

Applications

Asunción Gómez Pérez
Oscar Corcho

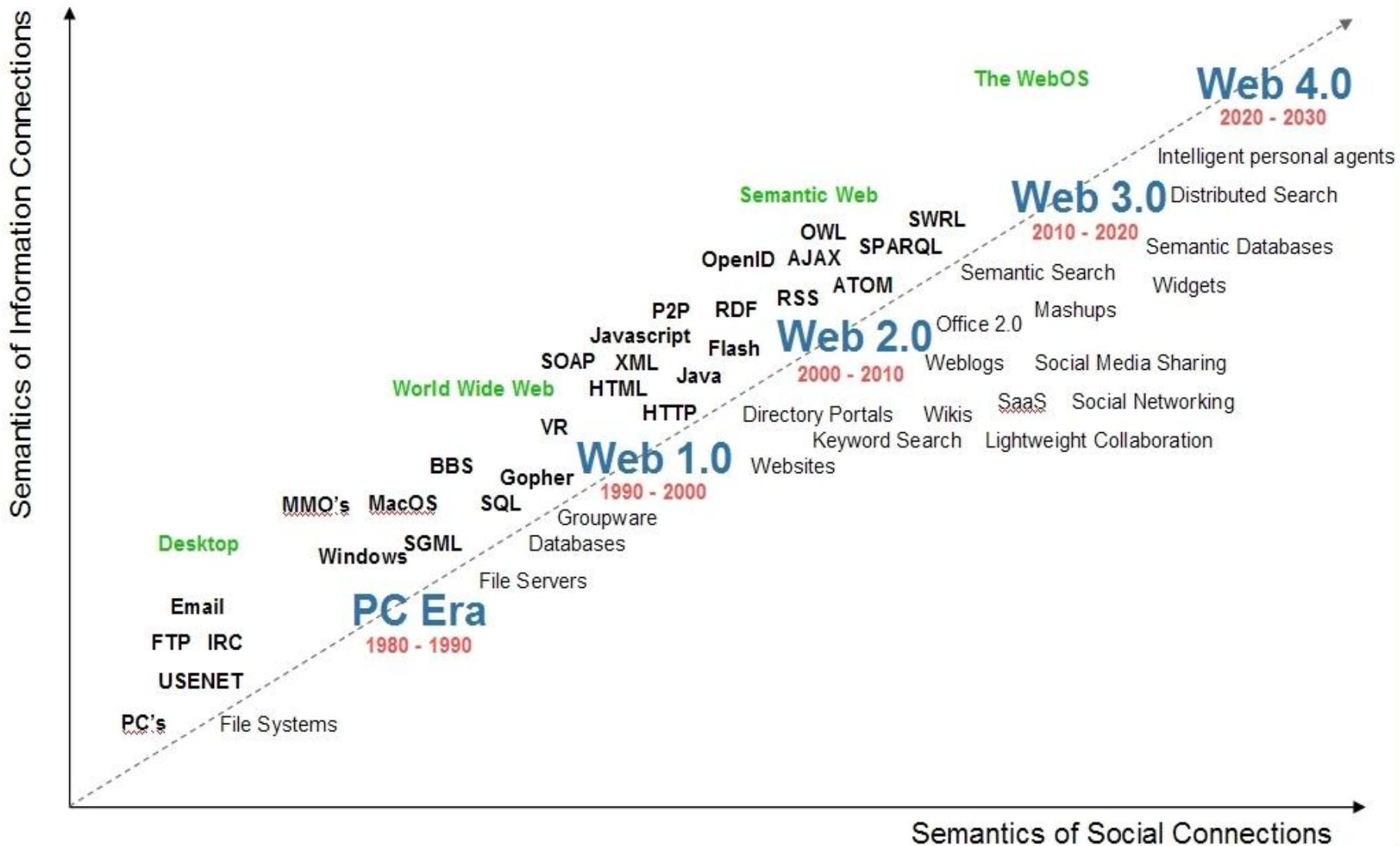


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 - Annotation, Data Integration and Decision Support Sy
 - Semantic Web 3.0 Applications
 - (Collaborative) Annotation and Data Integration



Web n+1: Roadmap

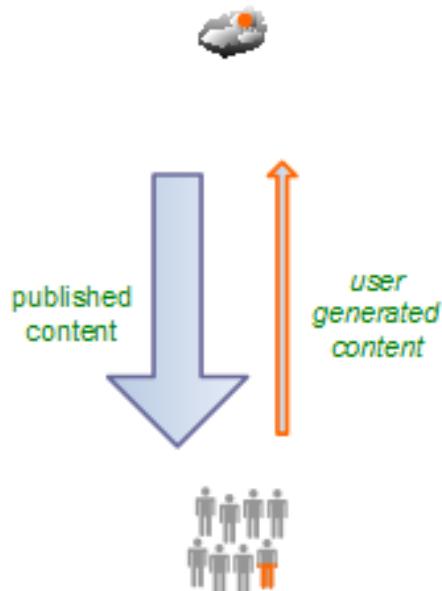


Web1.0 vs Web2.0

Web 1.0

"the mostly read-only Web"

