



Publishing Linked Data – There is no One-Size-Fits-All Formula

Asunción Gómez-Pérez

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Acknowledgements:

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Our partners at: BNE, IGN, ...

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LOV SYMPOSIUM: LINKING AND OPENING VOCABULARIES.

18th June, 2012

1. The concept
2. Foundations
3. The process
4. Examples

- Libraries: <http://datos.bne.es>
- Geo: <http://geo.linkeddata.es/>
- Metereology: <http://aemet.linkeddata.es/>
- Travelling: <http://webenemasuno.linkeddata.es/>

Complex queries using data from heterogeneous Web pages

Información de la biblioteca
Web de la BNE
Biblioteca del catálogo
Contacto con la BNE
Buzón del Catálogo

Resultados de la búsqueda
Resultados no ordenados porque la búsqueda recuperó más de 200.
"Cervantes Saavedra, Miguel de 1547-1616" la búsqueda recuperó 264 Registros bibliográficos.
Página << 1 2 3 4 ...100 ...193 >>

#1
XX(999921.1)
Híspemajá [da] go Don Kibot Lamanáki; Tái a [Texto impreso]
Cervantes Saavedra, Miguel de 1547-1616
1 ejemplar disponible en Sede de Recolección en Salón General

#2
12 /R4771
Pasos y entresuenos [Texto impreso] 2ª ed.
Marín Martínez, Juan María
8 ejemplares disponibles en Sede de Alcalá

#3
CERVIC /1/34
Homenaje a Cervantes [Texto impreso]
Cervantes Saavedra, Miguel de 1547-1616
No hay ejemplares disponibles actualmente.

#4
12 /R05448
La gitanilla [Texto impreso]
Cervantes Saavedra, Miguel de 1547-1616
2 ejemplares disponibles en Sede de Alcalá

<http://www.bne.es/>

Cervantes enthusiast from Germany visiting Madrid and willing to know more about Cervantes' work and life



Reservas / Ruta de las Tapas

Ruta de las Tapas
Alcalá de Henares

Alcalá de Henares es conocida entre otras muchas cosas por su gastronomía y particularmente por sus tapas. Desde Lacalle Mayor.net queremos ponérselo fácil, y por eso te ofrecemos nuestra "Ruta de las tapas" por la ciudad Cervantina. Una gran forma de compaginar la visita del patrimonio histórico y el gastronómico de la ciudad. Esta ruta se puede comenzar desde cualquier punto de la ciudad, aunque nuestra

<http://elviajero.elpais.com/>

Locales

Macandé
Restaurante
Descripción: Tapas exquisitas durante todo el año, terraza de temporada, especialidad en tostas, pates, ibéricos, menú diario. Muy centrado, idóneo para tertulias.

[Ampliar Información](#)

O'Bogavante Restaurante Marisquería
Categoría: Restaurantes
Descripción: Meco también es un lugar imprescindible para tapear en la Ciudad de la Luz. Te recomendamos: Parrillada de marisco, carne a la piedra, arroz con bogavante... Viernes y Sabados Cenas - Baile musica de los 60 a los 90 Menú degustación 35 € por persona.

[Ampliar Información](#)

VIAF
Fichero de Autoridades Virtual Internacional

Búsqueda
Selección campo: Todos los nombres | Selección índice: Todo VIAF | Términos de búsqueda: [Búsqueda]

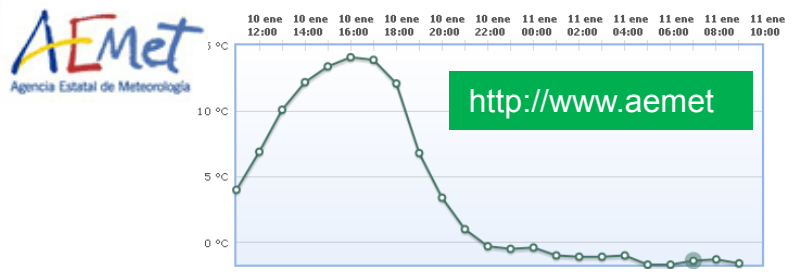
Cervantes Saavedra, Miguel de 1547-1616
Cervantes, Miguel de, 1547-1616
De Cervantes Saavedra, Miguel

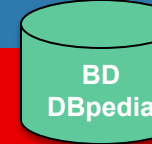
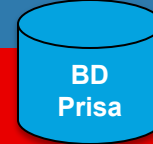
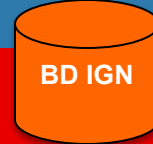
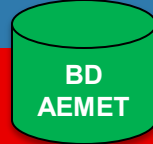
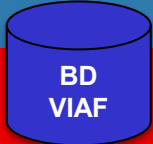
1547-1616, 211 579, 000710
VIAF ID: 11220427 (Personal)

<http://www.viaf.org/>

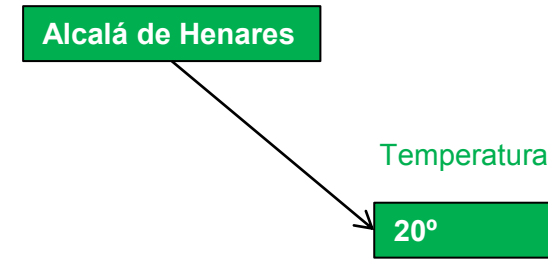
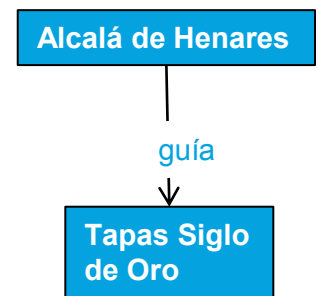
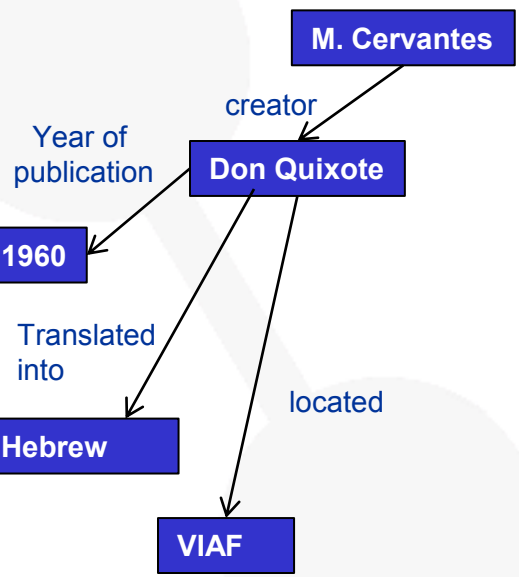
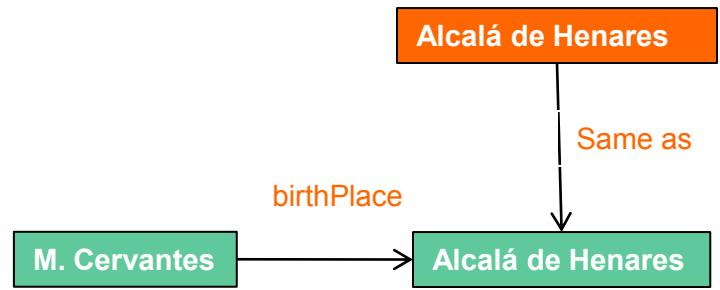
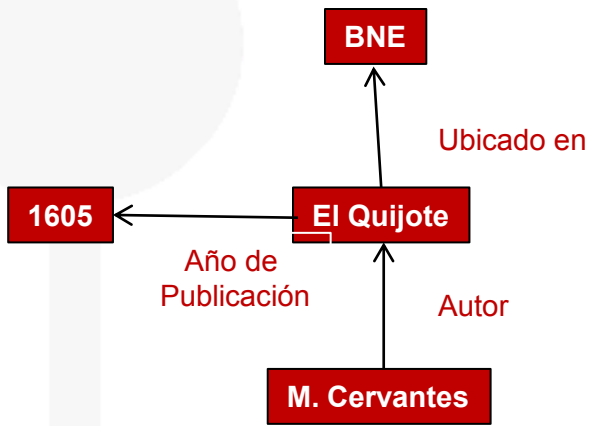
Formas preferidas
100 1 1a Cervantes Saavedra, Miguel de, 1547-1616
100 1 1a Cervantes Saavedra, Miguel de, 1547-1616
100 1 1a Cervantes Saavedra, Miguel de, 1547-1616
100 2 1a Cervantes Saavedra, Miguel de, 1547-1616
100 1 1a Cervantes Saavedra, Miguel de, 1547-1616
100 1 1a Cervantes Saavedra, Miguel de, 1547-1616

