rdf:ID="Creation">
  <rdfs:subClassOf rdf:resource="&ome;Gain" />
  <rdfs:comment>This class represents an act of creation</rdfs:comment>
```

```
  <rdfs:label>Creation</rdfs:label>
</owl:Class>

</rdf:RDF>
```

Listing G.18: OntoMedia Gain

G.19 OntoMedia Introduction

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    intro#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia </rdfs:label>
 <dc:title xml:lang="en">OntoMedia Introduction Events</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>

<!-- Introduction Classes -->

<owl:Class rdf:ID="First-Meeting">
  <rdfs:subClassOf rdf:resource="&omea;Introduction" />
  <rdfs:comment>This class represents an event focused on the first
    meeting of two or more characters</rdfs:comment>
  <rdfs:label>First Meeting</rdfs:label>
```

```
</owl:Class>

</rdf:RDF>
```

Listing G.19: OntoMedia Introduction

G.20 OntoMedia Loss

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    loss#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Knowledge Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Knowledge Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/expression"/>
</owl:Ontology>

<!-- Loss Classes -->

<owl:Class rdf:ID="Betrayal">
  <rdfs:subClassOf rdf:resource="&ome;Loss" />
  <rdfs:comment>This class represents an act of betrayal</rdfs:comment>
```

```
  <rdfs:label>Betrayal</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Destruction">
  <rdfs:subClassOf rdf:resource="&ome;Loss" />
  <rdfs:comment>This class represents an act of destruction</rdfs:comment
    >
  <rdfs:label>Destruction</rdfs:label>
</owl:Class>

</rdf:RDF>
```

Listing G.20: OntoMedia Loss

G.21 OntoMedia Transformation

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    trans#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Knowledge Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Knowledge Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media)
    Transformation has been designed to describe the interactions
    occurring in a transformation event.</dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2006-04-18</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>

<!-- Transformation Classes -->


<owl:Class rdf:ID="Transference">
  <rdfs:subClassOf rdf:resource="&ome;Transformation" />
  <rdfs:comment>This class represents an entity being transfered</
    rdfs:comment>
```

```
  <rdfs:label>Transfer Entity</rdfs:label>
</owl:Class>

<!-- Biological Changes -->

<owl:Class rdf:ID="Division">
  <rdfs:subClassOf rdf:resource="&ome;Transformation" />
  <rdfs:comment>This class represents an entity dividing or otherwise
    transforming into multiple entities</rdfs:comment>
  <rdfs:label>Division/Seperation</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Merge">
  <rdfs:subClassOf rdf:resource="&ome;Transformation" />
  <rdfs:comment>This class represents multiple entities merging or
    otherwise transforming into a single entity</rdfs:comment>
  <rdfs:label>Division/Seperation</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Degradation">
  <rdfs:subClassOf rdf:resource="&base;Division" />
  <rdfs:comment>This class represents an entity degrading</rdfs:comment>
  <rdfs:label>Degradation</rdfs:label>
</owl:Class>

</rdf:RDF>
```

Listing G.21: OntoMedia Transformation

G.22 OntoMedia Social

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    social#">
<!ENTITY omea "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    action#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Knowledge Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Knowledge Representation</dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2007-03-29</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>

<!-- Social Classes -->

<!-- Sex -->

<owl:Class rdf:ID="Flirtation">
```

```
  <rdfs:subClassOf rdf:resource="&ome;Social" />
  <rdfs:subClassOf rdf:resource="&omea;Sex" />
  <rdfs:comment>This class represents flirting social interactions</
    rdfs:comment>
  <rdfs:label>Flirtation</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Proposition">
  <rdfs:subClassOf rdf:resource="&base;Flirtation" />
  <rdfs:comment>This class represents flirting with serious intente/
    making a pass</rdfs:comment>
  <rdfs:label>Propositioning/Making a Pass</rdfs:label>
</owl:Class>

</rdf:RDF>
```

Listing G.22: OntoMedia Social

G.23 OntoMedia Event Properties

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY xprop "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/events/
    eventprop#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:xprop="&xprop;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Trait Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Expression Property Representation</
    dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
</owl:Ontology>

<!-- Event Properties -->

  <owl:Class rdf:ID="Event-Properties">
```

```
    <rdfs:label>Event Properties</rdfs:label>
    <rdfs:comment>This class represents additional properties for events<
    /rdfs:comment>
  </owl:Class>


<!-- Event Properties Extensions -->

  <owl:Class rdf:ID="Consent-Properties">
    <rdfs:label>Expression Properties</rdfs:label>
    <rdfs:comment>This class represents the consensual nature of the
    event</rdfs:comment>
    <rdfs:subClassOf rdf:resource="#Event-Properties" />
  </owl:Class>


<!-- Consent Classes -->

  <owl:Class rdf:ID="Consent-Given">
    <rdfs:label>Consent Given</rdfs:label>
    <rdfs:comment>This class represents the concept of consent being
    given for an action by the subject to the object</rdfs:comment>
    <rdfs:subClassOf rdf:resource="#Consent-Properties" />
    <owl:disjointWith rdf:resource="#Consent-Implied" />
    <owl:disjointWith rdf:resource="#Consent-Not-Given" />
    <owl:disjointWith rdf:resource="#Consent-Unclear" />
  </owl:Class>

  <owl:Class rdf:ID="Consent-Implied">
    <rdfs:label>Consent Implied</rdfs:label>
    <rdfs:comment>This class represents the concept of consent being
    implied for an action by the subject to the object</rdfs:comment>
    <rdfs:subClassOf rdf:resource="#Consent-Properties" />
    <owl:disjointWith rdf:resource="#Consent-Given" />
    <owl:disjointWith rdf:resource="#Consent-Not-Given" />
    <owl:disjointWith rdf:resource="#Consent-Unclear" />
  </owl:Class>

  <owl:Class rdf:ID="Consent-Not-Given">
    <rdfs:label>Consent Not Given</rdfs:label>
    <rdfs:comment>This class represents the concept of consent not being
    given for an action by the subject to the object</rdfs:comment>
    <rdfs:subClassOf rdf:resource="#Consent-Properties" />
    <owl:disjointWith rdf:resource="#Consent-Given" />
    <owl:disjointWith rdf:resource="#Consent-Implied" />
    <owl:disjointWith rdf:resource="#Consent-Unclear" />
  </owl:Class>

  <owl:Class rdf:ID="Consent-Unclear">
    <rdfs:label>Expression Properties</rdfs:label>
    <rdfs:comment>This class represents the concept of consent being
```

```
    unclear for an action by the subject to the object</rdfs:comment>
     <rdfs:subClassOf rdf:resource="#Consent-Properties" />
     <owl:disjointWith rdf:resource="#Consent-Given" />
     <owl:disjointWith rdf:resource="#Consent-Implied" />
     <owl:disjointWith rdf:resource="#Consent-Not-Given" />
  </owl:Class>

</rdf:RDF>
```

Listing G.23: OntoMedia Event Properties

G.24 OntoMedia Character

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY loc "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space#">
<!ENTITY omb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY foaf "http://xmlns.com/foaf/0.1/#">
]>


<rdf:RDF
 xmlns:ome="&ome;"
 xmlns:omb="&omb;"
 xmlns:loc="&loc;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Fictional Character Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Fictional Character Representation</
    dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.2</owl:versionInfo>
 <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/ontologies/
    core/expression"/>
```

```
 <owl:imports rdf:resource="http://xmlns.com/foaf/0.1/"/>
</owl:Ontology>

<!-- Character Classes -->

<owl:Class rdf:ID="Guest-Character">
  <rdfs:subClassOf rdf:resource="&omb;Character" />
  <rdfs:comment>This class represents an character which is not original
    to the context</rdfs:comment>
  <rdfs:label>Guest Character</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Original-Character">
  <rdfs:subClassOf rdf:resource="&omb;Character" />
  <rdfs:comment>This class represents an character which is original to
    the context</rdfs:comment>
  <rdfs:label>Original Character</rdfs:label>
</owl:Class>


<!-- Properties -->

<!-- Character Properties -->

  <owl:ObjectProperty rdf:ID="originating-context">
    <rdfs:comment>This property represents that the context the guest
    character was borrowed from. The indicating context may not be the
    original context, just the one that the character came from (i.e. it
    may also have borrowed the character).</rdfs:comment>
    <rdfs:label>Originating Context</rdfs:label>
    <rdfs:domain rdf:resource="&base;Guest-Character"/>
    <rdfs:range rdf:resource="&base;Context"/>
  </owl:ObjectProperty>

<!-- Acting -->

  <owl:ObjectProperty rdf:ID="portrayed-by">
    <rdfs:label>Portrayed By</rdfs:label>
    <rdfs:comment>This property specifies what the entity or event is
    being portrayed by</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&ome;is-linked-to" />
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&omb;Character"/>
            <owl:Class rdf:about="&omb;Group"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
      </owl:Class>
```

```
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Physical-Item"/>
      <owl:Class rdf:about="&omb;Being"/>
            <owl:Class rdf:about="&omb;Group"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
    <owl:inverseOf rdf:resource="&omb;portrays"/>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.24: OntoMedia Character

G.25 OntoMedia Fiction

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/
    fiction/fic#">
  <!ENTITY ome    "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
  <!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common
    /exprop#">
  <!ENTITY omb    "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common
    /being#">
  <!ENTITY loc    "http://ontomedia.ecs.soton.ac.uk/ontologies/core/space
    #">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
]>



<rdf:RDF
 xmlns:rdf="&rdf;"
 xmlns:rdfs="&rdfs;"
 xmlns:owl="&owl;"
 xmlns:xsd="&xsd;"
 xml:base="&base;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xprop="&xprop;"
 xmlns:ome="&ome;"
>


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia: Fiction</rdfs:label>
    <dc:title xml:lang="en">OntoMedia: Fiction</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
```

```
    <dct:created>2005-05-03</dct:created>
    <owl:versionInfo>0.3</owl:versionInfo>
  </owl:Ontology>

<!-- FICTION PROPERTIES -->

  <owl:ObjectProperty rdf:ID="is-parody-of">
    <rdfs:label>Is Parody Of</rdfs:label>
    <rdfs:comment>This property indicates that the expression is a parody
     of another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&ome;has-variant" />
    <owl:inverseOf rdf:resource="#has-parody"/>
    <rdfs:domain>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Item"/>
      <owl:Class rdf:about="&omb;Character"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
      <owl:Class rdf:about="&ome;Timeline"/>
      <owl:Class rdf:about="&ome;Occurrence"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Item"/>
      <owl:Class rdf:about="&omb;Being"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
      <owl:Class rdf:about="&ome;Timeline"/>
      <owl:Class rdf:about="&ome;Occurrence"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
 </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-parody">
    <rdfs:label>Has Parody</rdfs:label>
    <rdfs:comment>This property indicates that the expression has been
    parodied by another</rdfs:comment>
    <rdfs:subPropertyOf rdf:resource="&ome;has-variant" />
    <owl:inverseOf rdf:resource="#is-parody-of"/>
    <rdfs:domain>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Item"/>
      <owl:Class rdf:about="&omb;Being"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
```

```
      <owl:Class rdf:about="&ome;Timeline"/>
      <owl:Class rdf:about="&ome;Occurrence"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:domain>
    <rdfs:range>
    <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
      <owl:Class rdf:about="&ome;Item"/>
      <owl:Class rdf:about="&omb;Character"/>
      <owl:Class rdf:about="&loc;Space"/>
      <owl:Class rdf:about="&ome;Event"/>
      <owl:Class rdf:about="&ome;Timeline"/>
      <owl:Class rdf:about="&ome;Occurrence"/>
        </owl:unionOf>
    </owl:Class>
    </rdfs:range>
  </owl:ObjectProperty>

<!-- Expression Properties Extensions -->

  <owl:Class rdf:ID="Spoiler-Rating-Properties">
    <rdfs:label>Spoiler Rating Properties</rdfs:label>
    <rdfs:comment>This class represents the spoiler rating of the
   information</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&xprop;Expression-Properties" />
  </owl:Class>

<!-- Spoiler Classes -->

  <owl:Class rdf:ID="Spoiler">
    <rdfs:label>Spoiler</rdfs:label>
    <rdfs:comment>This class represents the concept of spoiler
   information</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Spoiler-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Fact" />
    <owl:disjointWith rdf:resource="&base;Key" />
    <owl:disjointWith rdf:resource="&base;Main" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>

  <owl:Class rdf:ID="Key">
    <rdfs:label>Key</rdfs:label>
    <rdfs:comment>This class represents the concept of a key information<
   /rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Spoiler-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Fact" />
    <owl:disjointWith rdf:resource="&base;Spoiler" />
    <owl:disjointWith rdf:resource="&base;Main" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>
```

```
  <owl:Class rdf:ID="Main">
    <rdfs:label>Main</rdfs:label>
    <rdfs:comment>This class represents the concept of main information</
    rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Spoiler-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Fact" />
    <owl:disjointWith rdf:resource="&base;Key" />
    <owl:disjointWith rdf:resource="&base;Spoiler" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>

  <owl:Class rdf:ID="Fact">
    <rdfs:label>Fact</rdfs:label>
    <rdfs:comment>This class represents the concept of a factual
    information</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Spoiler-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Spoiler" />
    <owl:disjointWith rdf:resource="&base;Key" />
    <owl:disjointWith rdf:resource="&base;Main" />
    <owl:disjointWith rdf:resource="&base;Nitpick" />
  </owl:Class>

  <owl:Class rdf:ID="Nitpick">
    <rdfs:label>Nitpick</rdfs:label>
    <rdfs:comment>This class represents the concept of a nitpick</
    rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Spoiler-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Fact" />
    <owl:disjointWith rdf:resource="&base;Key" />
    <owl:disjointWith rdf:resource="&base;Main" />
    <owl:disjointWith rdf:resource="&base;Spoiler" />
  </owl:Class>


<!-- Level of Descriptiove Detail -->

  <owl:Class rdf:ID="Detail-Rating-Properties">
    <rdfs:label>Detail Rating Properties</rdfs:label>
    <rdfs:comment>This class represents detail of the information</
    rdfs:comment>
    <rdfs:subClassOf rdf:resource="&xprop;Expression-Properties" />
  </owl:Class>

<!-- Level of Detail Classes -->

  <owl:Class rdf:ID="Implied">
    <rdfs:label>Implies</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    implied</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
```

```
    <owl:disjointWith rdf:resource="&base;References-Concept" />
    <owl:disjointWith rdf:resource="&base;In-Passing" />
    <owl:disjointWith rdf:resource="&base;Vague-Description" />
    <owl:disjointWith rdf:resource="&base;Describes" />
    <owl:disjointWith rdf:resource="&base;Detailed-Description" />
    <owl:disjointWith rdf:resource="&base;Extremely-Detailed-Description"
     />
    <owl:disjointWith rdf:resource="&base;Fade-To-Black" />
  </owl:Class>

  <owl:Class rdf:ID="References-Concept">
    <rdfs:label>References Concept</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    referred to</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Implied" />
    <owl:disjointWith rdf:resource="&base;In-Passing" />
    <owl:disjointWith rdf:resource="&base;Vague-Description" />
    <owl:disjointWith rdf:resource="&base;Describes" />
    <owl:disjointWith rdf:resource="&base;Detailed-Description" />
    <owl:disjointWith rdf:resource="&base;Extremely-Detailed-Description"
     />
    <owl:disjointWith rdf:resource="&base;Fade-To-Black" />
  </owl:Class>

  <owl:Class rdf:ID="In-Passing">
    <rdfs:label>In Passing</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    discussed in passing</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;References-Concept" />
    <owl:disjointWith rdf:resource="&base;Implied" />
    <owl:disjointWith rdf:resource="&base;Vague-Description" />
    <owl:disjointWith rdf:resource="&base;Describes" />
    <owl:disjointWith rdf:resource="&base;Detailed-Description" />
    <owl:disjointWith rdf:resource="&base;Extremely-Detailed-Description"
     />
    <owl:disjointWith rdf:resource="&base;Fade-To-Black" />
  </owl:Class>