250,000 sites



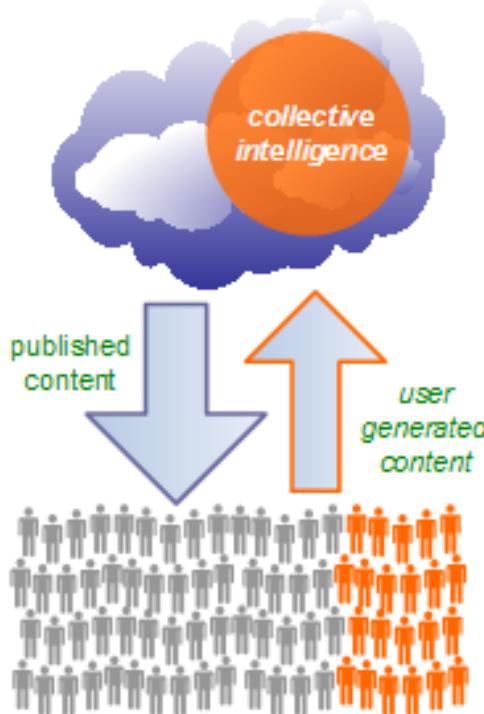
45 million global users

1996

Web 2.0

"the wildly read-write Web"

80,000,000 sites



1 billion+ global users

2006

- Cooperation
- Dynamicity
- Decentralised change
- Heterogeneity
- Multimedia content

del.icio.us - Mozilla Firefox

Archivo Editor Ver Higton Marcadores Herramientas Ayuda

Personalizar vínculos http://pobladores.lyc... http://pobladores.lyc... Iberia.com

Google delicious web Buscar M Marcadores Corrector ortográfico Traductor Enviar a delicious Configuración

del.icio.us
social bookmarking

» all your bookmarks in one place
» bookmark things for yourself and friends
» check out what other people are bookmarking

learn more... **get started**

hotlist what's hot right now on del.icio.us

HOT NOW

- Gumption: Do You Just Get Me? Do I Even Get Myself? 103 people
- Ask The Readers: What Books Have Changed Your Life? 104 people
- 9 Steps to Achieving Flow (and Happiness) in Your Work | Zen Habits 121 people

toread Preparing the Battlefield by S... Cool Tool: Books That ... ATOzTOA: Linux...

media TVer DVDRip

Terminado

YouTube Broadcast Yourself™

Videos Categories

Director Videos

- Teenie Weenie Raw Flesh
- Ryan Leslie's MySpace Blog #2
- Midget Binge Drinking
- Ronaldinho

Featured Videos

drawing youtube 02:04

This is a short version of the videos i did. I'm drawing people on you... you want me to draw a picture of you? Just ask me. (more)

From: [marcosejii](#) Views: 6,080 ★★★★☆ More in Arts

- Encontrar
- Comprender
- Extraer
- Comparar
- Agregar
- Publicar
- Contextualizar

flickr

Signed in as **Sentience** Help Sign Out

Home You Organize Contacts Groups Explore

Search everyone's photos Search

cardboxes

ADD TO FAVORITES BLOG THIS ALL SIZES

Uploaded on September 2, 2006 by **Nils K. Windisch (netomer)**

Nils K. Windisch (netomer)'s photostream

1,218 photos View as slideshow

Tags

- netomer
- 50mm
- 50mm f/1.8 AF
- D70
- Nikon
- black and white
- August
- 2006
- 0.4s
- f/8
- landscape format
- ISO200
- Göttingen
- Germany
- Europe
- Library
- State and University Library Göttingen
- on tour with Ralf Stockmann
- indoor
- historical Building
- geo:lat=51.534003
- geo:lon=9.932199

The neutrality of this article is disputed.

Please see the relevant discussion on the talk page.

Web 2.0 is a term often applied to a perceived ongoing transition of the [World Wide Web](#) from a collection of websites to a full-fledged computing platform serving web applications to end users. Ultimately Web 2.0 services are expected to replace desktop computing applications for many purposes.

Contents [edit]

- 1 Overview
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- 2 Technology
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- 2.3 Server software
- 3 Social Impact
- 4 Business Impact
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- 5.1 Examples

Overview

The original conception of the web (in this context, labeled *Web 1.0*) comprised static HTML pages that were updated rarely, if at all. The success of the *.dot-com* era depended on a more dynamic web (sometimes labeled *Web 1.5*) where [content management systems](#) served dynamic HTML web pages created on the fly from an ever-changing [content database](#). In both senses, so-called [eyeballing](#) was considered intrinsic to the web experience, thus making [page hits](#) and visual aesthetics important factors.

Proponents of the Web 2.0 approach believe that web usage is increasingly oriented toward interaction and rudimentary [social networks](#), which can serve content that exploits [network effects](#) with or without creating a visual, interactive web page. In one view, Web 2.0 sites act more as [points of presence](#), or user-dependent [web portals](#), than as traditional [websites](#).

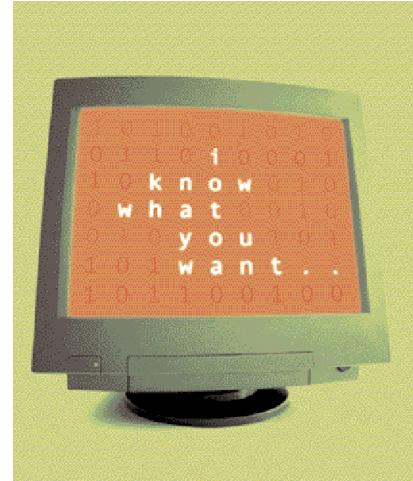
Comparison with Semantic Web

[edit]

Ontology Engineering Group

What is the Semantic Web?