Alcala de Henares. Temperatura (°C)





Data Integration



1. The concept

2. Foundations

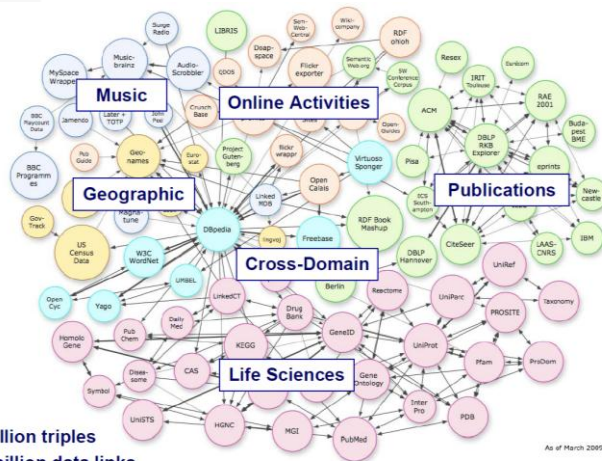
3. The process

4. Examples

- Libraries: <http://datos.bne.es>
- Geo: <http://geo.linkeddata.es/>
- Metereology: <http://aemet.linkeddata.es/>
- Travelling: <http://webenemasuno.linkeddata.es/>

Linked Data: why it is important?

- Facilitate data integration
 - From heterogeneous sources
 - In different formats
 - Different granularity
 - In different languages
 - From different countries



