



THE MONTY HYAMS ARCHIVE: A NEW RESOURCE IN INFORMATION SCIENCE HISTORY

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Table of Contents

1	Acknowledgements	3
2	Abstract	4
3	Introduction.....	5
4	Literature Review	7
4.1	Archival.....	7
4.1.1	What is an Archive?	7
4.1.2	<i>Respect des fonds</i> , Provenance, and Original Order	9
4.2	Patents, Patent Information, and Derwent.....	12
4.2.1	Definitions	12
4.2.2	Historical Examinations of Derwent and Monty Hyams.....	13
4.3	References.....	14
5	Research Methodology.....	17
5.1	Organisation, Description, and Future Preservation.....	17
5.2	Qualitative Analyses	20
5.2.1	Literary Warrant Analysis	20
5.2.2	Documentary Analysis.....	20
5.2.3	Historical Research	21
5.3	Interviews	23
5.4	References.....	24
6	Findings.....	25
6.1	The Monty Hyams Archive	25
6.1.1	Arrangement and Description, and Legislation.....	25
6.1.2	Future Conservation and Preservation.....	28
6.1.3	References.....	30
6.2	World Patents Index.....	32
6.2.1	Leasco, BIRPI/WIPO, and Derwent.....	32
6.2.2	Derwent and BIRPI/WIPO.....	36
6.2.3	Introduction of the World Patents Index	45
6.2.4	References.....	48
6.3	Derwent, Patent Information Coding, and Technological Advancement in the 20 th Century.....	51
6.3.1	Derwent Coding and Cards.....	51
6.3.2	Magnetic Tape	59
6.3.3	Microform.....	61
6.3.4	Online Services	63

6.3.5	CD-ROMs	71
6.3.6	References	72
7	Conclusions and the Future of the Archive	78
8	References	79
9	Appendices	90
9.1	Appendix A: Proposal and Reflection	90
9.1.1	Reflection.....	90
9.1.2	Proposal.....	91
9.2	Appendix B: Selection of Interview Transcriptions	100
9.2.1	Peter Hyams Interview	100
9.2.2	Stephen Hyams Interview.....	103
9.2.3	Dr. Charles Oppenheim Interview	105
9.2.4	Informal David Bawden Discussion Notes.....	108
9.3	Appendix C: Sample of Archival Descriptions.....	106

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2 Abstract

The Monty Hyams Archive stands as an important source of information history. This project seeks to organise and investigate the contents of the Archive while providing information on standards application to the care of the Archive. Through the research methodologies of literary warrant analysis, documentary analysis, and historical research, this dissertation proposed standards for future care of the archive, inspected the documents, and evaluated their contents and assigned descriptions. Interviews and historical research were used to expand on the information found in the documents. The descriptions generated were used to discern the major themes within the Archive and to develop an argument for The Monty Hyams as a crucial information science and patent information history resource. The project resulted in the description of the Archive's contents, a proposed framework of standards with which to care for the Archive, and a confirmation of the argument that The Monty Hyams Archive exists as an important source of information history.

3 Introduction

The establishment of The Monty Hyams Archive is vital to the study and understanding of information science. The project began with Peter Hyams, the eldest son of the archive's namesake, and his desire to organise and donate his father's materials for research and preservation purposes. The official donation of the Archive to City University London's Department of Library and Information took place in June 2014. In autumn 2014, Dr. Lyn Robinson and Dr. David Bawden expressed the desire for a student to take on the project of organising and analysing the documents. Having a background in archives, I offered my services in hopes of assisting with the preservation of the documents and investigating their contents.

First, some background information for Hyams is required. In 1947, Monty Hyams was hired by the Pyrene Company as a research chemist and would later take on the role of Patents Manager. Working for the company, he made frequent trips to London to visit the British Patent Office where he would create abstracts for patents pertinent to chemical information. This resulted in the earliest product developed by Monty Hyams, the weekly bulletin 'British Chemical Patents Report' which began publication in 1948. Derwent Publications Ltd. (later known as Derwent Information Ltd.) began as a modest abstracting and indexing service operated out of Monty Hyams' house, and it grew into a giant of patent information. In this project, the impact of the company and its history within information science is traced.

The initial objectives of the project were as follows:

- Define the archive
- Contextualise the documents
- Research appropriate classification systems and insight into the benefits and problems of each and recommend one
- Inspect software options for cataloguing purposes
- Investigate various techniques for preservation including digitisation and storage options
- Perform analyses on the documents in order to discern the existence of a new theory of information

These objectives were set out prior to any serious investigation of their feasibility. Time limitations of the project altered the objectives quite drastically. As such, the intentions of the project evolved over time. Inspect of software and investigation of

preservation techniques were replaced with an investigation of the standards to which the Archive must adhere for accreditation, conservation, and preservation reasons. Instead, the objectives were modified to centre upon inspection on the wealth of information the documents within The Monty Hyams Archive held.

As a result of these changes, two major themes major themes were selected as a focus along with an inspection of archival standards which can apply in future to the Archive. The resulting paper is a project-based report centred on the description of The Monty Hyams Archive and the analyses of its contents with the intention to construct an argument for the Archive as a key resource for information science history.

4 Literature Review

The purpose of the literature review is to discuss the literature surrounding archives and patents. Considerations of differing archival definitions and theories have been given in order to determine the best approach for this project. On the other hand, patents and patent information have been examined to give

4.1 Archival

The literature review offers an overview of current archival definitions and theories while placing The Monty Hyams Archive in the necessary background of patents and patent information. Discussion of standards and best practices applicable to the establishment and preservation of an archive were part of the research methodology of the project. Thus, they are discussed in a later portion of the paper.

4.1.1 What is an Archive?

Defining an archive is central to the understanding of what an archive is today. Inspecting definitions defines the contents and the process by which new additions are considered. Through observation of the changing definitions of archives and their context, this project intends to determine a suitable concept of an archive suitable for The Monty Hyams Archive.

Definitions of archives are viewed by Caroline Williams (2014, pp.12-17) as falling into one of two categories: exclusive and inclusive. As the terms suggest, exclusive definitions provide a stringent set of criteria for the assurance of authenticity, reliability, and auditability of the information held within the documents (Williams, 2014, p.13). Alternatively, an inclusive archives definition (largely supported by professional organisations) places emphasis on the massive varied information and data accumulated by organisations according to their operational needs (Williams, 2014, p.15). Going forward, various fundamental definitions within the archival field are discussed in relation to the category in which they fall.

One of the classic definitions of an archive is derived from Hilary Jenkinson's work *A Manual of Archive Administration*. In the text, he defines documents suitable for inclusion within an archive as such:

"A document which may be said to belong to the class of Archives is one which was drawn up or used in the course of an administrative or executive transaction (whether public or private) of which itself formed a part; and subsequently

preserved in their own custody for their own information by the person or persons responsible for that transaction and their legitimate successors.”

(Jenkinson, 1937, p.11)

This definitive exclusive definition shaped much of professional archival work for most of the early 20th century. The problem with this definition is the extreme stress placed upon custodianship. Only documents which related directly to the individual or individuals concerned were considered for inclusion. While this definition might be applicable to much of the Archive’s contents, future additions to the collection would not be welcome as they were not directly related to Hyams’ own formation and preservation of the documents.

Schellenberg (1956, p.14) also questions the applicability of Jenkinson’s definition to modern archival documents as the construction of archives now involved the addition of relationally complex documents. Tracing the custodial history of documents prior to their inclusion in a modern archive can be difficult. Thus, Schelleberg proposes his own definition:

“Those records of any public or private institute which are adjudged worthy of permanent preservation for reference and research purposes and which have been deposited or have been selected for deposit in an archival institution.”

(Schellenberg, T.R., 1956, p.16)

Schellenberg pronounces the line of custody as emphasised by Jenkinson to be less crucial to their rightful inclusion in a collection. Additionally, he expands the understanding that documents relating to the scope of an archive can be added based on their research potential and perhaps not by their direct links to the main creator of the archive’s original contents.

Regarding international bodies, the International Council on Archives (ICA) (n.d.) proposes a brief but very comprehensive definition of archives which defined archives as a collection of documents made, received, and preserved by an organisation or individual. The Society of American Archivists (SAA) affords a definition encompassing the role and contents of this archive, which is comparable to the aforementioned ICA explanation and was later incorporated into the ISO 16175-1:2010 standard:

“Materials created or received by a person, family, or organization, public or private, in the conduct of their affairs and preserved because of the enduring

value contained in the information they contain or as evidence of the functions and responsibilities of their creator, especially those materials maintained using the principles of provenance, original order, and collective control; permanent records.”

(Pearce-Moses, 2005, p.30)

This inclusive definition informs the concept of archives for a number of organisations including The National Archives (2013, p.1) in the UK. This definition is much broader than those previously mentioned. The noting of ‘evidential material’ in the definition opens the Archive to additions from organisations and individuals which were significant either to the life of Monty Hyams or to the history and operations at Derwent Publications Ltd.

4.1.2 *Respect des fonds, Provenance, and Original Order*

Classical archival theory roots itself in *respect des fonds*, a principle defined by Michel Duchein (1983, p.64) as “to group, without mixing them with others, the archives (documents of every kind) created by or coming from an administration, establishment, person, or corporate body.” From this understanding of the construction of archives and the archivist’s role in maintaining arrangement come two principles: provenance and original order.

At the centre of any archival projects is the principle of provenance. Provenance is defined by the International Council on Archives (2000, p.11) as: “The relationship between records and the organizations or individuals that created, accumulated and/or maintained and used them in the conduct of personal or corporate activity.” Thus, the chain through which the documents have passed is documented within the archive and is key to the understanding of any adjustments made to the documents and the purposes for which they might have been used. The authors or users of the materials prior to their contribution to the archive are key to tracing their history and providing context to the Archive’s contents. Little opposition to the principle of provenance exists within the literature.

Original order is defined by the Society of American Archivists (2005, pp.280-281) as follows the organisation and arrangement imposed by the owner of the documents. The original order in which an archive is acquired must not be disturbed. This applies even when the organisation of the documents may appear confusing at first, for the arrangement may link documents in a unique way which could reveal information about their relationships in the past.

The original order principle does not exist without challenge however. Perhaps one of the most important articles contesting original order was presented by Heather MacNeil. In her article 'Archivalterity: Rethinking Original Order', she presents two new concepts to the world of archives: custodial bond and archivalterity. MacNeil (2008, p.14) describes the "custodial bond" as "the relations that exist between a body of records and the various custodial authorities that interact with the records over time, including archivists and archival institutions." With the new idea, she views the interventions of those working with archives as a natural occurrence in the documents' histories which should be accepted. The second concept of archivalterity is defined as "the acts of continuous and discontinuous change that transform the meaning and authenticity of a fond as it is transmitted over time and space." (MacNeil, 2008, p.14) Some of her arguments include that arrangement of an archive alters over time organically and should be considered part of the record's ongoing history and that the documents within an archive no longer serve their original purpose and thus their original order should be questioned and potentially rearranged (MacNeil, 2008, pp.21-22). Alternatively, Millar (2010, p.101) considers original order as a way of providing context for an archive as an added benefit to its contents. She also finds that the practical advantage of time management with the archivist not having to formulate a new order for the archive. Removal of these details would forever alter the way researchers perceived the documents.

Another challenge to the principle of original order is found in Frank Boles' analysis of the history of the concept and its applications and challenges in modern archival arrangement. By observing the documented limitations of original order, he proposes a new way of approaching archival arrangement: usability (Boles, 1982, pp.30-31). Concerned with the access issues which could arise when a creator's arrangement inflicts confusion upon the researcher, Boles (1982, p.31) finds that usability "acknowledges the evidential superiority of documents over filing systems by placing primary emphasis on access to documents." He goes on to recognise that should the creator's arrangement align well with usability, it would benefit both the Archive and its researchers to maintain the original order.

The problems which arise from this idea are illustrated by Brothman. By reorganising an archive to assume a new state of original order, Brothman (1991, pp.84-85) contends an idealised 'original order' is created which is completely removed from the original intentions of the creators and the complex interrelationships of the documents is possibly forever lost. Regardless of how useful

arrangement of an archive for usability purposes may appear, doing so is simply not worth the risk of harming the understanding of an archive.

4.2 Patents, Patent Information, and Derwent

4.2.1 Definitions

Understanding patents and the sources of their content is central to examining the make-up of The Monty Hyams Archive. At the time of the Derwent Publication Ltd.'s founding, the 'Patents Act 1949' governed the usage of patents in the UK and directed the company's understanding of patents. As described in the 1964 Derwent Patents Manual, according to the law, a patent application can be awarded for any invention which has the following attributes:

- It must be for what is called 'A Manner of Manufacture'.
- It must be novel.
- It must be useful.
- It must have involved some exercise of inventive ingenuity not obvious to those skilled in and familiar with the subject to which it relates.

(Hyams and Wickardt, 1963, p.32)

Little has changed for the definition of a UK patent since 1949. With the introduction of the 'Patents Act 1977', the new understanding of patents which could be approved was extremely similar with a greater focus on inventiveness and usefulness.

According to Martin A. Lobeck (1990, p.53) in *Chemical Information 2*, there are two different ways of defining patent information: "the first one covers the area of information coming from patents. The second definition sees patent documentation as a service for the classical needs of patent departments, such as: novelty search, infringement searches, opposition against competitors' patents. The information searched and used is by no means restricted to patent documents; on the contrary, *all* relevant information is interesting and welcome." In the instance of this project, Derwent Publications Ltd. is considered to be a company which uses the information from patents to create a whole new set of 'patent information' through its documentation services including abstracts and indexes.

To comprehend some of the information described within the contents of The Monty Hyams Archive, background knowledge of patent information is required. The services offered by Derwent Publications Ltd. were produced with the concept of patent families at their core. One of Monty Hyams' greatest achievements was as the first developer of patent families (Martinez, 2010, p.6).

The European Patent Office (n.d.) defines a patent family as "a set of either patent applications or publications taken in multiple countries to protect a single invention by

a common inventor(s) and then patented in more than one country. A first application is made in one country – the priority – and is then extended to other offices.” The first application described would usually be the ‘basic’ patent around which a patent family is formed. Subsequently, ‘equivalents’ are filed in various other countries by the same patentee.

Derwent’s unique formation of Derwent patent families within the World Patents Index, qualify it as a creator of artificial patent families. WIPO defines an artificial patent family:

“a patent family consisting of a collection of equivalent patent documents (i.e., documents relating to the same invention) published by different offices and at least some of which do not share a common originating application or applications (or where data relating to such a common originating application is not disclosed). The members of this type of family are determined only after intellectual investigation to have essentially the same disclosed content.”

(World Intellectual Property Organization, 2013, p. 8.1.18)

The key term here is “intellectual investigation”. This concept of using humans to sift through the patent documentations in order to derive important aspects for retrieval and documentation was something which set Derwent apart from many of its competitors. From the very beginning, Derwent was assigning unique titles and abstracts to patent applications, selecting key information to focus its special indexing upon. What set Derwent apart in the construction of its patent documentation was the focus on value added material with human indexing at its centre.

4.2.2 Historical Examinations of Derwent and Monty Hyams

Beyond a brief introduction of Derwent in articles relating to the company’s services, very little current literature investigates the history of the Derwent or its founder in relation to information history in a meaningful way. Nancy Lambert (2008) provides important insight in an editorial for *World Patent Information* discussed Derwent in the context of showing how understanding the knowledge of patent information history can inform current ways of dealing with patent information services. Claus Suhr (2004) also examines Derwent when discussing the early work in patent information management stating that “[they] responded slowly but steadily to the requirements voiced at the annual user meetings by improving the services step by step.” The Archive itself stands as a testament to this fact, and following the findings of this project more inspection into the value of the subscriber meeting

reports will likely be required. Edlyn S. Simmons (2004), an important voice in patent information, also observed Derwent's World Patents Index in relation to the development of databases from the 1970s to 2004. Overall, little focused critical analyses have been done on Derwent's history and the development of its services in relation to information science history.

The intention of this project is not only to establish and describe The Monty Hyams Archive but to also argue that the Archive is a key source of information science history. Prior to the analyses of the Archive, it was important to determine the uniqueness of Derwent Publications Ltd. during the Archive's timeline as perceived today. Two questions arose following the project's first appraisal of the Archive: how is Derwent perceived today; what importance does it hold with the history of patent information. Few current literature resources delve into the history of Derwent services and their impact on the study of information science history today. This project will establish a source never before seen by most researchers in information science.

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5 Research Methodology

5.1 Organisation, Description, and Future Preservation

Organisation and description of The Monty Hyams Archive was vital to the investigation of the Archive's contents and the knowledge gained from them. As mentioned in the literature review, the matter of original order was strongly adhered due to the intellectual arrangement conducted by Peter and Stephen Hyams. Thus, the time allotted for the shelf arrangement of the documents was found to be unnecessary.

Prior to the analyses of the Archive, considerations for arrangement and description were necessary. The ordering of an archive which may at first appear to be a simple task is described in all its hierarchical complexities by Millar (2010, p.146) as:

“...the creating agency (the fonds or group and the sub-group); the functions and activities performed by that creator (the series and sub-series); the record-keeping structure adopted by the creator or by the archivist in the absence of an existing structure (the file); and the actual documentary material kept for its evidential and informational value (the item and piece).”

However, as mentioned in the literature review, the idea of original order guided the arrangement of the documents. The original proposal for the dissertation scheduled time for a basic shelf re-organisation of the documentation. This of course was not needed due to the principle of original order. Instead, focus was placed on the documentation which proved a more time consuming task than originally allotted for in the proposal's time schedule.

The most important step in this part of the process was the formation of codes to assign to the individual documents. The second edition ISAD(G) informed much of the methodology for archival description due to the frequent use of the standard in the UK. The key elements to archival arrangement according to this document are as follows: reference code, title, author, data(s), extent of the unit of description, and level of description (International Council on Archives, 2000, p. 9). Most of the details listed are clear. The uniquely identifying reference code is up to interpretation to some extent however. However, any reference code assigned should at the minimum possess the following information:

- the country code in accordance with the latest version of ISO 3166 Codes for the representation of names of countries;
- the repository code in accordance with the national repository code standard or other unique location identifier;
- a specific local reference code, control number, or other unique identifier.

(International Council on Archives, 2000, p.13)

With these guidelines in mind, the subsequent reference code was assigned to The Monty Hyams Archive: GB 2107 MYHS. GB is the country code for all archives housed in the UK. 2107 is the unique code given to the collections at City University London. MYHS is the distinctive code provided for The Monty Hyams Archive, employing the first and last letter of its namesake's forename and surname.

Within City University London's University Archives, each collection is considered a subfond/series. Therefore, The Monty Hyams Archive is considered a series and any sections within are considered subseries. The first number in any reference code denotes the subseries. The following are the subseries (along with their reference codes) which currently comprise the Archive:

- Correspondence as GB 2107 MYHS/1
- Subscriber Meeting Reports GB 2107 MYHS/2
- Talks and Brochures GB 2107 MYHS/3
- Instruction Manuals GB 2107 MYHS/4

Beyond the subseries number attached, any subsequent numbers (separated by a forward slash) indicate the file level. Any additional forward slashes and numbers are reference codes for item level descriptions. However, not all of the subseries listed required this level of reference code detail. For instance, all subseries other than correspondence have only two numbers attached.

Limitations to this project prevented a thorough description of all the Archive has to offer. The subscriber meeting reports and instruction manuals, which hold within them a variety of documents bound inside the same volume, have only been included at their item level, but their individual components should be described at length in the description section. Conversely, the individual components could be considered items themselves and the bound volumes to be files. It would be very beneficial in future to have someone create records for each of the reports and coding documents within each of the reports.

The description process required the addition of notes to each individual record. The purpose of these notes within the project was for analyses only. However, it is important to note that, while the notes may not exactly follow the required format for description, key terms and concepts can be pulled from the descriptions in the future in order to follow the ISAD(G) guidelines for archival description, as a process of representing the documents through analysis and recording of data.

5.2 Qualitative Analyses

The decision to use a qualitative analysis approach to the analyses of The Monty Hyams Archive was based project process and the Archive's contents. Two forms of qualitative analyses were used to explore the contents of The Monty Hyams Archive: documentary analysis and historical research.

5.2.1 Literary Warrant Analysis

The beginning of the description of the documents identified a number of problems the collections faces for preservation and conservation. In order to present a clear vision of care for the Archive in the future, a separate analysis was performed to examine current standards and best practices in the field of archival science. Literary warrant analysis was employed in the analysis of the document, and the process is defined as follows:

“The literary warrant for professional practice is made up of authoritative sources, which are recognized and valued by practitioners. Such authoritative sources may be found in the law, codes of ethics, standards, the professional and scholarly literature, and literary texts. Analysis of the literary warrant for professional practice establishes the ‘mandates’ for best practice, and identifies its conceptual and theoretical frames of reference.”

(Gilliland and McKemmish, 2004, p.180)

Literary warrant analysis was used to locate resources in support of a preservation plan for The Monty Hyams Archive. The use of this form of analysis in examination of the documents resulted in a concise comparison of relevant documents which in turn led to a fully realised plan for the future of The Monty Hyams Archive.

5.2.2 Documentary Analysis

Documentary analysis is the cornerstone of the inspection of The Monty Hyams Archive. According to Jonathan Grix (2010, p.81), the primary aim of using documentary analysis to investigate archives is “to bring ‘dead’ documents alive to shed light on specific events, personalities or policies by introducing them to a wider readership.” As mentioned in the introduction, this exists as one of the main aims of this project as well, to introduce its audience to a set of documents, some of which are being discussed and seen for the first time since their owner arranged them himself.

The focus of this paper is on Pickard's (2013, p.251) description of a more open approach to documentary analysis which involves the researcher "allowing concepts to emerge from the material itself and remaining vigilant to revealing quotations that can be included in the report." The problem which arises in the use of this type of analysis in the instance of this project is that The Monty Hyams Archive provided detailed accounts of Derwent's history otherwise scarcely noted in available materials. Pickard (2013, p.254) writes that questions of validity may arise when assessing the documents, and even though historical research has been employed, at some points in the analyses only the Archive's documents could submit accounts of the events. Thus, the subjective nature of the documents, particularly in the correspondence pieces leading up to the creation of Derwent's World Patents Index, must be noted. With some of the documents relating to sensitive business negotiations, some information was likely withheld by the organisations involved, and it was difficult at the time of the Archive's assessment to discern these cases since the Archive was the only source for the majority of the discourse surrounding the formation of a world patent documentation service. However, in cases where light could be shed upon some of the information found, historical research and data collection through interviews were used.

The process of documentary analysis employed for documentary analysis occurred throughout the arrangement and description of the Archive in a number of ways. Firstly, the documents provided by Peter and Stephen Hyams, the sons of Monty Hyams, offered insight into the overall structure and contents of the Archive along while suggestions for approach were provided by Dr. Charles Oppenheim, former Director of Research and Development at Derwent during the early 1980s.

During the descriptive process, a variety of major themes stood out with the most prominent being the negotiations leading up to the development of Derwent's World Patents Index and the technological changes for the storage and dissemination of Derwent patent information throughout the history covered by the Archive. These two areas became the focus of the documentary analysis, highlighting key documents within The Monty Hyams Archive and using them to construct historical narratives.