- An extension of the current Web...
 - ... where **information and services** are given **well-defined** and **explicitly represented meaning**, ...
 - ... so that it can be **shared** and used by **humans and machines**, ...
 - ... better enabling them to work in cooperation
- How?
 - Promoting information exchange by **tagging web content** with machine processable descriptions of its meaning.
 - And **technologies** and **infrastructure** to do this

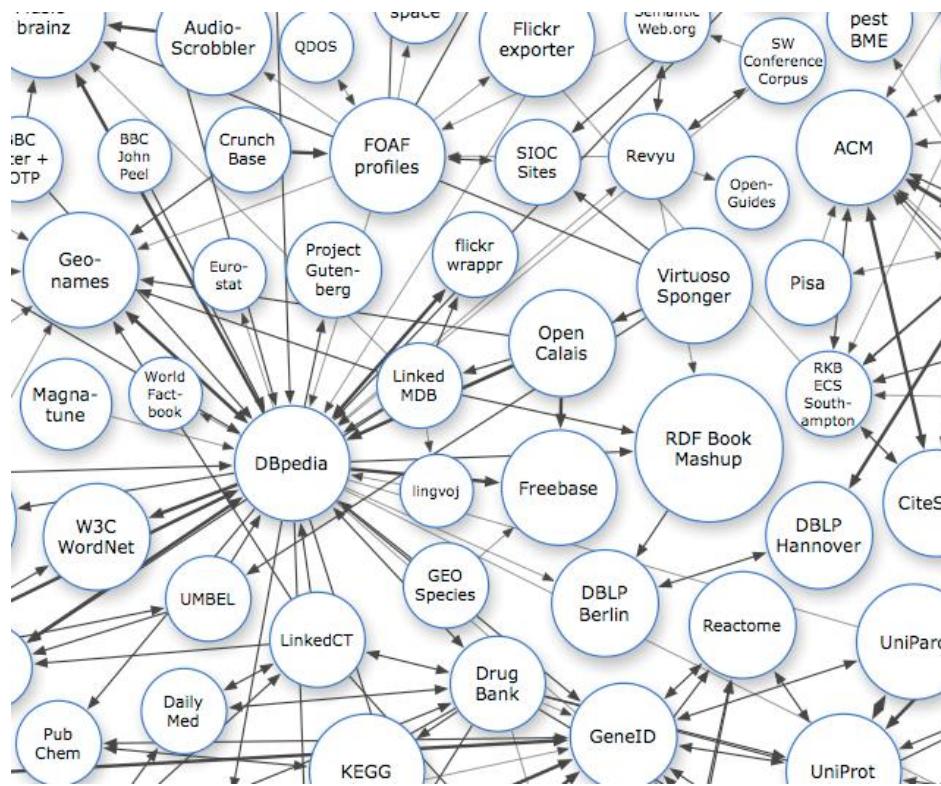


A new form of Web content
that is meaningful to computers
will unleash a revolution of new abilities

by
TIM BERNERS-LEE,
JAMES HENDLER and
ORA LASSILA

What is the Web of Linked Data?

- An extension of the current Web...
 - ... where **information** is given **well-defined** and **explicitly represented meaning**, ...
 - ... so that it can be **shared** and used by **humans and machines**, ...
 - ... better enabling them to work in cooperation
- How?
 - Promoting information exchange by **tagging web content** with machine processable descriptions of its meaning.
 - And **technologies** and **infrastructure** to do this
 - And **clear principles** on how to publish data



Definiciones para todos los gustos...

- Incluye, la transformación de la red en una base de datos, un movimiento hacia hacer los contenidos accesibles por múltiples aplicaciones *non-browser*, el empuje de las tecnologías de la Web Semántica, la Web Geoespacial, o la Web 3D.
- Serán aplicaciones conjuntas, de poco tamaño, que puedan correr en cualquier componente ya sea móvil o PC, aplicaciones rápidas y muy configurables y lo más importante de todo es que serán distribuidas por marketing viral, como son las redes sociales (digg, meneame, stumble upon, etc.) o los correos

Web 3.0

- **Web Inteligente**

- Semantic Web technologies
- The Data Web – a global database
- Intelligent applications (NLP, machine learning, machine reasoning, autonomous agents)

- **Conexión Ubicua**

- Broadband adoption
- Mobile Internet access
- Mobile devices

- **Computación en red**

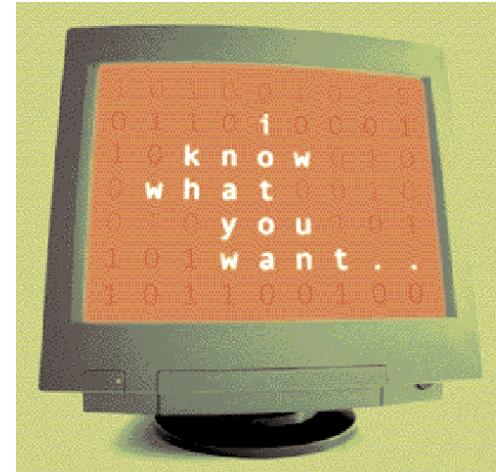
- Software-as-a-service business models
- Web services interoperability
- Distributed computing (P2P, grid computing, hosted "cloud computing" server farms)

- **Tecnologías abiertas**

- Open APIs and protocols
- Open data formats
- Open-source software platforms
- Open data (Creative Commons, Open Data License, etc.)