W3C

Choosing *How* to Publish



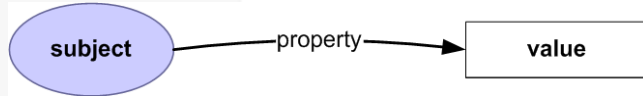
Human-readable



Machine-readable

© Slide adapted from "5min Introduction to Linked Data"- Olaf Hartig

RDF(S) models

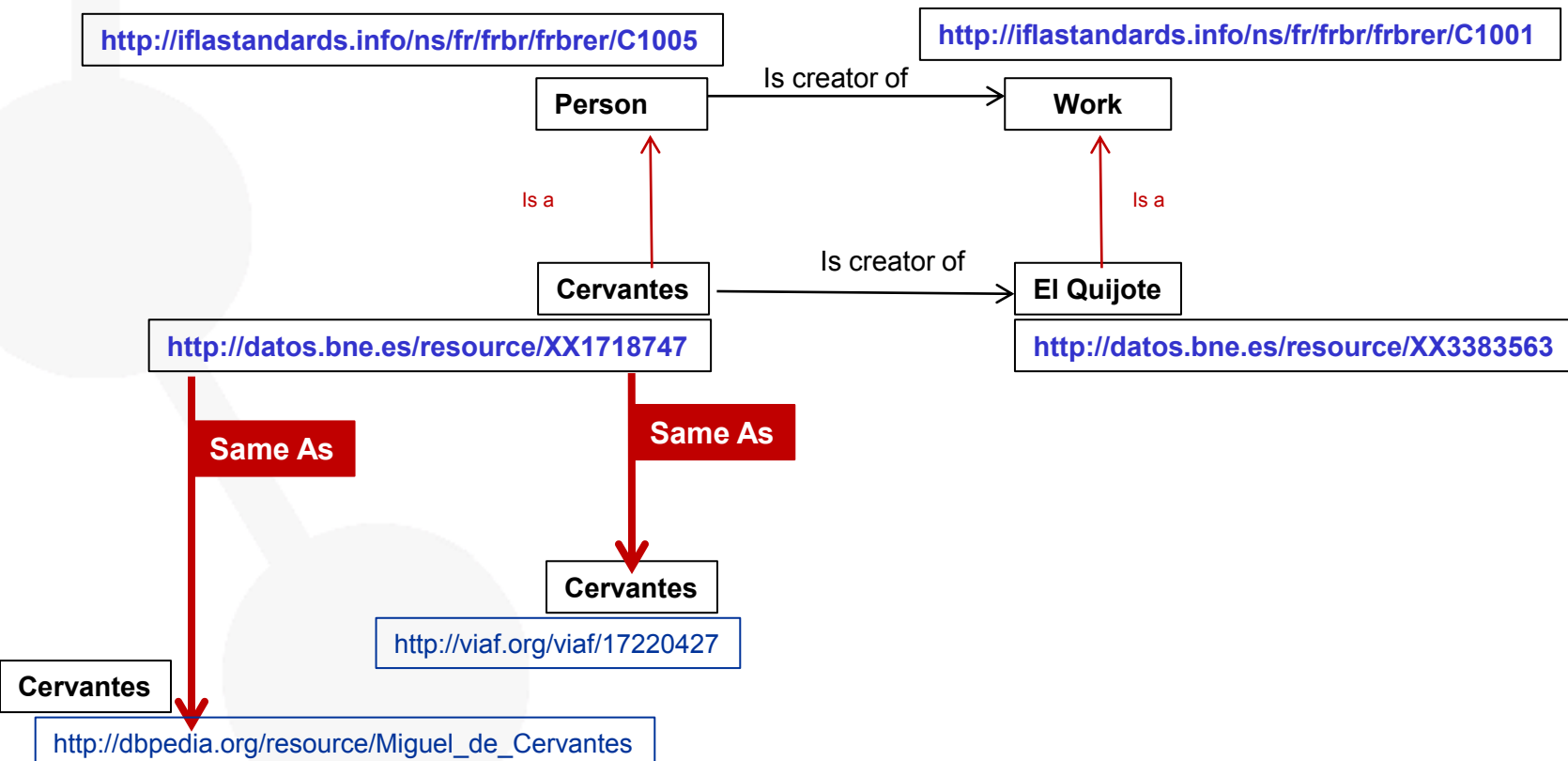


Unique identifiers: URI
 identify or name a resource

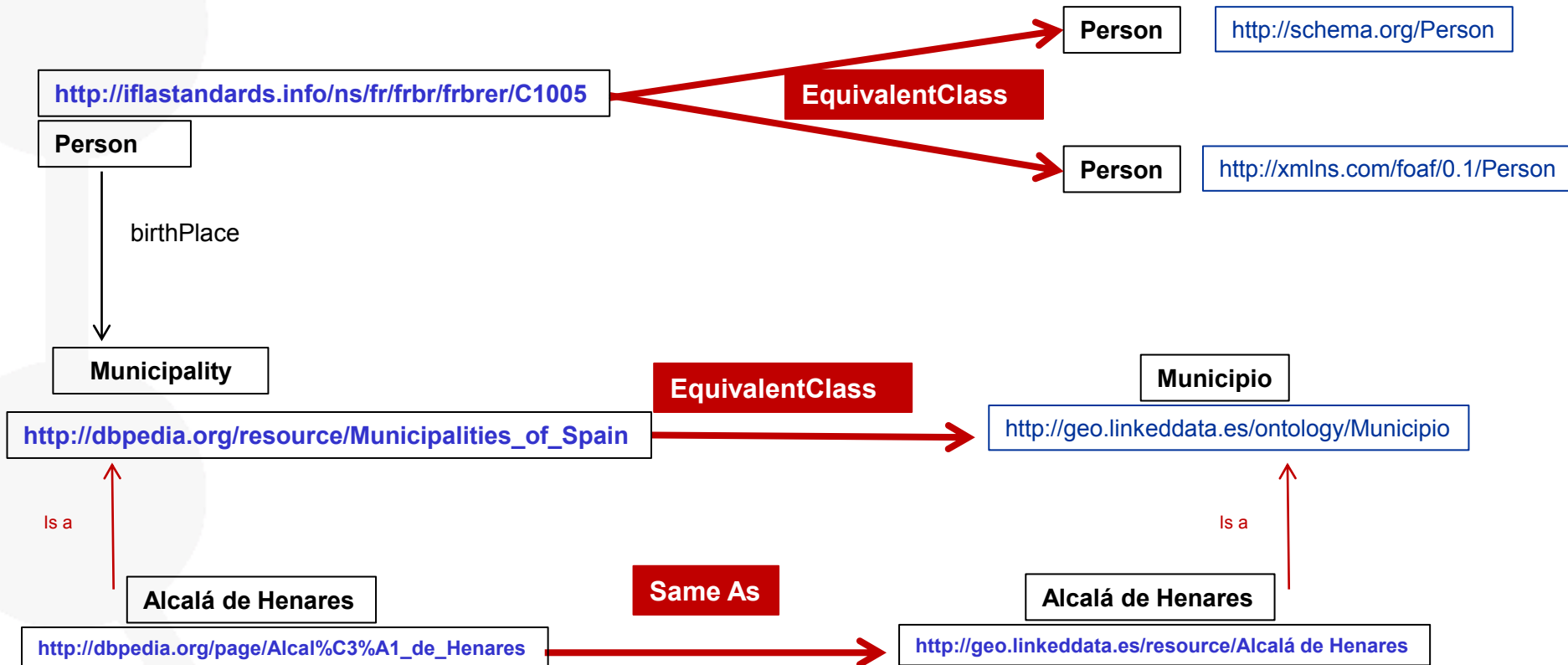
Equivalence links to other datasets

Same As

Data navigation



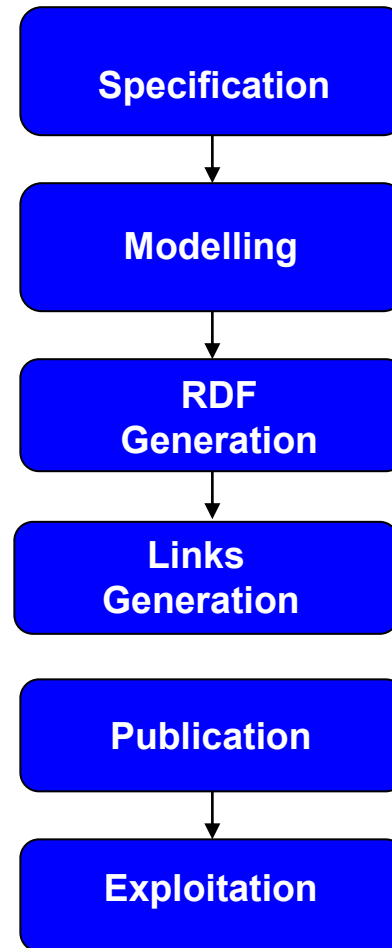
Aligning Models with Owl EquivalentClass



Lessons learnt

1. Reuse existing models
2. Align the data and the concepts.

1. The concept
2. Foundations
3. **The process**
4. Examples



Specification

Modelling

RDF
Generation

Links
Generation

Publication

Exploitation

- **Data sources analysis**
- **URI Design**
- **License definition**

Identification and selection of data sources

Specification

Modelling

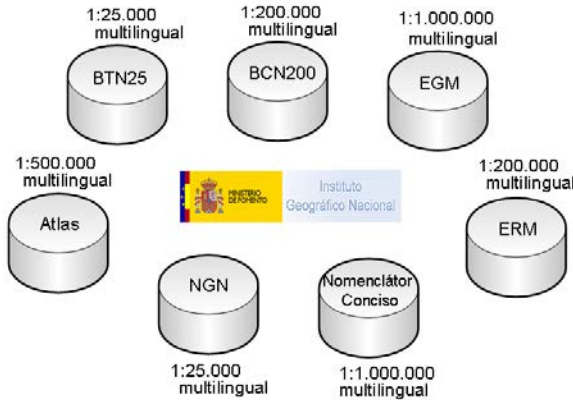
RDF
Generation

Links
Generation

Publication

Exploitation

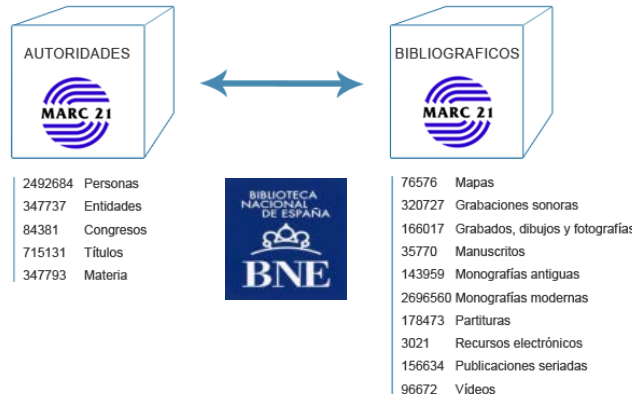
Geographical Spanish Institute



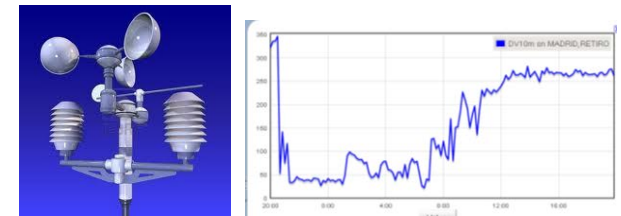
Statistical Spanish Institute



Spanish National Libraries



Meteorological Office (AEMET)