  <owl:Class rdf:ID="Vague-Description">
    <rdfs:label>Vague Description</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    described in a vague manner</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;References-Concept" />
    <owl:disjointWith rdf:resource="&base;In-Passing" />
    <owl:disjointWith rdf:resource="&base;Implied" />
    <owl:disjointWith rdf:resource="&base;Describes" />
    <owl:disjointWith rdf:resource="&base;Detailed-Description" />
    <owl:disjointWith rdf:resource="&base;Extremely-Detailed-Description"
```

```
    />
    <owl:disjointWith rdf:resource="&base;Fade-To-Black" />
  </owl:Class>

  <owl:Class rdf:ID="Describes">
    <rdfs:label>Describes</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    described</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;References-Concept" />
    <owl:disjointWith rdf:resource="&base;In-Passing" />
    <owl:disjointWith rdf:resource="&base;Vague-Description" />
    <owl:disjointWith rdf:resource="&base;Implied" />
    <owl:disjointWith rdf:resource="&base;Detailed-Description" />
    <owl:disjointWith rdf:resource="&base;Extremely-Detailed-Description"
    />
    <owl:disjointWith rdf:resource="&base;Fade-To-Black" />
  </owl:Class>

  <owl:Class rdf:ID="Detailed-Description">
    <rdfs:label>Detailed Description</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    described in detail</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;References-Concept" />
    <owl:disjointWith rdf:resource="&base;In-Passing" />
    <owl:disjointWith rdf:resource="&base;Vague-Description" />
    <owl:disjointWith rdf:resource="&base;Describes" />
    <owl:disjointWith rdf:resource="&base;Implied" />
    <owl:disjointWith rdf:resource="&base;Extremely-Detailed-Description"
    />
    <owl:disjointWith rdf:resource="&base;Fade-To-Black" />
  </owl:Class>

  <owl:Class rdf:ID="Extremely-Detailed-Description">
    <rdfs:label>Extremely Detailed Description</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    described in extreme detail</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;References-Concept" />
    <owl:disjointWith rdf:resource="&base;In-Passing" />
    <owl:disjointWith rdf:resource="&base;Vague-Description" />
    <owl:disjointWith rdf:resource="&base;Describes" />
    <owl:disjointWith rdf:resource="&base;Detailed-Description" />
    <owl:disjointWith rdf:resource="&base;Implied" />
    <owl:disjointWith rdf:resource="&base;Fade-To-Black" />
  </owl:Class>

  <owl:Class rdf:ID="Fade-To-Black">
    <rdfs:label>Fade To Black</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
```

```
    described but then 'fading to black'</rdfs:comment>
     <rdfs:subClassOf rdf:resource="&base;Detail-Rating-Properties" />
     <owl:disjointWith rdf:resource="&base;References-Concept" />
     <owl:disjointWith rdf:resource="&base;In-Passing" />
     <owl:disjointWith rdf:resource="&base;Vague-Description" />
     <owl:disjointWith rdf:resource="&base;Describes" />
     <owl:disjointWith rdf:resource="&base;Detailed-Description" />
     <owl:disjointWith rdf:resource="&base;Extremely-Detailed-Description"
     />
     <owl:disjointWith rdf:resource="&base;Implied" />
  </owl:Class>

<!-- Level of Textuality -->

  <owl:Class rdf:ID="Textuality-Rating-Properties">
    <rdfs:label>Textuality Rating Properties</rdfs:label>
    <rdfs:comment>This class represents level of textual assertion</
    rdfs:comment>
    <rdfs:subClassOf rdf:resource="&xprop;Expression-Properties" />
  </owl:Class>

<!-- Text levels -->

  <owl:Class rdf:ID="Text">
    <rdfs:label>Text</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being
    explictly stated in the text</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Textuality-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Subtext" />
    <owl:disjointWith rdf:resource="&base;Calculated" />
    <owl:disjointWith rdf:resource="&base;Interpretation" />
    <owl:disjointWith rdf:resource="&base;Supplimental" />
  </owl:Class>

  <owl:Class rdf:ID="Calculated">
      <rdfs:label>Calculated</rdfs:label>
      <rdfs:comment>This class represents the idea of a concept being not
     being specifically stated but calculated from information that was</
    rdfs:comment>
      <rdfs:subClassOf rdf:resource="&base;Textuality-Rating-Properties"
    />
      <owl:disjointWith rdf:resource="&base;Text" />
      <owl:disjointWith rdf:resource="&base;Subtext" />
      <owl:disjointWith rdf:resource="&base;Interpretation" />
      <owl:disjointWith rdf:resource="&base;Subtext" />
  </owl:Class>

  <owl:Class rdf:ID="Supplemental">
      <rdfs:label>Supplemental</rdfs:label>
      <rdfs:comment>This class represents the idea of a concept being
    explictly stated in supplemental material such as making of or author
```

```
    interviews</rdfs:comment>
      <rdfs:subClassOf rdf:resource="&base;Textuality-Rating-Properties"
    />
      <owl:disjointWith rdf:resource="&base;Text" />
      <owl:disjointWith rdf:resource="&base;Calculated" />
      <owl:disjointWith rdf:resource="&base;Interpretation" />
      <owl:disjointWith rdf:resource="&base;Subtext" />
  </owl:Class>

  <owl:Class rdf:ID="Subtext">
    <rdfs:label>Subtext</rdfs:label>
    <rdfs:comment>This class represents the idea of a concept being as
    subtext</rdfs:comment>
    <rdfs:subClassOf rdf:resource="&base;Textuality-Rating-Properties" />
    <owl:disjointWith rdf:resource="&base;Text" />
    <owl:disjointWith rdf:resource="&base;Calculated" />
    <owl:disjointWith rdf:resource="&base;Interpretation" />
    <owl:disjointWith rdf:resource="&base;Supplimental" />
  </owl:Class>

    <owl:Class rdf:ID="Interpretation">
      <rdfs:label>Interpretation</rdfs:label>
      <rdfs:comment>This class represents the idea of a concept being an
    interpretation of the text</rdfs:comment>
      <rdfs:subClassOf rdf:resource="&base;Textuality-Rating-Properties"
    />
      <owl:disjointWith rdf:resource="&base;Text" />
      <owl:disjointWith rdf:resource="&base;Calculated" />
      <owl:disjointWith rdf:resource="&base;Subtext" />
      <owl:disjointWith rdf:resource="&base;Supplimental" />
  </owl:Class>

</rdf:RDF>
```

Listing G.25: OntoMedia Fiction

G.26 OntoMedia Audio Item

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    audio#">
  <!ENTITY omm    "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media
    #">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia Media Representation</rdfs:label>
    <dc:title xml:lang="en">OntoMedia Media Representation</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-05-10</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
    <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/
    ontologies/core/media" />
  </owl:Ontology>

  <!-- A default audio item -->

  <owl:Class rdf:ID="AudioItem">
    <rdfs:subClassOf rdf:resource="&omm;MediaAtom" />
    <rdfs:label>AudioItem</rdfs:label>
    <rdfs:comment>This class represents an audio item</rdfs:comment>
```

```
  </owl:Class>

</rdf:RDF>
```

Listing G.26: OntoMedia Audio Item

G.27 OntoMedia Image Item

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    image#">
  <!ENTITY omm    "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media
    #">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia Media Representation</rdfs:label>
    <dc:title xml:lang="en">OntoMedia Media Representation</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-05-10</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
    <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/
    ontologies/core/media" />
  </owl:Ontology>

  <!-- A default image item -->

  <owl:Class rdf:ID="ImageItem">
    <rdfs:subClassOf rdf:resource="&omm;MediaAtom" />
    <rdfs:label>ImageItem</rdfs:label>
    <rdfs:comment>This class represents an image item</rdfs:comment>
```

```
  </owl:Class>

</rdf:RDF>
```

Listing G.27: OntoMedia Image Item

G.28 OntoMedia Photo Item

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    photo#">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
  <!ENTITY ommi   "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    image#">
  <!ENTITY exif   "http://www.w3.org/2003/12/exif/ns">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xml:ommi="&ommi;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia Media Representation</rdfs:label>
    <dc:title xml:lang="en">OntoMedia Media Representation</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-05-10</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
    <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/
    ontologies/core/media" />
  </owl:Ontology>

  <!-- A default photograph item -->

  <owl:Class rdf:ID="PhotoItem">
    <rdfs:subClassOf rdf:resource="&ommi;ImageItem" />
```

```
    <rdfs:subClassOf rdf:resource="&exif;IFD" />
    <rdfs:label>PhotoItem</rdfs:label>
    <rdfs:comment>This class represents a photograph</rdfs:comment>
  </owl:Class>

</rdf:RDF>
```

Listing G.28: OntoMedia Photo Item

G.29 OntoMedia Text Item

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
  <!ENTITY omm    "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media
    #">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    text#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:omm="&omm;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia Media Representation</rdfs:label>
    <dc:title xml:lang="en">OntoMedia Media Representation</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-05-10</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
    <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/
    ontologies/core/media" />
  </owl:Ontology>

  <!-- A default text item -->

  <owl:Class rdf:ID="TextItem">
    <rdfs:subClassOf rdf:resource="&omm;MediaAtom" />
    <rdfs:label>TextItem</rdfs:label>
```

```
    <rdfs:comment>This class represents a textual item</rdfs:comment>
  </owl:Class>

</rdf:RDF>
```

Listing G.29: OntoMedia Text Item

G.30 OntoMedia Text Types

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    texttype#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY omti "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/text
    #">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:dc="&dc;"
   xmlns:omti="&omti;"
   xmlns:dct="&dct;">

<!-- Classes -->

<owl:Class rdf:ID="Fiction">
  <rdfs:subClassOf rdf:resource="&omti;TextItem" />
  <rdfs:comment>This class represents written fiction</rdfs:comment>
  <rdfs:label>Fiction</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Non-Fiction">
  <rdfs:subClassOf rdf:resource="&omti;TextItem" />
  <rdfs:comment>This class represents written non-fiction</rdfs:comment>
  <rdfs:label>Non-Fiction</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Essay">
  <rdfs:subClassOf rdf:resource="#Non-Fiction" />
  <rdfs:comment>This class represents an essay</rdfs:comment>
  <rdfs:label>Essay</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Review">
  <rdfs:subClassOf rdf:resource="#Essay" />
  <rdfs:comment>This class represents a review</rdfs:comment>
  <rdfs:label>Review</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Discussion">
  <rdfs:subClassOf rdf:resource="#Essay" />
  <rdfs:comment>This class represents a discussion piece</rdfs:comment>
  <rdfs:label>Discussion</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Drabble">
  <rdfs:subClassOf rdf:resource="#Fiction" />
  <rdfs:comment>This class represents a fictional text item of 100 words<
    /rdfs:comment>
  <rdfs:label>Drabble (100 words)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="DoubleDrabble">
  <rdfs:subClassOf rdf:resource="#Fiction" />
  <rdfs:comment>This class represents a fictional text item of 200 words<
    /rdfs:comment>
  <rdfs:label>Double Drabble (200 words)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Flash">
  <rdfs:subClassOf rdf:resource="#Fiction" />
  <rdfs:comment>This class represents a fictional text item of under 500
    words</rdfs:comment>
  <rdfs:label>Flash Story (under 500 words)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Short">
  <rdfs:subClassOf rdf:resource="#Fiction" />
  <rdfs:comment>This class represents a fictional text item of 500 -
    15,000 words</rdfs:comment>
  <rdfs:label>Short Story (500-15,000 words)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Novella">
  <rdfs:subClassOf rdf:resource="#Fiction" />
  <rdfs:comment>This class represents a fictional text item of 15,000 -
    40,000 words</rdfs:comment>
  <rdfs:label>Novella (15,000-40,000 words)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Novel">
  <rdfs:subClassOf rdf:resource="#Fiction" />
  <rdfs:comment>This class represents a fictional text item of 40,000 -
    120,000 words</rdfs:comment>
  <rdfs:label>Novel (40,000-120,000 words)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Epic">
  <rdfs:subClassOf rdf:resource="#Fiction" />
```

```
  <rdfs:comment>This class represents a fictional text item of over
    120,000 words</rdfs:comment>
  <rdfs:label>Epic (>120,000 words)</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Script">
  <rdfs:subClassOf rdf:resource="#Fiction" />
  <rdfs:comment>This class represents a script</rdfs:comment>
  <rdfs:label>Script</rdfs:label>
</owl:Class>
</rdf:RDF>
```

Listing G.30: OntoMedia Text Types

G.31 OntoMedia Video Item

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY omm    "http://ontomedia.ecs.soton.ac.uk/ontologies/core/media
    #">
  <!ENTITY dct          "http://purl.org/dc/terms/">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    video#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:omm="&omm;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia Media Representation</rdfs:label>
    <dc:title xml:lang="en">OntoMedia Media Representation</dc:title>
    <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
     designed to describe the interactions occurring in multimedia.</
    dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-05-10</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
    <owl:imports rdf:resource="http://ontomedia.ecs.soton.ac.uk/
    ontologies/core/media" />
  </owl:Ontology>

  <!-- A default video item -->

  <owl:Class rdf:ID="VideoItem">
    <rdfs:subClassOf rdf:resource="&omm;MediaAtom" />
    <rdfs:label>VideoItem</rdfs:label>
```

```
    <rdfs:comment>This class represents a video item</rdfs:comment>
  </owl:Class>

</rdf:RDF>
```

Listing G.31: OntoMedia Video Item

G.32 OntoMedia Video Types

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    vidtypes#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY omvi "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/media/
    video#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:dc="&dc;"
   xmlns:omvi="&omvi;"
   xmlns:dct="&dct;">

  <!-- Classes -->

  <owl:Class rdf:ID="Movie">
    <rdfs:subClassOf rdf:resource="&omvi;VideoItem" />
    <rdfs:comment>This class represents a full length film</rdfs:comment>
    <rdfs:label>Movie</rdfs:label>
  </owl:Class>

  <owl:Class rdf:ID="Short">
    <rdfs:subClassOf rdf:resource="&omvi;VideoItem" />
    <rdfs:comment>This class represents a short film</rdfs:comment>
    <rdfs:label>Short Film</rdfs:label>
  </owl:Class>

  <owl:Class rdf:ID="Trailer">
    <rdfs:subClassOf rdf:resource="&omvi;VideoItem" />
    <rdfs:comment>This class represents a trailer</rdfs:comment>
    <rdfs:label>Trailer</rdfs:label>
  </owl:Class>

  <owl:Class rdf:ID="Episode">
    <rdfs:subClassOf rdf:resource="&omvi;VideoItem" />
    <rdfs:comment>This class represents an episode</rdfs:comment>
    <rdfs:label>Episode</rdfs:label>
  </owl:Class>
```

```
  <owl:Class rdf:ID="Game">
    <rdfs:subClassOf rdf:resource="&omvi;VideoItem" />
    <rdfs:comment>This class represents a multimedia game</rdfs:comment>
    <rdfs:label>Game/Simulation</rdfs:label>
  </owl:Class>

  <owl:Class rdf:ID="Survey">
    <rdfs:subClassOf rdf:resource="&omvi;VideoItem" />
    <rdfs:comment>This class represents a multimedia survey</rdfs:comment
    >
    <rdfs:label>Survey</rdfs:label>
  </owl:Class>


</rdf:RDF>
```

Listing G.32: OntoMedia Video Types

G.33 Dates

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/date#">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omk "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/detail/know
    #">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xmlns:omt="&omt;"
 xmlns:ome="&ome;"
 xmlns:omb="&omb;"
 xmlns:omk="&omk;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Name Part Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Date-Component Part Representation</
    dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) Date
    Component has been designed to describe the different ways of marking
    time in media.</dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.21</owl:versionInfo>
```