- **Open Identity**

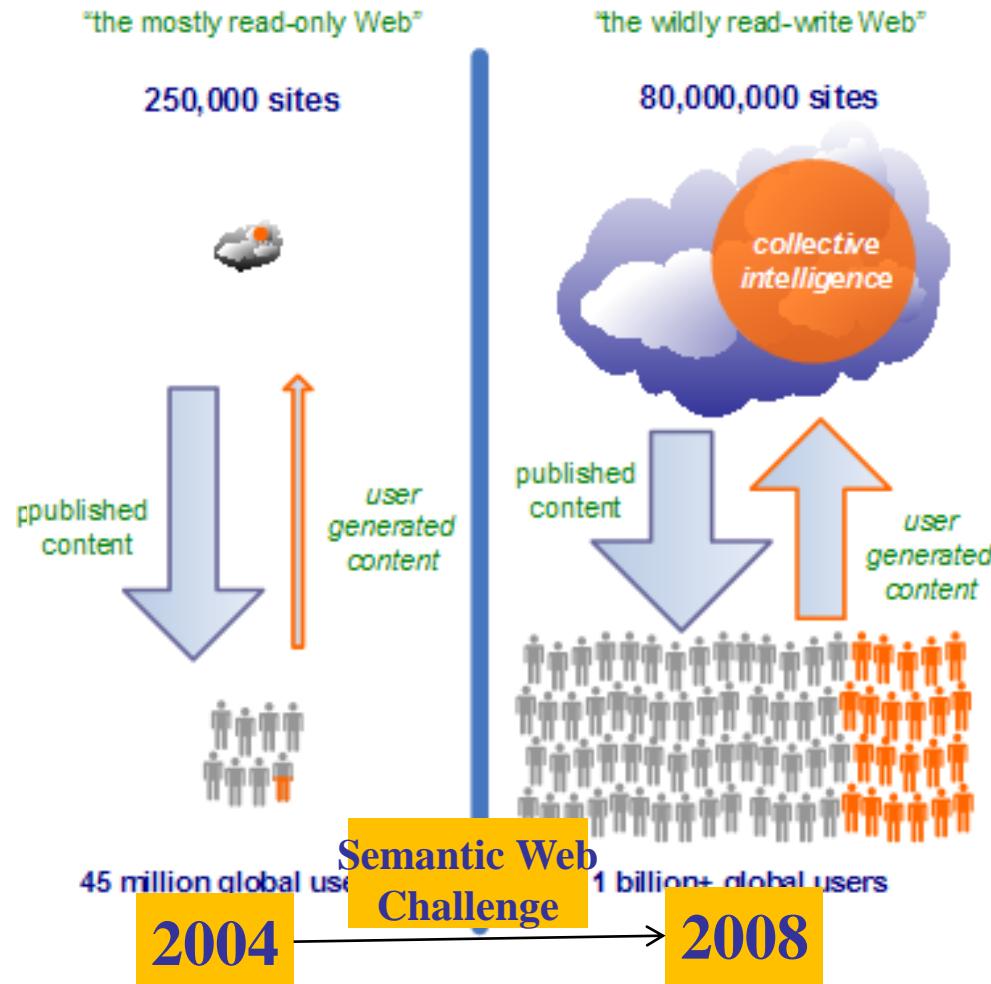
- Open identity (OpenID)
- Open reputation
- Portable identity and personal data