1. Identification and selection of the data sources

Specification

Modelling

RDF
Generation

Links
Generation

Publication

Exploitation

- Geographic Spanish Institute
 - Multilingual (Spanish, Vasc, Gallician, Catalan)
 - Conceptualization mismatches
 - Granularity (scale concept)
 - Domain vocabulary
 - Inform. hidrográfica.** Embalse, albufera, río, etc.
 - Transportes.** Vía desdoblada, Ferrocarril, ...
 - Unidades Administrativas.** Municipio.
 - Particularities
 - Longitude and latitude
- Statistic Spanish Institute
 - Monolingual
 - Numerical information
 - Particularities
 - Geo (textual level) and Temporal

1. Identification and selection of the data sources: Geographical information

NOMBRE	ENTIDAD	COM	PROV	CODINE	XUTM	YUTM	HUSO	HOJA25	LongitudG	LatitudG	LongitudGMS	LatitudGMS
Abejuela, Olivar de / Oli	Lugar/Paraje	0	02	02042	584300	246500	30	0867-3	-2,03512445814873	38,3620693572292	-02°02'06.44	38°21'43
Abejuela, Rambla de	Corriente fluvial	0	04	04053	597560	152000	30	0974-4	-1,89618811907142	37,509177056304	-01°53'46.27	37°30'33
Abejuela, Rambla de la	Corriente fluvial	1	46	46262	579190	123000	30	0638-2	-0,90285531710738	39,9374839997029	-00°54'10.27	39°56'14
Abejuela, Rambla de la	Corriente fluvial	1	44	44002	578800	124000	30	0638-2	-0,907142388290964	39,9465700679236	-00°54'25.71	39°56'47
Abelá, A	Población	0	27	27025	521500	336500	29	0003-3	-7,49293473672413	43,670782491816	-07°29'34.56	43°40'14
Abeladoira	Población	0	27	27039	522000	774030	29	0073-1	-7,50066276897865	43,1084031553505	-07°30'02.38	43°06'30
Abeladoira	Lugar/Paraje	0	27	27039	521550	774200	29	0073-1	-7,50615404547912	43,1100057447368	-07°30'22.15	43°06'36
Abelaedo	Lugar/Paraje	0	27	27005	548100	321300	29	0010-3	-7,16730269277051	43,5291689758955	-07°10'02.28	43°31'45
Abelaedo, Chao do	Llanura/Raso	0	27	27013	525500	330200	29	0009-1	-7,4448008623332	43,613414717808	-07°26'41.28	43°36'48
Abelaedo, Monte do	Lugar/Paraje	0	27	27064	509000	341000	29	0002-4	-7,6470271512085	43,7132267731492	-07°38'49.29	43°42'47
Abelaedo, O	Población	0	27	27064	508500	340500	29	0002-4	-7,65333254552948	43,708799463333	-07°39'11.99	43°42'31
Abelaedo, Rego do	Corriente fluvial	0	27	27064	509000	340540	29	0002-4	-7,64712030731384	43,7090862344245	-07°38'49.63	43°42'32

NOMBRE	GMLGEOMETRY
Abengibre	(HUGECLOB)
Alatoz	(HUGECLOB)
Albatana	
Balsa de Ves	
Ballestero, El	
Alborea	
Alcadozo	
Alcalá del Júcar	

```

<gml:Polygon srsName="SDO:8223" xmlns:gml="http://www.opengis.net/gml">
  <gml:outerBoundaryIs><gml:LinearRing><gml:coordinates decimal="." cs="," ts=" ">-1.48374108,39.23127677,0 -1.48404
  -1.48480765,39.22531695,0 -1.48544493,39.2231538,0 -1.4858725,39.22212319,0 -1.48608465,39.22141415,0 -1.4860584
  -1.48421128,39.21319056,0 -1.48390698,39.21064575,0 -1.48429166,39.2094524,0 -1.48529268,39.20490629,0 -1.492506
  -1.49590016,39.20383639,0 -1.49905691,39.20405732,0 -1.50256876,39.20446292,0 -1.50338941,39.20453654,0 -1.50483
  -1.51378498,39.2047147,0 -1.51398161,39.20472622,0 -1.5171434,39.20471246,0 -1.51894734,39.20373528,0 -1.5196271
  -1.52344981,39.20108038,0 -1.52699007,39.19901681,0 -1.5284903,39.19815278,0 -1.53151867,39.19619073,0 -1.532086
  -1.5329951,39.19479473,0 -1.53398695,39.19603246,0 -1.53537021,39.19528414,0 -1.53607317,39.19544615,0 -1.536914
  -1.53953498,39.19602121,0 -1.54099994,39.19629185,0 -1.54110394,39.19630216,0 -1.54231647,39.19646151,0 -1.54461
  -1.54957924,39.19633592,0 -1.55131402,39.1964386,0 -1.55382202,39.19666799,0 -1.55798564,39.19690882,0 -1.559800
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  -1.57633787,39.19982863,0 -1.57807687,39.20087703,0 -1.57814542,39.20092292,0 -1.57871557,39.20136237,0 -1.57915
  -1.5805024,39.20233924,0 -1.58088715,39.20278543,0 -1.58107708,39.20313014,0 -1.58122865,39.20365457,0 -1.581447
  -1.5819531,39.20563664,0 -1.58191475,39.20581637,0 -1.58194513,39.20603299,0 -1.58285235,39.20756676,0 -1.584270
  -1.58543918,39.21073152,0 -1.58648894,39.21087713,0 -1.5873874,39.211438,0 -1.58788888,39.21143788,0 -1.58834488
  
```

1. Identification and selection of the data sources

Statistical information

Specification

Modelling

RDF
Generation

Links
Generation

Publication

Exploitation

POBLA_01
POBLA_08
PBL01_08
TS_CRECE_EF
DENS_01
DENS_08
DENS01_08
TS_CRECE_VE
TS_CRECE_VE
TS_CRECE_VE
TS_NAT_01
TS_NAT_08
TS_NAT01_0
TS_MORT_01
TS_MORT_08
TS_MORTAL_
TS_FECUN_0
TS_FECUN_0
TS_FECUN01
MUJ_FERTIL
MUJ_FERTIL
MUJ_FETIL_
POBL_EXTR_
POBL_EXTR_
EVOL_POBL_
IND_DEP_01
IND_DEP_08
IND_DEPEN_
ESP_IND_EN
ESP_IND_EN
ESP_IND_EN
PORT_IND_E
PORT_IND_E

Población año 2001
Población año 2008
Evolución de la población desde el 2001 al 2008
Tasa de Crecimiento efectivo
Densidad de Población año 2001
Densidad de Población año 2008
Evolución de la densidad desde el año 2001 al 2008