```
</owl:Ontology>

<!-- Date -->

<owl:Class rdf:ID="Calendar">
  <rdfs:subClassOf rdf:resource="&omk;Culture" />
  <rdfs:comment>This class represents a system of representing time</
    rdfs:comment>
  <rdfs:label>Calendar</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Date">
  <rdfs:subClassOf rdf:resource="&omt;Value" />
  <rdfs:comment>This class represents a value representing time</
    rdfs:comment>
  <rdfs:label>Date</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="CalendarReferencePoint">
  <rdfs:subClassOf rdf:resource="&base;Date" />
  <rdfs:comment>This class represents a reference point which a calendar
    measures other dates relative to</rdfs:comment>
  <rdfs:label>Calendar Reference Point</rdfs:label>
</owl:Class>

<!-- Date-Component -->

<owl:Class rdf:ID="Date-Component">
  <rdfs:subClassOf rdf:resource="&omt;AbstractComponent" />
  <rdfs:comment>This class represents the parts of a date</rdfs:comment>
  <rdfs:label>Date Component</rdfs:label>
</owl:Class>

<!-- Date-Ordering -->

<owl:Class rdf:ID="Date-Ordering">
  <rdfs:subClassOf rdf:resource="&omt;Ordering" />
  <rdfs:comment>This class represents the order in which components
    describing a date should be displayed</rdfs:comment>
  <rdfs:label>Date Ordering</rdfs:label>
</owl:Class>

<!-- Date Component Classes -->

<owl:Class rdf:ID="Second">
  <rdfs:subClassOf rdf:resource="&base;Date-Component" />
  <rdfs:comment>This class represents the part of a date which is the
    second designaition</rdfs:comment>
  <rdfs:label>Second</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Minute">
  <rdfs:subClassOf rdf:resource="&base;Date-Component" />
  <rdfs:comment>This class represents the part of a date which is the
    minute designaition</rdfs:comment>
  <rdfs:label>Minute</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Hour">
  <rdfs:subClassOf rdf:resource="&base;Date-Component" />
  <rdfs:comment>This class represents the part of a date which is the
    hour designaition</rdfs:comment>
  <rdfs:label>Hour</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Day">
  <rdfs:subClassOf rdf:resource="&base;Date-Component" />
  <rdfs:comment>This class represents the part of a date which is the day
     designaition</rdfs:comment>
  <rdfs:label>Day</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Month">
  <rdfs:subClassOf rdf:resource="&base;Date-Component" />
  <rdfs:comment>This class represents the part of a date which is the
    month designaition</rdfs:comment>
  <rdfs:label>Month</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Year">
  <rdfs:subClassOf rdf:resource="&base;Date-Component" />
  <rdfs:comment>This class represents the part of a date which is the
    year designaition</rdfs:comment>
  <rdfs:label>Year</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Qualifier">
  <rdfs:subClassOf rdf:resource="&base;Date-Component" />
  <rdfs:comment>This class represents the textual qualifier that may be
    part of the data i.e. AD, BCE etc</rdfs:comment>
  <rdfs:label>Qualifier</rdfs:label>
</owl:Class>

<!-- Date Ordering Classes -->

<owl:Class rdf:ID="Standard">
  <rdfs:subClassOf rdf:resource="&base;Date-Ordering" />
  <rdfs:comment>This class represents the International Standard form of
    the date</rdfs:comment>
  <rdfs:label>International Standard</rdfs:label>
</owl:Class>
```

```
<!-- Date-Component Properties -->


<!--  HAS-VALUE NOW USED

  <owl:ObjectProperty rdf:ID="date-component-value">
    <rdfs:label>Date Component Value</rdfs:label>
    <rdfs:comment>This property specifies the name represented by the
    component</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Date-Component"/>
    <rdfs:range rdf:resource="&rdfs;Literal"/>
  </owl:ObjectProperty>

-->

<!-- Date Properties -->

  <owl:ObjectProperty rdf:ID="has-date-component">
    <rdfs:label>Has Date Component</rdfs:label>
    <rdfs:comment>This property specifies the name represented by the
    component</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Date"/>
    <rdfs:range rdf:resource="&base;Date-Component"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="abstracted-from-occurrence">
      <rdfs:label>Abstracted From Occurrence</rdfs:label>
      <rdfs:comment>The occurrance of an event from which the reference
    point was abstracted</rdfs:comment>
      <rdfs:domain rdf:resource="&base;Date"/>
      <rdfs:range rdf:resource="&ome;Occurrence"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="before-reference-point">
      <rdfs:label>Before Reference Point</rdfs:label>
      <rdfs:comment>The relative reference point before which the desired
     point of time occurs</rdfs:comment>
      <rdfs:domain rdf:resource="&base;Date"/>
      <rdfs:range rdf:resource="&base;CalendarReferencePoint"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="after-reference-point">
      <rdfs:label>After Reference Point</rdfs:label>
      <rdfs:comment>The relative reference point after which the desired
    point of time occurs</rdfs:comment>
      <rdfs:domain rdf:resource="&base;Date"/>
      <rdfs:range rdf:resource="&base;CalendarReferencePoint"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="uses-calendar">
      <rdfs:label>Uses Calendar</rdfs:label>
```

```
      <rdfs:comment>The calandar which the date uses</rdfs:comment>
      <rdfs:domain rdf:resource="&base;Date"/>
      <rdfs:range rdf:resource="&base;Calendar"/>
  </owl:ObjectProperty>

<!-- Calander Properties -->

  <owl:ObjectProperty rdf:ID="has-reference-point">
      <rdfs:label>Has Reference Point</rdfs:label>
      <rdfs:comment>This property specifies a point of reference in a
    Calendar</rdfs:comment>
      <rdfs:domain rdf:resource="&base;Calendar"/>
      <rdfs:range rdf:resource="&base;CalendarReferencePoint"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="reference-point-minus-one">
      <rdfs:label>Reference Point Minus One</rdfs:label>
      <rdfs:comment>The Year Preceeding the Reference Point Year</
    rdfs:comment>
      <rdfs:domain rdf:resource="&base;CalendarReferencePoint"/>
      <rdfs:range rdf:resource="&base;Year"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="reference-point-plus-one">
      <rdfs:label>Reference Point Plus One</rdfs:label>
      <rdfs:comment>The Year Following the Reference Point Year</
    rdfs:comment>
      <rdfs:domain rdf:resource="&base;CalendarReferencePoint"/>
      <rdfs:range rdf:resource="&base;Year"/>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.33: Dates

G.34 Names

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct "http://purl.org/dc/terms/">
<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome "http://ontomedia.ecs.soton.ac.uk/ontologies/core/expression
    #">
<!ENTITY omb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
]>


<rdf:RDF
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xmlns:omt="&omt;"
 xmlns:ome="&ome;"
 xmlns:omb="&omb;"
 xml:base="&base;"
>


<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Name Part Representation</rdfs:label>
 <dc:title xml:lang="en">OntoMedia Name-Component Part Representation</
    dc:title>
 <dc:description xml:lang="en">OntoMedia (Ontology for Media) has been
    designed to describe the interactions occurring in multimedia.</
    dc:description>
 <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator>
 <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
 <dct:created>2005-05-11</dct:created>
 <owl:versionInfo>0.21</owl:versionInfo>
</owl:Ontology>

<!-- Name-Component -->
```

```
<owl:Class rdf:ID="Name-Component">
  <rdfs:subClassOf rdf:resource="&omt;AbstractComponent" />
  <rdfs:comment>This class represents the parts of a name</rdfs:comment>
  <rdfs:label>Name Component</rdfs:label>
</owl:Class>

<!-- Name-Ordering -->

<owl:Class rdf:ID="Name-Ordering">
  <rdfs:subClassOf rdf:resource="&omt;Ordering" />
  <rdfs:comment>This class represents the order of a name</rdfs:comment>
  <rdfs:label>Name Ordering</rdfs:label>
</owl:Class>

<!-- Name Component Classes -->

<owl:Class rdf:ID="Title">
  <rdfs:subClassOf rdf:resource="&base;Name-Component" />
  <rdfs:comment>This class represents the parts of a name which is the
    title</rdfs:comment>
  <rdfs:label>Title</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Patronymic">
  <rdfs:subClassOf rdf:resource="&base;Name-Component" />
  <rdfs:comment>This class represents the parts of a name which is the
    patronymic or equivilent description of lineage</rdfs:comment>
  <rdfs:label>Patronymic</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Primary-Name">
  <rdfs:subClassOf rdf:resource="&base;Name-Component" />
  <rdfs:comment>This class represents the parts of a name which is
    primarily used i.e first or Christian name</rdfs:comment>
  <rdfs:label>Primary Name</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Additional-Name">
  <rdfs:subClassOf rdf:resource="&base;Name-Component" />
  <rdfs:comment>This class represents the parts of a name that aren't
    covered otherwise i.e. middle names</rdfs:comment>
  <rdfs:label>Additional Name</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Family-Name">
  <rdfs:subClassOf rdf:resource="&base;Name-Component" />
  <rdfs:comment>This class represents the parts of a name which is the
    Family Name or Surname</rdfs:comment>
  <rdfs:label>Family Name</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Qualifier">
  <rdfs:subClassOf rdf:resource="&base;Name-Component" />
  <rdfs:comment>This class represents the parts of a name which is acts
    as a qualifier i.e 'Jr', 'III' or 'the Great'</rdfs:comment>
  <rdfs:label>Name Qualifier</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Nick">
  <rdfs:subClassOf rdf:resource="&base;Name-Component" />
  <rdfs:comment>This class represents the parts of a nick name</
    rdfs:comment>
  <rdfs:label>Nickname</rdfs:label>
</owl:Class>

<!-- Name Ordering Classes -->

<owl:Class rdf:ID="Formal">
  <rdfs:subClassOf rdf:resource="&base;Name-Ordering" />
  <rdfs:comment>This class represents the formal form of the name</
    rdfs:comment>
  <rdfs:label>Formal Name</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Professional">
  <rdfs:subClassOf rdf:resource="&base;Formal" />
  <rdfs:comment>This class represents the form of the name used for
    professional reasons i.e. a stage name</rdfs:comment>
  <rdfs:label>Professional Name</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Informal">
  <rdfs:subClassOf rdf:resource="&base;Name-Ordering" />
  <rdfs:comment>This class represents the informal form of the name</
    rdfs:comment>
  <rdfs:label>Every Day Name</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Familiar">
  <rdfs:subClassOf rdf:resource="&base;Name-Ordering" />
  <rdfs:comment>This class represents the familiar form of the name</
    rdfs:comment>
  <rdfs:label>Nick Name</rdfs:label>
</owl:Class>

<owl:Class rdf:ID="Full">
  <rdfs:subClassOf rdf:resource="&base;Name-Ordering" />
  <rdfs:comment>This class represents the full form of the name for
    example used on an indentity document</rdfs:comment>
  <rdfs:label>Full Name</rdfs:label>
</owl:Class>
```

```
<owl:Class rdf:ID="Birth">
  <rdfs:subClassOf rdf:resource="&base;Full" />
  <rdfs:comment>This class represents the name given to the entity at
    birth which may be changed later for religious, personal or
    professional reasons</rdfs:comment>
  <rdfs:label>Birth Name</rdfs:label>
</owl:Class>

<!-- Name-Component Properties -->

  <owl:ObjectProperty rdf:ID="has-name-component">
    <rdfs:label>Has Name Component</rdfs:label>
    <rdfs:comment>This property specifies the name represented by the
    component</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Name-Component"/>
    <rdfs:range rdf:resource="&rdfs;Literal"/>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="has-abrv-component">
    <rdfs:label>Has Abreviated Name Component</rdfs:label>
    <rdfs:comment>This property specifies the abreviated version name
    represented by the component</rdfs:comment>
    <rdfs:domain rdf:resource="&base;Name-Component"/>
    <rdfs:range rdf:resource="&rdfs;Literal"/>
  </owl:ObjectProperty>


</rdf:RDF>
```

Listing G.34: Names

G.35 Colour

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/colour#
    ">
<!ENTITY omt "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
]>


<rdf:RDF
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:omt="&omt;"
>

<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Colour Ontology</rdfs:label>

<dc:description xml:lang="en">This ontology provides a portable
    representation of colour.</dc:description>
  <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
  <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator
    >
  <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
  <dct:created>2005-05-27</dct:created>
  <owl:versionInfo>0.1</owl:versionInfo>
</owl:Ontology>


<owl:ObjectProperty rdf:ID="has-shade">
  <rdfs:label>Has Shade</rdfs:label>
  <rdfs:comment>This property specifies the shades which come under the
    label of this colour</rdfs:comment>
  <rdfs:domain rdf:resource="&omt;Colour" />
  <rdfs:range rdf:resource="&base;Shade" />
</owl:ObjectProperty>
```

```
<owl:Class rdf:ID="Shade">
  <rdfs:label>Shade</rdfs:label>
  <rdfs:subClassOf rdf:resource="&omt;Colour" />
  <rdfs:comment>A specific colour. This has hue, saturation and
    brightness.</rdfs:comment>
</owl:Class>

<owl:DatatypeProperty rdf:ID="has-hue">
  <rdfs:label>Has Hue</rdfs:label>
  <rdfs:comment>This property specifies the hue of a shade (from 0.0 to
    360.0)</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Shade" />
  <rdfs:range rdf:resource="&xsd;decimal" />
</owl:DatatypeProperty>

<owl:DatatypeProperty rdf:ID="has-saturation">
  <rdfs:label>Has Saturation</rdfs:label>
  <rdfs:comment>This property specifies the saturation of a shade (from
    0.0 to 100.0)</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Shade" />
  <rdfs:range rdf:resource="&xsd;decimal" />
</owl:DatatypeProperty>

<owl:DatatypeProperty rdf:ID="has-brightness">
  <rdfs:label>Has Brightness</rdfs:label>
  <rdfs:comment>This property specifies the brightness of a shade (from
    0.0 to 100.0)</rdfs:comment>
  <rdfs:domain rdf:resource="&base;Shade" />
  <rdfs:range rdf:resource="&xsd;decimal" />
</owl:DatatypeProperty>


</rdf:RDF>
```