<http://lifeboat.com/ex/web.3.0>

The evolution of the Semantic Web

pre-Semantic Web Semantic Web 1.0 Semantic Web 3.0

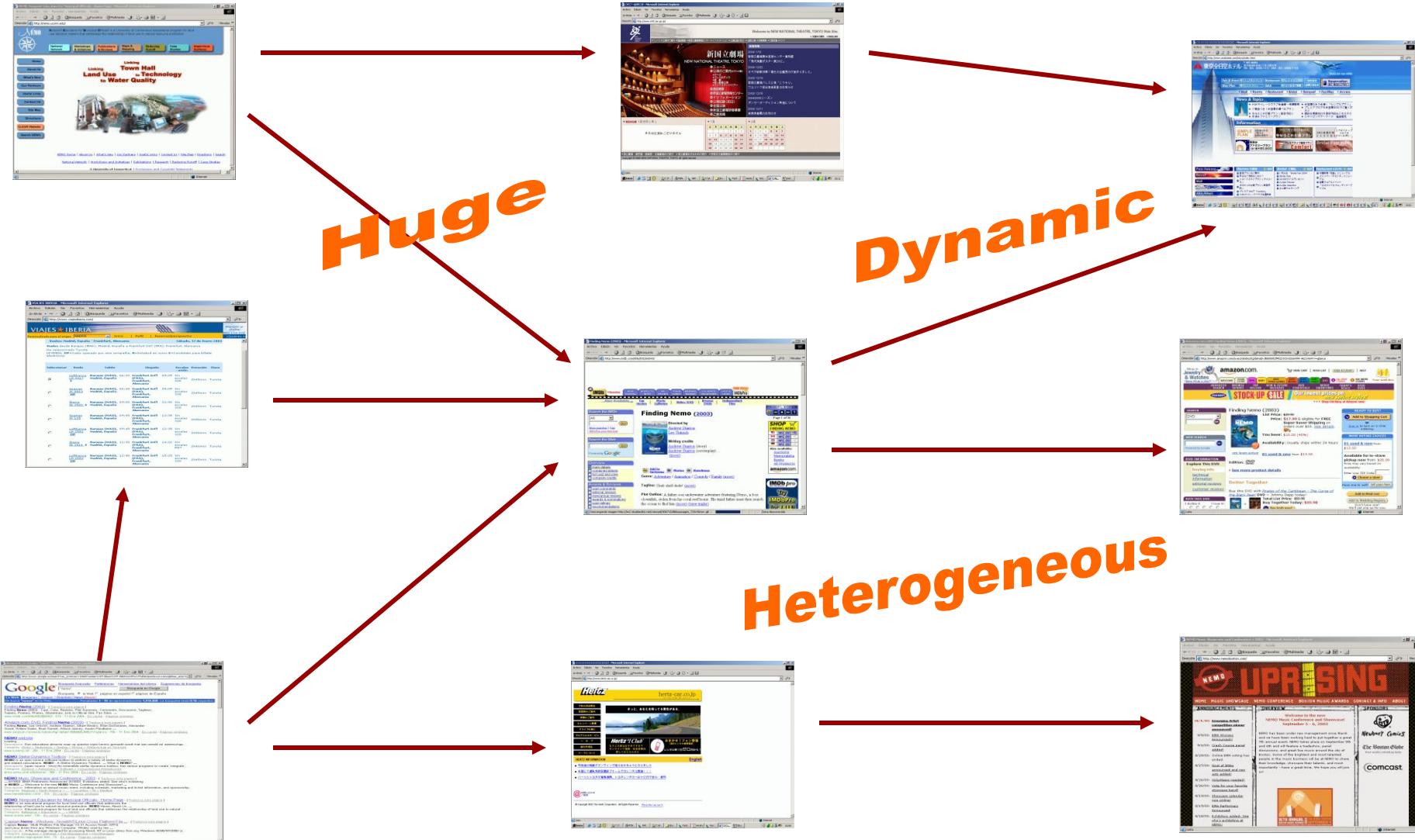


No standardised formats