	2009	2008	2007	2006	2005	2004	2003
Total Nacional	3355830	3422239	3336657	3174393	3064129	2942583	2813159
Álava	21988	22318	20676	20349	19838	19779	19638
Albacete	27380	27647	27068	25531	24685	23550	22547
Alicante	136239	142307	140145	133016	123333	113852	111805
Almería	43501	45130	43970	40871	38766	36260	33947
Asturias	71853	73124	72276	70115	68175	67039	65062
Ávila	11455	11708	11434	10900	10611	10319	10211
Badajoz	40874	41358	40168	38045	37052	34972	34866
Illes Balears	91826	93335	91254	88027	87024	85425	75951
Barcelona	467385	477942	469432	444410	436294	417425	397693
Burgos	25567	25891	25372	24504	23733	22882	22159
Cáceres	26307	26494	26064	25039	24846	20596	23440
Cádiz	62817	64505	63338	61691	58986	57138	54462
Cantabria	39611	40393	39560	37690	36561	35649	34017
Castellón	42122	43855	42476	39749	37865	37214	34213
Ciudad Real	32046	33011	31881	30446	29521	29011	26778
Córdoba	48979	50057	49302	47155	45405	43394	41964
Coruña, A	83748	84220	82873	79170	77023	74809	71748
Cuenca	14747	14928	14741	13822	13336	12829	12546
Girona	58404	51467	50108	47169	46827	45145	52482
Granada	60016	62269	61055	57223	54341	50508	49662
Guadalajara	13507	13735	12874	11825	10438	10120	9422
Guipúzcoa	62034	63569	59546	58486	57193	56498	55983
Huelva	26783	27463	27063	25487	24777	24270	22547
Huesca	16837	17109	16694	16025	15390	15078	14283
Jaén	36557	37368	36962	35383	34675	33157	32444
León	33564	34012	33563	32359	31664	30992	30256
Lleida	36920	37638	36065	33956	32739	31515	29605
Lugo	24861	25035	24609	23780	23122	22479	22396
Madrid	511804	519307	503000	478202	456175	436074	407655
Málaga	113362	116683	114547	108713	102382	96587	88257
Murcia	95636	100075	97374	90698	85110	82484	75973
Navarra	43282	43847	43142	41083	40730	39679	38936
Ourense	23304	23711	23520	22843	22452	22118	21560
Palencia	10964	11111	11060	10694	10575	10399	10297

Specification

Modelling

RDF
Generation

Links
Generation

Publication

Exploitation

- Records in the **MARC 21** format
- **3.9 million** bibliographical records
- **4.2 million** authority records
- Version: November, 2011



2492684	Personas
347737	Entidades
84381	Congresos
715131	Títulos
347793	Materia



76576	Mapas
320727	Grabaciones sonoras
166017	Grabados, dibujos y fotografías
35770	Manuscritos
143959	Monografías antiguas
2696560	Monografías modernas
178473	Partituras
3021	Recursos electrónicos
156634	Publicaciones seriadas
96672	Videos

Specification

Modelling

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Generation

Publication

Exploitation

- **Meaningful URIs versus Opaque URIs**
- **Separate TBox (ontology model) from ABox**
- **Base URI**
 - <http://linkeddata.es/>
 - <http://datos.bne.es/>
 - <http://geo.linkeddata.es/>
 - <http://otalex.linkeddata.es/>
- **OntologyTBox URIs)**
 - <http://iflstandards.info/ns/fr/frbr/frbrer/C1005>
 - <http://phenomenontology.linkeddata.es/ontology/{concept|property}>
 - <http://phenomenontology.linkeddata.es/ontology/Municipio>
 - We use the RDF Data Cube Vocabulary and/or other vocabularies
- **Data (ABox URIs)**
 - <http://datos.bne.es/resource/XX1718747>
 - <http://geo.linkeddata.es/resource/{resource type}/{resource name}>
 - <http://geo.linkeddata.es/resource/Municipio/Badajoz>

Specification

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Exploitation

- **Ontologies:**

- A **set of terms**
- A set of explicit **assumptions** regarding the intended meaning of the terms.
 - Almost always including concepts and their classification
 - Almost always including properties between concepts

- **Shared understanding** of a domain of interest

- Ontologies expressed in OWL or **RDF(S)**, both based on RDF
- The **NeOn methodology** helps to build ontologies

2. Vocabulary development

Specification

Modelling

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Publication

Exploitation

- Features
 - Lightweight :
 - Taxonomies and a few properties
 - Consensuated vocabularies
 - To avoid the mapping problems
 - Multilingual
 - Linked data are multilingual
- The NeOn methodology can help to
 - Re-engineer Non ontological resources into ontologies
 - Pros: use domain terminology already consensuated by domain experts
 - Withdraw in heavyweight ontologies those features that you don't need
 - Reuse existing vocabularies

The Ontology for BNE: based on IFLA vocabularies

Specification

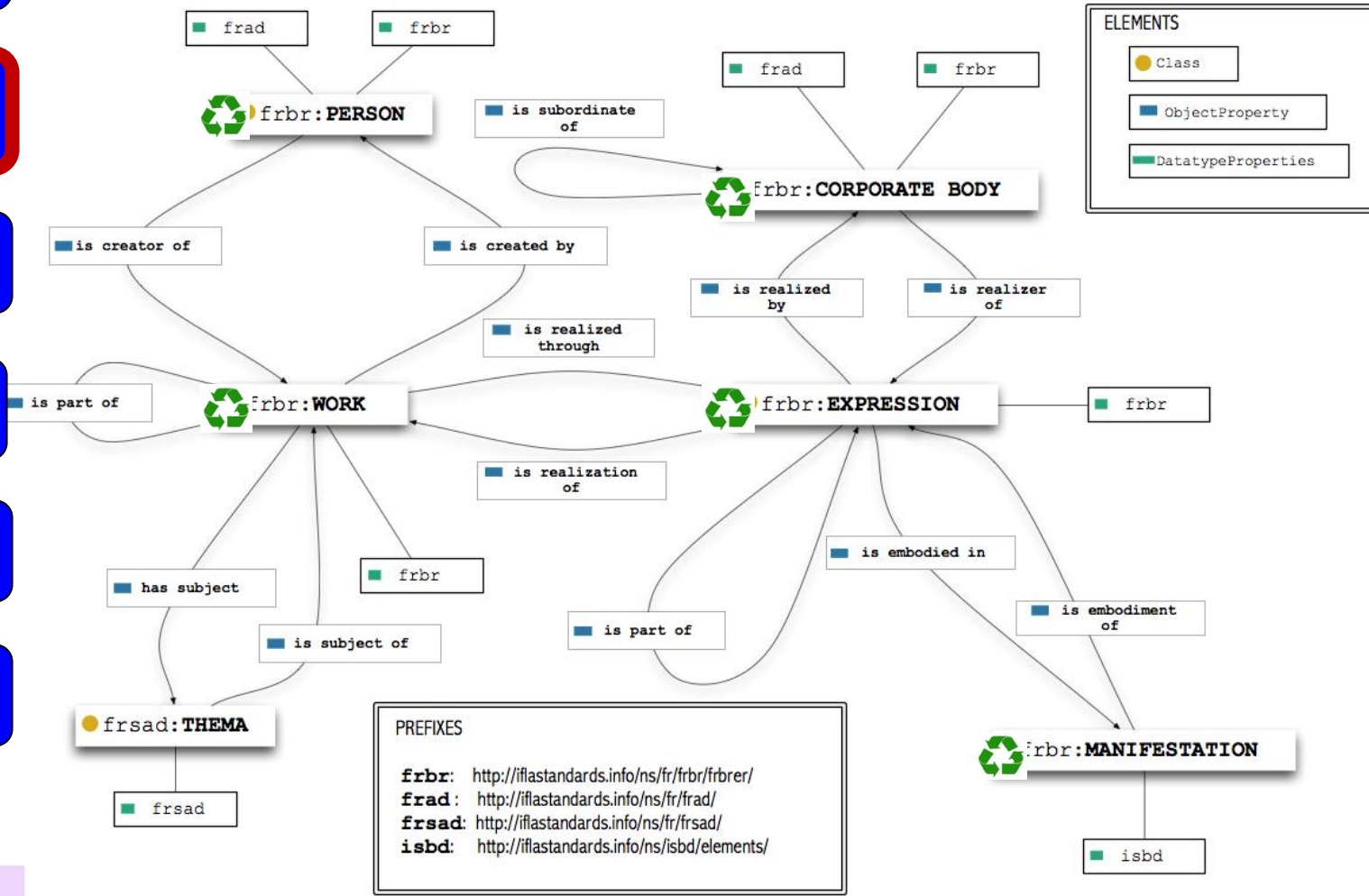
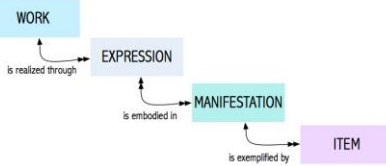
Modelling