Listing G.35: Colour

G.36 Geometry

```
<?xml version="1.0"?>
<!DOCTYPE owl [
<!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/
    geometry#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY geo  "http://www.w3.org/2003/01/geo/wgs84_pos#">
]>


<rdf:RDF
 xmlns:rdf="&rdf;"
 xmlns:owl="&owl;"
 xmlns:rdfs="&rdfs;"
 xml:base="&base;"
 xmlns:dc="&dc;"
 xmlns:dct="&dct;"
 xmlns:xsd="&xsd;"
 xmlns:geo="&geo;"
>

<owl:Ontology rdf:about="&base;">
 <rdfs:label>OntoMedia Geometry Ontology</rdfs:label>

<dc:description xml:lang="en">This ontology provides a portable
    representation of geometry.</dc:description>
  <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</dc:creator>
  <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</dc:creator
    >
  <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
  <dct:created>2005-07-14</dct:created>
  <owl:versionInfo>0.1</owl:versionInfo>
</owl:Ontology>

<owl:Class rdf:ID="Shape">
  <rdfs:label>Shape</rdfs:label>
  <rdfs:comment>A generic shape.</rdfs:comment>
</owl:Class>

<!-- Circle -->

<owl:Class rdf:ID="Circle">
  <rdfs:subClassOf rdf:resource="#Shape" />
```

```
</owl:Class>

<owl:ObjectProperty rdf:ID="has-circle-centre">
  <rdfs:label>Has Centre</rdfs:label>
  <rdfs:comment>This property specifies the circle centre</rdfs:comment>
  <rdfs:domain rdf:resource="#Circle" />
  <rdfs:range rdf:resource="#Point" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-radius">
  <rdfs:label>Has Radius</rdfs:label>
  <rdfs:comment>This property specifies the circle radius</rdfs:comment>
  <rdfs:domain rdf:resource="#Circle" />
  <rdfs:range rdf:resource="#Distance" />
</owl:ObjectProperty>

<!-- Rectangle -->

<owl:Class rdf:ID="Rectangle">
  <rdfs:subClassOf rdf:resource="#Shape" />
</owl:Class>

<owl:ObjectProperty rdf:ID="has-top-left">
  <rdfs:label>Has Top-Left</rdfs:label>
  <rdfs:comment>This property specifies the top-left point</rdfs:comment>
  <rdfs:domain rdf:resource="#Rectangle" />
  <rdfs:range rdf:resource="#Point" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-top-right">
  <rdfs:label>Has Top-Left</rdfs:label>
  <rdfs:comment>This property specifies the top-right point</rdfs:comment
    >
  <rdfs:domain rdf:resource="#Rectangle" />
  <rdfs:range rdf:resource="#Point" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-bottom-left">
  <rdfs:label>Has Bottom-Left</rdfs:label>
  <rdfs:comment>This property specifies the bottom-left point</
    rdfs:comment>
  <rdfs:domain rdf:resource="#Rectangle" />
  <rdfs:range rdf:resource="#Point" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-bottom-right">
  <rdfs:label>Has Bottom-Right</rdfs:label>
  <rdfs:comment>This property specifies the bottom-right point</
    rdfs:comment>
  <rdfs:domain rdf:resource="#Rectangle" />
  <rdfs:range rdf:resource="#Point" />
```

```
</owl:ObjectProperty>

<!-- Ellipse -->

<owl:Class rdf:ID="Ellipse">
  <rdfs:subClassOf rdf:resource="#Shape" />
</owl:Class>

<owl:ObjectProperty rdf:ID="has-ellipse-centre">
  <rdfs:label>Has Centre</rdfs:label>
  <rdfs:comment>This property specifies the ellipse centre</rdfs:comment>
  <rdfs:domain rdf:resource="#Ellipse" />
  <rdfs:range rdf:resource="#Point" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-horizontal-radius">
  <rdfs:label>Has Horizontal Radius</rdfs:label>
  <rdfs:comment>This property specifies the ellipse's horizontal radius</
    rdfs:comment>
  <rdfs:domain rdf:resource="#Ellipse" />
  <rdfs:range rdf:resource="#Distance" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-vertical-radius">
  <rdfs:label>Has Horizontal Radius</rdfs:label>
  <rdfs:comment>This property specifies the ellipse's vertical radius</
    rdfs:comment>
  <rdfs:domain rdf:resource="#Ellipse" />
  <rdfs:range rdf:resource="#Distance" />
</owl:ObjectProperty>

<!-- Line -->

<owl:Class rdf:ID="Line">
  <rdfs:subClassOf rdf:resource="#Shape" />
</owl:Class>

<owl:ObjectProperty rdf:ID="has-start-point">
  <rdfs:label>Has Start Point</rdfs:label>
  <rdfs:comment>This property specifies the start point of the line</
    rdfs:comment>
  <rdfs:domain rdf:resource="#Line" />
  <rdfs:range rdf:resource="#Point" />
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="has-end-point">
  <rdfs:label>Has Start Point</rdfs:label>
  <rdfs:comment>This property specifies the end point of the line</
    rdfs:comment>
  <rdfs:domain rdf:resource="#Line" />
  <rdfs:range rdf:resource="#Point" />
```

```
</owl:ObjectProperty>

<!-- Polyline -->

<owl:Class rdf:ID="Polyline">
  <rdfs:subClassOf rdf:resource="#Shape" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-points"/>
      <owl:minCardinality rdf:datatype="&xsd;nonNegativeInteger">2</
    owl:minCardinality>
    </owl:Restriction>
  </rdfs:subClassOf>
</owl:Class>

<owl:ObjectProperty rdf:ID="has-points">
  <rdfs:label>Has Points</rdfs:label>
  <rdfs:comment>This property specifies the points which make up the
    polyline</rdfs:comment>
  <rdfs:domain rdf:resource="#Polyline" />
  <rdfs:range rdf:resource="#Point" />
</owl:ObjectProperty>


<!-- Polygon -->

<owl:Class rdf:ID="Polygon">
  <rdfs:subClassOf rdf:resource="#Polyline" />
  <rdfs:subClassOf>
    <owl:Restriction>
      <owl:onProperty rdf:resource="#has-points"/>
      <owl:minCardinality rdf:datatype="&xsd;nonNegativeInteger">3</
    owl:minCardinality>
    </owl:Restriction>
  </rdfs:subClassOf>
</owl:Class>

<!-- Distance -->

<owl:class rdf:ID="Distance">
  <rdfs:comment>This class provides a simple pairing of a distance value
    and a unit</rdfs:comment>
</owl:class>

<owl:DatatypeProperty rdf:ID="has-value">
  <rdfs:label>has-value</rdfs:label>
  <rdfs:domain rdf:resource="#Value" />
  <rdfs:range rdf:resource="&xsd;double" />
  <rdfs:comment>This property specifies a value</rdfs:comment>
</owl:DatatypeProperty>
```

```
<owl:ObjectProperty rdf:ID="has-unit">
  <rdfs:label>has-unit</rdfs:label>
  <rdfs:domain rdf:resource="#Value" />
  <rdfs:range rdf:resource="#Unit" />
  <rdfs:comment>This property specifies the unit of a value</rdfs:comment
    >
</owl:ObjectProperty>

<!-- Unit -->

<owl:class rdf:ID="Unit">
  <rdfs:comment>This class represents a unit of a value</rdfs:comment>
</owl:class>

<owl:DatatypeProperty rdf:ID="has-name">
  <rdfs:label>has-name</rdfs:label>
  <rdfs:domain rdf:resource="#Unit" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:comment>The full name of the unit (e.g. centimetre)</rdfs:comment
    >
</owl:DatatypeProperty>

<owl:DatatypeProperty rdf:ID="has-abbrev">
  <rdfs:label>has-abbrev</rdfs:label>
  <rdfs:domain rdf:resource="#Unit" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:comment>The short form of the unit (e.g. cm)</rdfs:comment>
</owl:DatatypeProperty>

<!-- Point -->

<owl:class rdf:ID="Point">
  <rdfs:comment>This class represents a point in space (or presumably
    time)</rdfs:comment>
</owl:class>

<owl:class rdf:ID="Point2D">
  <rdfs:subClassOf rdf:resource="#Point" />
  <rdfs:comment>This class represents a 2D point</rdfs:comment>
</owl:class>

<owl:DatatypeProperty rdf:ID="has-x-value">
  <rdfs:label>Has X Value</rdfs:label>
  <rdfs:domain rdf:resource="#Point2D" />
  <rdfs:range rdf:resource="&xsd;double" />
  <rdfs:comment>This property specifies the X co-ord of a point</
    rdfs:comment>
</owl:DatatypeProperty>

<owl:DatatypeProperty rdf:ID="has-y-value">
  <rdfs:label>Has Y Value</rdfs:label>
```

```
  <rdfs:domain rdf:resource="#Point2D" />
  <rdfs:range rdf:resource="&xsd;double" />
  <rdfs:comment>This property specifies the Y co-ord of a point</
   rdfs:comment>
</owl:DatatypeProperty>

<owl:class rdf:ID="PixelPoint">
  <!-- Could do with a way to restrict the type to integer here -->
  <rdfs:subClassOf rdf:resource="#Point2D" />
</owl:class>

<owl:class rdf:ID="WGS84Point">
   <rdfs:subClassOf rdf:resource="#Point" />
   <rdfs:subClassOf rdf:resource="&geo;Point" />
</owl:class>

</rdf:RDF>
```

Listing G.36: Geometry

G.37 Locspec

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/
    locspec#">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
]>



<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>OntoMedia LocSpec Ontology</rdfs:label>
    <dc:title xml:lang="en">OntoMedia LocSpec Ontology</dc:title>
    <dc:description xml:lang="en">The OntoMedia LocSpec ontology provides
     a method to specify regions of media items</dc:description>
    <dc:creator>Michael O. Jewell (mailto:moj@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
    dc:creator>
    <dc:creator>Mischa M Tuffield (mailto:mmt04r@ecs.soton.ac.uk)</
    dc:creator>
    <dct:created>2005-07-14</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
  </owl:Ontology>

  <owl:class rdf:ID="LocSpec">
    <rdfs:label>LocSpec</rdfs:label>
    <rdfs:comment>This class represents a location or region within a
    medium</rdfs:comment>
  </owl:class>

  <owl:DatatypeProperty rdf:ID="uri">
    <rdfs:label>uri</rdfs:label>
    <rdfs:domain rdf:resource="#LocSpec" />
```

```
  <rdfs:range rdf:resource="&xsd;anyURI" />
  <rdfs:comment>This property specifies the URI of the media</
 rdfs:comment>
</owl:DatatypeProperty>

<!-- Value -->
<owl:class rdf:ID="Value">
  <rdfs:comment>This class provides a simple pairing of a value and a
 unit</rdfs:comment>
</owl:class>

<owl:DatatypeProperty rdf:ID="value">
  <rdfs:label>value</rdfs:label>
  <rdfs:domain rdf:resource="#Value" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:comment>This property specifies a value</rdfs:comment>
</owl:DatatypeProperty>

<owl:DatatypeProperty rdf:ID="unit">
  <rdfs:label>unit</rdfs:label>
  <rdfs:domain rdf:resource="#Value" />
  <rdfs:range rdf:resource="&rdfs;Literal" />
  <rdfs:comment>This property specifies the unit of a value</
 rdfs:comment>
</owl:DatatypeProperty>

<!-- Range -->

<owl:class rdf:ID="Range">
  <rdfs:subClassOf rdf:resource="#LocSpec" />
  <rdfs:comment>This class represents a portion of a medium denoted by
 a start point and a length</rdfs:comment>
</owl:class>

<owl:ObjectProperty rdf:ID="offset">
  <rdfs:label>offset</rdfs:label>
  <rdfs:domain rdf:resource="#Range" />
  <rdfs:range rdf:resource="#Value" />
  <rdfs:comment>This property specifies the offset into a region</
 rdfs:comment>
</owl:ObjectProperty>

<owl:DatatypeProperty rdf:ID="length">
  <rdfs:label>length</rdfs:label>
  <rdfs:domain rdf:resource="#Range" />
  <rdfs:range rdf:resource="#Value" />
  <rdfs:comment>This property specifies the length of a range</
 rdfs:comment>
</owl:DatatypeProperty>

<!-- CharRange -->
```

```
<owl:class rdf:ID="CharRange">
  <rdfs:subClassOf rdf:resource="#Range" />
</owl:class>

<!-- VideoRange -->

<owl:class rdf:ID="VideoRange">
  <rdfs:subClassOf rdf:resource="#Range" />
</owl:class>

<!-- AudioRange -->

<owl:class rdf:ID="AudioRange">
  <rdfs:subClassOf rdf:resource="#Range" />
</owl:class>

<!-- Area -->

<owl:class rdf:ID="Area">
  <rdfs:subClassOf rdf:resource="#LocSpec" />
</owl:class>

<owl:ObjectProperty rdf:ID="page">
  <rdfs:label>page</rdfs:label>
  <rdfs:domain rdf:resource="#Area" />
  <rdfs:range rdf:resource="#Value" />
  <rdfs:comment>This property specifies the page to work with</
 rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="startx">
  <rdfs:label>start x</rdfs:label>
  <rdfs:domain rdf:resource="#Area" />
  <rdfs:range rdf:resource="#Value" />
  <rdfs:comment>This property specifies the start X co-ordinate</
 rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="endx">
  <rdfs:label>end x</rdfs:label>
  <rdfs:domain rdf:resource="#Area" />
  <rdfs:range rdf:resource="#Value" />
  <rdfs:comment>This property specifies the end X co-ordinate</
 rdfs:comment>
</owl:ObjectProperty>

<owl:ObjectProperty rdf:ID="starty">
  <rdfs:label>start y</rdfs:label>
  <rdfs:domain rdf:resource="#Area" />
  <rdfs:range rdf:resource="#Value" />
```

```
    <rdfs:comment>This property specifies the start Y co-ordinate</
    rdfs:comment>
  </owl:ObjectProperty>

  <owl:ObjectProperty rdf:ID="endy">
    <rdfs:label>end y</rdfs:label>
    <rdfs:domain rdf:resource="#Area" />
    <rdfs:range rdf:resource="#Value" />
    <rdfs:comment>This property specifies the end Y co-ordinate</
    rdfs:comment>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing G.37: Locspec

Appendix H

Tag2 Ontology

H.1 Tag2 v0.1 OWL Specification

```
<?xml version="1.0"?>

<!DOCTYPE owl [
  <!ENTITY xsd    "http://www.w3.org/2001/XMLSchema#">
  <!ENTITY rdf    "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <!ENTITY rdfs   "http://www.w3.org/2000/01/rdf-schema#">
  <!ENTITY owl    "http://www.w3.org/2002/07/owl#">
  <!ENTITY base   "http://contextus.info/Tag2-schema#">
  <!ENTITY dc           "http://purl.org/dc/elements/1.1/">
  <!ENTITY dct          "http://purl.org/dc/terms/">
]>


<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:owl="&owl;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">


  <owl:Ontology rdf:about="&base;">
    <rdfs:label>Tag2 Schema</rdfs:label>
    <dc:title xml:lang="en">Tag2 Scheme</dc:title>
    <dc:description xml:lang="en">A schema for mapping between tags or
   tag clusters and complicated concepts decribed in RDF</dc:description>
    <dc:creator>K Faith Lawrence (mailto:kf03r@ecs.soton.ac.uk)</
   dc:creator>
    <dct:created>2006-05-26</dct:created>
    <owl:versionInfo>0.1</owl:versionInfo>
```

```
  </owl:Ontology>

<!-- Classes -->

  <owl:Class rdf:ID="Tag">
    <rdfs:label>Tag</rdfs:label>
    <rdfs:comment>A tag string</rdfs:comment>
  </owl:Class>

  <owl:Class rdf:ID="TagCloud">
    <rdfs:label>Tag Cloud</rdfs:label>
    <rdfs:comment>A tag cloud</rdfs:comment>
  </owl:Class>

  <owl:Class rdf:ID="DataCrystal">
    <rdfs:label>Data Crystal</rdfs:label>
    <rdfs:comment>A data structure which describes a concept</
   rdfs:comment>
  </owl:Class>

  <owl:Class rdf:ID="Query">
    <rdfs:label>Query</rdfs:label>
    <rdfs:comment>A query which defines a concept</rdfs:comment>
  </owl:Class>


<!-- Properties -->

  <owl:FunctionalProperty rdf:ID="mapsTo">
    <rdfs:label>Maps To</rdfs:label>
    <rdfs:comment>This property the concept being mapped to</rdfs:comment
   >
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Tag"/>
          <owl:Class rdf:about="&base;TagCloud"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="#DataCrystal"/>
  </owl:FunctionalProperty>

  <owl:FunctionalProperty rdf:ID="mapsToResultsOf">
    <rdfs:label>Maps To</rdfs:label>
    <rdfs:comment>This property the concept being mapped to</rdfs:comment
   >
    <rdfs:domain>
      <owl:Class>
        <owl:unionOf rdf:parseType="Collection">
          <owl:Class rdf:about="&base;Tag"/>
```

```
          <owl:Class rdf:about="&base;TagCloud"/>
        </owl:unionOf>
      </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="#Query"/>
  </owl:FunctionalProperty>

  <owl:ObjectProperty rdf:ID="includes">
    <rdfs:label>Includes</rdfs:label>
    <rdfs:comment>A tag that is included in the Tag Cloud</rdfs:comment>
    <rdfs:domain rdf:resource="&base;TagCloud"/>
    <rdfs:range rdf:resource="&base;Tag"/>
  </owl:ObjectProperty>

</rdf:RDF>
```

Listing H.1: Tag2 OWL Specification

Appendix I

Notes From Meditate Useability Experiment

I.1 User 1

- Asked for spelling
- Asked whether name components stacked
- Asked about speed of software
- Asked for clarification about which Spoiler/Evidence boxes related to which traits and when the information was applied
- Asked whether the age box could accept text entries as well as numerical

Additional notes: Added gender of actress without prompting

I.2 User 2

- Checked name
- Asked for clarification on where the spoiler dropdown was
- Needed reminding how traits were set but fine once found the dropdowns
- Needed to be reminded that age had to be numerical digits
- Requested confirmation that 'additional name' corresponded to 'second name'
- Had to be prompted that you could scroll dropdown options

Additional notes: Commented that it was difficult to start with, it was straight forward when you knew where things were

I.3 User 3

- Requested information on what happened when a name was deleted. Assumed that the delete button related to the textual information dropdown and not everything else so that you could add and remove that dropdown

Additional notes:

Felt like the spoiler dropdown should change values depending on which name section of the table has been selected thus allowing the user to set the value for each section independently.