5.2.3 Historical Research

Historical research was also employed as part of the research. Pickard (2013, p.167) states that historical research "is concerned with reconstructing the past, identifying pieces of a puzzle and putting them together to provide insight and understanding of a situation, event or process." The method was primarily use to

flesh out some of the narratives created in the findings. However, the task proved quite difficult.

The gaps which exist within the Archive and require further discussion are situations which presented a unique problem to the project. Deductions had to be made both on the content of the documents and their context when letters or confidential documents were not present. Thus, very little external research could be done to fill the holes. Rather, the qualitative approach was used to frame the documents in their historical context when appropriate.

Much of the outside literature consulted consisted of official Derwent publications or publications written by their partners on specific projects such as SDC (Search Data Corporation). The use of these texts was mostly to inform the technological changes in the world of patent information throughout the timeline of The Monty Hyams Archive.

5.3 Interviews

The primary source of data collection outside of The Monty Hyams Archive documents was interviews. A semi-structured approach was employed in the interviewing process, specifically a guided approach wherein the interviewer has a checklist of topics to cover. For the purposes of this project, the checklist involved questions covering a range of topics. All three interviewees brought with them memories and information they wished to discuss. Thus, the environment created was one of semi-structured flowing thoughts.

Michael Quinn Patton provided an overview of a guided interview, which was used as the basis for this project's interviewing process. Patton (1987, p.112) articulated this interviewing style as a guide is used to ensure that specific questions are touched upon throughout the interviewing process. For this project as the interviewee went through their experiences and information, they were allowed to express themselves freely. Upon reaching an appropriate stopping point, the interviewee was asked a question and responses were given. While questions were compiled prior to the interviews, much of the discussion was produced in a narrative, chronologically arranged format, tracing the history of both Monty Hyams and Derwent.

Three interviewees were questioned for the project: Peter Hyams, Stephen Hyams, and Dr. Charles Oppenheim. Peter Hyams, the eldest son of Monty Hyams, was interviewed in relation to the history of Derwent, having originally compiled and organised the contents of the archive. Stephen Hyams, the younger son of Monty, was interviewed for both their personal history and technical information insights. Dr. Oppenheim was chosen as an interviewee based on his unique insight into the operations at Derwent as the former Director of Research and Development and for his working relationship with Monty Hyams. An HD camera was borrowed from the Information Technology Department at City University London, and the interviews were captured onto two separate SD cards: one for the Hyams brothers and the other for Dr. Oppenheim. Interviews were conducted on-site in meeting rooms at City University London. Informal discussions with Dr. David Bawden of City University London's Department of Library and Information Science concerning his time at Derwent and James Atkinson of City University London's Library on the current state, care, and organisation of City University London's University Archives were also conducted. Notes from these informal discussions were examined in a manner similar to the interviews but not included in the appendices.

Transcriptions were conducted in a manual format. Windows Media Player was used to play the interviews as they were transcribed. Furthermore, windows movie maker was used to strip the videos' audio which was then imported to an audio editing program called Audacity for more detailed analyses. Audacity's looping and noise reduction capabilities were important tools in accurately transcribing the video interviews. The time devoted to this portion of the project was greater than initially intended due to the amount of time it took to transcribe the lengthy interviews.

Ethical questions were present in the conducting and analysis of the interviews. Due to the sensitive nature of some of the information given in the interviews, the decision was made to edit some material from the final hard copies and transcripts. This was done at the discretion of the interviewer with the guidance and permission of supervisor Dr. Lyn Robinson. To ensure full consent for publication and preservation of the materials, final transcripts were submitted to the interviewees prior to submission of the dissertation.

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6 Findings

6.1 The Monty Hyams Archive

Due to the lack of clarity concerning the current standards followed by City University London's University Archives, where The Monty Hyams Archive will eventually be placed, it was presumed that no current standards were being adhered to, broadening the scope of standards which could be examined as part of the literary warrant analysis. Thus, standards relating to all matter of archival arrangement, cataloguing, and preservation have been considered and discussed in the findings. However, explanation of the current state of the University Archives will be given when necessary.

6.1.1 Arrangement and Description, and Legislation

The City University London University Archives comprises one fond which is then divided into the following thirteen subseries:

- Administration and academic administration
- Colleges of Advanced Technology: Committee of Principals
- Departmental records
- Ephemera
- Estates and buildings
- External bodies
- Finance
- Governing Body and Council
- Library papers
- National College of Horology
- Sir Thomas Smythe's Charity: residue of the poor fund
- Staff and staff association papers
- Student and student societies papers

It is proposed that The Monty Hyams Archive be labelled as a separate series when incorporated into the current University Archives.

Information on the University Archives' contents is hosted through AIM25 (Archives in London and the M25 area). The information appears to have been added around 2001 with little to no updates made since. Currently, the levels described are only the fond and series levels. According to an Excel spreadsheet of the current University Archives catalogue received from James Atkinson of the City University London Library, reference codes have yet to be assigned to the materials

beyond the previously mentioned levels (City University London Library, 2015). Thus, the Archive will require updates to the information held including levels, reference codes, dates, extent, and description in order to meeting the ISAD(G) guidelines assigned to The Monty Hyams Archive. For the purposes of the literary warrant analysis, only the project Archie was integrated into the findings.

As mentioned in the research methodology, the decision to use the second edition of ISAD(G) as the guidance for future archival arrangement and description of The Monty Hyams Archive was informed through its use in UK archives as evidenced by The National Archive's *Framework of standards* and the Archives Hub. ISAD(G) is a hierarchical multilevel data content description standard. The application of ISAD(G) guidelines for archival arrangement and description to The Monty Hyams resulted in the creation of at least the following key information:

- Reference code(s)
- Title
- Date(s)
- Level of description
- Extent and medium of the unit of description (quantity, bulk, or size)
- Name of creator(s)

(International Council on Archives, 2000, p.9)

These are the six most basic elements required in the standard. Due to the time limitations of the project and the amount of documents, only these most vital elements were provided, despite the existence of over twenty additional description fields which can be included. Further application of the ISAD(G) standard was found to be necessary for future descriptions within the Archive.

The other key standard needed to govern the description of the Archive was found to be Encoded Archival Description (EAD). This data structure standard was chosen for its links to ISAD(G) in its developments, and once again based on the use by a variety of UK institutions including the Archives Hub (Daniel V. Pitti, 1999; Society of Archivists Data Standards Group, 2009). EAD was created for the creation of finding aids for online environments and "is available as a DTD now compatible with Extensible Markup Language (XML) as well as SGML. It is also available as an XML schema in two syntaxes: Relax NG Schema (RNG) and W3C Schema (XSD)." (Society of Archivists Data Standards Group, 2009) The data elements part of EAD corresponded with those is ISAD(G), assisting with the further lining up of the

standards for application to the Archive. It is currently in the process of revision with an official publication planned by the end of 2015, showing the relevance of the standard (Library of Congress, 2014).

One primary UK legislation affects The Monty Hyams Archive: Data Protection Act 1998. Within the Archive, a number of documents contain personal information such as personal physical addresses and phone numbers. In October 2007, the *Code of practice for archivists and records managers under Section 51(4) of the Data Protection Act 1998* was published by The National Archives, the Society of Archivists, the Records Management Society and the National Association for Information Management following approval by the Information Commission to provide best practice guidelines for archivists and records managers. According the guidance, if the lifespan of the person to whom the data refers cannot be determined by the archivist, a lifespan of one hundred years is assumed (The National Archives, the Society of Archivists, the Records Management Society and the National Association for Information Management, 2007, p.28). Despite the time which has passed since the Archive's contents were created, it will be important to establish whether or not the information is accurate and determine disclosure according to the Data Protection Act 1998.

To obtain accreditation through The National Archives, an organisation or institution must meet Archive Service Accreditation Standard established by the institution. Organisations and institutions applying for accreditation must present clear policies and objectives in the following six criteria areas:

- Definition of an Archive Service
- Size of the archive collection
- Provision of access
- Digital records
- Staffing
- Storage

(The National Archives, 2015, p.2)

This standard was determined as the most important for the purposes of achieving recognition of the Archive within the field and exemplifying the caretakers of the collection's dedication to high standards.

6.1.2 Future Conservation and Preservation

Another key element of analysis into future development of the Archive was investigation of preservation and conservation standards and guidance. Crucial to the formation and care of any archive is the distinction between conservation and preservation. According to The National Archives (2009, p.12), conservation is defined as “a set of activities that aims to stabilise the physical or chemical condition of a record, to prolong the life of a record and relevant metadata, or enhance its value, or improve access to it through interventive treatment.” Conversely, preservation is understood to be “a set of activities that aims to prolong the life of a record and relevant metadata, or enhance its value, or improve access to it through non-intervention means. This includes actions taken to influence records creators prior to selection and acquisition.” (The National Archives, 2009, p.12) Simply put, when considering the care of a document, conservation is considered to be the physical nature of said care while preservation is used to extend the access surrounding a document. Conservation was mainly inspected to the immediacy of the needs of The Monty Hyams Archive, and the feasibility of these measures versus the more costly preservation; however digitisation is touched upon briefly.

Prior to examination and application of standards to The Monty Hyams Archive, it is important to note that the archival standards of preservation which UK cultural institutions follow are in a transitioning phase. According to Forde and Rhys Lewis (2013, p.257), European standards which overlap with UK standards will eventually replace the British standards.

Analysis of the standards and guidance established PD 5454:2012 which replaced BS 5454:2000 as the primary standard guiding the storage of archival materials within the UK and thus conservation of archival documents, was found to be suitable for environment conservation of the documents. Only a few of the many aspects of the standard were highlighted based on their feasibility and the urgency at which they should be implemented. Within the standard, guidance varied based on the frequency of handling of the documents and the type of documents. Originally, The Monty Hyams Archive was comprised of only paper documents; the addition of the interviews on SD cards changed this and the required environmental needs. Following examination of the standard, it was concluded that cool storage, which falls between 5 °C and 18 °C, would be most appropriate with the relative humidity kept between 30% and 50% (British Standards Institution, 2012, p.13). Of course, implementation of the standard was found to require specific types of equipment for

monitoring purposes. However, relative humidity controls for the SD cards themselves could be controlled by their storage rather than the environmental conditions of the entire Archive by sealing the devices and thus creating an RH microclimate (British Standards Institution, 2012, p.13). Light can also be limited with the switching off of lights when the Archive is not being observed to avoid damage to the documents.

In order to provide options to archive which might not have the funding to implement some of the recommendations in the standard, The National Archives compiled a list of three points to follow which might be suitable during the initial treatment of The Monty Hyams Archive:

- Thick walls, few or no windows in the repository, and a solid roof will go some way towards insulating the storage environment from changes in the outside environment. Do not leave doors or windows open, and switch off lights when they are not in use.
- Use archival-quality boxes to store documents.
- Avoid storing documents on the floor or against an external wall because these areas may be damp. Open shelving is preferable because it allows air to circulate.

(The National Archives, n.d., p.3)

Part of the future preservation of the Archive should include digitisation efforts, and in fact it might be the most important step in the process of establishing The Monty Hyams Archive. An investigation of documents from various organisations and government bodies resulted in no clear standard for digitisation. Thus, The National Archives' own standards for digitisation became the basis for the formation of a clear plan of action.

The guidance from The National Archives covers a number of areas of digitisation from the handling of the documents during the process to the creation of metadata records. Prior to digitisation, The National Archives recommends the removal of any items attached to the documents (The National Archives, n.d., p.6). This highlights both a conservation and preservation concern found during the analyses of the documents: damaging items attached to the Archive's contents. These mostly related to the existence of staples, tape, paper clips, and other harmful materials which could prove damaging to the documents in the future. An effort was made to note the existence of these materials within the notes section. However, in order to maintain

the current original order and due to the time limitations, preservation efforts and the removal of these damaging items were not conducted.

One key note to make about The National Archives guidance was that much of the standard relies on the input of a conservator for discussion of handling the documents and decision making about the application of assistants such as weights upon a document (The National Archives, n.d., p.7). Access to a conservator might not be guaranteed in the process for a university archive. Expert opinion or outsourcing the digitisation for The Monty Hyams Archive process was a possibility derived from exploration of the standard.

Overall, application of the standards discussed here would serve as the foundations needed for proper description and care of The Monty Hyams Archive. These are just the first steps toward the development of a framework for the Archive. Following application of these standards, accreditation through The National Archives should be sought.

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6.2 World Patents Index

The introduction of Derwent's World Patents Index (DWPI or WPI) marked a significant shift in patent information coverage for the Derwent Publications Ltd. and access to patent information around the world. The new service went beyond areas already covered in Derwent's Central Patents Index (now Chemical Patents Index) and its Ringdoc service. While consideration was given to the inclusion of financial information in the analyses, the importance of the development of the service itself was deemed more prudent for the information science project. Thus, while finances may be mentioned on occasion, overall the focus is on the progress of services attached to the World Patents Index and its development along with the major players in the process prior to its launch in 1974. It should be reiterated once again that the purpose of this analysis is to present support for the argument that The Monty Hyams Archive is an important source of information in the history of information science.

6.2.1 Leasco, BIRPI/WIPO, and Derwent

One of the most interesting aspects of The Monty Hyams Archive is the path to the Derwent World Patents Index. Through first inspection of Hyams autobiographical draft of the relations between himself and BIRPI, a glimpse into the complexities of beginning the service and the pause in between become apparent. BIRPI (initially known as Bureaux Internationaux Reunis pour la Protection de la Propriete) enacted treaties relating to Intellectual Property on an international level.

Correspondence within the Archive begins in 1965 with letters to and from Monty Hyams to the Bureaux Internationaux Réunis pour la Protection de la Propriété (BIRPI; later known as WIPO) with documentation of the first machinations of the World Patents Index (WPI). As mentioned previously, documentary analysis was employed to reveal major themes throughout the archive. One such theme was the discussion and creation of the WPI. The main players within these documents are Monty Hyams, BIRPI (later WIPO) Institut International des Brevets (IIB), INPADOC, and the Thomson Organisation.

The first attempts at developing a World Patents Index arise in the correspondence between Derwent Publications Limited, IIB (International Patent Institute) located at The Hague, Netherlands, and BIRPI (United International Bureaux for the Protection of Intellectual Property; later rebranded as the World Intellectual Property Organization, WIPO) located in Geneva, Switzerland. In a

memoir draft within the Archive, Hyams (n.d., p.1) illustrates the importance of one committee in the formation of BIRPI interest in a World Patents Index: The Committee for International Corporation among Examining Patent Offices (ICIREPAT).

ICREPAT encouraged BIRPI to investigate possible interest in a World Patents Index, and this resulted in the distribution of a key pamphlet. In late 1965 and early 1966, BIRPI in conjunction with IIB published and distributed their "Plan for a 'World Patent Index'". The purpose of the international service proposed would be:

- to identify all those which are based on the same priority, claimed under the Paris Convention,
- to indicate, in each case, when there is a reported change in the legal status (grant, cancellation, expiration, etc.),
- to identify all those which show the applicant, patentee, or inventor,
- to list those which relate to a given branch of technology
- to further other information described in this Brochure.

(BIRPI and IIB, 1966, p.1)

Thus began the search for a company or institute which could advance the idea laid out. In addition to the purposes given, specific services were also noted as necessary to any World Patent Index: individual reports, current awareness service, and weekly reports (BIRPI and IIB, 1966, p.5-7). The copy of the brochure possessed by Monty Hyams is covered with his own notes, marking the importance of this publication to the creation of his own service as it is the first indication with the Archive of Hyams' interest in the development of a worldwide patent information service.

Following the publication of the plan and its position in the Archive, a gap exists in correspondence and notes on the World Patents Index. To fill in this significant document lapse, a draft copy of Monty Hyams memoirs is included in the Archive. BIRPI published a progress report detailing the concerns of the international community in response to the development of a world patent documentation service in December 1966 which pronounced both financial and intellectual property concerns by the international community. Responses numbered 1,134 from 24 countries, resulting in the calculation of a \$1.4 million income which would barely cover establishment and production costs for the service (Hyams, n.d.a, p. 2). Intellectual property concerns also arose as it "[helped] industrial pirates to know, for

any given invention, in which countries patent protection had not been sought, and whenever important patents had been abandoned or had lapsed.” (Hyams, n.d.a, p. 2). However, these opinions did not deter Derwent’s interest in the development of a World Patents Index.

In 1969, Derwent’s involvement abruptly shifts to a possible cooperative agreement with Leasco for presentation to BIRPI. However, this change in path signals a major gap in the correspondence. Here, Hyams’ memoir draft acts as a strength once again, offering insight into the private dealings of Derwent with other WPI companies and individual players.

Folder GB MYHS/1/2 charts the 1969 interactions between BIRPI, Leasco Systems and Research Corporation, and Derwent. The revelation of Leasco’s submission of a WPI proposal to BIRPI came through confidential correspondence between Derwent and Melvin B. Eagle, President of Leasco. Eagle signalled Leasco’s intentions to include Derwent in the cooperation plan outlining the products and duties of the two companies.

At the beginning of these interactions, there was intent to establish a cooperative plan by Derwent and Leasco for a World Patents Index. Division of labour was detailed within a preliminary plan with special focus placed upon the skills of each company, combining Derwent’s current products knowledge and expertise with Leasco’s marketing, microform, and computer strengths (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969a, p.3). Within the proposed plan and through Hyams’ memoir, we find that Leasco was incapable of carrying out the more technical aspects of the development of a WPI, thus resulting in the cooperation efforts with Derwent. However, as noted by Hyams, much of this information was kept secret from BIRPI with Leasco requesting confidential negotiations between Derwent and their company. In a letter following Leasco’s proposal, Hyams expressed that the document seemed quite one-sided. He wrote, “my main concern appears to be that you wish to produce so many of the reports and journals in the United States, whereas we are well geared to do this ourselves more objectively over here, also I am still puzzled about the benefits which you or we would hope to derive from the BIRPI ‘plan’.” (Hyams, 1969a)

By August 1969, the correspondence shows Derwent’s intentions to not enter into a cooperative plan proposal with Leasco for BIRPI. Within the correspondence, exists a breakdown of negotiations between Derwent and Leasco not reflected in the Archive itself as there is a lack of documentation showing the actual process of this

occurring. Derwent's intentions to submit their own proposal in competition with Leasco becomes apparent. As expected from commercial organisations, financial gain remained at the centre of most of the issues arising. A letter from Hyams to Arpad Bogsch, Deputy Director of BIRPI, on 20 August 1969 depicted Derwent's ability to set up a computer in Geneva for the establishment of a World Patents Index and the services it could provide (Hyams, 1969b, p.2). In conjunction with KODAK, Derwent is willing to produce microfilm reels and aperture cards with English abstracts along with complete patent specifications "of those countries in respect of which there is indication of sufficient interest." (Hyams, 1969b, p.2) Regarding financial aspects of the service, Derwent offered BIRPI 2% of all patent services-based income acquired by Derwent in a year, amounting to no less than £24,000 per annum, in exchange for assistance in gaining cooperation with national patent offices "in the supply of patent specifications, convention data and Official Gazettes and in the performance of reliable International Patent Classification." (Hyams, 1969b, p.2)

Following the submission of this brief proposal and various rumours, Monty Hyams (1969c) confirmed in a letter to Arpad Bogsch, Deputy Director of BIRPI, on 12 September that Derwent had again entered into talks with Leasco and were prepared to offer a joint Derwent-Leasco offer to BIRPI for the formation of a World Patents Index. However in a brief letter a few days later on 15 September, Hyams (1969d) revoked his aforementioned statement regarding a joint offer with Leasco, after a decision by Derwent's board. Inspection of these documents highlights the weight carried by Derwent's board in major decisions.

Once again, Hyam's memoir draft provides key information on the internal workings of Derwent at the time. Derwent's attempt to sever ties with Leasco in regards to the service led to shock by BIRPI, but Bogsch agrees to a possible proposal from Derwent as long as it follows closely the existing draft contract between BIRPI and Leasco (Hyams, n.d., p.3). Though pages from an early 1969 Derwent draft contract proposal exist within the Archive, the dreams of a Derwent/BIRPI agreement were short-lived. Following meetings in mid-September 1969 and assessment of proposals, BIRPI changed its position.

The end came swiftly. A letter on 29 October 1969 notes the decision by BIRPI as relayed by Arpad Bogsch, Deputy Director of BIRPI, to reject both Leasco and Derwent's proposals for a World Patents Index. Within the document Bogsch states the "many and such substantial changes of mind by Derwent" as the reason for the rejection of any proposal offered by the company. While he confirms that it will

consider any future offers until the November meeting BIRPI is unwilling "...to stay our [sic] hand in stay respect in anticipation of a possible offer from Derwent whether separate or joint with Leasco." (Bogsch, 1969)

The true intent of Derwent's entrance into the mix was revealed in a document by the company, charting the history of the World Patents Index. Derwent Publications Ltd. admitted as much following the collapse of BIRPI proposal submissions: "Since we had only made our bid to keep Leasco out, there was no need to make a fresh bid and the matter was allowed to rest there." (Hyams, 1972a, p.1) Despite this, Derwent Publications Ltd. did notify its subscribers in an official 1969 document of its intentions to pursue a "Computerised World Patents Index" project (Derwent Publications Ltd., 1969). Given the future involvement of Hyams in the WPI discussions, Derwent's infiltration of the negotiation appears to have also been a carefully calculated move in order to buy the company enough time to develop a sound proposal for the creation of a service. Thus, the initial World Patents Index attempt ended, but a spark of renewed interest in its development in late 1970.

6.2.2 Derwent and BIRPI/WIPO

Discussions surrounding the development of a World Patents Index would once again resume in November 1970 through the work of Edward Brenner, former US Commission of Patents who was now employed as a consultant (Hyams, M., n.d.b). Hyams himself believed that Arpad Bogsch (who was now Deputy Director General of WIPO following BIRPI becoming WIPO in 1970) may have also had a hand in the renewed interest as BIRPI had become WIPO and was appointed examining authority for the Patent Cooperation Treaty (Hyams, M., n.d.b).

A meeting was arranged with Arpad Bogsch in mid-November for WPI discussions to recommence. Within the Archive there exists a draft contract originally intended for an agreement between Leasco and BIRPI. Handwritten notes upon the cover by Peter Hyams state that the plan seems to have been used as a starting point for negotiations between Derwent and BIRPI. Additional notes and strikethroughs most likely from the meeting attendees (and perhaps Hyams himself) remove Leasco and insert Derwent throughout the document and make corrections and changes throughout the text. The importance of this document cannot be overstated, for here we see the confidential Derwent edits and progression in the contract.

The first major rewrites take place in the 'Definitions' section. These revisions distinguish Derwent from Leasco once again in their capabilities in better understanding and presenting patent information and the technology for production

and distribution of such technology. 'Family' (as in a patent family) is redefined to comprise of the patent application and "may include documents which do not invoke the same priority or priorities provided in all cases they relate to the same invention" While 'copies' as a definition of Public Patent Documents is revised to define the recipients of the copies more explicitly as subscribers to the service (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p.3A) Another major alteration came to 'Sales' understanding. Initially, it was defined as comprising the value received by the company from third parties for the services rendered minus any amount refunding or credited to third parties. Derwent recast the section as relating the sales made to both the World Patents Index and the Central Patents Index. Additions of definitions for 'National Office' and another illegible word (perhaps 'Promptly?') were noted as required (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p.3).