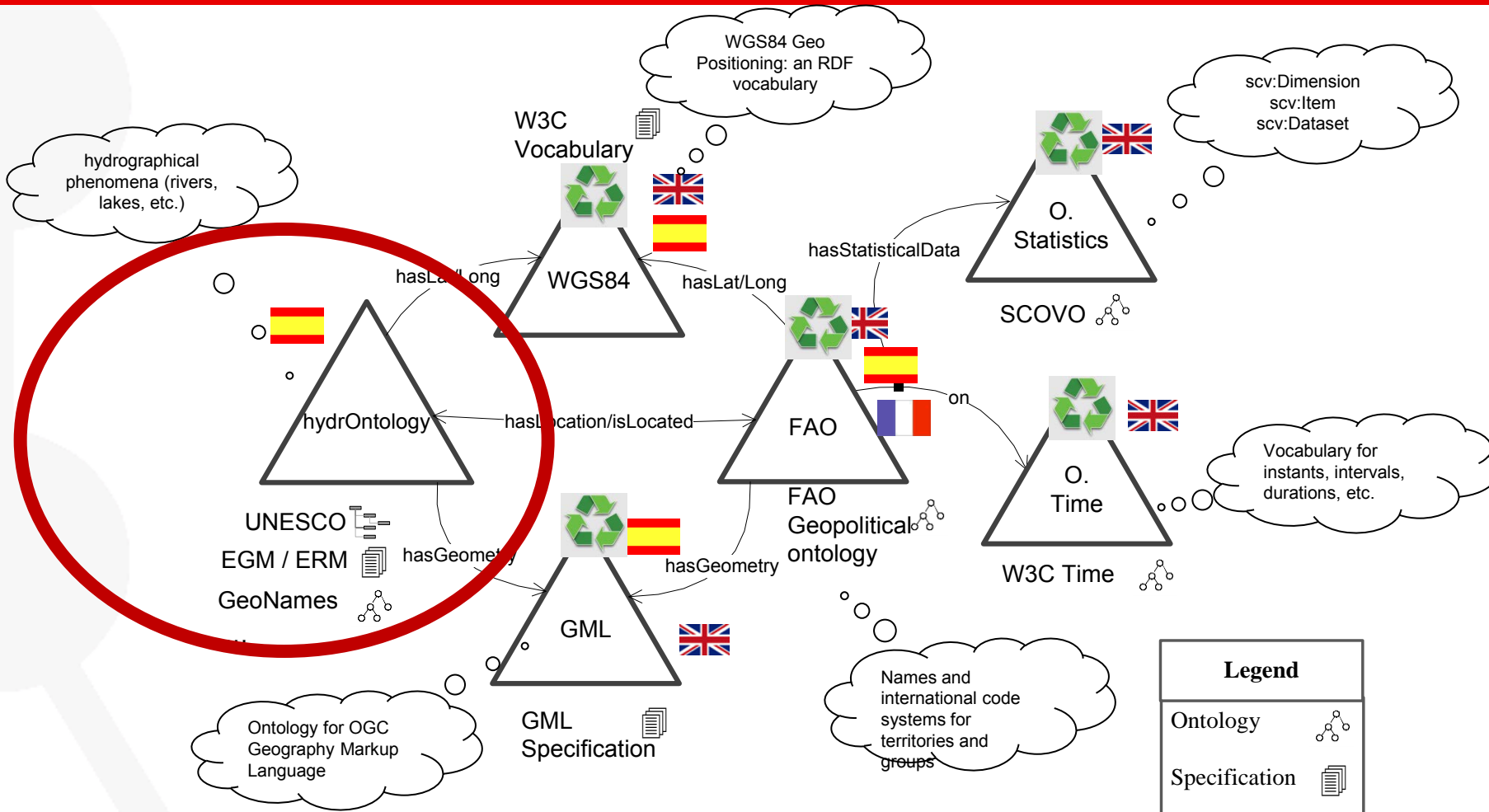
RDF
Generation

Links
Generation

Publication

Exploitation





Classes	33	33
Object Properties	44	44
Data Properties	318	318



Following the INSPIRE (INfrastructure for SPatial InfoRmation in Europe) recommendation. hydrOntology, SCOVO, FAO Geopolitical, WGS84, GML, and Time



Specification

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Publication

Exploitation



- From the Data sources
 - Geographic information (Databases)
 - Statistic information (.xsl)
 - Geospatial information
 - Bibliographic information (MARC 21)
- Different technologies for RDF generation
 - NOR20 (from excell, XML, text files, ...)
 - R20 and ODEMapster (from Databases)
 - Geometry2RDF and SPh2RDF (for Geo data)
 - Marimba for Libraries