—e.g., (KA)²

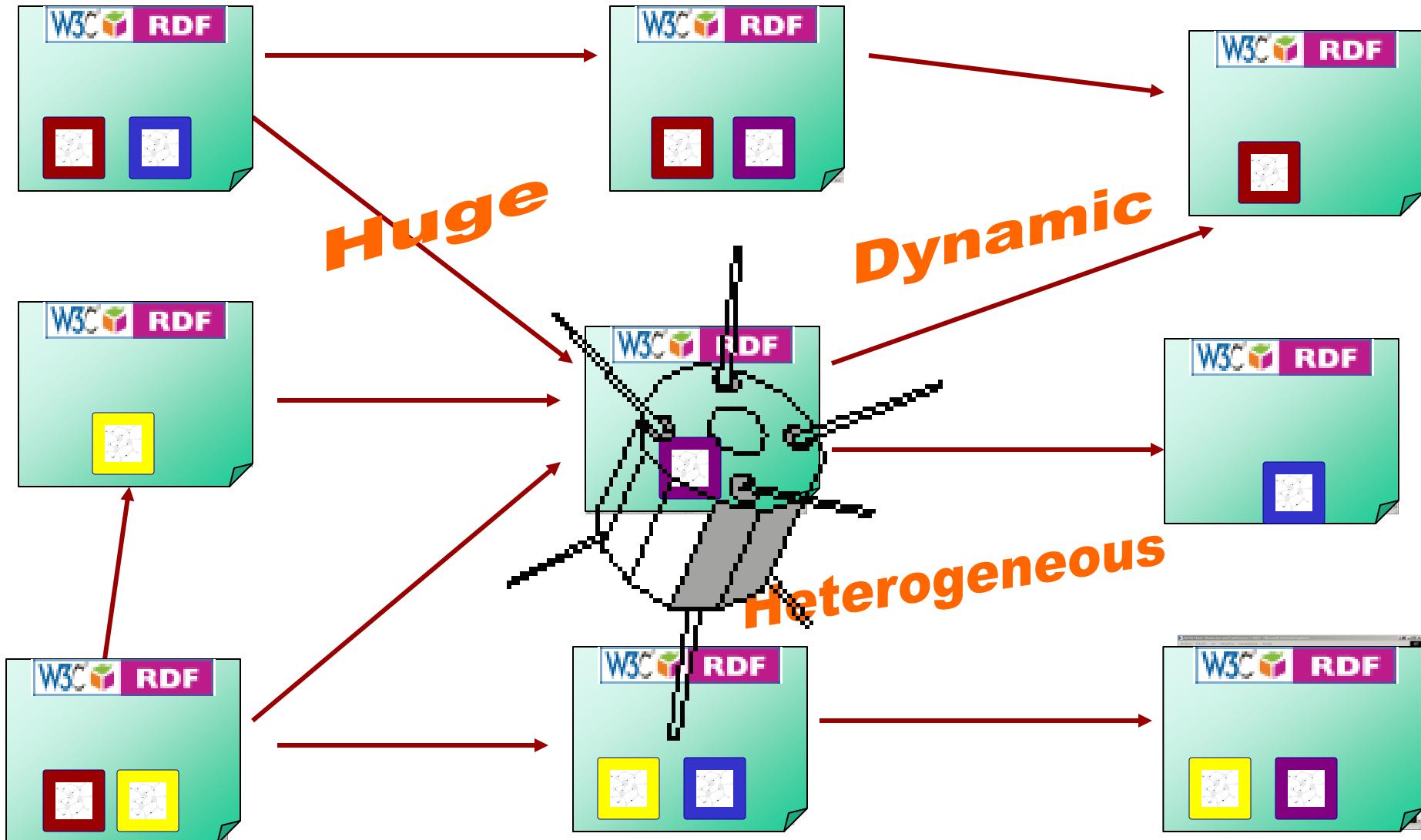
RDFS, OWL

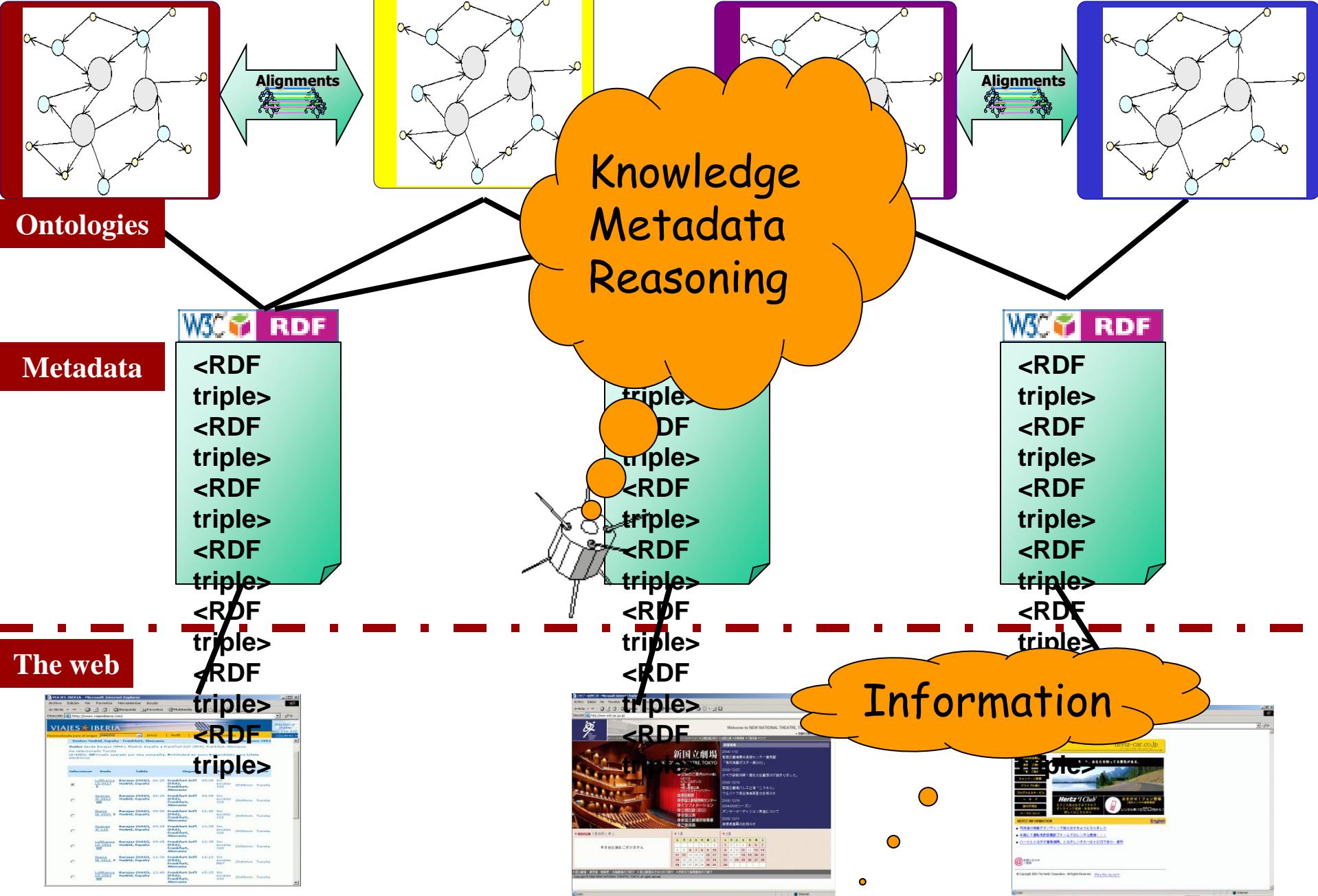
- Cooperation
- Decentralised change
- Heterogeneity
- Dynamicity