Regarding the establishment of the service, much of the original intentions by Leasco are kept with the service being placed in Geneva. Services will not be conducted by Derwent until the materials acquired by BIRPI are received by the company at a steady pace (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p.4).

BIRPI had eight obligations to Derwent as part of the contract:

- Collect one copy of all 'Public Patent Documents' and 'Gazettes' published by every country of the Paris Union (as founded under the Paris Convention of 1883)
- Attempt to obtain copies in microform or machine readable formats if they are available and requested by Derwent
- Promptly acquire published patents and patent applications and the gazettes of the national office after they are publically available
- Transfer materials acquired to a place designated by Derwent for the first two years and then to Geneva after the service is established there
- Two months following budget approval, BIRPI will begin collection of materials
- Establish a World Patent Index Service Standing Committee
- (Inserted by Derwent) BIRPI must attempt to institute a liaison between Derwent and the national patent offices; promote International Patent Classification for production of uniform patent applications; and market the World Patent Index Service to the public

- Aid the finding and leasing of a location for personal and equipment if deemed necessary by Derwent

(Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p.5-6)

One major alteration related to the development of patent families under the third clause of BIRPI obligations. Under the new clause, BIRPI would be required to assist Derwent in obtaining priority patent specifications claimed under the Paris Convention (Convention for the Protection of Industrial Property of March 20, 1883) from national patent offices (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p.3 and 5A). Obtainment of the information is requested at the earliest availability, before public access is granted (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p. 5A). Additionally, the original sixth clause of BIRPI responsibilities which required of BIRPI to request governments to either relinquish copyrights or to arrange for use by the company of copyrighted patent, with a small royalty paid to the national patent office, was removed (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p.6).

Only minor alterations were made to Derwent's obligations to BIRPI and the establishment of the services. The following five responsibilities were agreed by Derwent:

- Run all operations required for the World Patent Index Service
- (Altered by Derwent to reflect rejected Leasco reports and copies services) Services offered to anyone requesting them at the published prices, with a significant price reduction given to national patent offices participating in the service
- Propose pricing after discussing with BIRPI and the Standing Committee (though the advice given is not binding for Derwent)
- Locate place of operation for first two years of service
- Install and conduct services and subscriber interactions in Geneva after two years

(Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969b, p.7-7A)

Property rights regarding the materials acquired had merely one major change. Formerly, Leasco relinquished rights to the original copies of materials obtained from

the national patent offices entirely to BIRPI (p.19). Derwent, however, included a new portion to the clause stating that, while BIRPI would have full property rights, “Derwent shall be entitled to retain such original copies for so long as they are required for use by Derwent for the World Patent Index Service and may be defaced as may be necessary for processing purposes for such service and returned so defaced.” (p. 19) This new addition was included to protect Derwent from any foreseeable legal issues which may arise should BIRPI choose to reacquire any materials.

Overall, the most important difference between to the original Leasco draft contract and Derwent’s edits is the understanding of what services would be rendered and at what price and to whom. The service Derwent has proposed is the “World Patent Index Service”, and it is markedly different than the Leasco vision. The more detailed Derwent changes were meant to improve and protect the company and its services.

Following the inclusion of the hand-edited Leasco-BIRPI draft contract, a more formal Derwent-BIRPI draft contract is enclosed with correspondence with Brenner. At the beginning of the document, the idea for the ‘World Patent Documentation Service’ is defined as follows:

“the production and dissemination of services involving information relating to Public Patent Documents, including without limitation, abstracts, bibliographical information, classification, microform, search systems, copies of Patent Documents, and the like which services are economically feasible at any particular point of time.”

(Derwent Publications Ltd. and BIRPI, 1970a)

Within this description, Derwent’s early vision for what a World Patents Index would look like is laid out. Little changed in this original interpretation of the overall service during its development, even after talks with BIRPI failed to succeed.

Despite the extensive aforementioned revisions to the original Leasco plan, a rough draft sent to Hyams was much simpler than the initial edits, for instance, the new ‘Definitions’ section additions were left out of this new document. A reduction in the complexities of this portion as a whole seemed to take place as well with various explanations removed. The new manifestation of the service served as an expansion of the products “including without limitation, abstracts, bibliographical information, classification, microform, search systems, copies of Public Patent Documents, and

the like which services are economically feasible at any particular point of time.” (Derwent Publications Ltd. and BIRPI, 1970a, p.2) The broadening of the service was likely welcomed by Hyams due to the ability to stretch the products and the technology used to deliver them.

Other encompassed alterations changed the direction of the service drastically. For instance, BIRPI limited the materials it was obligated to supply to Derwent “to the extent that they apply to Materials relating to field of technology involved in the World Patent Documentation Service.” The language here is rather vague and could have possibly limited the coverage Derwent was able to conduct later on had the contract been signed. Another notable change reduced the agreement to a two-year contract (Derwent Publications Ltd. and BIRPI, 1970a, p.13). This negates much of the previous sections regarding relocation to Geneva.

Legislation changes also affected the development of the agreement, such as the June 1970 adoption of the Patent Cooperation Treaty (PCT). Under the provisions related to the World Patent Documentation Service (p.1), the treaty calls for the establishment of an international patent information service and offered additional provisions for the creation of a Committee for Technical Assistance to assist countries with the development of their patent systems.

Following the development of this new draft contract, in a 23 November 1970 letter to Brenner following a meeting, Hyams laid out a number of key points to Derwent’s agreement with BIRPI/WIPO: Derwent would still have autonomy in its interactions with national patent offices and retain the right to contact the offices directly for commercial purposes; the definition for the ‘World Patent Documentation Service’ would exclude the Central Patent Index; BIRPI/WIPO would not have the rights to the dissemination of Derwent-provided data (Hyams, 1970a, p.2).

A second counterproposal is issued by BIRPI/WIPO on 25 November 1970. In a letter from the same date, Brenner notes that the main alterations all relate to financial obligations within the draft contract. Monty Hyams appears to have made red pen marks on the sections of which he took note and are highlighted here. An alteration to the understanding of the ‘Sales’ definition strips changes interpreted as including all Derwent patent-related sales for one year (Derwent Publications Ltd. and BIRPI, 1970b, p.4). Another important change is that the services rendered by Derwent would be provided free of charge to WIPO and the national patent offices which offered their services, altering the original intent to require payment of reduced subscription prices by the patent offices (Derwent Publications Ltd. and BIRPI,

1970b, p.8). Under the copyrights section, WIPO limits subscriber use of data to internal operations only without the written permission of Derwent (Derwent Publications Ltd. and BIRPI, 1970b, p.14). Furthermore, the new proposal extends the agreement to five years.

A memo attached to a 21 December 1970 letter from Hyams to Bogsch laid out the commercial services which would comprise the 'World Patent Documentation Service' shows little change to the services Derwent originally wished to produce. The main focus is on the establishment of a database updated every two weeks and print outs of the information from the databases with the information required for their subscribers, particularly national patent offices (Hyams, n.d.c., p.1). Additional services were listed as possibilities for future development based on market research and the needs of national patent offices (Hyams, n.d.c., p.1). Including microfilm reels of 'Published Patents and Published Patent Applications, PCT-conforming English abstracts, and aperture cards of the previously mentioned microfilm reels (Hyams, n.d.c., p.1).

While the Archive's correspondence and proposals with BIRPI/WIPO in 1970, the official outline compiled by Monty Hyams acknowledges the next step in WPI negotiations occurring in March 1971. A new Derwent proposal was submitted in March 1971 through the advisement of Ed Brenner, a Derwent consultant. A February 1971 draft of the proposal includes a key addition of "Patent Data Base [sic]" to the proposal, defined as a system comprised of the following machine readable data acquired:

- Kind of document
- Number of document
- Country publishing the document
- Application number
- Date of filing application
- International Patent Classification, or in its absence a national classification
- Title of the invention
- Name(s) of the applicant(s)
- Number(s) assigned to priority application(s)
- Convention priority dates
- Priority countries

(Derwent Publications Ltd. and BIRPI/WIPO, 1971a, p.4)

The addition of the December 1970 memorandum information also expands the official understanding of the service. Thus, Derwent begins to detail its service even further, proving the building blocks for what would become the Derwent World Patents Index.

The draft was then considered by the 'Advisory Group on the Derwent Proposal' in June 1971 following its establishment by WIPO. Responses and concerns by various national patent offices and international bodies were presented through documentation provided by the group, leading up to the official June meeting. The meeting resulted in the resolution "to put off any decisions until results of an investigation, to see whether or not the work could be given to a non-private organisation were received." (Hyams, 1972a, p.1) In the final report of the June 1971 meeting, WIPO suggested that Derwent reconsider its restrictions of access to the service's computer files and additional products only to those national patent offices which participate in the service (BIRPI/WIPO, 1971, p.9). Also, WIPO (BIRPI/WIPO, 1971, p.8) decided "that no decision should be made in respect of the Derwent proposal without an exploration of alternatives to it, in particular whether solutions, no requiring contracting with private enterprises, could be found", thus opening itself up to proposals by IIB and other governments.

Continuing after these meetings, much resistance to Derwent's proposals was felt from various national patents offices. In August 1971, IIB officially submitted its own proposal to WIPO. Perhaps one of the most revealing letters with the Archive is from Leif Nordstrand, Director of the Norwegian Patent Office, to G.H.C. Bodenhausen, Director General of WIPO, on 24 August 1971. Within the correspondence piece, Nordstrand proposes an international body be given the task of establishing a World Patents Index as an alternative to Derwent's own proposal. Germany also believed that a private firm should not be offered a contract (Baron von Stempel, O., 1971, p.1 of attachment)). Alternatively, Austria presented itself as a suitable candidate for the establishment of the "International Patent Documentation Center" in Vienna (Ceska, F., 1971, p.1-3). There was an overwhelming call for an international body to control the development of such a service.

In October 1971, all of this correspondence culminated in an annex within the Archive (WIPO, 1971a,, p.5-19) in which WIPO posed a number of questions to Austria, IIB, and Derwent for the purposes of determining who might be most suitable to command the creation of a world patent documentation service. These questions were submitted as part of a meeting in Geneva to discuss the Patent Cooperation

Treaty which had been approved on 19 June 1970. Within its answers, Derwent offered a more clear representation of the service it planned to offer. It defined the following forms in which to offer the service: “copies of its updated master computer file; copies of updating magnetic tapes; lists as print-out, and as tape from which print-outs may be prepared and; replies to individual questions.” (WIPO, 1971a, p.7) Derwent also planned to offer a number of incentives for national patent offices including:

- To those which furnish paper copies: 50% off the initial sales prices to be used for the purchasing of World Patent Document Service or Derwent services
- To those which provide their bibliographic data of their patent documents in machine readable form: 50% off the initial sales prices to be used for the purchasing of World Patent Documentation Service or Derwent services
- To those which offer paper copies and machine readable forms: 10% price reduction on World Patent Documentation Service and 5% price reduction to Paris Union members’ national patent offices which do not provide the aforementioned materials

(WIPO, 1971a, pp.7-8)

Within the text, Derwent also continued its long-held request for WIPO to endeavour to establish uniform International Patent Classification (IPC) by national patent offices (WIPO, 1971a, p.10). One way in which Derwent could not rival one of their opponents was in the matter of coverage. The Austrian Patent Office dominated patent documentation coverage since its coverage dated back to the 1870s in some cases (WIPO, 1971a, p.17)

Derwent, the Austrian Patent Office, and IIB all had strong arguments for their services. However, the last question within the annex provided insight into possible future intentions by WIPO: “What role, if any, do you think (IIB and/or Derwent) (Austria and/or Derwent) (IIB and/or Austria) could or should play in your plan?” (WIPO, 1971a, p.19) The questions and assessment of the answers at the meeting led to a resolution to continue negotiations with Derwent, IIB, and the Austrian government and have the organisation cooperate together to form a service (WIPO, 1971b, p.13). Judging by the letter sent to T. Lorenz of the Austrian Patent Office on 15 December 1971, Monty Hyams appeared open to cooperation discussions and requested a meeting.

According to a 1972 briefing to Thomson, Hyams believed the reluctance of the national patent offices to stem the fear “that Derwent, as a private organisation might go bankrupt and therefore the service would come to an end.” (Hyams, 1972a, p.5) Hyams goes on to state the invalidity of this argument and the need to reach out to the patent offices.

In light of the issues faced in the negotiation process, Hyams viewed the prospects of reaching an agreement with BIRPI to be slim by March 1972 (Hyams, 1972a, p.3). However from January 1972-July 1973, the Archive shows that negotiations between Derwent, the Austrian Patent Office, and WIPO continued with the service’s name to be altered as the Vienna Institute.

A January 1972 meeting between WIPO, the Austrian Patent Office, and Derwent shows progress in Derwent’s idea of what the proposed service should entail in regards to developing technologies. During the meeting, Derwent “drew attention to its investment in software, and indicated that suitable arrangements could be made to share its experience with the proposed institute.” (Hyams, 1972a, p.1) This is key to the development of the future World Patents Index in that it’s the first indication within the Archive of Derwent’s investigation of software specifically in relation to these services. Additionally, separation of the Central Patents Index from the service is identified due to timeliness and accuracy concerns along with the data requirements exceeding that provided for the services to be rendered by the Vienna Institute (Hyams, 1972a, p.2) To this day what is now known as the Chemical Patents Index remains distinguished from the World Patents Index.

Following an additional meeting in February, a 9 March 1972 letter indicates some of services Derwent feels are necessary for meaningful products. Derwent agreed to:

“undertake at its own cost to punch to patentee and meaningful title in English in respect of every document covered by the prospective Vienna Institute, and furthermore that Derwent at its own expense will write programs for the production of printed lists and will in fact print such lists and make them available for sale.”

(Hyams, 1972b, p.2)

Derwent also requested that it receives in addition to the tapes, all documents from which additional data can be prepared (Hyams, 1972b, p.2). As evidenced from these points, the negotiations taking place at this point in the correspondence are vastly different than previous ones relating directly with BIRPI/WIPO. Derwent has

expanded its initial definition of what the services should entail based on the original BIRPI requirements to be adaptable to the every-changing technology and information landscape.

Sometime between March and May 1972, a message sent from Hyams to T. Lorenz of the Austrian Patent Office indicates that WIPO “[considered] its roles in trying to bring about agreement between Derwent and Austria terminated” and that the WIPO was open to considering any proposals Derwent put forth in the future. The correspondence does not pick up until after the establishment of INPADOC in May 1972.

During a briefing by Monty Hyams to Thomson which has cited at various points through this section, Hyams presented his plan: Derwent and Thomson:

“should go ahead with our plans to produce, whilst carrying out diplomatic negotiations always on the footing that we are carrying out our plans so as to fulfil a long felt need on the understanding that we are always willing to consider and discuss with the Patent Offices through BIRPI [WIPO] transference of official control of the operation through a committee headed by BIRPI [WIPO] and in which Derwent is represented.”

(Hyams, 1972a, p.6)

With the recent establishment of INPADOC, this was likely the best choice for Derwent. True to his word, The Monty Hyams Archive in folders GB 2107 MYHS/1/6 through GB 2107 MYHS/1/9 shows evidence of Hyams’ continued dedication to interacting with international bodies such and INPADOC and WIPO for cooperation purposes

Through a series of correspondence between from INAPDOC and Derwent from July through September 1972, Hyams efforts to interact with INPADOC and its Director General (or CEO) Otto Auracher were evident. However, as seen in a 1 September 1972 letter from Hyams to Arpad Bogsch of BIRPI/WIPO, attempts at the establishment of cooperation resulted in no responses from INPADOC, leading Hyams to conclude that the organisation did not wish to cooperate in any way with Derwent.

[6.2.3 Introduction of the World Patents Index](#)

Derwent’s World Patents Index as it is known today was instituted in 1974. The question of how Derwent pulled off the operation after years of other competitors

presenting their own solutions is answered within the mass of documents now compiled within the Archive; Derwent had experience. Since the launch of Farmdoc in 1963, Derwent had collected a lot of data and developed an effective system of organisation and searching of the system. A service similar to the World Patents Index likely could have not come to fruition through the efforts of any other commercial, governmental, or international body. It had to be Derwent.

The World Patents Index was described at length by Monty Hyams at the WIPO Moscow Symposium 1974. Defining the service himself Hyams (1974a) said:

“A new service *World Patents Index* has provided since the beginning of the year computer-generated, photo-typeset weekly and quarterly indexes covering all published patents in 12 countries which, by the end of the year, will be extended to 24. Also as from the beginning of next year, World Patents Index would comprise of detailed abstracts with drawings as a follow-up to the indexes in IPC order.”

The production schedules were outlined as a five-step process:

- Daily reception and transference of the new patent specifications' information to microfilm, punched cards, magnetic tape, and computers for further editing
- Inspection of each patent specification to determine categorisation as basic or equivalent, production of abstracts by part-time specialists, and editing of titles along with assignment of patentee codes and Central Patents Index classes for chemical basic patent specifications
- Flexowriter punching onto paper tape for the development of 'flex' input magnetic tape
- Creation of a merge file with all the information compile on the punched cards and 'flex' input tapes
- Use of the merge file “(1) to update the master file...;(2) to draw off from the master file information about equivalents...; and (3) to create new tapes for computer printing the various weekly indexes for carrying out current awareness searches.” (p.ii)

(Hyams, 1974a, p.i-ii and 2)

The creation of the World Patents Index also resulted in the expansion of Derwent's patent specifications coverage in certain countries. At the time of the symposium, the service covered the following countries (designated in Figure III by WIPO codes): Belgium, East Germany, the Netherlands, West Germany, France,

Japan, South Africa, Canada, the Soviet Union, the United States, Switzerland, and Great Britain (Hyams, 1974a, p.3). From autumn 1974, Derwent intended to cover patent specifications published by Denmark, Norway, Sweden, Portugal, and Finland, with coverage from January 1975 including Argentina, Australia, Hungary, Austria, Czechoslovakia, Romania, Israel, and further coverage of Japan's patents (Hyams, 1974a, p.3). As evidenced by the countries listed here, Derwent's World Patents Index would live up to its name, processing much of the international patents offered with future prospects for expansion.

Manual searching of the World Patents Index was crucial to the initial launch of the service. The World Patents Index, as explained by Hyams (p.iv), was devised to be a compilation of weekly gazettes divided into the following four sections: P (General), Q (Mechanical), R (Electrical), and Ch (Chemical). Within each of the gazettes, six 'sectional indexes' (Hyams, p.iv) would be incorporated: the Basic Patentee Index, the Equivalent Patentee Index, the Basic IPC Index, the Equivalent IPC Index, Patent Number Index, and the Priority Concordance.

Initial World Patents Index computer retrieval could be conducted in a number of ways. Users could perform searches on their own computers or they could access Derwent's file online through a California-based computer on the TYMSHARE network. Users would have terminal attached to their telephone for retrieval and printing of various information related to a specific patent such as equivalents, bibliographical information, and statistics.

Eventually, the WPI would be hosted by various online services including SDC, DIALOG, and Télésystèmes-Questel. These developments will be discussed later in the online retrieval portion of the project.

The journey toward the development of the World Patents Index presents information never before seen outside the organisations involved in the correspondence. Much of the push and pull behind one of the leading patent information sources today would have been lost had Monty Hyams not decided to take with him upon leaving his workplace in the late 1980s key documents charting the history of Derwent Publications Ltd. The process of negotiating the formation of the World Patents Index is just one of many interesting aspects of The Monty Hyams Archive.

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6.3 Derwent, Patent Information Coding, and Technological Advancement in the 20th Century

The Monty Hyams Archive reflects in its documents major technological innovations and advancements key to the history of information science from print publications to the development of online services. At the core of all of Derwent Publications Ltd.'s developments and services was the focus on a value-added approach to the information created. Understanding the beginnings of the service and the additional information it provided for patent searchers is key to illustrating the importance of the company Hyams began and the reason it endures to this day. At the height of Chemical Patents Index (Central Patents Index) production, the following technologies were in use were manual code cards for manual retrieval, IBM cards for punch coding, and magnetic tapes for computer searching.

The emphasis of this analysis portion was placed upon the technological and some coding aspects of the Derwent patent information retrieval services (not the patent literature service previously known as Ringdoc and now recognised as the Derwent Drug File, though it may be briefly mentioned) and their development and the importance Hyams' own initiative and the subscribers had upon the evolution in patent information retrieval services. Monty Hyams, himself, noted the importance of subscribers and their impact in *Chemistry in Britain*:

“Most of the participants are large chemical manufacturers who have helped develop the system, and a unique feature of CPI is the involvement of subscribers' representatives in helping to formulate new coding systems, retrieval techniques and product formats by serving together on regional committees despite the competitive nature of the commercial organizations to which they are attached.”

(Hyams, 1970b, p. 420)

6.3.1 Derwent Coding and Cards

Initially, the value-added service produced by Derwent involved the creation of three main types of codes for the description of patents: chemical structure fragmentation codes; manual code cards for subject organisation of abstracts; and assignee-arranged company code cards (Simmons, 1988). Examination of the codes in detail would take considerable time and goes beyond the scope of this project. Within this research, emphasis is placed on the importance of each individual code

within Derwent's history and basic explanations are given for the coding systems and the technology used to conduct searches with them. However, it is necessary to at least provide brief overviews of their structure and the complexities of the coding which even Derwent coders struggled to fully grasp sometimes (See Bawden notes in Appendix B).

6.3.1.1 Manual Coding and Cards

One of the most innovative features added to patent information by Derwent was the Derwent Manual Codes. Peter Hyams (n.d.b) describes the coding system as follows: "A proprietary coding system was established on a hierarchical basis so that searches could be made at different levels of specificity." This was keyword-based hierarchical system.

The formation of the Central Patents Index (now known as the Chemical Patents Index) began with the above-mentioned Farmdoc service. Farmdoc (1951-), a pharmaceutical abstracting and indexing service, became the first patent documentation service offered by Derwent. Though documentation for the first year is not included in the Archive, the *Combined Farmdoc & Ringdoc Meeting* report from 1964 provides insight into the early developments of Derwent's manual coding within Farmdoc.

Prior to the introduction of the new sections which would later form the Central Patents Index, Farmdoc was divided into twelve groups which were then further split be subgroupings. These subgroupings were assigned a number and letter to be added to the patent information compiled by Derwent (Derwent Publications Ltd., 1963, p. 13). According to Monty Hyams (1963, p.59) in the Derwent Patents Manual 1964, the Manual Code for Farmdoc at the time included 315 classes with individual patents "assigned on an average to three different classes, so that for a yearly output of around 5,000 basic patents 15,000 cards are required giving an average of 50 cards per class." He goes on to explain that Derwent decided upon a standard IBM card for the printing of abstracts for manual retrieval in order to ensure a universal standard was in use, highlighting Hyams and Derwent's forethought in patent information retrieval issues (Hyams, 1963, p.59).