Libraries: Marimba uses the ontology to generate RDF



Specification

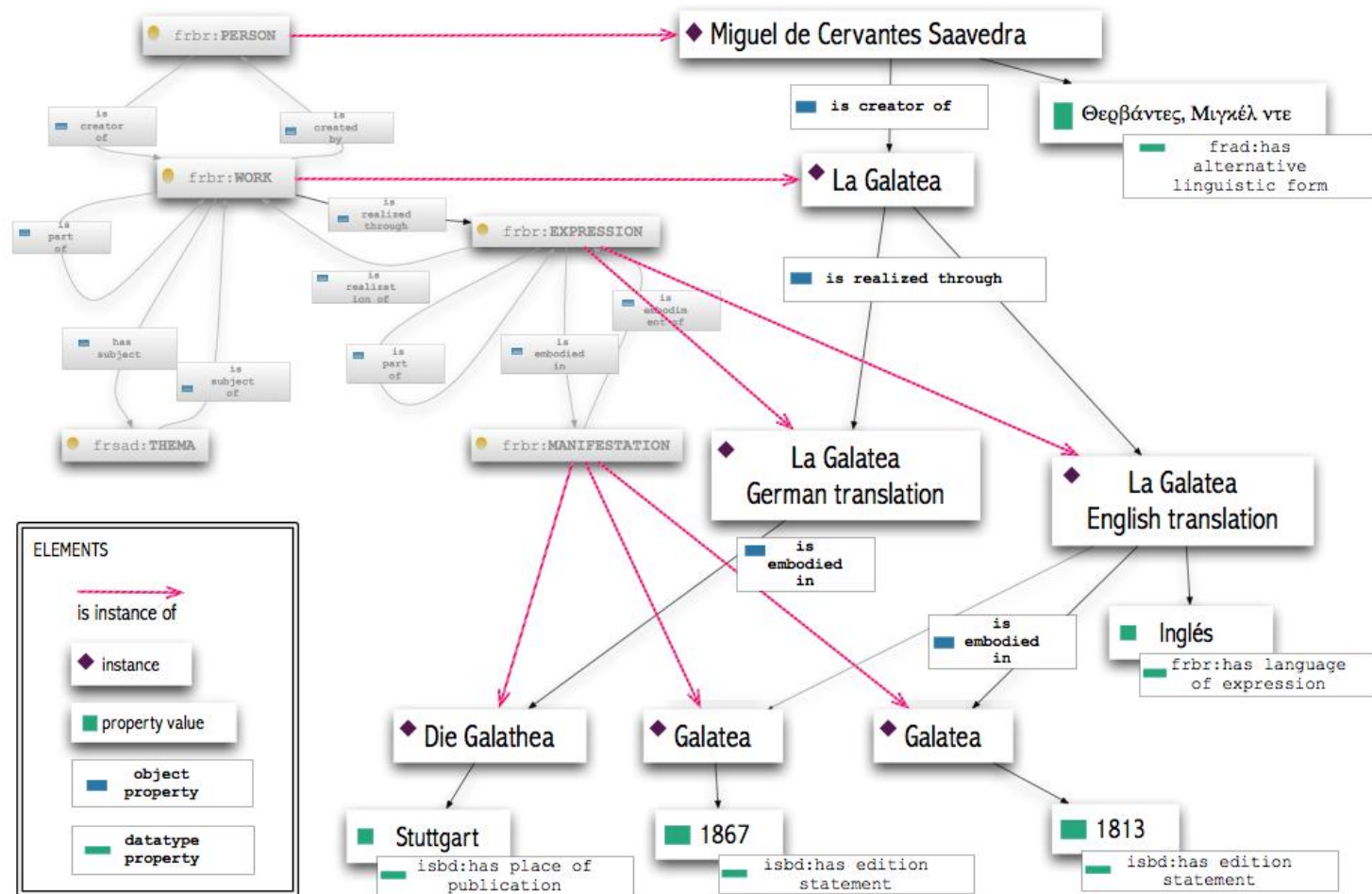
Modelling

RDF Generation

Links Generation

Publication

Exploitation



Marimba links with other resources: VIAF, DNB, SUDOC, LIBRIS, DBpedia

Specification

Modelling

RDF
Generation

Links
Generation

Publication

Exploitation

ifla-frbr:P3039

ifla-frbr:P3040

ifla-frad:P4031

locmads:citationNote

rdf:type

- [bne:resource/XX5027917](#)

- [bne:resource/XX5035214](#)

- Cervantes Saavedra, Miguel de

- 1547-1616

- Cervantes

- Cervantes di Saavedra, Michele

- Cervantes, Miguel de

- Servantes Saavedra, Migel

- Sirfantis Saafedrā, Mīgīl dī

- Therbantes, Minkel nte

- Zerbantes eta Saabedra, Mikel

- Θερβόντες, Μιγκέλ ντε

- Сервантес Сааведра, Мигель де

- سرفنتسن ساافرا، ميجيل دي

- (Cervantes Saavedra, Miguel de (Alcalá de Henares, Madrid, 1547-Madrid, 1616))

- port. (Miguel de Servantes Saavedra)

- port. (Miguel de Cervantes Saavedra)

- port. (Miguel de Cervantes)

- port. (Μιγκέλ ντε Θερβόντες = Minkel nte Therbantes)

- port. (سرفنتسن ساافرا = Mīgīl dī Sirfantis Saafedrā)

- vol. 1, port. (Miguel' de Servantes Saavedra = Мигель де Сервантес Сааведра)

- [http://dbpedia.org/resource/Miguel_de_Cervantes](#)

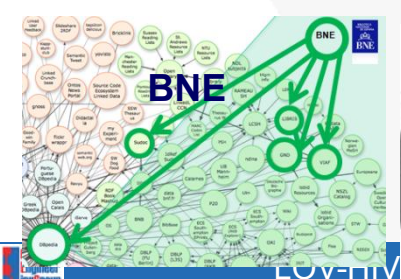
- [<http://d-nb.info/gnd/11851993X>](#)

- [<http://libris.kb.se/resource/auth/45369>](#)

- [<http://viaf.org/viaf/17220427>](#)

- [<http://www.idref.fr/026774771/id>](#)

- ifla-frbr:C1005



Marimba links with other resources: VIAF, DNB, SUDOC, LIBRIS, DBpedia

Specification

Modelling

RDF
Generation

Links
Generation

Publication

Exploitation

<http://d-nb.info/gnd/11851993X>

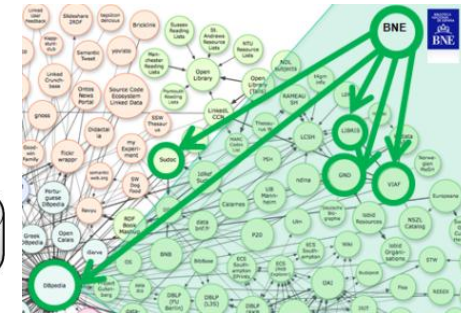


DNB

<http://viaf.org/viaf/17220427>



VIAF



Same As

Same As

Same As

Same As

Same As

http://dbpedia.org/resource/Miguel_de_Cervantes



DBpedia

<http://datos.bne.es/resource/XX1718747>



BNE

<http://www.idref.fr/026774771/id>



SUDOC

<http://libris.kb.se/resource/auth/45369>



LIBRIS

- vol. 1, port. (Miguel' de Servantes Saavedra = Мигель де Сервантес Сааведра)
- http://dbpedia.org/resource/Miguel_de_Cervantes
- <http://d-nb.info/gnd/11851993X>
- <http://libris.kb.se/resource/auth/45369>
- <http://viaf.org/viaf/17220427>
- <http://www.idref.fr/026774771/id>

owl:sameAs

Specification

Modelling

RDF
Generation

Links
Generation

Publication

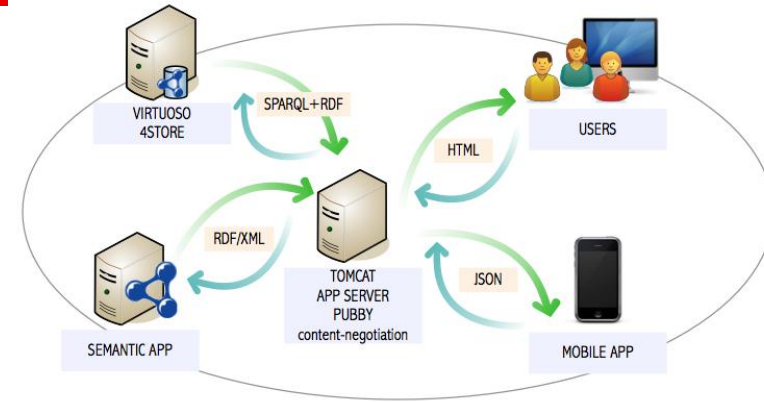
Exploitation

Data publication

Metadata publication using VOID

To facilitate the discovery

- Register in CKAN your dataset
- Use to **sitemap4rdf** to generate the site map
- Upload the site map to **Google** and **Sindice**