The Web

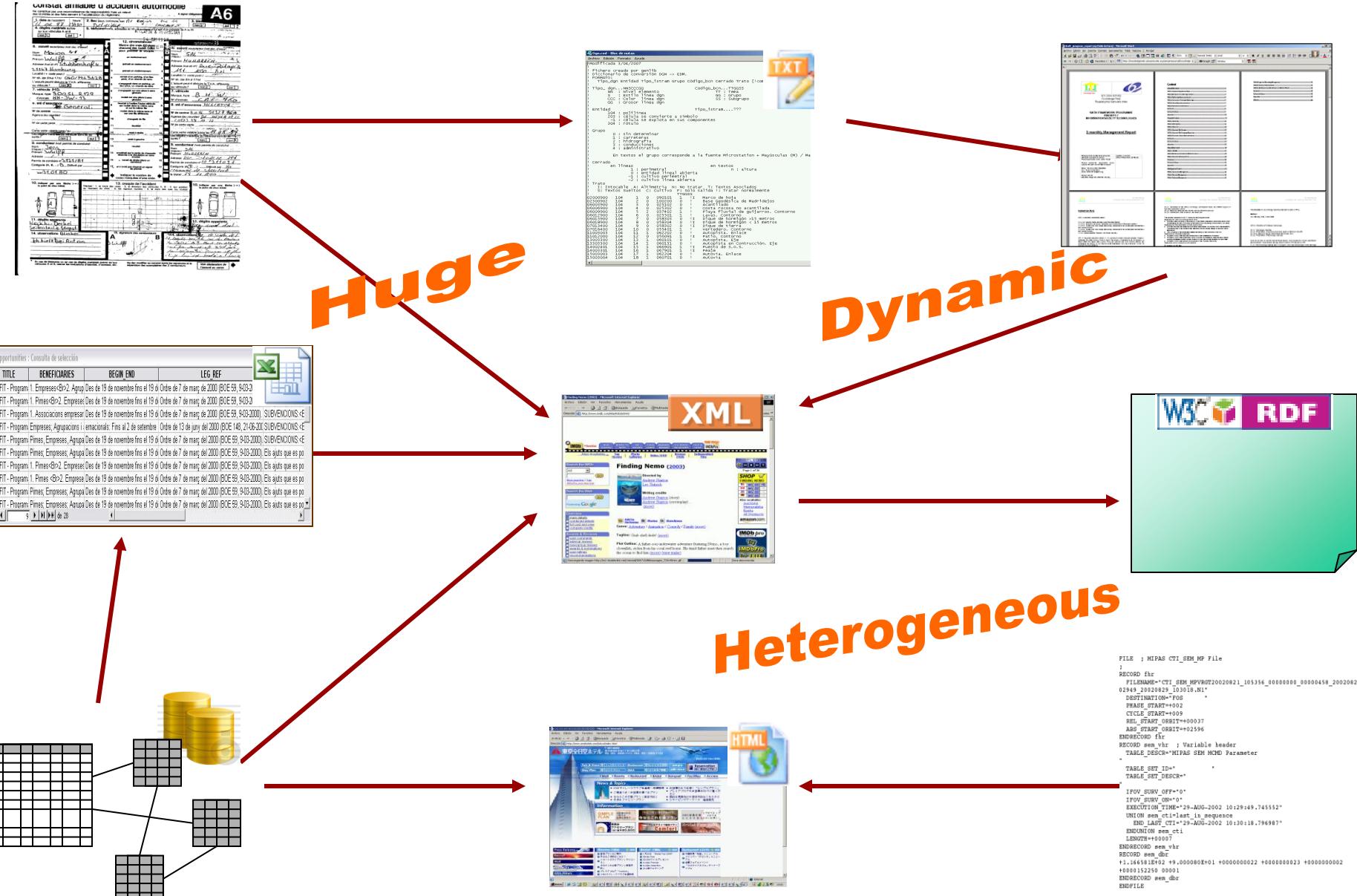


Semantic Webs

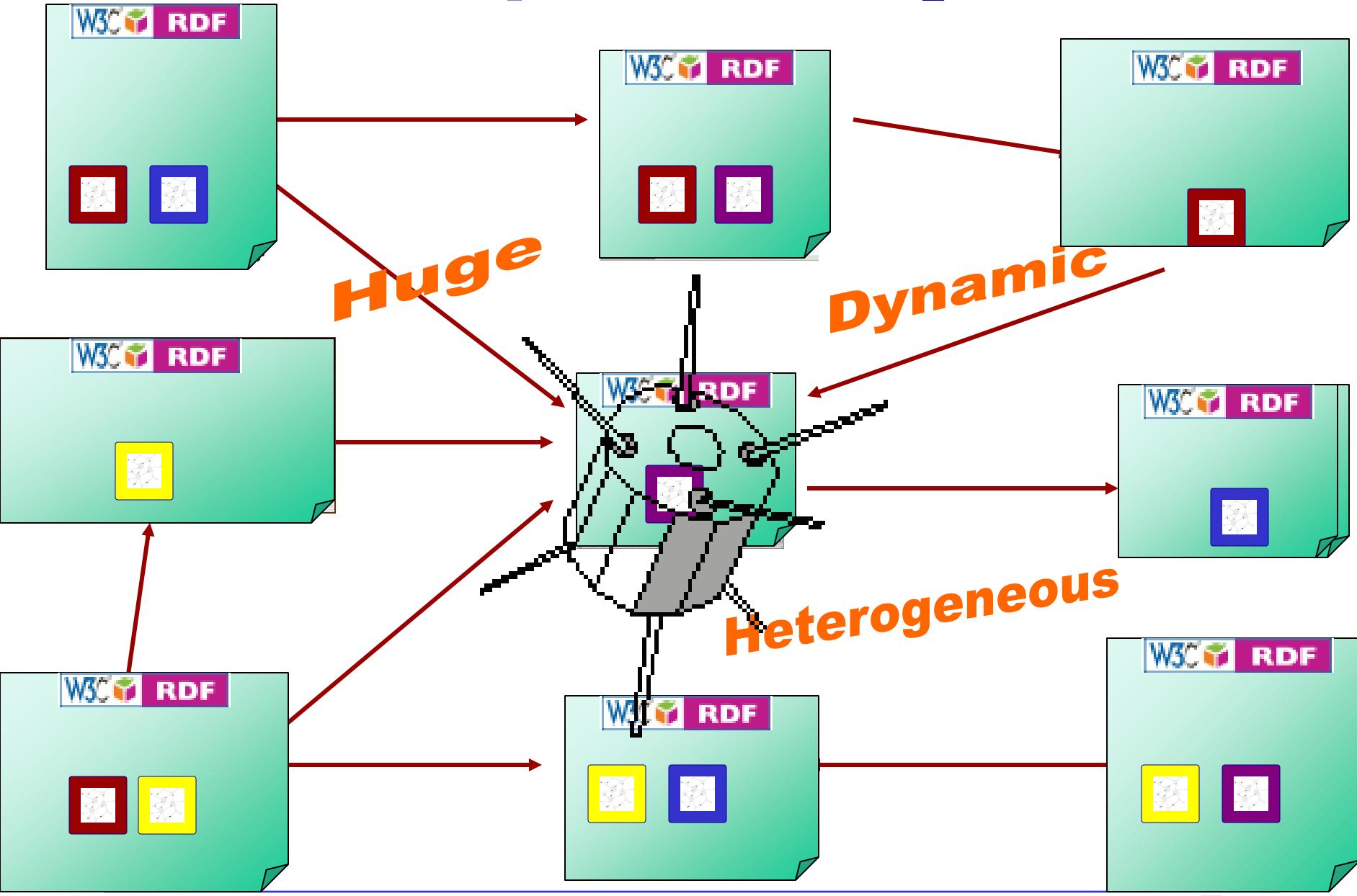