Following the introduction of the Derwent Manual Codes in 1963 with Farmdoc, the expansive nature of the CPI Classification allowed for a variety of subsections which could be added to as required by patent developments. In the Derwent Patents Manual 1964, the development of the next section is mentioned: Plasdoc. Plasdoc would follow the example of Farmdoc's scheme and its focus would be plastics

patents (Hyams, 1963, p.61). By 1972, the main sections of the Central Patents Index were:

- A Plasdoc – Polymers, Plastics
- B Farmdoc
- C Agdoc
- D Food, Disinfectants, Detergents
- E Chemdoc – General Chemicals
- F Textiles, Paper, Cellulose
- G Printing, Coating, Photographic
- H Petroleum
- J Chemical Engineering
- K Nucleonics, Explosives, Protection
- L Glass, Ceramics, Refractories
- M Metallurgy

The sections above are the main divisions of the CPI Classification. In 1972, these sections were further expanded into 163 classes which were “not intended to serve as a coding or retrieval tool, but to break down the subject matter simply and unambiguously into a number of profiles for alerting, SDI and scanning purposes.” (Derwent Publications Ltd., 1972, p.1)

The creation of the Manual Code system was to expand upon the CPI Classification and was “far deeper than the arrangement according to CPI class, and is similar in structure to a national patent office classification but strengthened to take care of chemical and polymers.” (Derwent Publications Ltd., 1972, p.20) The production of the manual code codes were intended to promote rapid manual information retrieval through a subject-based classification for a company’s in-house files (Derwent Publications Ltd., 1972, p.20). Two separate card types were provided for the system. For Farmdoc and Agdoc (Sections B and C) IBM-size cards were made available “with as many copies of the record as there are groups to which the invention is assigned.” (Derwent Publications Ltd., 1976, p.25) The other ten sections of CPI “all the documentation abstracts falling within the same manual code are compiled on 6-up size cards (6 inches x 8 inches) (Derwent Publications Ltd., 1976, p.25).

New Derwent-constructed abstracts and titles were assigned to each of the patents and would appear on the cards, a mark of the value-added approach taken by Derwent to patent information. According to a Plasdoc/Polydoc report from 1966

(Derwent Publications Ltd., 1966, p.4), the Manual Code was placed on magnetic tape. Individual cards were then printed and distributed along with the code.

Manual codes appeared across all types of Derwent publications. According to P. Robbins and H. Winning of Derwent Publications Ltd. (1978, p.52) in their presentation on the Derwent Manual Code at the International Patents Conference 1978, manual codes were included on all copies of each documentation abstracts. Additionally, each of the forms of the *Basic Abstracts Journal* included “an index of the Manual Codes used, the title of the code and a list of accession numbers of documents to which each code relating to that particular journal had been assigned (Robbins and Winning, 1978, p.52).

While primarily meant for manual information retrieval, manual codes could be employed for computer and online searching. In the coding, any subsection number (the first number to appear in the code) with less than one digit must have a zero added to it for computer or online retrieval (Robbins and Winning, 1978, p.55). If a subgroup number is not assigned in the code, then the proceeding letter must be preceded by two zeros (Robbins and Winning, 1978, p.55). However, some of the Derwent manual coding tapes inserted these zeros automatically (Robbins and Winning, 1978, p.55).

The 1972 CPI Code Manual included in the 1972 CPI Instruction Manuals illustrated how the later stages of the Manual Codes were formulated. Each of the main sections listed above included a number of groups which in turn had their own subgroupings. For example, patents classified under ‘Glass ceramics’ would be coded as L1-A8. ‘L’ is the section code for ‘Glass; Ceramics; Electro (In)Organic, Etc.’. ‘1’ denotes the group which is ‘Glass, Vitreous Enamels’. ‘A’ indicates the subgrouping of ‘Chemical Compositions’, and ‘8’ designates the patent as falling into the category of ‘Glass ceramics’. Should any new area of research and patent submission arise, new groups and subgroupings could be incorporated in without issue.

The February 1972 CPI Manual Code Manual (Derwent Publications Ltd., 1972, p.A1) included in 1972 CPI Instruction Manuals provides insight into how codes varied depending on the heading under which the patent fell. For instance, Plasdac (Section A) patents were assigned codes based not only on their ingenuity but also on the materials. Additionally, the introduction of this manual marks a change in the representation of the codes. The original Basic Group numbers for the Manual Codes were formed using a Roman numeral format; this changed with a shift to Arabic

number forms with the addition of the section letter before the basic group number (Derwent Publications Ltd., 1972, p.B1). This change was likely prompted by the need for quicker processing of the information into a machine-readable format. Chemdoc also differed from its fellow CPI sections: "In order to reduce the number of manual codes, assigned to a patent, to a minimum, a system of priorities is used in Chemdoc whereby (in general) only one code is assigned to a single chemical compound." (Derwent Publications Ltd., 1972, p.E1)

These priority organisations were described in the three main subsections of Chemdoc. In other words, the Manual Codes assigned to the individual patents were decided upon through the designation of a key feature which was deemed to be unique to that specific patent. The coding system considers both the structure of the chemical and the purpose of its eventual use into account with its source material found in the Documentation Abstract assigned by Derwent.

By 1976, the CPI and WPI Instruction Manuals from February 1976 indicate 3600 Manual Codes were in use within the CPI. Card files are created using the documentation abstracts relating to a specific Manual Code and compiled every two years on microfilm, providing the option to subscribers for the elimination of print cards which might take up considerable storage space (Derwent Publications Ltd, 1976, p.3).

The introduction of CPI online also allowed for the print out of manual codes (Derwent Publications Ltd., 1977, p.1). Derwent subscribers eventually requested that manual codes be made available online as a separate print option, and they were being loading on SDC as of April 1979. (Derwent Publications Ltd., 1979, p.G2)

Developments in the manual code continued over the years, and with the advent of online retrieval, new challenges were faced. Some of the main difficulties were illustrated in in 1984 (Derwent Publications Ltd., 1984a, p.2.6-2.7). With the increase in new technology developments and thus the need to expand the manual code classification, confusion could be created when adding more divisions within the coding system (Derwent Publications Ltd., 1984a, p.2.6). Derwent decided to create subdivisions for "highly-posted code descriptors" which then resulted in the increased convenience of using online searching versus the use of manual codes since many basics may be assigned to the same code (Derwent Publications Ltd., 1984a, p.2.6-2.7)

Despite the complications faced by manual coding, Derwent persevered and continued its output of the coding system. In fact, Thomson Reuters still uses the

Manual Codes to this day, continuing the coding of inventive aspects of patents developed today.

6.3.1.2 IBM Cards and Chemical Fragmentation Coding

One of the major contributions by Derwent to the history of information science related to its searching and indexing of chemical patents. The first developments began with the introduction of Farmdoc in 1963 along with Derwent's Chemical Fragmentation Codes. The development of the code was intended to assist with the coding of patents which included non-polymeric chemicals (Derwent Publications Ltd, 1972, p.27).

Chemical fragmentation coding is complicated to say the least. Explaining the whole history even in the Archive's timeline would lead to diving into a rabbit hole, never to escape again. The development of the code over the years led to many hurdles for researchers today since:

“as the code grew, the existing files could not be updated, and so several file splits have to be taking into account when searching: files created using earlier versions of the code are not searchable with the additional codes included in later versions.”

(Lynch and Downs, 1991, p.133)

The purpose of chemical fragmentation codes was to breakdown a chemical compound's structure in order to determine core parts. These individual parts were then assigned unique codes.

An informal conversation with David Bawden (See Appendix B) provided insight into the difficulties faced in producing the Chemical Fragmentation Code. The compounds included in patents were often very general in order to cover a large area of production. This made the task of coding the already complex Markush structures even more challenging since the information provided was intentionally incomplete.

Punched card coding is first publically noted in the Derwent Patents Manual 1964 which is not included in its entirety within the Archive. Upcoming New York and London subscriber meetings were announced in the manual by Hyams (1963, p.61-62) as the occasion upon which the introduction of proposals for the use of Derwent abstracts as the foundation for IBM punched card for mechanical retrieval would take place. Hyams (1963, p.62) wrote:

“In addition the cards will be used for printing out cumulative indexes listing under each code heading all patents that have been classified under that heading, the lists being in the form of three line expanded titles printed out from the cards by an interpreter.”

The punched code was printed on 80 column IBM cards, with each of the punch holes denoted a fragment of the chemical code. Punch card sorters were the machines which processed the punch cards. They were “used to arrange punch cards in sequence or grouping necessary to present the information they contain in the required order.” (Derwent Publications Ltd, Central Patents Index: General Instruction Manual 1972 in Central Patents Index Manuals: Instruction Manuals 1972, p.27) Each of the punch positions on a card was stored as a three-digit number, denoting the column and position number (Derwent Publications Ltd., 1976, p.44).

In 1966, approximately 1.2 punch code cards were being created per patent specification, and the information on the cards was transferred to magnetic tape on a quarterly basis (Derwent Publications Ltd., 1966, p.4). Additionally, the decision was made to no longer print the punch code along with abstracts to facilitate the sorting of the cards.

There were two separate punch codes as evidenced by the division into CPI Punch Code Manual for section A Plasdoc (which was originally formulated by Imperial Chemical Industries Ltd. and the CPI Chemical Punch Code Manual for sections B, C & E in the Central Patents Index: Instructional Manuals for 1972. The two different coding systems each had a large amount of complete advice on the construction of their code. Thus, these complexities had to be examined in regards to online retrieval needs.

With the introduction of WPI and CPI files along with coding onto SDC (Search Data Corporation) in 1975, Derwent had to explain in the 1976 instructional manual how to search the punch codes. The aforementioned three digit codes derived from the punch position was followed by a forward slash and then a sub-heading code (Derwent Publications Ltd., 1976, p.44). For instance, a punch code for a steroid patent would have the sub-heading code of B5, ‘B’ indicating ‘Farmdoc’ and ‘5’ indicating ‘steroid’ (p.44). The searching of most CPI patents resulted in the separation of each code-subheading combination with either ‘AND’ or ‘AND NOT’ whereas searching B, C, E required a more complex logic when searching (Derwent Publications Ltd., 1976, pp.44-45). The user could rename ‘AND’ as a plus sign when searching, but it must be reverted back when searching for patents in other

classifications (Derwent Publications Ltd., 1976, p.45). The system allowed the user to see how many postings were found during the process, negating the need to add an abundance of terms (Derwent Publications Ltd., 1976, p.45).

Derwent recognised the need to move away from punch card input and retrieval in 1977. In his paper "Patent Documentation for the Chemical Industry – Future Developments", Monty Hyams (p.43) noted that IBM will end its production of IBM cards in 1978, negating further use of the system. Additionally, the amount of companies still in possession of punch card sorters was minimal (Hyams, 1977, p.43).

In October 1978, Derwent established a new sub-committee "to try to devise a unified coding system for Sections B, C and E, with the introduction of additional search parameters, based on an 'extended punch card principle.'" (Derwent Publications Ltd., 1979, p.F1) Following the development of the new code, Derwent knew the production of punch cards and mutlipunch tapes would no longer be required or economically recommended (p.F1). The end of punch card coding was near, and Derwent new it needed to adapt for the future of chemical patent information retrieval. According to a later Derwent document from April 1980, Derwent planned to cease production of punch cards around the end of 1980 (Derwent Publications Ltd., 1980). Despite the many revisions to the punch code since 1970, the impact of the original three digit codes and the cards upon which they were stored on the history of patent information are crucial.

6.3.1.3 Company Cards and Coding

The Combined Company Code (or Company Code; now known as the Derwent Assignee Code) had been assigned to patents since 1963 with all patents following 1969 have four-letter codes for each patentee, including individuals (Derwent Publications Ltd., 1976b, p.42). The format of assigning four letters per code was altered very little over the years.

In 1975 major changes took place Subsidiaries of well-known companies or any obvious subsidiaries of less-known companies are assigned an identical company code in order (Derwent Publications Ltd., 1976b, p.42-43). Derwent's decision to retain the original codes assigned to companies despite any company name changes was acceptable due to the printing of a separate list in which company names were listed in alphabetical order The assignment of Company Codes was often straight forward and resulted from the first four letters of the first word in the company name. However, for more accurate retrieval, certain words are edited or ignored (Derwent

Publications Ltd., 1976b, p.44). An updated to the Company Code occurred in April 1975 to the correct issues such as a company have multiple codes or the same code being assigned to two unrelated companies (Derwent Publications Ltd., 1976b, p.42). It is important to note that the pre-CPI company codes remained a four alphabetical letter code.

While the same company codes were used for the abstract headings in CPI and WPI, CPI indexes differed. From 1970 and the issue of the new code in 1975, non-standard codes were formed of three letters followed by an asterisk (*) for the company codes appearing in the CPI (Derwent Publications Ltd., 1976b, p.45). From April 1975, non-standard patentees were assigned their first three letters followed by an asterisk for companies and, in the case of individuals, by a slash (ABC* or /ABC). The WPI nonstandard company codes had only three letters as well followed by either a hyphen or a forward slash (ABC – or ABC /) (Derwent Publications Ltd., 1976b, p.45).

As with the Manual Code and the Punch Codes, the Company Code was also affected by the advent of online retrieval. The codes were offered as of the search parameters by which subscribers could locate information on the WPI and CPI via SDC Orbit. Searching of standard company codes was simply a matter of type (PC) followed by the company code. To prevent false drops (irrelevant results), the application of 'stringsearching' was useful. It is "a special ORBIT serial searching procedure which permits the searching of words or character strings in any printable category." (Derwent Publications Ltd, 1976b, p.40,42) By placing colon marks on either side of a term with STRS (CC) before the phrase, it eliminated the separation of the terms within the marks and thus irrelevant results (Derwent Publications Ltd, 1976, p.42). Eventually, the creation of the Patentee Dictionary would further promote the usability of the Company Code for its subscribers, which also assisted in the confirmation of new patent specifications (Derwent Publications Ltd., 1979, p.C12). Overall, despite the changes to each of the three main codes over the years, the core intentions of purpose of the codes remain. The Monty Hyams Archive exists as a testament to the enduring appeal of Monty Hyams, Derwent, and their ideas.

6.3.2 Magnetic Tape

Magnetic tape was developed by chemist Friedrich Matthias of BASF in the 1930s, an invention which would continue to thrive through the digital revolution of the 1980s (Audio Engineering Society, n.d.) The first computer to employ magnetic tape in the storage of information was completed in 1951. Thus, by the introduction of

Derwent in the 1950s, magnetic tape was already being established as a key storage device, and the company ran it exclusively on IBM computers in the beginning (Derwent Publications Ltd., 1966, p.7).

Magnetic tapes were supplied by organisations and companies like Derwent Publications Ltd. “to organizations operating suitable main-frame computers to enable the tapes to be interrogated through telephone communication (online searching).” (Rimmer and Green, 1985, p.258) The production of magnetic tape was aided by Derwent’s creation of its own computer programs. A variety of programs would be created for the most popular computers of the time in order to ensure users of different systems could produce magnetic tape (Derwent Publications Ltd., 1966, p.7). The tapes being produced at the time were for punched coding and bibliographical information (Derwent Publications Ltd., 1966, p.7) At the time, the punch coding tape could hold several years’ of information while the bibliography tape only held one year’s worth of information (Derwent Publications Ltd., 1966, p.6-7). The 1966 Plasdoc/Polydoc report demonstrates Derwent’s commitment to servicing their clients various computer programmes through the inclusion of a computer specifications questionnaire in order to determine the most popular systems used by their subscribers (Derwent Publications Ltd, 1966, pp.15-16).

By 1972, in addition to the punch code search tapes, manual code/company/classes tape was produced along with print tapes and a weekly mini-tape (bibliography) (Derwent Publications Ltd., 1972, p.36-39). Weekly magnetic tapes for Current Awareness Profiles (SDI) were provided for all sections of the CPI the punch code cards from Sections A, B, C, and E of the Central Patents Index (CPI) were converted into magnetic tapes, and the updated tapes were sent to subscribers every quarter with the possibility of fifty questions per run (Derwent Publications Ltd., 1972, p.36). Paper tape and manual codes are converted for the manual code/company/classes tape with a maximum of ten questions per run of the tape. The search must be limited to one column for the searching of these tapes (Derwent Publications Ltd., 1972, p.36-38).

With the increasing production of magnetic tape, Derwent began to encourage its users to use it as a primary source of searchable information. While one could use a punch card sorter like the IBM 108 for searching, for accessibility purposes Derwent recommended “transfer the card information onto magnetic tape in multipunch record format in serial order according to *CPI* accession number.” (Hyams, 1970b, p.419-420)

As stated previously, magnetic tape usage continued throughout the timeline of the Archive. Derwent would update magnetic tape types as needed to keep up with the organisation's needs (Brooks, 1978a, p.51). Despite some issues with the accessibility issues of the format, they remained popular with Derwent subscribers for decades likely due to its remaining the most advanced information retrieval method until the advent of software-based online searching which resulted in much quicker searching for researchers (David Magrill, 1978, p.78)

6.3.3 Microform

The introduction of microform products for the dissemination of patent information was highly important to both Derwent and information professionals alike. According to Martin A. Lobeck (1990, p.54), microfilm was key to reduction in storage space of patent information. Microform products were developed for a number of services over the years and eventually adapted for online retrieval purposes, despite a brief moment in 1971 where Hyams actually considered stopping the production of microfilm altogether due to a lack of demand from the national patent offices (N.A., 1971).

Production of microfilm in 1969 was aided by the use of a flat-bed camera which assisted for the creation of high quality products (Derwent Publications Ltd., 1969, p.1). Around 1969, Derwent entered an arrangement with Eastman Kodak for the production of aperture cards of "*CPI* basic specifications with the documentation abstract as the first frame, and with coded information punched into the body of the card." (Hyams, 1970, p.420)

By 1978, the Computer Output Microfilm (COM fiche) was viewed as the preferred method of providing subscribers with WPI and CPI Indexes. Based on Derwent subscribers' attitudes toward print and COM indexes, COM indexes were becoming more satisfactory for use (Derwent Publications Ltd., 1978, p.12). According to M.D. Dixon (Derwent Publications Ltd., 1978, p.12), this was beneficial to Derwent since it was taking ten weeks to produce print indexes where COM indexes could be produced within three weeks. However, even the use of COM indexes were being overshadowed by online use by subscribers as the order numbers dropped considerably in 1977 (Derwent Publications Ltd., 1978, p.12). This might be one of the earliest indications of online use overtaking previous forms in regards to information access and retrieval in any area. It marked a significant shift from the reports in November 1977 by Monty Hyams. Hyams declared that, while COM

indexes were being ordered, they by no means outshined the printed formats which were still in demand on a weekly and quarterly basis (Hyams, 1977, p.40)

Despite this drop in index orders, Derwent Publications Ltd. continued its production of microform products. In 1977, the company produced microfilmed five million pages of patent information for its services. Illustrating the amount of microfilm being produced, H. Mumford stated that:

“...on 1,400 roll film silver masters of 100 feet in length from which more than 30,000 diazo copies of 100 feet were produced. These were distributed to subscribers in 17,000 plastic boxes, 11,300 3M cartridges and 3,000 Kodak cartridges. The 30,000 copies amount to 570 miles of microfilm which is equivalent to 3 return journeys between Stratford and Heathrow.”

(Derwent Publications Ltd., 1978, p.15)

In other words, the amount of microfilm being produced by Derwent in the late-1970s was enormous, demonstrating the importance of the medium to the physical dissemination of patent information.

A number of problems faced the production of microform products. One of the primary problems faced by Derwent was poorly printed patent specifications (Derwent Publications Ltd., 1982, p.1). These often resulted in illegible information and poor quality drawings. According to Derwent, it made continuous contact with the patent offices to explain the problems these printings created (Derwent Publications Ltd., 1982, p.1). Another concern was that some patent offices were producing their specifications with very small margins, thus causing the stapling of the materials to possibly hinder the investigation of the documents (Derwent Publications Ltd., 1978, p. 17-18). Worldwide colour variation results in varying microfilm density, causing more issues (Derwent Publications Ltd., 1978, p.18). These problems were presented by H. Mumford Smith at the International Patents Conference in 1978.

By 1982, Derwent Publications Ltd. (Derwent Publications Ltd., 1982, p.1) claimed to be ‘one of the worlds [sic] largest producers of microform products’, converting 4,000,000 frames of materials to microfilm in the previous year. By the late 1980s and the end of the Archive’s timeline, microfilm still dominated the area of archiving print publications in spite of few updates to the information retrieval technology according to Monty Hyams (1987, p.147). Due to the problems such as the labour involved in order to rotate the microfilm cartridges, Derwent kept up to date with new microform systems and technology in order to service its customers (Hyams, 1987,

p.148). Derwent persevered through any quality and information retrieval issues to continue to deliver to its subscribers when CD-ROMs were still incapable of delivering the results required to meet Derwent Publications Ltd. standard for its high quality services (p.149).

6.3.4 Online Services

The advent of online retrieval of information greatly shaped the delivery methods of Derwent services. Derwent's responsiveness to technological changes ensured it was at the forefront of patent information online-based delivery methods. Peter Hyams (2015) said of his father's place in the development of online services at Derwent, "...it was his job to make sure that Derwent got the best possible arrangements, and there were a few false starts with online." These false starts and some of the developments with its initial online service providers are key to the foundations of information science.

According to Monty Hyams, the advent of online print brought with it problems not faced in the use of punch cards. As previously mentioned, one of the major benefits of punch cards was the ability to print abstracts upon the cards along with all other relevant information. Peter Hyams (n.d.c.) wrote, "The initial online services of mid 1970s onwards removed those benefits. You could not even display simple graphics, nor were computing capabilities a match even for the much smaller database sizes of that era. There were continual 'memory overflow' problems with the early online systems."

Despite the less detailed results, a 1974 CPI questionnaire found that many subscribers were interested in online computer searches carried out by Derwent on their behalf (Derwent Publications Ltd., 1974a, p.3). Thus, a new department was formed at Derwent whose primary objective would be to carry out these searches. Derwent guaranteed that searches would be performed within seven days of the submitted requested with manual searching employed when more cost efficient (Derwent Publications Ltd., 1974a, p.3). The cost of searches varied on the information derived for the search. By 1975, Derwent decided to make available the entire Central Patents Index and World Patents Index file for SDC users. The major annual subscriber meeting was postponed for 1975 due to the demonstration meetings which would take place throughout the year (Derwent Publications Ltd., 1975a, p.10). Additionally, the introduction of a retrospective online retrieval service for Ringdoc was also being developed at the time with testing of the files taking place

through 1975 (Derwent Publications Ltd., 1975b, p.3) Thus, the advent of online retrieval had taken hold of Derwent by this point.

Derwent's online services began in 1975 (P. Hyams, n.d.a). This followed a period of correspondence held within the Archive which tracks the interactions between three main companies: Tymshare, SDC (System Development Corporation Ltd.), INFOLINE, and DIALOG. A chronology document within the Archive outlines the online hosts of Derwent as follows:

- Tymshare (1973-1974)
- SDC (1975-)
- SDC/J (1979-)
- INFOLINE (1977-1980)
- Derwent/SDC (1981-) [Derwent/SDC Search Service]

(Derwent Publications Ltd., n.d.a.)