Wanted some feedback when typing into textboxes to show that the information was being saved. Especially as this contrasted with the name table where it was necessary to hit return to make sure the name section was added into the name.

I.4 User 4

- Asked about marital status to fill in title
- Asked what a 'patronymic' was
- Tried to type directly on to the 'Seen by Audience' tab and asked how to type into it
- Asked to be reminded how to add a trait
- Asked for conformation the the delete button was a delete button
- Asked for conformation on what the approximate/accurate button did

Additional notes:

Initially set the State of Being spoiler dropdown to set the spoiler state for the nickname option (the dropdown is vertically above the name table) however realised the error later.

Had to state that the employment trait was not yet fully implemented.

Task 9 skipped.

I.5 User 5

- Requested conformation that spelling was not important for the test

Additional notes:

Set the State-of-Being spoiler dropdown in an attempt to set the spoiler value for the nickname name component (vertical relationship).

Initially expected to be able to set the spoiler dropdown for each name component but after a few attempts realised that this didn't work and added a sperate nickname.

Expected the 'traits as seen by other characters' to be a subset of the trait menu.

Commented that if 'sex' and 'gender' were being differentiated then they should have seperate dropdowns.

Hit return at end of text box addition.

Wanted the name component table to be vertically resizable.

Checked that the entity link information was added in to both entities.

I.6 User 6

- Checked name and whether either of the initial name components were nicknames
- Asked how to view the table headers more clearly
- Asked if it was possible to put a range into the age box

Additional notes:

Asked if the nickname 'Mary-Sue' should be added in for the actress as she was referred to in that manner in one of the questions although the question did not relate to names. Decided to add it having been told it was beyond the scope of the experiment.

I.7 User 7

Additional notes:

Asked for clarifications reguarding the way that names and tabs worked prior to the start of the tasks.

Commented on the existence of the sex/gender split in gender dropdown.

Returned to the Krisella profile to add the link between Mary-Sue and Krisella rather than adding it in the Mary-Sue profile.

I.8 User 8

- Needed to clarify that the profile had been loaded at the start of the experiment and it was not necessary to create a new system
- Asked what a 'patronymic' was
- Asked how to view the table headers more clearly
- Asked how to add traits
- Asked if it was necessary to hit return when entering text into a text box
- Asked how to move between entities

Additional notes:

While doing the task on adding gender, asked to be reminded how to add new traits. Having been told strongly concidered adding a new name configuration for the nickname but decided not to.

Software crashed halfway through the experiment and so restarted and redid the early tasks in a new session.

Added in the 'real' person successfully but then returned to the profile of Krisella and added the actresses details in there. Thought that 'birth name' related to the name of the real person rather than the name which the fictional character had at their fictional birth. Initially added it as a seperate name but when asked to show the link between the two entities changed it to be a name variation of the character's name to represent the link between the two.

I.9 User 9

- Checked name spelling
- Asked whether the spoiler dropdown applied to the entire of that name or just a component

Additional notes:

Decided to add state and age traits to 'seen by audience' tabs because they were information that the audience worked out external to the show's canon.

Created a nickname variation and set it but didn't initially hit return so it blanked. The nickname got set to the labelling name so when the entity link was being set it showned as blank. User asked how they were supposed to see it and suggested user check the names on the character profile. User saw the nickname had become blank so re-entered the name correctly and then was able to go back to the actress profile and identify the character name in the dropdown options.

I.10 User 10

- Asked about name spelling and title and whether it was her birth name or not
- Asked how to view the table headers more clearly
- Asked about order of name section appearence
- Asked if there was a way to add new options to the dropdowns
- Asked what 'main' meant in the dropdown
- Needed to be reminded that age had to be numerical digits

Additional notes:

Added in new 'birth name' twice before realising that it had responded slowly and deleted the unwanted names

Spent some time trying to find 'ghost' under species. Needed to be told the 'add new' species option hadn't been implemented so it could not be added in.

Asked what species the character was and when told this was outside the scope of the test removed the species trait.

Initially added new states then realised that they were already there. Null pointer error thrown when removing the extra state traits. Continued with session.

Asked whether ghosts were incorporeal. When told that that information was not in the question, just that the character was believed to be a ghost, the user decided that if it had been implied but not explicitly stated then the character was presumably manifesting and was therefore corporeal.

Created an `is` link between the character and the actress rather than the `portrays` link asked for. `protrays` is a subproperty of `is`.

Commented that dealing with different peoples' interpretations was obviously going to be a interesting task but that profiles of the type used in the software were how the user would want to interact which the type of information being shown.

Appendix J

Full Results From Meditate Useability Experiment

J.1 Task Results

The participants of the Meditate user Experiment were informed that they would be asked to fill in the details for a character on a fictional television show. The list of tasks, the expected steps required to add the information required by that task into the software and the user responses are detailed below.

J.1.1 Task 1

The Characters name is "Krisella Huntinghawk"

Correct steps:

0. Select suitable tab
1. "Krisella" entered into 'Primary Name' field in name table
2. "Huntinghawk" entered into 'Family Name' field in name table
3. Action taken to ensure all name sections have been recognised

User Response:

User	Step 1	Step 2	Step 3
1	√	√	√
2	√	√	√
3	√	X	√
4	√	√	√
5	√	√	√
6	√	√	√
7	√	√	√
8	√	√	√
9	√	√	√
10	√	√	√

J.1.2 Task 2

The Character also had the nickname "Krisella the Monk" although this information is considered a spoiler.

Correct steps:

0. Select suitable tab
1. New (nickname) name configuration added to existing name
2. "Krisella the Monk" entered into 'Nickname' field in name table
3. Action taken to ensure all name sections have been recognised
4. Nickname Spoiler dropdown set to 'Spoiler'

User Response:

User	Step 1	Step 2	Step 3	Step 4
1	X	√	√	√
2	X	√	√	√
3	X	√	√	X
4	X	√	√	X
5	√	√	√	√
6	X	√	√	X
7	√	√	√	√
8	X	√	√	X
9	√	√	√	√
10	√	√	√	√

J.1.3 Task 3

The Character is known to other characters as "Krisella Huntinghawk of the Swords"

Correct steps:

1. Switch to 'Traits as seen by other Characters' tab
2. Add new name trait
3. "Krisella" entered into 'Primary Name' field in name table
4. "Huntinghawk" entered into 'Family Name' field in name table
5. "of the Swords" entered into 'Name Qualifier' field in name table
6. Action taken to ensure all name sections have been recognised

User Response:

User	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
1	X	X	X	X	√	√
2	√	√	X	X	X	√
3	√	√	X	X	X	√
4	X	X	X	X	X	√
5	√	√	X	X	X	√
6	X	X	X	X	√	√
7	√	√	√	√	√	√
8	X	X	X	X	X	√
9	√	√	X	X	X	√
10	X	√	√	√	√	√

J.1.4 Task 4

The Character is a ghost although this information is strongly implied but never stated in the program. Set her states to reflect this

Correct answer:

0. Select suitable tab
1. Set State of Being dropdown to either 'Dead' or 'Undead'
2. Set State of Being Evidence dropdown to 'Calculated', 'Subtext' or 'Interpretation'

3. Set State of Form dropdown to 'Incorporeal'
4. Set State of Form Evidence dropdown to 'Calculated', 'Subtext' or 'Interpretation'

User Response:

User	Step 1	Step 2	Step 3	Step 4
1	√	√	√	X
2	√	√	√	√
3	√	√	√	√
4	√	√	X	X
5	√	√	√	√
6	X	X	√	√
7	√	√	√	√
8	X	X	√	√
9	√	√	√	√
10	√	√	X	√

J.1.5 Task 5

The Character is female, add a trait to show this

Correct answer:

0. Select suitable tab
1. Add gender trait from 'Add Trait' menu
2. Set Gender dropdown to either 'Female (sex)' or 'Female'

User Response:

Completed correctly by all users.

J.1.6 Task 6

The Character is in her mid-30s according to an interview with the actress. Add this information to the profile

Correct answer:

0. Select suitable tab

1. Add age trait from 'Add Trait' menu
2. "35" entered in text box
3. Equals/Approximate button toggled to "$\tilde{=}$" from "="
4. Age Evidence dropdown set to 'Supplimental'

User Response:

User	Step 1	Step 2	Step 3	Step 4
1	√	√	√	√
2	√	X	X	X
3	√	√	√	√
4	√	√	√	X
5	√	√	X	√
6	√	√	√	√
7	√	√	√	√
8	√	√	X	X
9	√	√	X	√
10	√	√	√	√

J.1.7 Task 7

A webpage about the Character exists at 'www.ghostmonk.org'. Add the information that people should also see that site

Correct answer:

0. Select suitable tab
1. Add external reference (URI) option from 'Add Other' menu
2. "www.ghostmonk.org" entered in text box

User Response:

Completed correctly by all users.

J.1.8 Task 8

The Character is played by an actress 'Mary Susan Trouber'. Add a new 'real' person and set her name

Correct answer:

1. Add new person (real) from 'Add New' menu
2. "Mary" entered into 'Primary Name' field in name table
3. "Susan" entered into 'Additional Name' field in name table
4. "Trouber" entered into 'Family Name' field in name table
5. Action taken to ensure all name sections have been recognised

User Response:

User	Step 1	Step 2	Step 3	Step 4	Step 5
1	√	√	√	√	√
2	√	√	√	√	X
3	√	√	X	X	√
4	√	√	√	√	X
5	√	√	√	√	√
6	√	√	√	√	√
7	√	√	√	√	√
8	√	X	X	X	X
9	√	√	X	√	√
10	√	√	√	√	√

J.1.9 Task 9

Since Mary-Sue portrays the character of Krisella, add the information of this link between the two entities

Correct answer:

1. Add entity link option from 'Add Other' menu
2. Set Link dropdown to 'Portrays'
3. Set Entity dropdown to 'Krisella'

User Response:

User	Step 1	Step 2	Step 3
1	√	√	√
2	√	√	√
3	√	√	√
4	Passed		
5	√	√	√
6	√	√	√
7	√	√	√
8	X	X	X
9	√	√	√
10	√	X	√

J.1.10 Task 10

Save the information you have entered as User[no].rdf in the MeditateExp folder

Correct answer:

1. Select 'save as' from 'File' menu and save the file in the specified folder with the specified name

Completed correctly by all users.

J.2 QuestionnaireResults

J.2.1 Question 1

Would you describe yourself as being involved in online fandom?

User	Response
1	Yes
2	Yes
3	Yes
4	No
5	No
6	No
7	No
8	No
9	Yes
10	No

J.2.2 Question 2

Which age range best describes you: 18–21, 22–25, 26–35, 36–45, 46–55, 56–65, Over 66?

User	Response
1	26–35
2	36–45
3	26–35
4	26–35
5	26–35
6	26–35
7	22–25
8	26–35
9	22–25
10	26–35

J.2.3 Question 3

Which gender best describes you?

User	Response
1	Female
2	Female
3	Female
4	Male
5	Male
6	Male
7	Male
8	Female
9	Male
10	Female

J.2.4 Question 4

On a scale of 0 to 5, with 0 being no experience and 5 being guru, how would you rate your technical ability?

User	Response
1	3.5
2	2
3	4.5
4	3
5	4
6	4
7	4.5
8	3
9	4.5
10	1.5

J.2.5 Question 5

On a scale of 0 to 5, with 0 being easy and 5 being hard, how difficult did you find Meditate to use?

User	Response	Additional Comment
1	2	
2	4.5	4.5 Initially but straight forward when you knew where stuff was
3	3	
4	2	
5	2	A few unexpected things but when you had entered a few characters you would know how it worked
6	1	
7	2	Not always clear initially but obvious after trying it
8	3	
9	1	
10	2	

J.2.6 Question 6a

The eventual aim of this project is to create an online repositary of information about pop culture and cultural heritage entities and the links between them. Do you think that you might contribute information to this data?

User	Response	Additional Comment
1	Yes	Quite probably
2	Yes	Might do depending on time
3	Yes	
4	No	Probably not
5	No	
6	No	Not my field
7	No	Not always clear initially but obvious after trying it
8	Yes	
9	Yes	Quite probably
10	Yes	

J.2.7 Question 6b

Do you think that you might reference this data?

User	Response	Additional Comment
1	Yes	Quite probably
2	Yes	
3	Yes	Maybe
4	No	
5	No	Probably not, it would depend on how the data was made available but probably just use wikipedia
6	Yes	
7	No	
8	Yes	
9	Yes	
10	Yes	

J.2.8 Question 7

Currently the software you have used would require you to download a copy. Would the fact that you needed to install something even if the program was embedded in a webpage put you off using it?

User	Response	Additional Comment
1	Browser plugin acceptable	
2	No	
3	Browser plugin acceptable	
4	No	
5	Yes	
6	No	Will download and install if trust the source
7	Browser plugin acceptable	If it was in area of interest would download and install
8	No	
9	Yes	
10	Browser plugin acceptable	depends on whether the source of the plugin was known

Appendix K

Meditate Experiment RDF Files

K.1 RDF Results

K.1.1 User 1

Note: RDF edited to remove additional traits added by error in the software.