Specification

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Exploitation

Web Interface

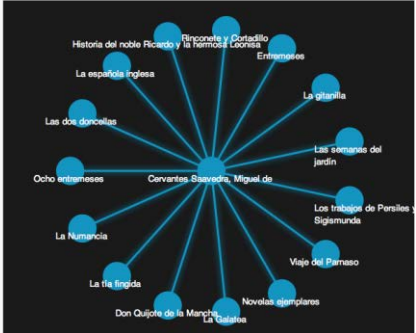


Cervantes Saavedra, Miguel de



Atributos

- tiene nombre de persona: Cervantes Saavedra, Miguel de
- tiene fechas de persona: 1547-1616
- tiene otra variante de nombre: Cervantes
- tiene otra variante de nombre: Cervantes di Saavedra, Michele
- tiene otra variante de nombre: Cervantes, Miguel de
- tiene otra variante de nombre: Серафто Саведра, Мигель де



SPARQL queries

```
select distinct COUNT(?Obras) where {
  http://datos.bne.es/resource/XX1718747
  <http://iflastandards.info/ns/fr/frbr/frbrer/P2010>
  ?Obras
```

URI Cervantes

Is author

<http://linkeddata3.dia.fi.upm.es/bne-demo>

1. The concept
2. Foundations
3. The process
4. **Examples**



- Libraries: <http://datos.bne.es>
- <http://linkeddata3.dia.fi.upm.es/bne-demo>
- Geo: <http://geo.linkeddata.es/>
- Meteorology: <http://aemet.linkeddata.es/>
- Travelling: <http://webenemasuno.linkeddata.es/>



Estacion MADRID, RETIRO
 21:40 26/5/2011

[Dir. media del viento:](#) 276 grados [dia](#) | [semana](#)

[Recorrido del viento:](#) 13 Hm [dia](#) | [semana](#)

[Vel. media del viento:](#) 2.2 m/s [dia](#) | [semana](#)

[Dir. de la v. max. del viento:](#) 251 grados [dia](#) | [semana](#)

[Temperatura del aire:](#) 18.5 grados C. [dia](#) | [semana](#)

[Humedad relativa:](#) 75 % [dia](#) | [semana](#)

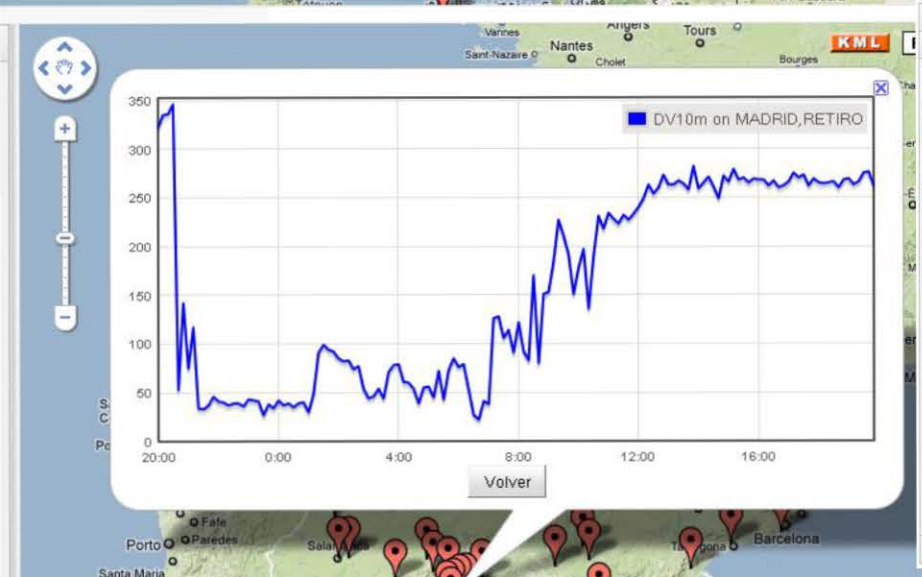
[Temp. del pto. de rocío:](#) 13.9 grados C. [dia](#) | [semana](#)

[Vel. max. del viento:](#) 4.7 m/s [dia](#) | [semana](#)

[Precipitacion:](#) 0 litros/m2 [dia](#) | [semana](#)

[Presion:](#) 938.4 hPa [dia](#) | [semana](#)

[Pres. reducida al nivel del mar:](#) 1013.6 hPa [dia](#) | [semana](#)



Facets

Capas

El Viajero

Filtrar por fecha

Línea temporal

Guías Viajes

Título: [Mi viaje a España](#) [Dibujar viaje](#) 01-04-2010 [Historial](#)

No hay fotos disponibles

Las chicas de Antón Martín

Reflejos versallescos en

Mi viaje a España

Jn paseo por Madrid

May 1 May 2 May 3 May 4 May 5

Abri Visitando El Escorial Jun





















Resultados

POWERED BY Google

2 mi 15 km

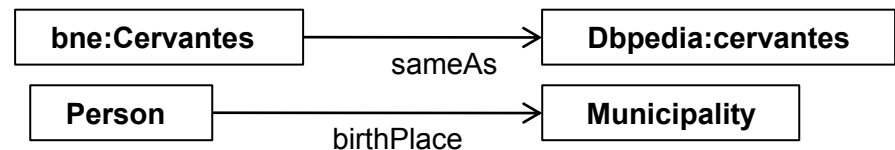
Datos de mapa ©2011 Tele Atlas - Términos de uso

There is no One-Size-Fits-All Formula

Phase	BNE	IGN	AEMET	PRISA	INE
Modeling	  DC	 Wgs84 time W3C® 	 SSN ontology	 SIOC	Scovo Data cube
RDF generation	 Ontology Engineer ingGroup	  geometry2rdf NOR2O	 CSV parser	  CSV parser	 NOR2O
Links generation	 DNB VIAF LIBRIS DBPEDIA	Silk DBPEDIA Geonames	Silk Geolinkeddata.es	Silk DBPEDIA Geolinkeddata.es	NOR2O Geolinkeddata.es
Publication	 OPENLINK VIRTUOSO	 Pubby	 ckan	 < SITEMAP XML /> sitemap4rdf	
Exploitation	 map4rdf		SPARQL		

Learn about Linked Data with UPM official courses in one week

- **URI**
 - Follow existing design guidelines for new URIs
 - **Reuse existing URIs from authoritative sources**
- **Models**
 - **Reuse existing models when available**
 - Create new models from authoritative sources
 - Do not forget to align your model with existing models
- **Generation**
 - Vertical domains usually require specific tools for generation
- **Link**
 - Generic link discovery tools performs well in vertical domains
 - **Link to other data sets using**
 - Equivalence links (sameAs)
 - Typed links
- **Discovery**
 - Use sitemap4rdf to allow search engines to find your data
- Use an **iterative-incremental life cycle** in your development





Publishing Linked Data – There is no One-Size-Fits-All Formula

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Our partners at: BNE, IGN, ...

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LOV SYMPOSIUM: LINKING AND OPENING VOCABULARIES.

18th June, 2012