The initial company Derwent discussed the possibility of online retrieval with was G.D. Searle & Co. concerning their SOLD system (Derwent Publications Ltd., 1974b, p.1). Some of the work performed by the company resulted in a presentation by G.D. Searle & Co. representatives at a Derwent 1973 Literature Division subscriber meeting (Derwent Publications Ltd., 1973, pp.51-73). Within the talk, the representatives provided an overview of SOLD (Searle On Line Data Retrieval System) which was capable of using all Derwent databases. The system's database search technique employed a controlled dictionary which contained various types of terms and synonyms which were then individually associated with a number (or a key which described the term) and a letter (or the termcode which identified the term type). The key is a six digit term which is originally attached to the master term before being assigned to the master term's synonyms. Thus, any search within the system using a key term results in the retrieval of the master term and its synonyms (p.65). Additionally, Boolean operators were employable within SOLD (Derwent Publications Ltd., 1973, p.65).

Derwent had little to do with the development of SOLD outside of providing its materials for use by G.D. Searle & Co. According to Derwent (Derwent Publications Ltd., 1974b, p.1), subscribers felt reservations toward a company other than Derwent (particularly a subscriber) having control over the input into an online retrieval system for Derwent's information (Derwent Publications Ltd., 1974b, p.1). Following a review by Derwent (1974b, p.1), it "did not favour the system, since this was understood to involve the merging of Index Terms, the omission of a considerable number of Free

Terms, etc.” While Derwent did not halt use of the system by Derwent subscribers, it did not allow non-subscribers to access their data through SOLD due to it not reflecting the original information inputted (Derwent Publications Ltd., 1974b, p.1). Thus, Derwent’s interactions with the company ended, and the search was on for another company to service its online retrieval needs.

The first major negotiations between Derwent and another company concerning the online retrieval of Derwent information began in 1973 with Tymshare. A test period was established through July 1975 during which time, Derwent and Tymshare would “provide international service and marketing of an on-line [sic] interactive retrieval service involving the World Patent Index (WPI).” (Derwent Publications Ltd., 1974b, p.1) Initially, it appears interest was only in the WPI file. However, according to the specifications of the data included found in the Archive’s documentation, this was expanded over a series of negotiations. The database would include: the full Derwent Central Patents Index/World Patents Index file from 1963 for bibliography and manual codes data; punch codes for the full sections A, B, C, and E of the Derwent Central Patents Index since 1963; and the SDI (Current Awareness) file’s complete bibliography and manual and punch codes including title terms (Derwent Publications Ltd., n.d.b, p.1). Accessibility for Derwent subscribers could be gained at either their own terminals, Derwent headquarters in London, or Tymshare’s office in Washington, D.C. (Derwent Publications Ltd., n.d.b, p.1). Throughout the subscriber meeting reports, a clear dedication to instructional classes provided by Derwent is evident.

The system launched resulted from the use of STIMS (Scientific and Technical Information Modular Software) and RECON (an online system created for NASA) (Derwent Publications Ltd., 1974b, p.2; Bourne and Hahn, 2003, p.141). According to Alden Heintz (1973, p.2), Vice President of Corporate Development at Tymshare, described the processes by which the software would be interacting for the creation of the service as:

“The STIMS system provides a batch file maintenance capability to create and update a file to which RECON provides a remote terminal, on-line interactive search ability. The combination of this general-purpose software will meet the indexing term requirements and the textual requirements that we agreed are necessary for users of the WPI File.”

(Heintz, A., 1973, p.2)

The final individual files produced from the system following the conversion of the WPI file and the CPI cards into the STIMS format would hold the following information: “patentee, International Patent Classification, basic patent number to equivalent number, Manual Codes, CPI classes, title (with text proximity).” (Tymshare, 1973, p.1) This shows progression from the limitations imposed by the SOLD created by G.D. Searle & Co.

Despite Tymshare interest in the Derwent online WPI project, the company came to find that it could not keep up for the needs of the service should it decide to go through with said project. According to Bourne and Hahn (2003, p.388), the complexity of the file and the storage and update requirements led to Tymshare backing out of negotiations with Derwent. Thus without notifying Derwent, representatives of TYMNET approached SDC (Search Data Corporation) to see if they would be able to work with the Derwent file. Bourne and Hahn argue that this was the deal which saved SDC Search Service from going under after losing MEDLINE as a customer (Bourne and Hahn, 2003, p.389).

Despite Tymshare’s endorsement of SDC as a suitable candidate for hosting online retrieval of Derwent materials, Derwent was also considering Lockheed’s DIALOG program. The final decision to select SDC was informed by the American Petroleum Institute’s (with whom Derwent had a working relationship) experience with SDC. Additionally, Carlos Cuadra of SDC guaranteed that unique ‘mod’ files would be developed to handle Derwent equivalent files and that Derwent would have ultimate control over pricing and access for its subscribers (GB 2107 MYHS/1/12/9). Unfortunately, early negotiations between SDC and Derwent are not reflected in the Archive.

One of the earliest indications of Derwent’s decision to pursue a contract with SDC is in the *CPI/WPI May 1975 Questionnaire: Report on Results and Decisions*. Following questions regarding online retrieval and usage by subscribers, Derwent Publications Ltd. (Derwent Publications Ltd., 1975a, p.6) found that the majority of users favoured the developed of an online service and that most of its subscribers were indeed current SDC users. By the time of the report’s publication, Derwent had provided SDC with three months data from all the company’s files with which they would commence final testing on 1 September 1975 (Derwent Publications Ltd., 1975a, p.6). Full file loading would commence mid-September with further testing conducted this time by a select group of experience Derwent subscribers in hopes of launching the online service to all subscribers by mid-October and completing file

uploads by the end of October with updates following every four weeks (Derwent Publications Ltd., 1975a , p.6).

The Derwent files hosted by SDC required the writing of new programs due to the special handling of the information provided. The development of the aforementioned 'mod' files was crucial to the online retrieval of Derwent patent information. Equivalents, as has been previously explained, and the patent applications filed in other countries after the initial 'basic' patent is filed in the originating country. As an equivalent patent specification is filed, the document number and a few aspects of its information are added to the basic's online record. The family of patents (the basic and its equivalents) is then identifiable by a shared accession number linked to the basic. Thus the record becomes one which must be continuously updated as new equivalents appear, creating a number of problems for online hosts (Derwent Publications Ltd., n.d.c). However, Derwent pointed out that the use of this system also allowed for the updating of older files which may include errors (Derwent Publications Ltd., n.d.c). This system is one which set Derwent apart from the rest by constantly ensuring the correct information was including for online retrieval, likely resulting in better results for its subscribers.

Initial searching on the World Patents Index included less parameters than the future versions. The two files mounted by SDC were the WPI/CPI file and the patent families file (Derwent Publications Ltd., n.d.c, p.6-8). The original search parameters were for the WPI/CPI file were: Derwent accession number, patentee code, Derwent classes, words in title, IPCs (International Patent Classification numbers), priority country, patent country, manual codes, and punch codes (Derwent Publications Ltd., n.d.c, p.6-7). On the other hand, the searchable data on the patents families file were Derwent accession number, patent number, and priorities (Derwent Publications Ltd., n.d.c, p.8). This would be greatly expanded by the year 1983 as seen in the year's Derwent Publications Ltd. (1983, p.20) *Online Instruction Manual*.

By February 1976, the WPI Master file, all Manual Codes, and all Punch codes were available (Derwent Publications Ltd., 1976b, p.51). However, a challenge was presented to both SDC and Derwent: the development and updating of programs. This resulted in a serious delay in codes updated (Derwent Publications Ltd., 1976b, p.51).

One of the most interesting parts of the service's developments was the concern over copyright of the information obtained. While this was no new area of interest for Derwent and its patent specification providers, online brought along easier access. In

the Notes for CPI Washington Meeting Spring 1976, Derwent noted that, while subscriber WPI/CPI file access would be unrestricted following 1 June 1976, distribution of the information outside of the subscriber's organisation required the permission of Derwent. This forethought was important due to the copyright problems which might have arisen for Derwent and/or the patent offices following the introduction of online services. Easier access and printing out of materials might have resulted in easier unauthorised distribution, a problem which continues to exist today for those companies or organisations releasing copyrighted material online or in print.

The effects of online retrieval could be felt within Derwent's services. The advent of online retrieval services marked a change in the Chemical Fragmentation Code. The code was initially design to provide high recall without much emphasis placed upon relevance (Hyams, 1977, p.42). With new technology came the need for an increase in specificity of the coding to offer more precise search results (Hyams, 1977, p.42). One consideration for updates to the code were given to those countries which were still exclusively employed punch card sorters or other previous means of searching Derwent's data. For this reason, technological advances in information retrieval had a significant impact on Derwent's services.

SDC's hosting of the WPI became quite the challenge. Carlos Cuadra of SDC's Orbit service mentioned the complexities of its development in an interview with *Information Today*:

"The Derwent file took probably eight or nine months, partly because it was a very complex database. Our joke around SDC was, "We wish to hell Roger had gotten it." He probably put up 12 databases during the time that we were trapped with the World Patents Index."

(Bjørner, S. and Bjørner & Associates, 2003)

In fact, the entire task was so labour-intensive that Peter Hyams (2015) indicated that Cuadra had wished an agreement between SDC and Derwent had never come to fruition. The early days of online were particularly difficult; all of the technology behind the development of online services at the time was new and quite complex.

One of the most difficult aspects of forming the Derwent WPI Master File was the existence of what were known as 'orphan records'. These records tended to be older ones which were integrated into the online file via multipunch data but were lacking bibliographic details, resulting in the only printable data for the orphan records being the accession number (Brooks, 1978b, p.226). Obviously, this would have a

significant effect on the retrieval of the patent information. Thus, a major effort was taken on Derwent's part to add data to the orphan records which were already available online through SDC. The following three files resulted from the project:

- A file containing bibliographies for over 277,000 Orphan Records.
- A file containing nearly 40,000 missing Equivalent Records from earlier years.
- A file containing over 10,000 missing Basic Records which were issued at the start of WPI and given year letter Z.

(Brooks, 1978b, p.227)

A major shift occurred in the World Patents Index when it was split into two separate files in 1981: World Patents Index (WPI) and World Patents Index Latest (WPIL). WPI was a monthly updated file which covered patent families whose basic was first entered into the system between 1963 and 1980. The updates to the WPI file involved the inclusion of patent family data from any equivalents issues from January 1981 onward. On the other hand, WPIL was a weekly updated file which covered all basics and their families from 1981 to the present (Derwent Publications Ltd., 1983a, p.7).

In a 1983 online instruction manual from Derwent, new users were given instructions on how to gain online access. The steps were as follows:

- Contact SDC Information Services or Derwent-SDC Search Service Ltd. for information and a password (or USERID) and for purchasing of SDC Orbit manuals.
- Contact Derwent Publications Ltd. to obtain a Derwent User Agreement which must be signed and returned to gain access to the patents file on SDC Orbit.
- If outside the United States, contact national telephone authority to acquire a Network User Identifier.
- Assess the service's requirements and purchase or lease a terminal for use. "Most microcomputers and word processors may be used as terminals provided telecommunication interfaces are added." (Derwent Publications Ltd., 1983a, p.2)
- Determine login steps through SDC Orbit User Manual and national telephone authority documents. Check terminal settings. "Then dial the network node, listen for high-pitched note and connect telephone to terminal. Type the terminal identifier, network identifier and finally /LOGIN USERID

remembering to depress the carriage return key at the end of each stage.”

(Derwent Publications Ltd., 1983a, p.2) Repeat it failure occurs.

- Enter security code and the command FILE WPI or FILE WPIL.
- Pause for “USER:” to appear on screen and then begin searching.
- Enter “STOP Y” at the end of the session of hang up the telephone.

(Derwent Publications Ltd., 1983a, p.2)

Today, the process may seem quite lengthy in comparison to visiting Google and entering a search term with or without Boolean operators and other symbols to assist in more accurate retrieval. However, the searching systems developed by SDC and other contemporary systems were revolutionary at the time.

The search system established had the ability to search a range of data elements. Data elements were denoted by a qualifier representing the type of search term when stored in an inverted index within SDC Orbit (Derwent Publications Ltd., 1983a, p.20). If a user were to search without the use of qualifiers, SDC Orbit would assume “that all single word terms are Title Terms, Index Terms, Abstract Words, Accession Numbers, or Patents Numbers, which are collectively known as the ‘Basic Index’”. (Derwent Publications Ltd., 1983a, p.20) In addition to these searching assistants, the user had the ability to save its search strategies which could later then be recalled within the other file (WPI or WPIL) (Derwent Publications Ltd., 1983a, p.20). Crossfile searching was also possible across other files serviced on SDC Orbit was also possible (Derwent Publications Ltd., 1983a, p.21). Another useful search property available was the Orbit proximity operators which enabled users:

“to specify more precise relationships between terms than does the AND operator, which checks only that the terms are within the same record. The proximity operators may be used to specify that words are adjacent, within ‘n’ words of each other, within the same sentence or with the same field.”

(Derwent Publications Ltd., 1983a, p.22)

Despite the benefits of the system developed, problems did exist. In the 1987 publication “How to profit from information technologies”, Monty Hyams (1987a, 4p.151) discussed one of the most important issues facing online retrieval: accurate results. To achieve correct results from searches in the early days of online retrieval, users had to be very knowledgeable about the search strategies for the individual systems and software used. The process often involved deep, time-consuming examination of user manuals, and Hyams (1987a, p.151) proposed the development

of 'expert' systems', computer programmes which could develop logical search strategies to combat the issue.

A number of other online retrieval services and additional online hosts for Derwent materials were developed following the success with SDC. Derwent cooperated with INFOLINE between 1977 and 1980. Also, a joint venture between the two companies known as the Derwent/SDC Search Service lasted from 1981 to the end of 1984. Following negotiations in late 1984, the WIP/L files were available on DILAOG from 1985, informed by the amount of online users who were not currently employed SDC for online searching (GB 2107 MYHS/1/12/60, p. 2). Télésystèmes-Questel would also be added as an online host from 1985 (Derwent Publications Ltd., 1984b, p. 2). In the 1980s, Derwent began cooperation efforts with Télésystèmes and the French Patent Office to allow Markush structure searching through the DARC software, delivering a desperately needed service which would revolutionise the searching of Derwent chemical patents (Derwent Publications Ltd., 1984b; Barnard, 1989, 152). These instances of further developments demonstrate Derwent's commitment to constantly querying their subscribers about their information and access, perhaps the most important aspect of the service beyond the value-added patent information it provided.

6.3.5 CD-ROMs

CD-ROMs are a format by which Derwent could offer subscribers information was just emerging in the timeline of the Archive. Thus, inspection of this time will be brief with a glimpse into the early 1980s views on CD-ROMs and their potential along with noting how this viewpoint evolved through to the early 1990s.

First inspection by Derwent of CD-ROMs in the early 1980s was met with enthusiasm and later disappointment. An early investigator of CD-ROM technology with whom Hyams and Derwent corresponded was ADONIS which was a document delivery project sponsored by six publishers "to investigate the possibly of electronic storage and subsequent delivery of published Scientific, Technical and Medical (STM) journal articles including illustrations which present problems in storage and transmission...." (ADONIS, 1982, p.2) However, the extent to which these interactions took place is unclear as the correspondence halts abruptly in December 1982 (Hyams, 1982). According to Dr. Charles Oppenheim (2015), Derwent produced too much information for CD-ROM manufacturers to deal with, at least up until his departure from Derwent in 1984.

The view by the company on the potential of CD-ROMs would develop over time with possible uses being considered. Unfortunately, this is not reflected in the Archive. Derwent noted the initial queries in an official publication:

“CD-ROM has been with use for several years now. When the media was first introduced, many questions were asked, such as ‘Is the online era over?’, ‘Does CD-ROM add to or detract from online services?’, ‘Is CD-ROM where the future lies for information technology?’. In those early day much of the discussion centred around whether CD-ROM bibliographic products would substitute the online access to bibliographic databases. “

(Hearle and Lee, 1993, p.27)

Considerations to online services showed Derwent’s commitment to its subscribers and their needs. Derwent’s was dedicated to investigating emerging technologies and determining whether or not their subscribers could benefit from their use continued. By 1987, Hyams viewpoint on CD-ROMs as the technology would be suited for “the publication of key-term searchable form of major reference works not required to be updated too frequently.” (Hyams, 1987b, p.179)

Overall, the technological development at Derwent Publications Ltd. traced here through The Monty Hyams Archive’s documents exemplified the perseverance of Monty Hyams and his company in investigating new technologies. In fact, when asked if there was a budget for the Research and Development department at Derwent in the 1980s, Dr. Charles Oppenheim (2015) responded that during his time no budget was given. Whenever a new technology required investigation, Hyams would put forth the necessary funds, all in the name of providing for his subscribers to the best of his abilities and maintaining the high quality of Derwent’s services.

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7 Conclusions and the Future of the Archive

The Monty Hyams Archive exists as a testament to the perseverance of one man and the company he created to provide the world with valuable patent information. Derwent Publications Ltd. grew a small company operated out of a house in London into a major service now operated by Thomson Reuters.

All aspects of the The Monty Hyams Archive point to both Monty Hyams and Derwent being important leaders in the history of patent information and information science. Tracing the World Patents Index, shows Hyams' dedication to providing the world with the best possible service while still remaining loyal to the needs of his subscribers. The inspection of the development of technology through the Monty Hyams Archives supports the belief that the Archive's contents exist as testaments to the place Hyams and Derwent hold in the history of patent information. All of these aspects support the argument that The Monty Hyams Archive is a collection worth noting and preserving.

Regarding the caretaking of the Archive, much work remains to be done. The employment of an archivist with credentials in line with those required for preservation and conservation of the Archive would be one of the first necessary steps to implementing the standards needed for appropriate care of the documents.

The Monty Hyams Archive is an ever-changing collection of documents; it exists as a living organism which will age, alter, and be added to. The completion of this project does not signal the completion of The Monty Hyams Archive. Important individual players and corporations may have documents relevant to the contents of the Archive. The value of seeking out and donating such document cannot be overlooked. The work of this project has only laid the foundations for future examinations of the Archive in relation to information science and its history.

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9 Appendices

9.1 Appendix A: Proposal and Reflection

9.1.1 Reflection

For my dissertation, I was fortunate enough to find a project which suited both my experience and interests as I have worked in two archives previously. The process of the dissertation was a good exercise in time and project management. A number of hurdles arose, some beneficial, others far from it.

As I progressed through the various stages, I had to readjust my work plan as the description portion of the required much more time than originally allotted for. More item level documents would reveal themselves, and I would need to account for additional time. Despite this, the time added to the descriptions actually benefited the project. I was able to delve deeper into the contents for analyses purposed, and each time I looked at a document, another piece of information would appear.

More time allotment was also given to the transcriptions of the interviews as issues arose in the processing of them. Due to the high quality camera's ability to pick up sound, almost every movement and small sound were quite loud. Thus, the separating of the audio and adjusting various settings in order to discern the words being said was performed. Despite the use of this technique numerous statements and inserts were lost. As a result, a number of unintelligible remarks are noted through the transcriptions as '{}'. This was disappointing as the transcriptions and the interviews are included with the Archive. Going forward, I hope to research more in this area to determine if a solution can be found as there was not time to do so during the project.

Another unfortunate aspect of the dissertation project resulted from the search for a theory of information science. This was one of the main objectives of the proposal as seen below. Based on my description of the documents, I do not believe that a theory exists.

One great thing about the project was the tangible evidence I assemble as part of it. The physical documents were handled through the project and the descriptions gathered from the research will result in the formation of a new archive which the world will have access to. The immense pride I feel at having accomplished this could not be overstated.

Overall, the dissertation project has resulted in me having a better grasp of project management and has informed my consideration of a Ph.D. Thanks to Dr. Lyn Robinson and Dr. David Bawden's encouragement throughout the process, I developed more confidence in my research and analyses skills. As a result, the dissertation shaped my life more than I could have imagined at the start.

9.1.2 Proposal

The Monty Hyams Archive: Exploring a revolution in patent information

Dissertation Proposal

By: Caitlin Moore

Dissertation Advisor: Dr. Lyn Robinson

City University London

15 May 2015

Working Title

The Monty Hyams Archive: Exploring a revolution in patent information

Introduction

The establishment of the Monty Hyams Archive is vital to the study of information science. In the 1950s, research chemist Montagu ('Monty') Hyams started to revolutionise the understanding of and access to patent information. Working for the Pyrene Company, Hyams made frequent trips to the London-based UK Patent Office where he began abstracting the articles with information valuable to chemists (Hyams, n.d.a). Thus began the journey that led to the creation of Derwent Publications, Ltd. By 1955, Hyams had noticed patents in Belgium were being published at a quicker rate than in the UK and wanted to bring this speed to patent offices worldwide. Travelling to the Brussels Patent Office, he began abstracting the French and Flemish patents in English, sparking a service which still continues today in digital form as a part of Thomson Reuters (Hyams, n.d.b and Thomson Reuters, n.d.).

Two aims of the project are to propose a system for the description and cataloguing of the archive's contents and to explore potential guidelines for handling, storage, and preservation. A final aim is to identify the possible formation of a new theory of information developed by Monty Hyams during his creation of Derwent Publications Ltd. These aims will be met by defining the archive, contextualising the documents, performing in-depth research in archival methods and software, and qualitatively analysing the findings through historical research and documentary analysis.

Aims

- Propose a system for describing and cataloguing the archive
- Offer guidelines for handling, storing, and preserving the contents of the archive
- Seek to identify whether or not Hyams formed a new theory of information which has yet to be recognised in the fields of library and information science

Objectives

- Define the archive

- Contextualise the documents
- Research appropriate classification systems and insight into the benefits and problems of each and recommend one
- Inspect software options for cataloguing purposes
- Investigate various techniques for preservation including digitisation and storage options
- Perform analyses on the documents in order to discern the existence of a new theory of information

Scope and definition

The scope of the project is limited to the contents of the archive. The primary function of this dissertation will be to describe and organise the archive's contents and to form a plan for preservation of the documents. The contents of the archive were delivered and divided into three categories: correspondence (11 buff folders and 13 pink dividers), subscriber meeting reports (1964-82), talks and brochures, and instruction manuals from 1972 and 1976. While these documents will be the chief focus of the project, efforts will be made to discover any other documents not collected here due to the information gaps which occur. Peter Hyams (2014) noted in one of his overview attachments that a number documents are being withheld from contribution to the archive which limits the scope of the project.

One of the most interesting aspects of the documents involves the development of the company shown across the correspondence included. Thus, tracing this evolution will be included in the descriptions of the archive and its contents. The size of this task alone could amount to the entirety of the dissertation. Therefore, while it is the intention of this project to seek a new theory of information amongst the documents, the completion of this analysis depends on the progression speed of the project.

Research context/literature review

The importance of establishing the Monty Hyams Archive cannot be overstated. He created revolutionary change within the world of patent information. This research project will provide access to documents that researchers will find useful for their inspections of patent information and its history. The goal is to offer a classification system and digitisation guidelines in addition to an overview of the archive and insight into its contents including major themes.

Due to the scope, the project must contain an examination of current archival science methods regarding document preservation and organisation. The literature review for the archive project will be multidisciplinary, covering resources from archival science, information science, business, chemistry, and patenting. Due to the subject nature, in-depth discussion of patents and the information and data attached to them will be required. Here a brief literature review will be given.