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/User1#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>
```

```
<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>User1</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: User1</dc:title>
  <dct:updated>2007-4-6</dct:updated>

  <rdf:Description rdf:about="#User1_Context_0">
    <rdfs:label>User1</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>User1.Krisella &amp;quot;Krisella the Monk&amp;quot;
    Huntinghawk of the Swords</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#User1_Context_0"/>
    <omt:has-trait rdf:resource="#Undead_Undead_Key_Interpretation_3"/>
    <omt:has-trait rdf:resource="#Incorporeal_Incorporeal_Fact_Text_4"/>
    <omt:has-trait rdf:resource="#
    Krisella_Krisella_the_Monk_Huntinghawk_of_the_Swords_Name_Spoiler_Text_17
    "/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_37"/>
    <omt:has-trait rdf:resource="#
    Age_Age_Approximate_Nitpick_Supplemental_39"/>
    <rdfs:seeAlso>www.ghostmonk.org</rdfs:seeAlso>
    <omt:has-trait rdf:resource="#Entity_what_hasn'
    t_had_a_name_entered_yet_5_Name_Fact_Text_44"/>
    <omfb:portrayed-by rdf:resource="#_new_entity_4__Being_41"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_40">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
```

```
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#_new_entity_4__Being_41">
  <rdfs:label> new entity 4 </rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality_Context_40"/>
  <omt:has-trait rdf:resource="#Mary_Suzanne_Trouber_Name_46"/>
  <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_54"/>
  <omb:portrays rdf:resource="#_new_entity_1__Character_2"/>
</rdf:Description>

<rdf:Description rdf:about="#Entity_what_hasn'
  t_had_a_name_entered_yet_5_Name_Fact_Text_44">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_Fact_Text_45"/>
</rdf:Description>

<rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_37">
  <rdf:type>
    <owl:Class rdf:about="&gender-default;FemaleSex" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#
  Age_Age_Approximate_Nitpick_Supplemental_39">
  <rdf:type>
    <owl:Class rdf:about="&omt;Age" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&xprop;Approximate" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Nitpick" />
```

```
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Supplemental" />
    </rdf:type>
    <omt:has-age rdf:resource="#Value_Value_38"/>
  </rdf:Description>

  <rdf:Description rdf:about="#FemaleSex_FemaleSex_54">
    <rdf:type>
      <owl:Class rdf:about="&gender-default;FemaleSex" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Incorporeal_Incorporeal_Fact_Text_4">
    <rdf:type>
      <owl:Class rdf:about="&omt;Incorporeal" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Suzanne_Trouber_Name_46">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_47"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Undead_Undead_Key_Interpretation_3">
    <rdf:type>
      <owl:Class rdf:about="&omt;Undead" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Key" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Interpretation" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisella_Krisella_the_Monk_Huntinghawk_of_the_Swords_Name_Spoiler_Text_17
    ">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
```

```
    <owl:Class rdf:about="&fic;Spoiler" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_Spoiler_Text_18"
  />
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_47">
  <rdf:type>
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Mary_Primary-Name_51" />
      <rdf:li rdf:resource="#Suzanne_Additional-Name_52" />
      <rdf:li rdf:resource="#Trouber_Family-Name_53" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Value_Value_38">
  <rdf:type>
    <owl:Class rdf:about="&omt;Value" />
  </rdf:type>
  <omt:has-value>35</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_Spoiler_Text_18">
  <rdf:type>
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Spoiler" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Krisella_Primary-Name_33" />
      <rdf:li rdf:resource="#Krisella_the_Monk_Nick_34" />
      <rdf:li rdf:resource="#Huntinghawk_Family-Name_35" />
      <rdf:li rdf:resource="#of_the_Swords_Qualifier_36" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_Fact_Text_45">
  <rdf:type>
```

```
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_35">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#of_the_Swords_Qualifier_36">
  <rdf:type>
    <owl:Class rdf:about="&nom;Qualifier" />
  </rdf:type>
  <nom:has-name-component>of the Swords</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Krisella_Primary-Name_33">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Krisella</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Trouber_Family-Name_53">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Trouber</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Primary-Name_51">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Mary</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Krisella_the_Monk_Nick_34">
  <rdf:type>
```

```
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Krisella the Monk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Suzanne_Additional-Name_52">
    <rdf:type>
      <owl:Class rdf:about="&nom;Additional-Name" />
    </rdf:type>
    <nom:has-name-component>Suzanne</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.1: RDF Results: User 1

K.1.2 User 2

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/User2#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>User2</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: User2</dc:title>
  <dct:updated>2007-4-6</dct:updated>

  <rdf:Description rdf:about="#User2_Context_0">
```

```
    <rdfs:label>User2</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>User2.Krisella &amp;quot;Krisella the Monk&amp;quot;
    Hunting Hawk</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#User2_Context_0"/>
    <omt:has-trait rdf:resource="#Dead_Fact_Dead_Interpretation_3"/>
    <omt:has-trait rdf:resource="#
    Incorporeal_Fact_Incorporeal_Interpretation_4"/>
    <omt:has-trait rdf:resource="#
    Krisella_Krisella_the_Monk_Hunting_Hawk_Name_Spoiler_Text_5"/>
    <omt:has-projected-trait rdf:resource="#
    Krisellas_Hunting_Hawk_of_the_Swords_Name_Fact_Text_13"/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_16"/>
    <omt:has-trait rdf:resource="#Age_Age_Accurate_Fact_Interpretation_18
    "/>
    <rdfs:seeAlso>www.ghostmonk.org</rdfs:seeAlso>
    <omfb:portrayed-by rdf:resource="#_new_entity_4__Being_20"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_19">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_4__Being_20">
    <rdfs:label>Reality.Mary susan</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_19"/>
    <omt:has-trait rdf:resource="#Alive_Alive_21"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_22"/>
    <omt:has-trait rdf:resource="#Mary_susan_Name_23"/>
    <omb:portrays rdf:resource="#_new_entity_1__Character_2"/>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Incorporeal_Fact_Incorporeal_Interpretation_4">
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
```

```
    <rdf:type>
      <owl:Class rdf:about="&omt;Incorporeal" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Interpretation" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Alive_Alive_21">
    <rdf:type>
      <owl:Class rdf:about="&omt;Alive" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisellas_Hunting_Hawk_of_the_Swords_Name_Fact_Text_13">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Nick_Name_Familiar_Fact_Text_14
    "/>
  </rdf:Description>

  <rdf:Description rdf:about="#Age_Age_Accurate_Fact_Interpretation_18">
    <rdf:type>
      <owl:Class rdf:about="&omt;Age" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&xprop;Accurate" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Interpretation" />
    </rdf:type>
    <omt:has-age rdf:resource="#Value_Value_17"/>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisella_Krisella_the_Monk_Hunting_Hawk_Name_Spoiler_Text_5">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
```

```
    <owl:Class rdf:about="&fic;Spoiler" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_Text_Spoiler_6"/
  >
</rdf:Description>

<rdf:Description rdf:about="#Corporeal_Corporeal_22">
  <rdf:type>
    <owl:Class rdf:about="&omt;Corporeal" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Dead_Fact_Dead_Interpretation_3">
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&omt;Dead" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Interpretation" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_16">
  <rdf:type>
    <owl:Class rdf:about="&gender-default;FemaleSex" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Mary_susan_Name_23">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_24"/>
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_Text_Spoiler_6">
  <rdf:type>
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <rdf:type>
```

```
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Spoiler" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Krisella_Primary-Name_10" />
      <rdf:li rdf:resource="#Krisella_the_Monk_Nick_11" />
      <rdf:li rdf:resource="#Hunting_Hawk_Family-Name_12" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Value_Value_17">
  <rdf:type>
    <owl:Class rdf:about="&omt;Value" />
  </rdf:type>
  <omt:has-value>30</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_24">
  <rdf:type>
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Mary_Primary-Name_26" />
      <rdf:li rdf:resource="#susan_Additional-Name_27" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Nick_Name_Familiar_Fact_Text_14">
  <rdf:type>
    <owl:Class rdf:about="&nom;Familiar" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#
  Krisellas_Hunting_Hawk_of_the_Swords_Nick_15" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>
```

```
  <rdf:Description rdf:about="#susan_Additional-Name_27">
    <rdf:type>
      <owl:Class rdf:about="&nom;Additional-Name" />
    </rdf:type>
    <nom:has-name-component>susan</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Hunting_Hawk_Family-Name_12">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Hunting Hawk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisellas_Hunting_Hawk_of_the_Swords_Nick_15">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Krisellas Hunting Hawk of the Swords</nom:has
    -name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_the_Monk_Nick_11">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Krisella the Monk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Primary-Name_10">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Primary-Name_26">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Mary</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.2: RDF Results: User 2

K.1.3 User 3

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/User3#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>User3</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: User3</dc:title>
  <dct:updated>2007-4-6</dct:updated>

  <rdf:Description rdf:about="#User3_Context_0">
```

```
    <rdfs:label>User3</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>User3.Krisella Huntinghawk &amp;quot;Krisella The Monk&
    amp;quot;</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#User3_Context_0"/>
    <omt:has-trait rdf:resource="#Dead_Fact_Dead_Subtext_3"/>
    <omt:has-trait rdf:resource="#Incorporeal_Fact_Incorporeal_Subtext_4"
    />
    <omt:has-trait rdf:resource="#
    Krisella_Huntinghawk_Krisella_The_Monk_Name_Fact_Text_10"/>
    <omt:has-projected-trait rdf:resource="#
    Krisella_Huntinghawk_Krisella_Huntinghawk_of_the_Swords_Name_Fact_Text_25
    "/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_30"/>
    <omt:has-trait rdf:resource="#
    Age_Age_Fact_Approximate_Supplemental_32"/>
    <rdfs:seeAlso>http://www.ghostmonk.org</rdfs:seeAlso>
    <omfb:portrayed-by rdf:resource="#_new_entity_5__Being_34"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_33">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_5__Being_34">
    <rdfs:label>Reality.Mary Susanne Trooper</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_33"/>
    <omt:has-trait rdf:resource="#Alive_Alive_35"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_36"/>
    <omt:has-trait rdf:resource="#Mary_Susanne_Trooper_Name_37"/>
    <omb:portrays rdf:resource="#_new_entity_1__Character_2"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Alive_Alive_35">
    <rdf:type>
      <owl:Class rdf:about="&omt;Alive" />
    </rdf:type>
```

```
</rdf:Description>

<rdf:Description rdf:about="#Dead_Fact_Dead_Subtext_3">
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&omt;Dead" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Subtext" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Age_Age_Fact_Approximate_Supplemental_32">
  <rdf:type>
    <owl:Class rdf:about="&omt;Age" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&xprop;Approximate" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Supplemental" />
  </rdf:type>
  <omt:has-age rdf:resource="#Value_Value_31"/>
</rdf:Description>

<rdf:Description rdf:about="#
  Krisella_Huntinghawk_Krisella_The_Monk_Name_Fact_Text_10">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_Text_Fact_11"/>
</rdf:Description>

<rdf:Description rdf:about="#Incorporeal_Fact_Incorporeal_Subtext_4">
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&omt;Incorporeal" />
  </rdf:type>
```

```
    <rdf:type>
      <owl:Class rdf:about="&fic;Subtext" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_30">
    <rdf:type>
      <owl:Class rdf:about="&gender-default;FemaleSex" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Corporeal_Corporeal_36">
    <rdf:type>
      <owl:Class rdf:about="&omt;Corporeal" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisella_Huntinghawk_Krisella_Huntinghawk_of_the_Swords_Name_Fact_Text_25
    ">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#
    Every_Day_Name_Informal_Fact_Text_26"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Susanne_Trooper_Name_37">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_38"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_Text_Fact_11">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <rdf:type>
```

```
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Krisella_Huntinghawk_Primary-Name_23" />
      <rdf:li rdf:resource="#Krisella_The_Monk_Nick_24" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Value_Value_31">
  <rdf:type>
    <owl:Class rdf:about="&omt;Value" />
  </rdf:type>
  <omt:has-value>35</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Every_Day_Name_Informal_Fact_Text_26">
  <rdf:type>
    <owl:Class rdf:about="&nom;Informal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Krisella_Huntinghawk_Primary-Name_28" />
      <rdf:li rdf:resource="#
 Krisella_Huntinghawk_of_the_Swords_Additional-Name_29" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_38">
  <rdf:type>
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Mary_Susanne_Trooper_Primary-Name_39" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Susanne_Trooper_Primary-Name_39">
```

```
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Mary Susanne Trooper</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Huntinghawk_Primary-Name_23">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella Huntinghawk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisella_Huntinghawk_of_the_Swords_Additional-Name_29">
    <rdf:type>
      <owl:Class rdf:about="&nom;Additional-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella Huntinghawk of the Swords</nom:has-
    name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Huntinghawk_Primary-Name_28">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella Huntinghawk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_The_Monk_Nick_24">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Krisella The Monk</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.3: RDF Results: User 3

K.1.4 User 4

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/user4#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>user4</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: user4</dc:title>
  <dct:updated>2007-4-10</dct:updated>

  <rdf:Description rdf:about="#user4_Context_0">
    <rdfs:label>user4</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
```

```
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>user4.Krisella &amp;quot;Krisella The Monk&amp;quot;
    Krisella Huntinghawk of the Swords Huntinghawk</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#user4_Context_0"/>
    <omt:has-trait rdf:resource="#Dead_Dead_Fact_Interpretation_3"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_Fact_Text_4"/>
    <omt:has-trait rdf:resource="#
    Krisella_Krisella_The_Monk_Krisella_Huntinghawk_of_the_Swords_Huntinghawk_Name_Fact
    "/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_21"/>
    <omt:has-trait rdf:resource="#Age_Age_Fact_Text_Approximate_23"/>
    <rdfs:seeAlso>www.ghostmonk.org</rdfs:seeAlso>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_24">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_3__Being_25">
    <rdfs:label>Reality.Mary Susanne</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_24"/>
    <omt:has-trait rdf:resource="#Alive_Alive_26"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_27"/>
    <omt:has-trait rdf:resource="#Mary_Susanne_Name_28"/>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisella_Krisella_The_Monk_Krisella_Huntinghawk_of_the_Swords_Huntinghawk_Name_Fact
    ">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_Fact_Text_6"/>
```

```
</rdf:Description>

<rdf:Description rdf:about="#Corporeal_Corporeal_27">
  <rdf:type>
    <owl:Class rdf:about="&omt;Corporeal" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Alive_Alive_26">
  <rdf:type>
    <owl:Class rdf:about="&omt;Alive" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Susanne_Name_28">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_29"/>
</rdf:Description>

<rdf:Description rdf:about="#Dead_Dead_Fact_Interpretation_3">
  <rdf:type>
    <owl:Class rdf:about="&omt;Dead" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Interpretation" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_21">
  <rdf:type>
    <owl:Class rdf:about="&gender-default;FemaleSex" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Corporeal_Corporeal_Fact_Text_4">
  <rdf:type>
    <owl:Class rdf:about="&omt;Corporeal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
```

```
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Age_Age_Fact_Text_Approximate_23">
    <rdf:type>
      <owl:Class rdf:about="&omt;Age" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&xprop;Approximate" />
    </rdf:type>
    <omt:has-age rdf:resource="#Value_Value_22"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Value_Value_22">
    <rdf:type>
      <owl:Class rdf:about="&omt;Value" />
    </rdf:type>
    <omt:has-value>35</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_29">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Mary_Primary-Name_31" />
        <rdf:li rdf:resource="#Susanne_Additional-Name_32" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_Fact_Text_6">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
```

```
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_Primary-Name_13" />
        <rdf:li rdf:resource="#Krisella_The_Monk_Nick_14" />
        <rdf:li rdf:resource="#
    Krisella_Huntinghawk_of_the_Swords_Additional-Name_15" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_16" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Susanne_Additional-Name_32">
    <rdf:type>
      <owl:Class rdf:about="&nom;Additional-Name" />
    </rdf:type>
    <nom:has-name-component>Susanne</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Huntinghawk_Family-Name_16">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Huntinghawk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Primary-Name_31">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Mary</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Krisella_Huntinghawk_of_the_Swords_Additional-Name_15">
    <rdf:type>
      <owl:Class rdf:about="&nom;Additional-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella Huntinghawk of the Swords</nom:has-
    name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Primary-Name_13">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_The_Monk_Nick_14">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
```

```
    </rdf:type>
    <nom:has-name-component>Krisella The Monk</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.4: RDF Results: User 4

K.1.5 User 5

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/Default#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>Default</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: Default</dc:title>
  <dct:updated>2007-4-10</dct:updated>

  <rdf:Description rdf:about="#Default_Context_0">
    <rdfs:label>Default</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
```

```
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_0__Character_1">
    <rdfs:label>Default.Chysella Huntinghawk</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Default_Context_0"/>
    <omt:has-trait rdf:resource="#Dead_Dead_Fact_Interpretation_2"/>
    <omt:has-trait rdf:resource="#
    Incorporeal_Incorporeal_Fact_Interpretation_3"/>
    <omt:has-trait rdf:resource="#Chyrsella_the_Monk_Name_Fact_Text_4"/>
    <omt:has-projected-trait rdf:resource="#
    Chrysella_Huntinghawk_of_the_Swords_Name_Fact_Text_22"/>
    <omt:has-trait rdf:resource="#Female_Female_Fact_Text_25"/>
    <omt:has-trait rdf:resource="#Age_Age_Accurate_Fact_Supplemental_27"/
    >
    <rdfs:seeAlso>www.ghostmonk.org</rdfs:seeAlso>
    <omfb:portrayed-by rdf:resource="#_new_entity_3__Being_29"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_28">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_3__Being_29">
    <rdfs:label>Reality.Mary Suzanne Truber</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_28"/>
    <omt:has-trait rdf:resource="#Alive_Alive_30"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_31"/>
    <omt:has-trait rdf:resource="#Mary_Suzanne_Truber_Name_32"/>
    <omb:portrays rdf:resource="#_new_entity_0__Character_1"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Female_Female_Fact_Text_25">
    <rdf:type>
      <owl:Class rdf:about="&omt;Female" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
```

```
</rdf:Description>

<rdf:Description rdf:about="#
  Chrysella_Huntinghawk_of_the_Swords_Name_Fact_Text_22">
   <rdf:type>
     <owl:Class rdf:about="&omt;Name" />
   </rdf:type>
   <rdf:type>
     <owl:Class rdf:about="&fic;Fact" />
   </rdf:type>
   <rdf:type>
     <owl:Class rdf:about="&fic;Text" />
   </rdf:type>
   <omt:has-name-ordering rdf:resource="#Nick_Name_Familiar_Fact_Text_23
  "/>
</rdf:Description>

<rdf:Description rdf:about="#Alive_Alive_30">
   <rdf:type>
     <owl:Class rdf:about="&omt;Alive" />
   </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Chyrsella_the_Monk_Name_Fact_Text_4">
   <rdf:type>
     <owl:Class rdf:about="&omt;Name" />
   </rdf:type>
   <rdf:type>
     <owl:Class rdf:about="&fic;Fact" />
   </rdf:type>
   <rdf:type>
     <owl:Class rdf:about="&fic;Text" />
   </rdf:type>
   <omt:has-name-ordering rdf:resource="#Full_Name_Full_Fact_Text_5"/>
   <omt:has-name-ordering rdf:resource="#
  Nick_Name_Familiar_Spoiler_Text_20"/>
</rdf:Description>

<rdf:Description rdf:about="#Age_Age_Accurate_Fact_Supplemental_27">
   <rdf:type>
     <owl:Class rdf:about="&omt;Age" />
   </rdf:type>
   <rdf:type>
     <owl:Class rdf:about="&xprop;Accurate" />
   </rdf:type>
   <rdf:type>
     <owl:Class rdf:about="&fic;Fact" />
   </rdf:type>
   <rdf:type>
     <owl:Class rdf:about="&fic;Supplemental" />
   </rdf:type>
```

```
  <omt:has-age rdf:resource="#Value_Value_26"/>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Suzanne_Truber_Name_32">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_33"/>
</rdf:Description>

<rdf:Description rdf:about="#Dead_Dead_Fact_Interpretation_2">
  <rdf:type>
    <owl:Class rdf:about="&omt;Dead" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Interpretation" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Corporeal_Corporeal_31">
  <rdf:type>
    <owl:Class rdf:about="&omt;Corporeal" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#
  Incorporeal_Incorporeal_Fact_Interpretation_3">
  <rdf:type>
    <owl:Class rdf:about="&omt;Incorporeal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Interpretation" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_33">
  <rdf:type>
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Mary_Primary-Name_38" />
      <rdf:li rdf:resource="#Suzanne_Additional-Name_39" />
      <rdf:li rdf:resource="#Truber_Family-Name_40" />
    </rdf:Seq>
```

```
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Nick_Name_Familiar_Spoiler_Text_20">
    <rdf:type>
      <owl:Class rdf:about="&nom;Familiar" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Spoiler" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Chyrsella_the_Monk_Nick_21" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_Fact_Text_5">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Chysella_Primary-Name_18" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_19" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Nick_Name_Familiar_Fact_Text_23">
    <rdf:type>
      <owl:Class rdf:about="&nom;Familiar" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
```

```
      <rdf:li rdf:resource="#
  Chrysella_Huntinghawk_of_the_Swords_Nick_24" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Value_Value_26">
  <rdf:type>
    <owl:Class rdf:about="&omt;Value" />
  </rdf:type>
  <omt:has-value>35</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_19">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#
  Chrysella_Huntinghawk_of_the_Swords_Nick_24">
  <rdf:type>
    <owl:Class rdf:about="&nom;Nick" />
  </rdf:type>
  <nom:has-name-component>Chrysella Huntinghawk of the Swords</nom:has-
  name-component>
</rdf:Description>

<rdf:Description rdf:about="#Chysella_Primary-Name_18">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Chysella</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Primary-Name_38">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Mary</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Chyrsella_the_Monk_Nick_21">
  <rdf:type>
    <owl:Class rdf:about="&nom;Nick" />
  </rdf:type>
  <nom:has-name-component>Chyrsella the Monk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Truber_Family-Name_40">
```

```
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Truber</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Suzanne_Additional-Name_39">
    <rdf:type>
      <owl:Class rdf:about="&nom;Additional-Name" />
    </rdf:type>
    <nom:has-name-component>Suzanne</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.5: RDF Results: User 5

K.1.6 User 6

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/user6#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>user6</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: user6</dc:title>
  <dct:updated>2007-4-15</dct:updated>

  <rdf:Description rdf:about="#user6_Context_0">
```

```
    <rdfs:label>user6</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>user6.Krisella &amp;quot;The Monk&amp;quot; Huntinghawk
    of the swords</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#user6_Context_0"/>
    <omt:has-trait rdf:resource="#Alive_Alive_Fact_Text_3"/>
    <omt:has-trait rdf:resource="#Incorporeal_Fact_Incorporeal_Subtext_4"
    />
    <omt:has-trait rdf:resource="#
    Krisella_The_Monk_Huntinghawk_of_the_swords_Name_Fact_Text_5"/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_22"/>
    <omt:has-trait rdf:resource="#
    Age_Age_Fact_Approximate_Supplemental_24"/>
    <rdfs:seeAlso>http://www.ghostmonk.org</rdfs:seeAlso>
    <omfb:portrayed-by rdf:resource="#_new_entity_3__Being_26"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_25">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_3__Being_26">
    <rdfs:label>Reality.Mary &amp;quot;Mary Sue&amp;quot; Suzanne Trouber
    </rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_25"/>
    <omt:has-trait rdf:resource="#Alive_Alive_27"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_28"/>
    <omt:has-trait rdf:resource="#Mary_Mary_Sue_Suzanne_Trouber_Name_29"/
    >
    <omb:portrays rdf:resource="#_new_entity_1__Character_2"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Incorporeal_Fact_Incorporeal_Subtext_4">
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
```

```
    <owl:Class rdf:about="&omt;Incorporeal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Subtext" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#
  Krisella_The_Monk_Huntinghawk_of_the_swords_Name_Fact_Text_5">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_Text_Fact_6"/>
</rdf:Description>

<rdf:Description rdf:about="#Alive_Alive_Fact_Text_3">
  <rdf:type>
    <owl:Class rdf:about="&omt;Alive" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Corporeal_Corporeal_28">
  <rdf:type>
    <owl:Class rdf:about="&omt;Corporeal" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Alive_Alive_27">
  <rdf:type>
    <owl:Class rdf:about="&omt;Alive" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Age_Age_Fact_Approximate_Supplemental_24">
  <rdf:type>
    <owl:Class rdf:about="&omt;Age" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
```

```
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&xprop;Approximate" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Supplemental" />
    </rdf:type>
    <omt:has-age rdf:resource="#Value_Value_23"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Mary_Sue_Suzanne_Trouber_Name_29">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_30"/>
  </rdf:Description>

  <rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_22">
    <rdf:type>
      <owl:Class rdf:about="&gender-default;FemaleSex" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_Text_Fact_6">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_Primary-Name_18" />
        <rdf:li rdf:resource="#The_Monk_Nick_19" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_20" />
        <rdf:li rdf:resource="#of_the_swords_Qualifier_21" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Value_Value_23">
    <rdf:type>
```

```
    <owl:Class rdf:about="&omt;Value" />
  </rdf:type>
  <omt:has-value>35</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#Full_Name_Full_30">
  <rdf:type>
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Mary_Primary-Name_37" />
      <rdf:li rdf:resource="#Mary_Sue_Nick_38" />
      <rdf:li rdf:resource="#Suzanne_Additional-Name_39" />
      <rdf:li rdf:resource="#Trouber_Family-Name_40" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Suzanne_Additional-Name_39">
  <rdf:type>
    <owl:Class rdf:about="&nom;Additional-Name" />
  </rdf:type>
  <nom:has-name-component>Suzanne</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Trouber_Family-Name_40">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Trouber</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#of_the_swords_Qualifier_21">
  <rdf:type>
    <owl:Class rdf:about="&nom;Qualifier" />
  </rdf:type>
  <nom:has-name-component>of the swords</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Krisella_Primary-Name_18">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Krisella</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Primary-Name_37">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
```

```
    <nom:has-name-component>Mary</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Sue_Nick_38">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Mary Sue</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Huntinghawk_Family-Name_20">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Huntinghawk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#The_Monk_Nick_19">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>The Monk</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.6: RDF Results: User 6

K.1.7 User 7

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/User7#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>User7</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: User7</dc:title>
  <dct:updated>2007-4-21</dct:updated>

  <rdf:Description rdf:about="#User7_Context_0">
```

```
    <rdfs:label>User7</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>User7.Chrisella Huntinghawk</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#User7_Context_0"/>
    <omt:has-trait rdf:resource="#Undead_Undead_Fact_Calculated_3"/>
    <omt:has-trait rdf:resource="#
    Incorporeal_Incorporeal_Fact_Calculated_4"/>
    <omt:has-trait rdf:resource="#Chrisella_the_Monk_Name_Fact_Text_5"/>
    <omt:has-projected-trait rdf:resource="#
    Chrisella_Huntinghawk_of_the_Swords_Name_Fact_Text_12"/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_24"/>
    <omt:has-trait rdf:resource="#
    Age_Age_Approximate_Fact_Supplemental_26"/>
    <rdfs:seeAlso>http://www.ghosthawk.org</rdfs:seeAlso>
    <omfb:portrayed-by rdf:resource="#_new_entity_4__Being_28"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_27">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_4__Being_28">
    <rdfs:label>Reality.Mary Susanne Truber</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_27"/>
    <omt:has-trait rdf:resource="#Alive_Alive_29"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_30"/>
    <omt:has-trait rdf:resource="#Mary_Susanne_Truber_Name_31"/>
    <omb:portrays rdf:resource="#_new_entity_1__Character_2"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Alive_Alive_29">
    <rdf:type>
      <owl:Class rdf:about="&omt;Alive" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Age_Age_Approximate_Fact_Supplemental_26">
```

```
    <rdf:type>
      <owl:Class rdf:about="&omt;Age" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&xprop;Approximate" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Supplemental" />
    </rdf:type>
    <omt:has-age rdf:resource="#Value_Value_25"/>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Chrisella_Huntinghawk_of_the_Swords_Name_Fact_Text_12">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Formal_Name_Formal_Fact_Text_13
    "/>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Susanne_Truber_Name_31">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_32"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Undead_Undead_Fact_Calculated_3">
    <rdf:type>
      <owl:Class rdf:about="&omt;Undead" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Calculated" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Corporeal_Corporeal_30">
    <rdf:type>
```

```
    <owl:Class rdf:about="&omt;Corporeal" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Chrisella_the_Monk_Name_Fact_Text_5">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_Fact_Text_6"/>
  <omt:has-name-ordering rdf:resource="#
 Nick_Name_Familiar_Spoiler_Text_10"/>
</rdf:Description>

<rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_24">
  <rdf:type>
    <owl:Class rdf:about="&gender-default;FemaleSex" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Incorporeal_Incorporeal_Fact_Calculated_4"
 >
  <rdf:type>
    <owl:Class rdf:about="&omt;Incorporeal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Calculated" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Formal_Name_Formal_Fact_Text_13">
  <rdf:type>
    <owl:Class rdf:about="&nom;Formal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
```

```
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Chrisella_Primary-Name_19" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_20" />
        <rdf:li rdf:resource="#of_the_Swords_Qualifier_21" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Value_Value_25">
    <rdf:type>
      <owl:Class rdf:about="&omt;Value" />
    </rdf:type>
    <omt:has-value>35</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_32">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Mary_Primary-Name_36" />
        <rdf:li rdf:resource="#Susanne_Additional-Name_37" />
        <rdf:li rdf:resource="#Truber_Family-Name_38" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Nick_Name_Familiar_Spoiler_Text_10">
    <rdf:type>
      <owl:Class rdf:about="&nom;Familiar" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Spoiler" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Chrisella_the_Monk_Nick_11" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_Fact_Text_6">
    <rdf:type>
```

```
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Chrisella_Primary-Name_8" />
      <rdf:li rdf:resource="#Huntinghawk_Family-Name_9" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Primary-Name_36">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Mary</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Susanne_Additional-Name_37">
  <rdf:type>
    <owl:Class rdf:about="&nom;Additional-Name" />
  </rdf:type>
  <nom:has-name-component>Susanne</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Chrisella_Primary-Name_19">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Chrisella</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_9">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_20">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>
```

```
  <rdf:Description rdf:about="#of_the_Swords_Qualifier_21">
    <rdf:type>
      <owl:Class rdf:about="&nom;Qualifier" />
    </rdf:type>
    <nom:has-name-component>of the Swords</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Truber_Family-Name_38">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Truber</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Chrisella_the_Monk_Nick_11">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Chrisella the Monk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Chrisella_Primary-Name_8">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Chrisella</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.7: RDF Results: User 7

K.1.8 User 8

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/User7#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>User7</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: User7</dc:title>
  <dct:updated>2007-4-21</dct:updated>

  <rdf:Description rdf:about="#User7_Context_0">
```

```
    <rdfs:label>User7</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>User7.Chrisella Huntinghawk</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#User7_Context_0"/>
    <omt:has-trait rdf:resource="#Undead_Undead_Fact_Calculated_3"/>
    <omt:has-trait rdf:resource="#
    Incorporeal_Incorporeal_Fact_Calculated_4"/>
    <omt:has-trait rdf:resource="#Chrisella_the_Monk_Name_Fact_Text_5"/>
    <omt:has-projected-trait rdf:resource="#
    Chrisella_Huntinghawk_of_the_Swords_Name_Fact_Text_12"/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_24"/>
    <omt:has-trait rdf:resource="#
    Age_Age_Approximate_Fact_Supplemental_26"/>
    <rdfs:seeAlso>http://www.ghosthawk.org</rdfs:seeAlso>
    <omfb:portrayed-by rdf:resource="#_new_entity_4__Being_28"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_27">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_4__Being_28">
    <rdfs:label>Reality.Mary Susanne Truber</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_27"/>
    <omt:has-trait rdf:resource="#Alive_Alive_29"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_30"/>
    <omt:has-trait rdf:resource="#Mary_Susanne_Truber_Name_31"/>
    <omb:portrays rdf:resource="#_new_entity_1__Character_2"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Alive_Alive_29">
    <rdf:type>
      <owl:Class rdf:about="&omt;Alive" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Age_Age_Approximate_Fact_Supplemental_26">
```

```
    <rdf:type>
      <owl:Class rdf:about="&omt;Age" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&xprop;Approximate" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Supplemental" />
    </rdf:type>
    <omt:has-age rdf:resource="#Value_Value_25"/>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Chrisella_Huntinghawk_of_the_Swords_Name_Fact_Text_12">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Formal_Name_Formal_Fact_Text_13
    "/>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Susanne_Truber_Name_31">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_32"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Undead_Undead_Fact_Calculated_3">
    <rdf:type>
      <owl:Class rdf:about="&omt;Undead" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Calculated" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Corporeal_Corporeal_30">
    <rdf:type>
```

```
    <owl:Class rdf:about="&omt;Corporeal" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Chrisella_the_Monk_Name_Fact_Text_5">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_Fact_Text_6"/>
  <omt:has-name-ordering rdf:resource="#
 Nick_Name_Familiar_Spoiler_Text_10"/>
</rdf:Description>

<rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_24">
  <rdf:type>
    <owl:Class rdf:about="&gender-default;FemaleSex" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Incorporeal_Incorporeal_Fact_Calculated_4"
 >
  <rdf:type>
    <owl:Class rdf:about="&omt;Incorporeal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Calculated" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Formal_Name_Formal_Fact_Text_13">
  <rdf:type>
    <owl:Class rdf:about="&nom;Formal" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
```

```
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Chrisella_Primary-Name_19" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_20" />
        <rdf:li rdf:resource="#of_the_Swords_Qualifier_21" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Value_Value_25">
    <rdf:type>
      <owl:Class rdf:about="&omt;Value" />
    </rdf:type>
    <omt:has-value>35</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_32">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Mary_Primary-Name_36" />
        <rdf:li rdf:resource="#Susanne_Additional-Name_37" />
        <rdf:li rdf:resource="#Truber_Family-Name_38" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Nick_Name_Familiar_Spoiler_Text_10">
    <rdf:type>
      <owl:Class rdf:about="&nom;Familiar" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Spoiler" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Chrisella_the_Monk_Nick_11" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_Fact_Text_6">
    <rdf:type>
```

```
    <owl:Class rdf:about="&nom;Full" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-order>
    <rdf:Seq>
      <rdf:li rdf:resource="#Chrisella_Primary-Name_8" />
      <rdf:li rdf:resource="#Huntinghawk_Family-Name_9" />
    </rdf:Seq>
  </omt:has-order>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Primary-Name_36">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Mary</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Susanne_Additional-Name_37">
  <rdf:type>
    <owl:Class rdf:about="&nom;Additional-Name" />
  </rdf:type>
  <nom:has-name-component>Susanne</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Chrisella_Primary-Name_19">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Chrisella</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_9">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_20">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>
```

```
  <rdf:Description rdf:about="#of_the_Swords_Qualifier_21">
    <rdf:type>
      <owl:Class rdf:about="&nom;Qualifier" />
    </rdf:type>
    <nom:has-name-component>of the Swords</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Truber_Family-Name_38">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Truber</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Chrisella_the_Monk_Nick_11">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Chrisella the Monk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Chrisella_Primary-Name_8">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Chrisella</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.8: RDF Results: User 8

K.1.9 User 9

Note: RDF edited to remove additional traits added by error in the software.