The contents of the archive span the history of Derwent Publications, Ltd. from the years 1964 to 1985. The correspondence in the first nine buff folders, mentioned previously, provide insight into the discussion surrounding the creation of a World Patents Index via correspondence between Hyams and his company with BIRPI (United International Bureaux for the Protection of Intellectual Property) and Inpadoc (International Patent Documentation). These mark a major shift in the progression of access to patent information, with plans being exchanged with marks of hand-written revisions and additions. The final two buff folders included correspondences with both the British and US Patent Office. The correspondence collections continue into

the thirteen pink dividers. This correspondence charts additional information and idea exchanges between Hyams and other patent companies. The communication with companies in Japan and China detailed in the last few folders displays the breadth of Hyams's influence in the world of patent information. In addition to the extensive correspondence documentation, subscriber meeting reports (1964-82) and the talks and brochures included offer a deeper understanding of the inner workings of the company itself and its collaborations with other companies in the patent world.

While the information gained from the contents of the archive is highly important, additional historical research is needed to frame and compare the documents. When Hyams started working with patents, researchers often waited for patents to be made available, which could take up to six years (Gore, 2014). As a patent manager at Pyrene Company, Hyams made frequent trips to London to research new patents at the UK Patent Office. He started to create abstracts for the chemical patents there and published his weekly British Chemical Patents Report (Poynder, 1998). Thus began Derwent Publications Ltd. In 1955, Hyams decided to solve the problem of delayed access to patents by travelling to the Brussels Patent Office and abstracting new patents there into English (Hyams, n.d.b). Later, his bulletin would become the Chemical Patents Index which would lead to the online database known today as the Derwent World Patents Index (Poynder, 1998). Throughout the progression of Derwent's services and the development of new technologies such as the Xerox machine, Hyams "...set up meetings with his customers, who were happy to show him how to run such systems and sell back to them an out-sourced service. The key meeting was held in Italy and so the service became "Farmdoc" (from farmacia)." (Gore, 2014) This project will seek to connect these resources and others with the archival documents in order to paint a comprehensive portrait of the expansion of Derwent and the work of Monty Hyams.

The complexity of organising and managing an archive are reflected in the literature. Millar (2010, p.146) describes ordering an archive as involving the organisation of materials into the following descending levels of arrangement:

"...the creating agency (the fonds or group and the sub-group); the functions and activities performed by that creator (the series and sub-series); the record-keeping structure adopted by the creator or by the archivist in the absence of an existing structure (the file); and the actual documentary material kept for its evidential and informational value (the item and piece)."

The application of these ideas (if adopted) to this project are vital to the sectioning of materials. At the file level Millar (2010, p.146, p.148) designated that, if the creator of the documents has established a filing order, it should be kept as is within that organisation level. Jimerson (2002) differed somewhat in his interpretation of archival classification seeing it as a necessity to keep the original order intact regardless of whether or not it was established by the creator of the documents. However, further research is necessary into the debates surrounding the provenance order of the archive and the virtues of attaching a new organisation. Was it already devised by Monty Hyams prior to his death or attached by another following? This is key to the understanding and defining of the archive.

In addition to book and journal literature regarding classification, standards have and will also be used to guide this project. Most notably, the "ISO 15489:2001 Information and documentation – Records management" which governs the

organisation of records. The subsequent guidelines regarding the classification system adopted will be adhered to:

- classification system – to classify the records within a type framework
- controlled vocabulary – for controlled subject access
- dispositions — record retention schedules, to provide details of what records should be created and how long they should be retained
- classification scheme – for access rights and restrictions

(Society of Archivists Data Standards Group, n.d.)

Regarding the preservation of the materials, a great deal of information has been and will be assessed to create a proper space for the archive. One of the main texts which has been and will be consulted is Forde and Rhys-Lewis's (2013) book on the preservation of archives. Insight into every aspect of preservation is incorporated into the text from the handling of print materials and environmental controls to digital preservation. A review of the literature provided differing policies and standards between institutions, most notably The British Library and the National Archives. For instance, in regards to the temperature at which to store documents, The British Library (following *PD 5454:2012 Guide for the storage and exhibition of archival materials*) recommended that mixed library and archival materials be kept in a facility at the temperatures from 13°C to 20°C. On the other hand, the National Archives (following *BS5454:2000*) suggested storing materials in a room 16-19°C

While not the core focus of this project, the prospect of digitising the collections in the future is key to preservation. The National Archives sponsored a comprehensive overview of the process of digitisation from prioritising what should be digitised first to selecting the equipment to use (Bülow, et.al., 2011). The question of openness arises with any digitisation project. Following the digitisation project, questions may arise concerning the location of archive storage which will be addressed as part of the digitisation recommendations.

Methodology

For the purposes of this project, qualitative analysis will be employed. The archival documents will be inspected and analysed with both a documentary analysis and historical research-based approach which are interlinked within the research world. Historical research is rather straight forward as the primary method of research for this project. During this project, the archival documents will act as primary resources for the description and investigation of the documents. Enclosing the documents with contemporary resources and current analyses will provide background and perspective.

While little external data collection is required for this project, interviews will be conducted in order to provide historical context for the archive. The interviewees will include family members and former colleagues of Monty Hyams. This type of data collection comes with ethics questions which will be addressed later.

The way documentary analysis will be approached for this project is defined by Pickard (2013, p.251) as a more open approach which involves the researcher "...allowing concepts to emerge from the material itself and remaining vigilant to revealing quotations that can be included in the report." Pickard (2013, pp.251-254) discussed the various ways documentary analysis could be incorporated into LIS research which will be applied to the archival documents. However, as Pickard states (2013, p.254), questions regarding the validity of the documents may appear which is

why historical research and additional interviews will be conducted and analysis will be done for comparison purposes. Content analysis will also be implemented on both the archive's documents and the interviews for the purposes of deeper analysis of the developments at Derwent and any theoretical groundwork constructed by Hyams.

Work Plan

The work plan below is subject to revisions based on the progression of the project.

The Monty Hyams Archive Dissertation Workplan

City University London

Project Lead: Caitlin Moore

Project Start

Date: 10/04/2015

Display Week: 1

WBS	Task	Start	End	% Done	Work Days
1	Proposal and Preliminary Research				
1.1	Proposal and Research	10/04/2015	15/05/2015	100%	26
2	Start-Up				
2.1	Archival Methods and Cataloguing Literature Review	16/05/2015	05/06/2015	0%	15
2.2	Historical Literature Review (Including Interviews)	06/06/2015	26/06/2015	0%	15
3	Mid-Term				
3.1	Basic shelf organisation of documents according cataloguing scheme proposed	27/06/2015	17/07/2015	0%	15
3.2	Description of the Documents	18/07/2015	07/08/2015	0%	15
4	Final				
4.1	Qualitative Analysis (Historical and Documentary)	08/08/2015	28/08/2015	0%	15

4.2	New information theory and wrap-up	29/08/2015	24/09/2015	0%	19
4.3	Submit Dissertation	25/09/2015	25/09/2015	0%	1

The Monty Hyams Archive Dissertation Workplan

City University London

Project Lead: Caitlin Moore

Project Start Date: 10/04/2015

Display Week: 1

WBS	Task	Start	End	% Done	Work Days
1	Proposal and Preliminary Research				
1.1	Proposal and Research	10/04/2015	15/05/2015	100%	26
2	Start-Up				
2.1	Archival Methods and Cataloguing Literature Review	16/05/2015	05/06/2015	0%	15
2.2	Historical Literature Review (Including Interviews)	06/06/2015	26/06/2015	0%	15
3	Mid-Term				
3.1	Basic shelf organisation of documents according cataloguing scheme proposed	27/06/2015	17/07/2015	0%	15
3.2	Description of the Documents	18/07/2015	07/08/2015	0%	15
4	Final				
4.1	Qualitative Analysis (Historical and Documentary)	08/08/2015	28/08/2015	0%	15
4.2	New information theory and wrap-up	29/08/2015	24/09/2015	0%	19
4.3	Submit Dissertation	25/09/2015	25/09/2015	0%	1

Resources

Resources required for this project involve both the archival work and interviews. For the purposes of organising and storing the documents, acid-free archival-grade boxes and folders will be required. Also, tools for the removal of staples will be needed. Regarding the tape which exists on a few documents, a paper conservator

should be contacted. For the interviewing process of the project, a recorder will be essential, and one which includes an attachable microphone to the interviewee's lapel is preferable.

Ethics

As part of the research process, interviews will be conducted with those who knew Monty Hyams. The interviewees will include family members and former colleagues. Below are the ethics questions from the checklist provided by City University London's School of Informatics and answers regarding this specific project.

1. Does your project pose only minimal and predictable risk to you (the student)? No.
2. Does your project pose only minimal and predictable risk to other people affected by or participating in the project? Yes.
3. Is your project supervised by a member of academic staff of the School of Informatics or another individual approved by the module leaders? Yes, Dr. Lyn Robinson, Programme Director for the School of Informatics.
4. Does your project involve animals? No.
5. Does your project involve pregnant women or women in labour? No.
6. Does your project involve human participants? For example, as interviewees, respondents to a questionnaire or participants in evaluation or testing? Yes, interviews will be conducted with family members and former colleagues.
7. Could your project uncover illegal activities? No.
8. Could your project cause stress or anxiety in the participants? No.
9. Will you be asking questions of a sensitive nature? No.
10. Does your project rely on covert observation of the participants? No.
11. Does your project involve participants who are under the age of 18? No.
12. Does your project involve adults who are vulnerable because of their social, psychological or medical circumstances (vulnerable adults)? No.
13. Does your project involve participants who have learning difficulties? No.
14. Will you ensure that participants taking part in your project are fully informed about the purpose of the research? No.
15. Will you ensure that participants taking part in your project are fully informed about the procedures affecting them or affecting any information collected about them, including information about how the data will be used, to whom it will be disclosed, and how long it will be kept? Yes, information packets with notes about usage intentions and consent forms will be provided to all interviewees.
16. When people agree to participate in your project, will it be made clear to them that they may withdraw (i.e. not participate) at any time without any penalty? Yes.
17. Will consent be obtained from the participants in your project? Yes.

18. Have you made arrangements to ensure that material and/or private information obtained from or about the participating individuals will remain confidential? Yes. If the interviewee provides written consent that the interview may be included in the appendix of the dissertation, then their name will be changed on the documents. However, as Pickard (2013, p.93) pointed out this does not always conceal the identity of the participant fully, and the removal of an interview from the record will occur if this becomes a concern for either the interviewer or the interviewee. Though, if the interviewee wishes for their name to be published for the record, written consent to this action will occur.

19. Will the research be conducted in the participant's home or other non-University location? No.

Confidentiality

Issues regarding confidentiality will arise in the interviewing process for this project. As noted in the previous section, safeguards have been considered for the protection of personal data and information provided by the interviewees. With the consent of the interviewees, the full text of the interviews will be incorporated into the appendices of the dissertation. Any interviews included will of course be stripped of personal data unless the interviewee notes their willingness to include their name for the record. Therefore, a pseudonym or code will be employed to refer to the interviewee.

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9.2 Appendix B: Selection of Interview Transcriptions

9.2.1 Peter Hyams Interview

Caitlin: So, when did he, and what kind of sparked his desire to start creating the World Patents Index?

Peter: Well it wasn't a personal whim. There had started to be subset documentation services, as they would call them, on different topics, and then the whole thing became consolidated – first of all Central Patents Index. That was pre-online, that was 1970. Subject scope was gradually being expanded during the 1960s until by 1970, or maybe a bit later, they were covering all the subjects they were ever going to and lots of specialist colleagues were inventing subject codes, chemical codes, all sorts of stuff like that to refine retrieval possibilities, and they were doing that in conjunction with the subscribers. Very important.

Caitlin: Did Monty have a hand in developing those codes, or...

Peter: Well he would have done, but he had lots of people working for him. He was no longer anything like a one-man band. He'd have been involved, but he wouldn't have been the one doing that primarily. He'd have been the one holding a meeting every now and then, saying, 'How's it going, my coding team?' He had the scientific background to be able to talk about this in the way that I couldn't, but Peter Norton, for example, was the prime mover on the chemical coding side of things. But there were lots of people – eventually, at its height, the firm employed about 600 people you know.

Caitlin: Returning back to more the business side of things, Thomson corporation, when did they first have an interest...

Peter: It turned out to be a virtuous circle, as I'll try to explain. The whole business grew very much in the first half of the 1960s – much greater financial turnover, many more staff being taken on, much more space being taken up in the offices, etc. etc. So that had various implications. Firstly, my father could no longer possibly manage the whole thing, and although he'd like to try to managing everything himself, he was bright enough to realise that the time had come when he had to start delegating a bit more, finding more people. And customers, who were increasingly relying on Derwent for pretty important information, were starting to say – he was getting on for 50 by now – they were starting to say, 'what if you're no longer around?' There began to be the sense that the ownership ought to be on a bigger footing. And also, frankly, it was time to cash in a bit. It was quite a frugal family life, you know, we weren't rolling in it for a long time, so it was time to cash in a bit as well. What happened was that something called the Queen's Award for Export Achievement was instituted in the early 1960s. Derwent applied and didn't win it – later on they won it; they didn't win it at the time, but going in for it drew the attention of several big publishers. I can think of at least one other that wanted to buy Derwent. I won't

mention them in case it's confidential, but there was a bit of competition. It wasn't a bad thing, and Thomson, the Thomson organisation, had a really good fit as far as my father was concerned for several reasons.

Firstly, they didn't want to buy all of it straight away. They were happy to buy 51% and to leave him in charge, in fact they insisted in leaving him in charge, and they were UK based. Roy Thomson originated in Canada, but by that time he was Lord Roy Thomson of Fleet, as in Fleet Street London, and he was British and local. Thomson was by then a Lord, a newspaper tycoon, you know, a big cheese, but as my father describes it – and indeed I've seen other accounts – he was really quite humble. He was a self-effacing chap with whom my father quite identified, and I have reason to think Thomson quite liked my father. So all of that had a good fit, but it did mean that once Thomson took over 51% things became on a much more professional footing. In particular Thomson seconded to Derwent, and he worked there for the rest of his career as second in command to my father, a Thomson trainee manager – well he came through the Thomson training scheme – called Brian Comfort. Brian had no scientific background. He was more like the likes of me. He had a managerial background, and he, and other people that my father could then tap into via Thomson, they had all the managerial stuff. My father had done stuff by instinct; they had learnt it in the proper way.

Caitlin: So, did, what type of role did your father take on, when Thomson took over?

Peter: Well, where are we in time would you say, I mean they took over in...

Caitlin: About 1976.

Peter: Well, they took over in '63 was it? Something like that?

Caitlin: '66

Peter: '66. I would say that for the next ten years still my father was very, very much hands on exclusively with Derwent. Until about the end of the 1970s, he was still really the prime mover with Derwent. He had a lot people working for him doing very important things, but he was still out and about and a big cheese, seeing customers all the time, doing deals, that kind of stuff, and didn't put in much time for Thomson's as such. Towards the end, we're reaching about 1980 and my father is 62, if you're working at Derwent you're probably by then thinking he's the old boy who's lost touch a bit with modern technology and things, and he's also not there so much. He's swanning about for Thomson's. Thomson's, for a while used him to, to investigate other companies they might buy, and do more corporate things towards the end. I don't think he was ever really corporate man. It didn't really sit very well with him I don't think.

[Break in selection]

Caitlin: Would you like to talk a little bit more about the website that you started?

When did you decide to start it?

Peter: Oh, well, immediately. Don't forget my background's as a journalist, and I'd been dealing with some of his stuff later in the information industry, so I would have been interested anyway even if I wasn't his son. I realised that I had all his stuff, and that, yes, we wanted to give the archive to the university where they'd do things with it, but there's also a more populist story to tell. There were also some aspects of the history of Derwent which I thought might be too boring and esoteric for you, but we'll discuss that – so I started doing it. I have more or less finished. Stuff that I add in future will be mostly personal, family, that kind of thing, in a different section. I've meanwhile done an 'Intro' section that tries to explain his career to somebody that's never heard of patents and so on, and tries to do it in quite a pop, accessible way, and quite a few friends and relations have read that and thought, 'Oh, that's quite interesting. We never knew that.'

Caitlin: That's very nice of them.

Peter: Then I've got another section called 'Derwent' which is taking some of the papers I haven't yet passed on to you, but will do, plus some stuff you've got already, some of his memoir extracts, and done some historical snapshots of Derwent. They're dryer. They would be interesting to far fewer people, although I think there's also some stuff there that's of general business interest. For example, never mind the patent side of it, in the early 1970s the pound got devalued, suddenly, and this had a devastating impact because suddenly the whole pricing structure for customers was all over the place. Derwent had all these expenses and tried to find, to find an equitable way out of that. Led to a whole lot of complicated shenanigans, which again, I'll give you – they're all documented. I imagine there must have been other businesses at the time having similar appalling difficulties. As we speak, it may well be that Greece is about to exit the Euro, and they're going to have comparable, well, worse difficulties. You have prices, and then you have agreements with customers, and then suddenly, oops...So some of that I think is of general business interest. Most of Derwent's stuff, well it's never been documented really, the history of Derwent.

Caitlin: I think it will be of great interest once...

Peter: It'll be a niche interest, but, you know, it is a niche.

Caitlin:just for information history.

Peter: I think so, so I'm very pleased you're doing this. I mean, Stephen and I giving this archive as his executors, we wanted a good home for it, and we're gradually realising what a good home it is going to be for it, and I can see, I think, that from your point of view and others, this could be an interesting project.

9.2.2 Stephen Hyams Interview

Stephen: He was very unpretentious. He did not like to draw attention to himself.

Caitlin: Do you feel those character traits played a hand in Derwent's success later on?

Stephen: Probably. He had a very good relationship with his staff, which I witnessed during my time working there as well as through comments he made at home. He had a very interesting management style, which I guess is because he was an entrepreneur and started the business. He was slightly eccentric but in a nice way. He was extremely kind and generous to his staff and very popular. Everyone referred to him as Monty, and they really were very fond of him. He sometimes treated them like naughty schoolchildren, including the management. He was very fond of them though and it was just his manner, which they understood. He would lose his temper sometimes and then it would quickly blow over and be forgotten. He was a very nice man but a difficult man to work with and quite demanding. He was very straightforward, and if he didn't like something he would tell people, so they all knew where they stood and they respected him. He also genuinely wanted to help people with their careers and I can think of several examples where he did that often spoke proudly about it many years later.

[Break in selection]

Stephen: I don't know how they dealt with the backlog, or if they ever converted it. I mentioned the chemical coding system which you could search online. You could say I have this chemical, it's got a bit of this and a bit of that, put it together and carry out a search. That was a new thing and I was fortunate to be there at the time. I had worked in chemical coding and so was able to do this.

Caitlin: So did they input two different codes and then find what they want?

Stephen: That's right and I have actually got an example I can show you of an online chemical search. I mentioned those big sheets of paper on which we did the chemical coding. There were lots of boxes and in each one there was a chemical

fragment. You search online for combinations of the same fragments to find patents about types of chemicals you are interested in. For most of my time at Derwent I was on the customer training side. I worked a lot with somebody called Richard Kurt, who was an American. I remember he came from New York and had a very pronounced accent, and we were amused by the fact that he sounded very American, but when he went back to the States they all thought he sound English.

Caitlin: That happens.

Stephen: But you can relate to it, can't you.

Caitlin: Not yet, but I'm sure when my family visits I will see it happen.

Stephen: But anyway Richard and I worked a lot together, we were part of the team responsible for customer technical support. He knew the polymer coding and I knew the chemical coding, so between us we were able to cover the technical side. There were also the Manual Codes which were more like keywords and had a hierarchical system, or a classification system. A manual code could be used online for a broad search and you could then combine this with fragmentation codes to narrow down the search.

Caitlin: Do you mind if I ask who developed these coding, how did it come about?

Stephen: I believe the coding system originated from the subscribers. I know my father did not make it up but he worked closely with the subscribers to develop the system that they wanted. They worked together to say this is what we want and then my father made it happen. We also prepared instruction manuals for the clients, I now remember. Then there were the instruction classes. This brochure I have here is a schedule of instruction classes, reminding me that I went to Philadelphia, New York, Frankfurt, San Francisco, and all over the place giving these classes. I gave classes in chemical coding and there were 2 day Introductory and Advanced courses depending on how experienced you are, and then a one day online course. So I used to spend one day teaching people to search online when in those days it was very primitive and people didn't know. Not like now, but in those days it made sense to learn how to search online.

Caitlin: Would they communicate with you via letter, or ...

Stephen: Yes, that was the other thing. We answered client queries and sometimes carried out searches for them. If a client wanted us to search I would do it for them and send them the results. It was very interesting to be there at a time when online

came in and to be able to combine that with the chemical coding. For the two day coding courses, I had some guidance from people back in the office of what to cover, like a broad syllabus, and I then used to make up examples. I would make up a chemical structure and put it on the blackboard and say, 'Right, how would you search for this?' and then they would answer. I would ask 'How do you code it?' and then 'How do you search for it?' and it was great fun, I really enjoyed it.

9.2.3 Dr. Charles Oppenheim Interview

Charles: So, what was it that I did? Basically, Derwent was at that time punch cards, so-called manual cards which were just the same shape of card but without holes punched in them for browsing through, various printed services, and it would supply tapes to a large company who would spin them in-house in effect and do their own searches outside. And the idea of online information retrieval; that is to say, somebody logging in and connecting to a remote computer and then searching and downloading was very, very new. So that part of what I was involved in was looking at that.

And the other part (and at the time it looked like this was equally exciting) was CD-ROMs. And so I had to look at...so I looked at the technology (and I'm not a techy I must [stress?]). But the capabilities, etc. of various CD-ROMs suppliers to see whether they could fulfil the needs of Derwent, which by and large they couldn't, cause Derwent produced so much information, much too big for CD-ROMs frankly. A subscriber would have had to have hundreds of CD-ROMs in order to be able to [sic], and putting one in and then putting this one, or having some kind of complicated system; there were jukeboxes or carousels where you could do a hundred CD-ROMs, and it would shift from one the other. But it was all very clunky.

[Break in selection]

Caitlin: Do you think that was one of the strengths of Derwent? Its desire to speak with its subscribers?

Charles: Absolutely. I don't think there's any question of it that the Derwent club if you like, the subscribers, felt they had a relationship with in particular Monty Hyams, and he chatted them up. For example, subscriber meetings, even though the attendees had to travel to wherever it was (Boston or Washington or London), they were wined and dined extraordinarily generously and it always included some highlight trip to a stately home or something like that, all organised by Derwent, in fact. I wasn't involved in any of the organisation of those events, but it was a real perk to be able to go along to that and be treated like royalty. And I'm sure the clients appreciated that as well.

Caitlin: Of course, you had them as a knowledge base almost. Some of them knew what the new technologies coming up and could make Derwent aware. It was kind of

an exchange of sorts. But, when did the subscriber meeting reports stop? Do you know? Or do they continue to this day?

Charles: I don't actually know. I don't know for sure. I don't actually know how Derwent is doing now.

Oh, perhaps I should explain. When Monty Hyams founded it, of course it was an independent company owned by him and his wife, I believe. But then he sold a chunk of to International Thomson. And then later on sold the remainder to International Thomson, but it was on the understanding that he remained CEO or Managing Director. And indeed, Thomson didn't interfere with the way he ran it. And he did run it as a personal fiefdom; there's no question of it, you know it was very much Monty Hyams' baby. So they were benevolent owners if you like. 'You carry on; you seem to be doing alright.' But then eventually, they insisted that he retire but after I had left Derwent (when he retired). Then, thereafter, it was taken over by a series of bureaucrats and effectively shifted the centre of gravity over to the States. And even though it is I still think notionally a British-based company, the major decisions are as far as I can tell are taken over at International...are taken into by International Thomson executives. So, it's no longer the sort of, you know, uniquely Monty Hyams thing.

[Break in selection]

Caitlin: What type of programmes were you using at the time? Was the statistical analyses run through SDC's programmes?

Charles: No, it wasn't. We did have a look at a software called SAS, which I believe still exists which offers very high-powered statistical analysis software. And I, I remember I approached SAS, I think it's US-based but has a UK operation, and say, 'We're thinking of making use of you. We'd like, I'd like to set up a meeting so that we could explore what we would like to do and whether SAS is the right software for that.' And got a reply back saying, 'We don't do that. Either you buy our software or you don't. We're not interested...' Arrogant bastards. So, so we never used SAS. Of course, I reported back to Mr. Hyams, and he said 'Forget it.' You know. I can't remember what the software was that we used, to be...but it certainly wasn't SEC's. It was a microcomputer program of some sort, but I genuinely can't remember what the software was. It's possible that in the articles. I'm sure I wrote at least one article. Is it with Mike Dixon, the article?

Caitlin: No, this one is just you.

Charles: Just me?

Caitlin: There is another one that Mike Dixon wrote with you. So...

Charles: Right. Okay, cause I did work with Mike Dixon on it, but it's possible the article actually said what the software is, I can't remember. But yes.

One thing I will say for Derwent was that it strongly encouraged, or certainly didn't discourage, writing up of stuff that we were doing as articles; and indeed at the subscriber meetings which I've talked about, I normally had a slot where I would say, 'This is the research we're currently doing, these are our proposed developments, etc. etc.' So that wasn't at all...there were, Monty Hyams was very upfront about that.

Caitlin: So you would present at these subscriber meeting reports. And would they automatically give feedback to you?

Charles: Yes, that was the whole point.

Caitlin: Right.

Charles: And indeed, the feedback could be along the lines of: no, that's not interesting to us; or yes, that's really interesting to us; or maybe, have you thought of the following angle? And the subscribers. Well, you must have seen in the Archive. There must be some subscriber meeting reports.

Caitlin: Yes, there's quite a bit.

Charles: And which are basically edited versions of what went on. But yes, that was the nature of the beast. It was for subscribers to register their complaints about the service (one sort or another), their wish list. But also, for the senior management in particular (Mr. Hyams), we're thinking of doing XYZ; what do you think? So, it was very much a feedback thing.

Caitlin: How were these reported? Did people write down their ideas? Or were they documented by a typist?

Charles: From what I recall, there'd be a lot of conversation. So there'd be a presentation [unintelligible] you could capture that in terms of the text; it wasn't PowerPoint, but there were slides, [unintelligible] capture that. And then the feedback, there was a minute taker, one of the senior Derwent staff would actually take minutes. So, as far as I know, there was no audio or video recording of the subscriber meetings, but it was, notes were taken of what was said.

9.2.4 Informal David Bawden Discussion Notes

- Markush structure and patents- more codes; not a specific compounds; made compounds very general and generic to cover everything; produce structures which are indefinite; Markush structures are difficult to understand and index; CPI code: way of capturing with the most specificity you could the variable underlying structure
- Chapter 4 of Chemical Structure Systems; Derwent system in full use by this time; problems of structure representation
- The Chemical Code developed for Derwent's CPI is what's known as a chemical fragmentation code.
- Hyams and subscribers at meetings- specialists
- Patent literature: simpler because it is reporting on specific chemicals

9.3 Appendix C: Sample of Archival Descriptions

Level	Reference Code	Title	Creator(s)	Date(s)	Extent	Description
Subseries	GB 2107 MYHS/1	Correspondence				
File	GB 2107 MYHS/1/1	Derwent, BIRPI, and IIB Correspondence 1965-1969				
Item	GB 2107 MYHS/1/1/1	Monty Hyams memoir draft	Monty Hyams	1965-1970	3 pp.	Covering the World Patents Index machinations
Item	GB 2107 MYHS/1/1/2	BIRPI (United International Bureaux for the Protection of Intellectual Property) and IIB (International Patent Institute) Plan for "World Patent Index"	BIRPI and IIB	1966	7 pp.	BIRPI and IIB
Item	GB 2107 MYHS/1/1/3	World Patent Index Plan notes on yellow ruled paper	Monty Hyams	20 December 1966	2 pp.	Notes on 1966 BIRPI and IIB Plan for 'World Patent Index'
Item	GB 2107 MYHS/1/4	Letter from Arpad Bogsch, Deputy Director of BIRPI, to Monty Hyams	Arpad Bogsch	24 October 1967	2 pp.	Early October meeting on a proposed Patent Cooperation Treaty
Item	GB 2107 MYHS/1/5	Letter from Klaus Pfanner, Head of the Industrial Property Division at BIRPI, to Monty Hyams	Klaus Pfanner	25 October 1967	2 pp.	Upcoming BIRPI meeting agenda included
Item	GB 2107 MYHS/1/6	Agenda and Notes on Meeting of Representatives of Derwent Publications Ltd. and the IIB at The Hague on 23 November 1967	Derwent Publications Ltd. and IIB	01 December 1967	6 pp.	IIB and Derwent; Potential French patent bulletin published by Derwent
Item	GB 2107 MYHS/1/7	Letter from Monty Hyams to Guillaume Finniss, former Director General of the Institut International des Brevets (IIB)	Monty Hyams	24 November 1967	1p.	Written in thanks for GB 2107 MYHS/1/6 notes
Item	GB 2107 MYHS/1/8	Letter from Monty Hyams to Guillaume Finniss	Monty Hyams	13 December 1967	1p.	Missed meeting
Item	GB 2107 MYHS/1/9	Letter from Guillaume Finniss to Hyams	Guillaume Finniss	22 December 1967	1p.	Missed meeting and future meeting after February 1968

Item	GB 2107 MYHS/1/10	Letter from Monty Hyams to L.F.W. Knight of the IIB	Monty Hyams	02 January 1968	1p.	Originally included copies of International Cooperation in Information Retrieval among Patent Offices (ICIREPAT) presentation; Copies mentioned not present in collection.
Item	GB 2107 MYHS/1/11	Letter from Monty Hyams Hyams to Guillaume Finniss	Monty Hyams	08 February 1968	1p.	Proposed classification of chemical patents enclosed with similarities to the International Patent Classification. Mention of trip to the US for discussion of classification with "large firms".
Item	GB 2107 MYHS/1/12	Letter from Guillaume Finniss to Monty Hyams	Guillaume Finniss	20 February 1968	1p.	Confirming receipt of GB 2107 MYHS/1/11 and further inspection of the chemical patents classification attached.
Item	GB 2107 MYHS/1/13	Letter from Monty Hyams to Guillaume	Monty Hyams	29 February 1968	1p.	Acknowledging receipt of GB 2107 MYHS/1/12 and request for thoughts on the newest French Official Journal (Journal officiel de la République française) publication. Includes meeting request.
Item	GB 2107 MYHS/1/14	Letter from Monty Hyams to Guillaume Finniss	Monty Hyams	06 May 1968	1p.	IIB's interest in patent documenting services given by Derwent. Two written notes on letter concerning telephone calls to Mr. Phillips (assistant to Finniss possibly).
Item	GB 2107 MYHS/1/15	Letter from Guillaume Finniss to Monty Hyams	Guillaume Finniss	16 May 1968	1p.	Possible future meeting and the investigation of documents from Hyams by the General Studies department
Item	GB 2107 MYHS/1/1/16	Letter from Monty Hyams to Guillaume Finniss.	Monty Hyams	21 August 1968	1p.	Mentions enclosed "Central Patent Index Proposals – August 1968" booklet. Notes on future meeting with the Thomson Corporation in hopes of procuring financial backing.

Item	GB 2107 MYHS/1/1/17	Letter from Guillaume Finniss to Monty Hyams.	Guillaume Finniss	11 July 1968	1p.	Possibility of a thesaurus by IIB; Handwritten notes on back for upcoming letter; Central Patents Index
Item	GB 2107 MYHS/1/1/18	Letter from Monty Hyams to Guillaume Finniss.	Monty Hyams	04 October 1968	1p.	Details proposed arrangements for an 11 October Finniss visit.
Item	GB 2107 MYHS/1/1/18	Letter from Guillaume Finniss to Monty Hyams	Guillaume Finniss	29 August 1968	1p.	Confirming receipt of GB 2107 MYHS/1/17; Notes appointment of Mr. P. Claus of the Shell Company as Derwent representative in the Netherlands; Claus mentioned as former employee of IIB and requesting his interactions be limited to the general management of IIB
Item	GB 2107 MYHS/1/1/20	Notes from meeting between Hyams, Guillaume Finniss (President of IIB), Feyereisen (Technical Vice President of IIB), H. Henry (Deputy Managing Director of Thomson Organisation), B.G. Paver (Director of Derwent and Thomson Publications), and K. Wickardt (Director of Derwent; Manager of Patents Division)	unknown	11 October 1968	2 pp.	Provides time schedule, major points of discussion, and proposed agenda; Major talking points include: patent information production cooperation; Derwent and Thomson financing the publication of documents relevant to the world of patent information including aperture cards and classified patent abstracts collections; Derwent and Thomson assisting with the marketing of exiting IIB material and using these techniques for future publications; setting up "central computer search facilities"; Further discussion on agenda: new laws effecting German and French patent abstracts; Netherlands convention; Belgian copies specification; Derwent plans for the World Patents Index (mentioned as Central Patents Index (now known as the Chemical Patents Index) in agenda)

Item	GB 2107 MYHS/1/1/21	Letter from Monty Hyams to L.F.W. Knight	Monty Hyams	23 December 1968	1p.	Desire to reopen negotiations begun with Finniss in London on the computerisation of the IIB Data Base (database)
Item	GB 2107 MYHS/1/1/21	Letter from L.F.W. Knight to Monty Hyams	L.F.W. Knight	17 December 1968	1p.	Hyams proposal for a PCT Search Data Base (database) and ICIREPAT booklet
Item	GB 2107 MYHS/1/1/23	Letter from Melvin B. Eagle and P. James Terragno to Monty Hyams	Melvin B. Eagle and P. James Terragno	04 November 1969	3 pp.	Discusses Hyams unsuccessful attempt to obtain agreement with Thomson Corporation on "verbal marketing agreements"; Eagle and Terragno wish to act as marketing representatives for Derwent by offering their services in the sale of Derwent products in North America and assisting with international patent events.
File	GB 2107 MYHS/1/2	Derwent and BIRPI Correspondence 1969				
Item	GB 2107 MYHS/1/2/1	Snippet of Monty Hyams memoir	Monty Hyams	Undated	6 pp.	1970 developments
Item	GB 2107 MYHS/1/2/2	World Patents Index: Outline and Past History of Present Position document	Monty Hyams and Derwent Publications Ltd.	23 June 1972	6 pp.	Leasco; BIRPI (later WIPO); 1970-1971 developments
Item	GB 2107 MYHS/1/2/3	Letter from Melvin B. Eagle, President of Leasco Information Products, to Michael D. Dixon, Technical Sales Manager of Derwent Publications Ltd.	Melvin B. Eagle	29 April 1969	1p.	Confirms intention to attend Derwent's 12 May New York meeting on Leasco's Central Patents Index (now known as the Chemical Patents Index) following discussion with Monty Hyams Herbert R. Koller of Leasco, P. James Terragno of Westat Research Inc., and Melvin B. Eagle

Item	GB 2107 MYHS/1/2/4	Letter from Melvin B. Eagle to Monty Hyams	Melvin B. Eagle	02 May 1969	1p.	Mentions preliminary plan for cooperation between Derwent and Leasco on the World Patents Index (WPI). Requests confidentiality as Leasco is in discussions with BIRPI (later WIPO) concerning WPI.; Confirms 13 May New York meeting
Item	GB 2107 MYHS/1/2/5	Letter from Monty Hyams to Melvin B. Eagle	Monty Hyams	07 May 1969	1p.	Discusses Hyams' concerns regarding the production of publications primarily in the US when Derwent has the means to do so in the UK. Questions the benefits of following the BIRPI plan and the sufficiency of a new market from which Leasco and Derwent could profit.
Item	GB 2107 MYHS/1/2/6	Preliminary Proposed Plan for Cooperation of Derwent and Leasco	Leasco	02 May 1969	1p.	Marked for internal used by Derwent Publications Ltd. only.
Item	GB 2107 MYHS/1/2/7	Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI	Monty Hyams	20 August 1969	2 pp.	With Appendix A and Appendix B attached; Application from Derwent Publications Ltd. to BIRPI for the creation of a World Patents Index (WPI); Appendix B is outline for the Central Patents Index (now known as the Chemical Patents Index) due to begin January 1970.; Implementation of the Central Patents Index, Derwent is prepared to modify it as needed and launch by January 1972 the World Patents Index
Item	GB 2107 MYHS/1/2/8	Letter from Monty Hyams to Arpad Bogsch, , Deputy Director of BIRPI, detailing GB 2107 MYHS/1/2/5 contents	Monty Hyams	20 August 1969	1p.	Possible cooperation with Kodak to produce microfilm reel and aperture cards in addition to abstracts in order to follow guidelines under the Patent Cooperation Treaty

Item	GB 2107 MYHS/1/2/9	Letter from G. Grant of the British Patent Office to Arpad Bogsch, , Deputy Director of BIRPI	G. Grant	21 August 1969	1p.	Encourages consideration of Hyams' last-minute proposal; Hyams has denied existence of cooperation agreements between Derwent and Leasco
Item	GB 2107 MYHS/1/2/10	Letter from Arpad Bogsch, Deputy Director of BIRPI, to Monty Hyams	Arpad Bogsch	01 September 1969	1p.	Confirms future 9 September meeting between Roger Harben (representative of BIRPI) and Wickham (representative of Derwent) regarding the World Patents Index proposal by Hyams; Confirms upcoming Geneva meeting between Hyams and Bogsch
Item	GB 2107 MYHS/1/2/11	Letter from W. Stein, Vice-President of Des Deutschen Patentamts, to Monty Hyams	W. Stein	01 September 1969	1p.	Acknowledges receipt of Hyams letter concerning World Patent Index; WPI and BIRPI notes on back of letter
Item	GB 2107 MYHS/1/2/12	Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI	Monty Hyams	12 September 1969	1p.	Notes attached applications and committee meeting concerning applications on 16 September 1969 in Geneva
Item	GB 2107 MYHS/1/2/13	Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI	Monty Hyams	12 September 1969	1p.	Describes enclosed application (not included with letter); discussions between Derwent and Leasco concerning a possible joint offer to introduce the World Patents Index with BIRPI; fejects the opportunity of either Derwent or Leasco to accept individual offers before creating and submitting a joint proposal to BIRPI
Item	GB 2107 MYHS/1/2/14	Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI	Monty Hyams	15 September 1969	1p.	Notes Derwent's decision to not pursue a joint offer involving any third party to form the World Patents Index with BIRPI.
Item	GB 2107 MYHS/1/2/15	Letter confirming telegram sent from Monty Hyams to Arapd Bogsch. Deputy Director of BIRPI	Monty Hyams	15 September 1969	1p.	Offers corrections and clarifications to Derwent World Patents Index offer to BIRPI

Item	GB 2107 MYHS/1/2/16	Derwent Proposal to BIRPI concerning World Patents Index	Derwent Publications Ltd. and IIB	X	X	X
Item	GB 2107 MYHS/1/2/17	Ad Hoc Subcommittee on Contracting for the World Patent Index: Second Session (Geneva, September 16, 1969)	BIRPI	16 September 1969	X	Includes notes and alternative decisions on the proposals by Leasco and Derwent
Item	GB 2107 MYHS/1/2/18	BIRPI meeting notes from B. Comfort to Monty Hyams	B. Comfort	17 September 1969	X	Name transcription and confirmation required
Item	GB 2107 MYHS/1/2/19	Message from Monty Hyams	Monty Hyams	17 September 1969	1p.	First resolution requests joint offer from Leasco and Derwent for the World Patents Index or individually submitted offer which was the full cooperation of the other company
Item	GB 2107 MYHS/1/2/20	Draft Resolution (second version) from the Ad Hoc Subcommittee on Contracting or the World Patents Index	BIRPI	X	X	Same resolutions as GB 2107 MYHS/1/2/17
Item	GB 2107 MYHS/1/2/21	Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI	Monty Hyams	18 September 1969	1p.	Agrees to Derwent and Leasco cooperation for World Patents Index proposals
Item	GB 2107 MYHS/1/2/22	Letter from Monty Hyams to Richard B. Sloop, Group Vice President of Information Products at Leasco	Monty Hyams	18 September 1969	1p.	Notes Thomson Corporation's reluctance to allow Derwent to enter into a long project with Leasco; resolution invitation from Director of BIRPI for Leasco and Derwent to construct a joint proposal agreed to by Thomson Corporation
Item	GB 2107 MYHS/1/2/23	Letter from Monty Hyams to Derwent subscribers	Monty Hyams	18 September 1969	1p.	Describes the postponing of services in the "Central Patent Index 1970" booklet and the Farmdoc, Agdoc, Plasdoc, and Organodoc pamphlets from 1970 pending the World Patents Index proposal consideration by BIRPI
Item	GB 2107 MYHS/1/2/24	Letter from Mr. Cohen to Arpad Bogsch, Deputy Director of BIRPI	Mr. Cohen	24 October 1969	1p.	Requests Leasco and Derwent joint proposal deadline extension due to pending negotiations

Item	GB 2107 MYHS/1/2/25	Letter from Arpad Bogsch, Deputy Director of BIRPI, to Mr. Cohen	Arpad Bogsch	29 October 1969	X	Outlines decision to either accept Leasco's separate offer or investigate other solutions since the Derwent and Leasco joint offer is still pending
File	GB 2107 MYHS/2/1	Subscriber meeting reports				
Item	GB 2107 MYHS/2/1/1	Combined Farmdoc and Ringdoc Meeting booklet	Derwent Publications Ltd.	01 November 1964	85 pp.	Includes: meeting agendas, meeting attendees, circulars, statistics, and classification and coding information
Item	GB 2107 MYHS/2/1/2	Report following August 1966 meetings Plasdoc and Polydoc	Derwent Publications Ltd.	01 August 1966	21 pp.	Includes information on subject and country coverage, journal information, coding (manual and punched cards), microfilm, magnetic tape, and subscriptions; Plasdoc and Polydoc
Item	GB 2107 MYHS/2/1/3	Pestdoc/Vetdoc subscriber meeting notes	Derwent Publications Ltd.	1967	9 pp.	Tokyo March 1967 meeting; Paris meetings; U.S. meetings
Item	GB 2107 MYHS/2/1/4	"Section 'C': Ringdoc" by Derwent Publications Ltd. in Pharmaceutical Literature Documentation	Derwent Publications Ltd.	1968	5 pp.	Ringdoc brief history and subscription list; Missing pages 10-12 and 14 of original document
Item	GB 2107 MYHS/2/1/5	Pestdoc/Vetdoc notes	Derwent Publications Ltd.	1969	6 pp.	Pestdoc, Vetdoc, Farmdoc
Item	GB 2107 MYHS/2/1/6	Selection of pages from unknown Derwent document	Derwent Publications Ltd.	1969	10 pp.	Pages torn from larger document; general features of Plasdoc; Farmdoc; Agdoc; Derwent computer programs; computerised World Patents Index: Outline of new project under development
Item	GB 2107 MYHS/2/1/7	Farmdoc subscription requirements for 1969	Derwent Publications Ltd.	1969	1p.	Farmdoc subscription requirements
Item	GB 2107 MYHS/2/1/8	Agdoc subscription requirements for 1969	Derwent Publications	1969	1p.	Agdoc subscription requirements

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Item	GB 2107 MYHS/2/1/9	Plasdoc subscription requirements for 1969	Derwent Publications Ltd.	1969	1p.	Plasdoc subscription requirements
Item	GB 2107 MYHS/2/1/10	Ringdoc three year agreement documents	Derwent Publications Ltd.	1970-1971	3 pp.	Subscription conditions; Pestdoc; Vetdoc
Item	GB 2107 MYHS/2/1/11	New integrated search system notes	Derwent Publications Ltd.	01 December 1971	8 pp.	Punch codes
Item	GB 2107 MYHS/2/1/12	Derwent pooled pharmaceutical Ringdoc: A study of nine codeless scanning computer systems by Lucille H. Campey	Derwent Publications Ltd.	01 August 1972	32 pp.	Codeless scanning; Systems: Datacentralen (Teletext); Hoffman; ICI (Assassin); Merck (Merlin); Organon (ACS); Robins (CRW); Searle/Pfizer (Spring); Squibb (Inquire); Upjohn
Item	GB 2107 MYHS/2/1/13	Miscellaneous typed and handwritten Ringdoc notes	Derwent Publications Ltd.	1971-1972	56 pp.	Development and coding; official literature clippings
Item	GB 2107 MYHS/2/1/14	Computer Meeting Frankfurt/Washington	Derwent Publications Ltd.	01 December 1971	68 pp.	Agenda; attendance lists; pre-prints; Ringdoc and CPI punch cards; CPI Manual code file; CPI minitape; Ringdoc and CPI print tapes; codeless scanning; indexes; integrated search system
Item	GB 2107 MYHS/2/1/15	Report of Literature Division joint annual meetings	Derwent Publications Ltd.	Autumn 1972	63 pp.	Coverage; abstracts and indexes; codeless scanning; Ring Code and Ringdoc materials; Pestdoc; Vetdoc; magnetic tape; subscriptions; microfiche and microfilm
Item	GB 2107 MYHS/2/1/17	Report of Literature Division joint annual meetings	Derwent Publications Ltd.	Spring 1973	16 pp.	1972 questionnaire responses; coverage; abstracts and indexes; codeless scanning; Ring Code; microfilm and microfiche; tapes, programs, and searchers; Vetdoc; Pestdoc; Pollutiondoc; Chemical