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/User9#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY omfb "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    char#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:omfb="&omfb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>User9</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: User9</dc:title>
  <dct:updated>2007-4-25</dct:updated>
```

```
<rdf:Description rdf:about="#User9_Context_0">
  <rdfs:label>User9</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#_new_entity_1__Character_2">
  <rdfs:label>User9.&amp;quot;Krisella the Monk&amp;quot;</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Character" />
  </rdf:type>
  <ome:exists-in rdf:resource="#User9_Context_0"/>
  <omt:has-trait rdf:resource="#Krisella_Huntinghawk_Name_Fact_Text_5"/
  >
  <omt:has-projected-trait rdf:resource="#
  Krisella_Huntinghawk_of_the_Swords_Name_Fact_Text_14"/>
  <omt:has-observed-trait rdf:resource="#
  Undead_Undead_Fact_Interpretation_17"/>
  <omt:has-observed-trait rdf:resource="#
  Incorporeal_Incorporeal_Fact_Interpretation_18"/>
  <omt:has-observed-trait rdf:resource="#
  Age_Age_Accurate_Fact_Supplemental_20"/>
  <rdfs:seeAlso>www.ghostmonk.org</rdfs:seeAlso>
  <omfb:portrayed-by rdf:resource="#_new_entity_4__Being_22"/>
  <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_36"/>
</rdf:Description>

<rdf:Description rdf:about="#Reality_Context_21">
  <rdfs:label>Reality</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&ome;Context" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#_new_entity_4__Being_22">
  <rdfs:label>Reality.Mary Suzanne Truber</rdfs:label>
  <rdf:type>
    <owl:Class rdf:about="&omb;Being" />
  </rdf:type>
  <ome:exists-in rdf:resource="#Reality_Context_21"/>
  <omt:has-trait rdf:resource="#Alive_Alive_23"/>
  <omt:has-trait rdf:resource="#Corporeal_Corporeal_24"/>
  <omt:has-trait rdf:resource="#Mary_Suzanne_Truber_Name_25"/>
  <omb:portrays rdf:resource="#_new_entity_1__Character_2"/>
</rdf:Description>

<rdf:Description rdf:about="#
  Krisella_Huntinghawk_of_the_Swords_Name_Fact_Text_14">
  <rdf:type>
```

```
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Nick_Name_Familiar_Fact_Text_15
  "/>
</rdf:Description>

<rdf:Description rdf:about="#Age_Age_Accurate_Fact_Supplemental_20">
  <rdf:type>
    <owl:Class rdf:about="&omt;Age" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&xprop;Accurate" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Supplemental" />
  </rdf:type>
  <omt:has-age rdf:resource="#Value_Value_19"/>
</rdf:Description>

<rdf:Description rdf:about="#Alive_Alive_23">
  <rdf:type>
    <owl:Class rdf:about="&omt;Alive" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Undead_Undead_Fact_Interpretation_17">
  <rdf:type>
    <owl:Class rdf:about="&omt;Undead" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Interpretation" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#
  Incorporeal_Incorporeal_Fact_Interpretation_18">
  <rdf:type>
    <owl:Class rdf:about="&omt;Incorporeal" />
  </rdf:type>
```

```
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Interpretation" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Huntinghawk_Name_Fact_Text_5">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_Fact_Text_6"/>
    <omt:has-name-ordering rdf:resource="#
   Nick_Name_Familiar_Spoiler_Text_13"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Corporeal_Corporeal_24">
    <rdf:type>
      <owl:Class rdf:about="&omt;Corporeal" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_36">
    <rdf:type>
      <owl:Class rdf:about="&gender-default;FemaleSex" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Suzanne_Truber_Name_25">
    <rdf:type>
      <owl:Class rdf:about="&omt;Name" />
    </rdf:type>
    <omt:has-name-ordering rdf:resource="#Full_Name_Full_26"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Nick_Name_Familiar_Fact_Text_15">
    <rdf:type>
      <owl:Class rdf:about="&nom;Familiar" />
```

```
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_Huntinghawk_of_the_Swords_Nick_16
   " />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_Fact_Text_6">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_Primary-Name_32" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_33" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Nick_Name_Familiar_Spoiler_Text_13">
    <rdf:type>
      <owl:Class rdf:about="&nom;Familiar" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Spoiler" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_the_Monk_Nick_31" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Value_Value_19">
```

```
    <rdf:type>
      <owl:Class rdf:about="&omt;Value" />
    </rdf:type>
    <omt:has-value>35</omt:has-value>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_26">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Mary_Suzanne_Primary-Name_28" />
        <rdf:li rdf:resource="#Truber_Family-Name_29" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Huntinghawk_of_the_Swords_Nick_16
    ">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Krisella Huntinghawk of the Swords</nom:has-
    name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Primary-Name_32">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Huntinghawk_Family-Name_33">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Huntinghawk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_the_Monk_Nick_31">
    <rdf:type>
      <owl:Class rdf:about="&nom;Nick" />
    </rdf:type>
    <nom:has-name-component>Krisella the Monk</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Truber_Family-Name_29">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
```

```
    </rdf:type>
    <nom:has-name-component>Truber</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Mary_Suzanne_Primary-Name_28">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Mary Suzanne</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.9: RDF Results: User 9

K.1.10 User 10

Note: RDF edited to remove additional traits added by error in the software.

```
<?xml version="1.0"?>
<!DOCTYPE rdf [
<!ENTITY base "http://ontomedia.ecs.soton.ac.uk/ontologies/ontomedia/
    entity_store/user10#">
<!ENTITY xsd  "http://www.w3.org/2001/XMLSchema#">
<!ENTITY rdf  "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
<!ENTITY dc "http://purl.org/dc/elements/1.1/">
<!ENTITY dct  "http://purl.org/dc/terms/">
<!ENTITY owl  "http://www.w3.org/2002/07/owl#">
<!ENTITY fic  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/fiction/
    fic#">
<!ENTITY omt  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    trait#">
<!ENTITY ome  "http://ontomedia.ecs.soton.ac.uk/ontologies/core/
    expression#">
<!ENTITY gender-default "http://ontomedia.contextus.info/entity_store/owl
    /user/gender/gender-default#">
<!ENTITY omb  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    being#">
<!ENTITY nom  "http://ontomedia.ecs.soton.ac.uk/ontologies/misc/name#">
<!ENTITY xprop  "http://ontomedia.ecs.soton.ac.uk/ontologies/ext/common/
    exprop#">
]>

<rdf:RDF xmlns:rdf="&rdf;"
   xmlns:rdfs="&rdfs;"
   xmlns:xsd="&xsd;"
   xml:base="&base;"
   xmlns:owl="&owl;"
   xmlns:fic="&fic;"
   xmlns:omt="&omt;"
   xmlns:ome="&ome;"
   xmlns:gender-default="&gender-default;"
   xmlns:omb="&omb;"
   xmlns:nom="&nom;"
   xmlns:xprop="&xprop;"
   xmlns:dc="&dc;"
   xmlns:dct="&dct;">

  <rdfs:label>user10</rdfs:label>
  <dc:title xml:lang="en">OntoMedia Extension: user10</dc:title>
  <dct:updated>2007-5-3</dct:updated>

  <rdf:Description rdf:about="#user10_Context_0">
    <rdfs:label>user10</rdfs:label>
```

```
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
    <ome:contains rdf:resource="#_new_entity_1__Character_2"/>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_1__Character_2">
    <rdfs:label>user10.Krisella Huntinghawk</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Character" />
    </rdf:type>
    <ome:exists-in rdf:resource="#user10_Context_0"/>
    <omt:has-trait rdf:resource="#Undead_Fact_Undead_Subtext_3"/>
    <omt:has-trait rdf:resource="#
    Corporeal_Corporeal_Fact_Interpretation_4"/>
    <omt:has-trait rdf:resource="#Krisella_the_Monk_Name_Fact_Text_5"/>
    <omt:has-trait rdf:resource="#FemaleSex_FemaleSex_Fact_Text_34"/>
    <omt:has-trait rdf:resource="#
    Age_Age_Fact_Approximate_Supplemental_36"/>
    <rdfs:seeAlso>www.ghostmonk.org</rdfs:seeAlso>
    <ome:is rdf:resource="#_new_entity_4__Being_43"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Reality_Context_42">
    <rdfs:label>Reality</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&ome;Context" />
    </rdf:type>
    <ome:contains rdf:resource="#_new_entity_4__Being_43"/>
  </rdf:Description>

  <rdf:Description rdf:about="#_new_entity_4__Being_43">
    <rdfs:label>Reality.Mary Suzanne Truber</rdfs:label>
    <rdf:type>
      <owl:Class rdf:about="&omb;Being" />
    </rdf:type>
    <ome:exists-in rdf:resource="#Reality_Context_42"/>
    <omt:has-trait rdf:resource="#Alive_Alive_44"/>
    <omt:has-trait rdf:resource="#Corporeal_Corporeal_45"/>
    <omt:has-trait rdf:resource="#Mary_Suzanne_Truber_Name_46"/>
    <ome:is rdf:resource="#_new_entity_1__Character_2"/>
  </rdf:Description>

  <rdf:Description rdf:about="#Alive_Alive_44">
    <rdf:type>
      <owl:Class rdf:about="&omt;Alive" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Age_Age_Fact_Approximate_Supplemental_36">
    <rdf:type>
```

```
    <owl:Class rdf:about="&omt;Age" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&xprop;Approximate" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Supplemental" />
  </rdf:type>
  <omt:has-age rdf:resource="#Value_Value_35"/>
</rdf:Description>

<rdf:Description rdf:about="#Krisella_the_Monk_Name_Fact_Text_5">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Text" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Birth_Name_Birth_Fact_Text_7"/>
  <omt:has-name-ordering rdf:resource="#
 Nick_Name_Familiar_Text_Spoiler_19"/>
  <omt:has-name-ordering rdf:resource="#
 Professional_Name_Professional_Fact_Text_20"/>
</rdf:Description>

<rdf:Description rdf:about="#Undead_Fact_Undead_Subtext_3">
  <rdf:type>
    <owl:Class rdf:about="&fic;Fact" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&omt;Undead" />
  </rdf:type>
  <rdf:type>
    <owl:Class rdf:about="&fic;Subtext" />
  </rdf:type>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Suzanne_Truber_Name_46">
  <rdf:type>
    <owl:Class rdf:about="&omt;Name" />
  </rdf:type>
  <omt:has-name-ordering rdf:resource="#Full_Name_Full_47"/>
</rdf:Description>

<rdf:Description rdf:about="#FemaleSex_FemaleSex_Fact_Text_34">
```

```
    <rdf:type>
      <owl:Class rdf:about="&gender-default;FemaleSex" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Corporeal_Corporeal_Fact_Interpretation_4"
    >
    <rdf:type>
      <owl:Class rdf:about="&omt;Corporeal" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Interpretation" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Corporeal_Corporeal_45">
    <rdf:type>
      <owl:Class rdf:about="&omt;Corporeal" />
    </rdf:type>
  </rdf:Description>

  <rdf:Description rdf:about="#Nick_Name_Familiar_Text_Spoiler_19">
    <rdf:type>
      <owl:Class rdf:about="&nom;Familiar" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Spoiler" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_the_Monk_Nick_41" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Birth_Name_Birth_Fact_Text_7">
    <rdf:type>
      <owl:Class rdf:about="&nom;Birth" />
    </rdf:type>
```

```
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_Primary-Name_17" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_18" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#
    Professional_Name_Professional_Fact_Text_20">
    <rdf:type>
      <owl:Class rdf:about="&nom;Professional" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Fact" />
    </rdf:type>
    <rdf:type>
      <owl:Class rdf:about="&fic;Text" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Krisella_Primary-Name_27" />
        <rdf:li rdf:resource="#Huntinghawk_Family-Name_28" />
        <rdf:li rdf:resource="#of_the_Swords_Qualifier_29" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Full_Name_Full_47">
    <rdf:type>
      <owl:Class rdf:about="&nom;Full" />
    </rdf:type>
    <omt:has-order>
      <rdf:Seq>
        <rdf:li rdf:resource="#Mary_Primary-Name_51" />
        <rdf:li rdf:resource="#Suzanne_Additional-Name_52" />
        <rdf:li rdf:resource="#Truber_Family-Name_53" />
      </rdf:Seq>
    </omt:has-order>
  </rdf:Description>

  <rdf:Description rdf:about="#Value_Value_35">
    <rdf:type>
      <owl:Class rdf:about="&omt;Value" />
    </rdf:type>
```

```
  <omt:has-value>35</omt:has-value>
</rdf:Description>

<rdf:Description rdf:about="#of_the_Swords_Qualifier_29">
  <rdf:type>
    <owl:Class rdf:about="&nom;Qualifier" />
  </rdf:type>
  <nom:has-name-component>of the Swords</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_28">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Huntinghawk_Family-Name_18">
  <rdf:type>
    <owl:Class rdf:about="&nom;Family-Name" />
  </rdf:type>
  <nom:has-name-component>Huntinghawk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Krisella_Primary-Name_27">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Krisella</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Krisella_the_Monk_Nick_41">
  <rdf:type>
    <owl:Class rdf:about="&nom;Nick" />
  </rdf:type>
  <nom:has-name-component>Krisella the Monk</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Mary_Primary-Name_51">
  <rdf:type>
    <owl:Class rdf:about="&nom;Primary-Name" />
  </rdf:type>
  <nom:has-name-component>Mary</nom:has-name-component>
</rdf:Description>

<rdf:Description rdf:about="#Suzanne_Additional-Name_52">
  <rdf:type>
    <owl:Class rdf:about="&nom;Additional-Name" />
  </rdf:type>
  <nom:has-name-component>Suzanne</nom:has-name-component>
</rdf:Description>
```

```
  <rdf:Description rdf:about="#Truber_Family-Name_53">
    <rdf:type>
      <owl:Class rdf:about="&nom;Family-Name" />
    </rdf:type>
    <nom:has-name-component>Truber</nom:has-name-component>
  </rdf:Description>

  <rdf:Description rdf:about="#Krisella_Primary-Name_17">
    <rdf:type>
      <owl:Class rdf:about="&nom;Primary-Name" />
    </rdf:type>
    <nom:has-name-component>Krisella</nom:has-name-component>
  </rdf:Description>

</rdf:RDF>
```

Listing K.10: RDF Results: User 10