						Reactions Service; subscriptions
Item	GB 2107 MYHS/2/1/18	Reprints of papers presented at Literature Division subscriber meetings	Derwent Publications Ltd.	1973	73 pp.	"Ringdoc SDI by computer using the Index Term Index" by A.G. Schering; "Should there be a special code for Prostaglandins?" by Ayerst Laboratories; "Plausibility check of chemical coding by using a computer" by A.G. Schering; "Biocode–Alphanumerical code" by Centre de Recherches Roussel-Uclaf; "RALF – a new software package for the whole complex of the punched card oriented literature documentation" by A.G.E. Merck (Rapid Access to Literature via Fragmentation Codes); "Computer manipulation of Derwent material" by G.D. Searle & Co.
Item	GB 2107 MYHS/2/1/19	Literature Division Ringdoc questionnaire: Results and decisions report	Derwent Publications Ltd.	1973	4 pp.	Increasing number of abstracts; online computer searching; pollutiondoc; Ring Code; CPI Code; Upcoming subscriber meeting
Item	GB 2107 MYHS/2/1/20	Literature Division Vetdoc questionnaire: Results and decisions report	Derwent Publications Ltd.	1973	4 pp.	Increasing number of abstracts; online computer searching; Pollutiondoc; Ring Code; CPI Code; Upcoming subscriber meeting
Item	GB 2107 MYHS/2/1/21	Literature Division Pestdoc questionnaire: Results and decisions report	Derwent Publications Ltd.	1973	4 pp.	Increasing number of abstracts; online computer searching; Pollutiondoc; Ring Code; CPI Code; Upcoming subscriber meeting
Item	GB 2107	Literature Division report of joint annual	Derwent	Spring 1974	20 pp.	Part II: Japanese Meetings; Part III:

	MYHS/2/1/22	meetings	Publications Ltd.			Results and Decisions
Item	GB 2107 MYHS/2/1/23	Literature Division report of joint annual meetings (Japan)	Derwent Publications Ltd.	Spring 1974	20 pp.	Part II: Japanese Meetings; Part III: Results and Decisions; additional copy- in disrepair
Item	GB 2107 MYHS/2/1/24	CPI/WPI May 1975 questionnaire: Report on results and decisions	Derwent Publications Ltd.	06 August 1975	12 pp.	Unexamined Japanese patents; online retrieval, SDI tapes, and keyword indexing; meetings, coding instruction classes, and new services; SDC
Item	GB 2107 MYHS/2/1/25	Ringdoc May 1975 questionnaire: Report on results and decisions	Derwent Publications Ltd.	08 August 1975	8 pp.	Online retrieval; annual subscriber meetings; extended service, Ringdoc II
Item	GB 2107 MYHS/2/1/26	Notes for CPI Washington Meeting	Derwent Publications Ltd.	Spring 1976	70 pp.	Online service notes; Patents Division products; WPI production schedule; punch card input and coding; alerting abstraction and indexes; computer retrieval; heading descriptors for alerting abstracts of invention and documentation abstract of invention; WPI gazettes; patentee in publications; International Patent Classification (IPC) in WPI gazettes; Manual Code Index of Invention "B" and CPI Class Index; Classification, company coding, manual coding, and SDI profiles; Derwent/SDC online service; Farmdoc/Agdoc punch coding examples
Item	GB 2107 MYHS/2/1/27	Notes for CPI Tokyo Meeting	Derwent Publications Ltd.	Spring 1976	56 pp.	Heading descriptors; patent families; indexes to patent families; classification and coding; SDI profiles; online services

Item	GB 2107 MYHS/2/1/28	Literature Division report of joint annual meetings	Derwent Publications Ltd.	Spring 1976	20 pp.	Coverage; abstracts and indexes; codeless scanning; chemical coding; biocoding; microfilm; tapes and programs; online retrieval; bureau searchers; Pestdoc; Vetdoc; Chemical Reactions Documentation Service; Methods code; Ringdoc expansion; subscriptions
Item	GB 2107 MYHS/2/1/29	Literature Division report of joint annual meetings	Derwent Publications Ltd.	Spring 1977	40 pp.	Coverage; abstracts and indexes; codeless scanning; chemical coding; biocoding; microfilm; tapes and programs; online retrieval; bureau searchers; Pestdoc; Vetdoc; Chemical Reactions Documentation Service; Methods code; subscriptions
Item	GB 2107 MYHS/2/1/30	Literature Division notes for regional secretaries meeting	Derwent Publications Ltd.	01 November 1977	61 pp.	Online services; chemical code; biocode; codeless scanning; Chemical Reactions Documentation Service; international conference; subscriber meetings
Item	GB 2107 MYHS/2/1/31	Literature Division report following regional secretaries' meeting in London on 21-22 November 1977	Derwent Publications Ltd.	1977	27 pp.	New journal committee; online services; subscription conditions; codeless scanning; chemical code; biocode; Chemical Reactions Documentation Service; subscriber meetings

Item	GB 2107 MYHS/2/1/32	Booklet for use at the International Patents Conference: Part I	Derwent Publications Ltd.	1978	51 pp.	Preprint of all papers by Derwent Staff; "Country Coverage in WPI and CPI" by S.J. Newey; "Patent Abstracts – their production and value" by H. Winning and K. Hoare; "WPI and CPI Printed and Microform Indexes" by Michael D. Dixon; "Microfilm operations by and for Derwent" by H. Mumford-Smith; Derwent's Patents On-line Search Files" by A.M. Brooks; "New thesaurus and text editing" by M.E. Pope; "Patent Families" by R.H. Hope; "The Chemical Reactions Documentation Service On-line" by A. Finch; "Derwent's magnetic tapes and computer programs" by A.M. Brooks
Item	GB 2107 MYHS/2/1/33	Booklet for use at the International Patents Conference: Part II	Derwent Publications Ltd.	1978	64 pp.	Continuation of GB 2107 MYHS/2/1/27 pre-prints; pp. 52-115
Item	GB 2107 MYHS/2/1/34	Central Patents Index: Report of meetings of Subscriber Representative Committees Nos. 1, 2, 3, 5, 6, & 7	Derwent Publications Ltd.	01 November 1978	40 pp.	Patent office procedures; microform products; abstracts, manual coding, and indexing; chemical coding; proposals for basic of new chemical coding; polymer coding; subscriber liaison
Item	GB 2107 MYHS/2/1/35	Central Patents Index: Report of 1977 CPI subscriber meetings	Derwent Publications Ltd.	1977	56 pp.	Country coverage; company coding; basics and equivalents; printed indexes; COM indexes; abstracts-alerting and basic; microfilm; manual coding; punch coding; keyword indexing of Section A; tapes and programs; online services

Item	GB 2107 MYHS/2/1/36	Literature Division report of joint annual meetings Spring 1978: Part I – Japanese and European Meetings	Derwent Publications Ltd.	1978	121 pp.	Codeless scanning; unified Ringdoc database debate; biocoding; relevance and recall in the retrieval of chemical compounds; WLN as input; subscription prices; Ringdoc journal list expansion; microfilm operations; Derwent's literature online search files; database retrieval; online searching; Chemical Reactions Documentation Service; Pestdoc;
Item	GB 2107 MYHS/2/1/37	Booklet for use at Central Patents Index Subscriber Meeting: Tokyo – 11th-12th June 1979	Derwent Publications Ltd.	25 May 1979	89 pp.	First two pages missing; coverage; abstracts, indexes, and company codes; microform products; chemical code; new chemical code; Polymer coding; Polydoc; Technical Services Division establishment; subscriber liaison; electrical and electronics patents; summary of decisions reached at London and USA meetings
Item	GB 2107 MYHS/2/1/38	Literature Division report of joint annual meetings	Derwent Publications Ltd.	Spring 1979	24 pp.	Journal list; unified data base; codeless scanning; chemical coding; biocoding; Methods code; online services; microform; Chemical Reactions Documentation Service; Pestdoc; Vetdoc; subscriptions

Item	GB 2107 MYHS/2/1/39	Booklet for use at Central Patents Index Subscriber Meeting: London – 21st-23rd May 1979	Derwent Publications Ltd.	26 April 1979	107 pp.	Loose-leaf printed documents inserted throughout; Data processing and online services including notes on CPI, Farmdoc, Agdoc, manual codes, multipunch records; and ICIREPAT country codes; patent office procedures and country coverage publication under PCT, EP, CP, New Law GB; abstracts, indexes, and company codes; microform products; chemical code; new chemical code; Polymer coding; Polydoc; Technical Services Division; subscriber liaison
Item	GB 2107 MYHS/2/1/40	Booklet for use at Central Patents Index Subscriber Meeting: Arlington, Virginia – 9th-11th May 1979	Derwent Publications Ltd.	24 April 1979	87 pp.	Data processing and online services; patent office procedures and country coverage publication under PCT, EP, CP, New Law GB; abstracts, indexes, and company codes; microform products; chemical code; new chemical code; Polymer coding; Polydoc; Technical Services Division; subscriber liaison
File	GB 2107 MYHS/2/2	Additional subscriber meeting report notes				
Item	GB 2107 MYHS/2/2/1	WPI/CPI/GPI Combined Production Schedule Flow Diagram document	Derwent Publications Ltd.	01 May 1973	2 pp.	Bureau searches information document included
Item	GB 2107 MYHS/2/2/2	CPI/WPI online service general remarks notes	Derwent Publications Ltd.	01 May 1976	5 pp.	File content; updating; access information; user identifications; print- out of citations; search parameters; subscriber usage; general queries
Item	GB 2107 MYHS/2/2/3	Appendix Five: Notes on despatch	Derwent Publications Ltd.	July 1976?	2 pp.	Material despatched to Europe, UK, USA, and Japan

Item	GB 2107 MYHS/2/2/4	Central Patents Index 1977 Subscriber Meeting List of Attendees	Derwent Publications Ltd.	01 May 1977	2 pp.	2nd-4th May 1977 in Hounslow
Item	GB 2107 MYHS/2/2/5	Ringdoc May 1975 Questionnaire documents	Derwent Publications Ltd.	1975	13 pp.	Questions, results, and decisions
Item	GB 2107 MYHS/2/2/6	Basics and equivalents notes	Derwent Publications Ltd.	01 May 1977	3 pp.	Rules for computer searching
Item	GB 2107 MYHS/2/2/7	November 1977 meeting notes	Derwent Publications Ltd.	1977	2 pp.	Subscription conditions and codeless scanning
Item	GB 2107 MYHS/2/2/8	Technical notes on searching	Derwent Publications Ltd.	01 May 1977	4 pp.	Punched card input; priority search; papertape ('flex') input; card/flexowriter input merge and file update
Item	GB 2107 MYHS/2/2/9	Ringdoc notes appendices	Derwent Publications Ltd.	April 1977?	14 pp.	Time slicing and online searching of Ringdoc punch codes
Item	GB 2107 MYHS/2/2/10	Report of Regional Secretaries Meeting notes	Derwent Publications Ltd.	01 May 1977	4 pp.	Japanese abstracts and country coverage; US patents publication delay; attendees list
Item	GB 2107 MYHS/2/2/11	Subscriber meeting note on online services	Derwent Publications Ltd.	01 November 1977	1p.	Proposals for merged system
Item	GB 2107 MYHS/2/2/12	Additional subscriber meeting notes on online services	Derwent Publications Ltd.	01 April 1978	6 pp.	Text editing; retrieval systems; impact of 1200 Baud online searching for the retrieval of patent information
Item	GB 2107 MYHS/2/2/13	Miscellaneous notes on coding at Derwent	Derwent Publications Ltd.	1978	5 pp.	Staff coders; chemical structures; coding of polymers; text searching; keyword indexing
Item	GB 2107 MYHS/2/2/14	Contents, introduction, and upcoming meeting notes of Literature Division report of joint annual meetings – Spring 1978	Derwent Publications Ltd.	1978	3 pp.	Japan and UK meetings
Item	GB 2107	Collection of notes on coding	Derwent	October 1972-	13 pp.	Progression of Ringdoc and Ring Code

	MYHS/2/2/15		Publications Ltd.	April 1978		
Item	GB 2107 MYHS/2/2/16	Collection of subscription notes	Derwent Publications Ltd.	April 1978- May 1984	7 pp.	Pricing and subscription information
Item	GB 2107 MYHS/2/2/17	Derwent 1978 International Patents Conference Proceedings	Derwent Publications Ltd.	1978	3 pp.	Front page and contents
Item	GB 2107 MYHS/2/2/18	International Patents Conference 1978 agenda	International Patents Conference	1978	4 pp.	12th-14th April 1978
Item	GB 2107 MYHS/2/2/19	Copy of "Some ideas upon collaboration between Derwent and its Subscribers" presentation by J.J. Ogay and F. Hoffman of La Roche & Co.	J.J. Ogay and F. Hoffman	01 April 1978	5 pp.	Presented at International Patents Conference 1978
Item	GB 2107 MYHS/2/2/20	Telex message from A.R. Haygarth Jackson of the Literature Services Section at ICI Pharmaceuticals Division to P.J. Brignell of the Corporate Intelligence Unite at IC House	A.R. Haygarth Jackson	21 November 1978	2 pp.	Selection of papers on Derwent Chemical Data Base
Item	GB 2107 MYHS/2/2/21	Copy of "Patent Families" presentation by R.H. Hope of Derwent Publications Ltd.	R.H. Hope	01 April 1978	3 pp.	Presented at the International Patents Conference 1978
Item	GB 2107 MYHS/2/2/22	Copy of "Country Coverage in WPI and CPI" presentation by S.J. Newey of Derwent Publications Ltd.	S.J. Newey	01 April 1978	6 pp.	Presented at the International Patents Conference 1978
Item	GB 2107 MYHS/2/2/23	Copy of "Derwent's Patents On-line Search Files" presentation by A.M. Brooks of Derwent Publications Ltd.	A.M. Brooks	01 April 1978	8 pp.	Presented at the International Patents Conference 1978
Item	GB 2107 MYHS/2/2/24	Copy of "Growth of an international service" presentation by D. Black of SDc	D. Black	01 April 1978	3 pp.	Missing page; presented at the International Patents Conference 1978
Item	GB 2107 MYHS/2/2/25	World Patents Index online file – summary document	Derwent Publications Ltd.	Undated	1p.	Coverage; accompanying GB 2107 MYHS/2/2/24 presentation

Item	GB 2107 MYHS/2/2/26	SDC; Lockheed; BRS document	Derwent Publications Ltd.	1978	1p.	SDC Search service; Lockheed Information Systems; accompanying GB 2107 MYHS/2/2/24 presentation in the Archive
Item	GB 2107 MYHS/2/2/27	Copy of "Derwent's magnetic tapes and computer programs" presentation by A.M. Brooks of Derwent Publications Ltd.	A.M. Brooks	01 April 1978	5 pp.	Presented at the International Patents Conference 1978
Item	GB 2107 MYHS/2/2/28	Derwent patent families documented	Derwent Publications Ltd.	Undated	1p.	Searching for equivalents
Item	GB 2107 MYHS/2/2/29	United States Patent Office and Eastman Kodak document	Derwent Publications Ltd.	Undated	1p.	Microfilm collections
Item	GB 2107 MYHS/2/2/30	Miscellaneous documents on Derwent services	Derwent Publications Ltd.	01 July 1976	4 pp.	Japanese country coverage; CPI/WPI On-line (online) service including file content, access, coding, terms, SDI files, and punch coding information; Manual coding notes
Item	GB 2107 MYHS/2/2/31	Copy of "New thesaurus and text editing" presentation by M.E. Popoe of Derwent Publications Ltd.	M.E. Pope	01 April 1978	4 pp.	Filed clean-up; text editing; Presented at the International Patents Conference 1978
Item	GB 2107 MYHS/2/2/32	Document on Chemical Reactions Documentation Service	Derwent Publications Ltd.	01 May 1977	1p.	Information on service
Item	GB 2107 MYHS/2/2/33	Copy of "The CPI Manual Code" presentation by P. Robbins and H. Winning of Derwent Publications Ltd.	P. Robbins and H. Winning	01 April 1978	4 pp.	Presented at the International Patents Conference 1978; manual coding manual and cards; manual code cards on microfilm
Item	GB 2107 MYHS/2/2/34	Miscellaneous notes on punch card input and priority search	Derwent Publications Ltd.	01 May 1976	2 pp.	Punch cards and priority search information
Item	GB 2107 MYHS/2/2/35	Copy of "The Patent Documentation Group – past, present and future" presentation by U. Sage, Huels A.G.,	U. Sage and Huels A.G.	01 April 1978	4 pp.	Patent Documentation Groupon (PDG); presented at the International Patents Conference 1978

		President of PDG				
Item	GB 2107 MYHS/2/2/36	Copy of "Use of CPI Documentation Abstracts at IDC" presentation by W. Schramm of IDC	W. Schramm	01 April 1978	1p.	Presented at the International Patents Conference 1978; Possibly missing pages
Item	GB 2107 MYHS/2/2/37	Selection of pages from Central Patents Index 1979 Subscriber Meeting	Derwent Publications Ltd.	April 1979?	4 pp.	Methods code and online; Japan meeting
Item	GB 2107 MYHS/2/2/38	Miscellaneous coding document	Derwent Publications Ltd.	01 October 1982	2 pp.	Coding manuals format; topological coding; DARC
Item	GB 2107 MYHS/2/2/39	Miscellaneous meeting notes clippings	Derwent Publications Ltd.	May 1982, May 1983, May 1984, April 1985, April 1986, May 1987	8 pp.	Meetings information
Item	GB 2107 MYHS/2/2/40	CPI Annual Subscriber Meeting programme and attendees list	Derwent Publications Ltd.	1983	2 pp.	9th-10th May 1983; Derwent-SDC Search Service; microfilm demonstrations
File	GB 2107 MYHS/2/3	Other official Derwent services publications				
Item	GB 2107 MYHS/2/3/1	United States Patents Abstracts: Section R: Electrical	Derwent Publications Ltd.	16 January 1980	58 pp.	Week B48 20 November 1979; abstracts; patentee, accession number, and patent number indexes
Item	GB 2107 MYHS/2/3/2	United States Patents Abstracts: Section Ch: Chemical	Derwent Publications Ltd.	16 January 1980	77 pp.	Week B48 20 November 1979; abstracts; patentee, accession number, and patent number indexes
Item	GB 2107 MYHS/2/3/3	Central Patents Index: Country Alerting Bulletin: Section L: Refractories, Ceramics, Cement	Derwent Publications Ltd.	23 January 1980	95 pp.	Week B49 various months in 1979; abstracts and indexes; patentee, CPI class, basic number, and patent number

Item	GB 2107 MYHS/2/3/4	PCT Patents Report	Derwent Publications Ltd.	07 November 1979	63 pp.	Week B39 + B41; 20 September 1979 + 4 October 1979; abstracts, patentee index, and class index
Item	GB 2107 MYHS/2/3/5	European Patents Report	Derwent Publications Ltd.	28 November 1979	168 pp.	Week B44 31 October 1979; abstracts, patentee index, and class index
Item	GB 2107 MYHS/2/3/6	Japanese Patents Report	Derwent Publications Ltd.	18 January 1980	69 pp.	Volume 79, Number 50; examined 6- 12 December 1979; abstracts; patentee, accession number, and patent number indexes
Item	GB 2107 MYHS/2/3/7	World Patents Abstracts Journal: R4-R5 Electrical Engineering	Derwent Publications Ltd.	23 January 1980	231 pp.	Week B49; Various months in 1979; abstracts; patentee, accession number, and patent number indexes
Item	GB 2107 MYHS/2/3/8	Chemico-Medical Abstracts: Section D: Endocrinology	Derwent Publications Ltd.	1967	77 pp.	Ringdoc; Volume 1, Number 1; D0001- D0304
Item	GB 2107 MYHS/2/3/9	Central Patents Index: Classified Alerting Bulletin: Section E: Chemdoc	Derwent Publications Ltd.	23 January 1980	109 pp.	Week B48; Various months in 1979; abstracts; patentee, basic number, and patent number indexes
File	GB 2107 MYHS/3/1	Talks and brochures				
Item	GB 2107 MYHS/3/1/1	Derwent Information Service brochure	Derwent Publications Ltd.	1962	16 pp.	X
Item	GB 2107 MYHS/3/1/2	"Foreign Patents Documentation" article	Derwent Publications Ltd.	1965	1p.	1st page only; in Journal of Chemical Documentation, Volume 6, Number 101
Item	GB 2107 MYHS/3/1/3	Central Patents Index (now known as the Chemical Patents Index) brochure	Derwent Publications Ltd.	1970	12 pp.	X
Item	GB 2107 MYHS/3/1/4	"Chemical Patents Information"	Derwent Publications Ltd.	01 October 1970	5 pp.	Reprinted in Chemistry in Britain, Volume 6, Number 10

Item	GB 2107 MYHS/3/1/5	The role of patent information in research and development lecture by Monty Hyams	Monty Hyams	1974	5 pp.	Lecture held at WIPO Moscow Symposium 1974; Reprint by Monty Hyams; Page numbers denote actual lecture; Table of contents describes supplementary material in booklet
Item	GB 2107 MYHS/3/1/6	"Derwent Publications Ltd." chapter	Japan Patent Association	31 August 1975	16 pp.	In: Patent Information Study Team in Europe and America: Report by Japan Patent Association, 31st August 1975
Item	GB 2107 MYHS/3/1/7	Patent documentation for the chemical industry – future developments by Monty Hyams	Monty Hyams	18 November 1977	9 pp.	Paper presented in Basel at the 20th Anniversary Meeting of the Patent Documentation Group; pp. 37-45 in another document
Item	GB 2107 MYHS/3/1/8	Some problems of a database producer presentation by Monty Hyams	Monty Hyams	1980	20 pp.	Given at the 1980 Annual Information Policy Address to The Information Industry Association
Item	GB 2107 MYHS/3/1/9	Derwent's patents services – latest developments paper by Monty Hyams	Monty Hyams	1983	16 pp.	Given to Association of Information Officers in the Pharmaceutical Industry (AIOPI); Complete proceedings includes 21 other papers (not in the Archive)
Item	GB 2107 MYHS/3/1/10	"Chemical patents information: the challenge of change" paper by Monty Hyams	Monty Hyams	25 September 1984; Reprinted in 1985	7 pp.	Originally presented at the 1984 Annual Meeting of the American Chemical Society; Copy in The Monty Hyams Archives is reprinted version from Journal of Chemical Information and Computer Sciences, Volume 25, pp. 365-371
Item	GB 2107 MYHS/3/1/11	Monty Hyams talks to Infotecture Europe interview of Monty Hyams	Monty Hyams	Published in January 1984	7 pp.	Tape removal required
Item	GB 2107 MYHS/3/1/12	Multi-level retrieval of new patent compounds presentation by Monty Hyams	Monty Hyams	1984	8 pp.	Presented at CSA Conference in Sheffield; Requires removal of tape
Item	GB 2107 MYHS/3/1/13	"Information for chemists – a European viewpoint" by Monty Hyams, Vice President of Aslib	Monty Hyams	01 May 1987	13 pp.	Published in: Aslib Proceedings, Volume 39, Number 5

Item	GB 2107 MYHS/3/1/14	"Information for chemists – a European viewpoint" by Monty Hyams, Vice President of Aslib	Monty Hyams	01 May 1987	13 pp.	Published in: Aslib Proceedings, Volume 39, Number 5; Re-arranged with handwritten notes
Item	GB 2107 MYHS/3/1/15	"Information for chemists – a European viewpoint" by Monty Hyams, Vice President of Aslib	Monty Hyams	01 May 1987	13 pp.	Published in: Aslib Proceedings, Volume 39, Number 5, pp. 169-181
Item	GB 2107 MYHS/3/1/1/16	"How to profit from information technologies"	Monty Hyams	1987	8 pp.	Published in: Information Services & Use, Volume 7; pp. 145-152