Corporative Semantics



Corporative Semantics



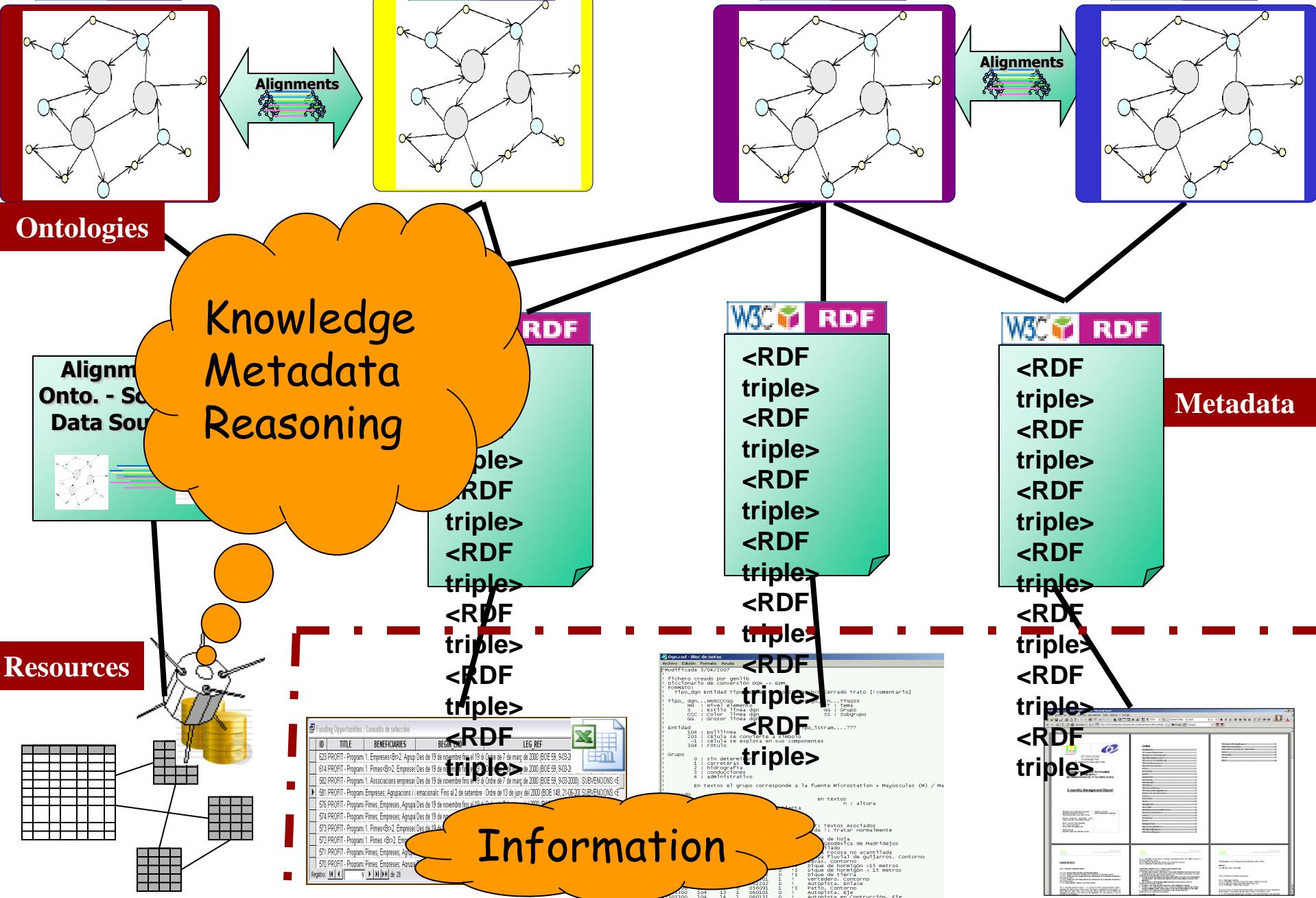


Table of Content

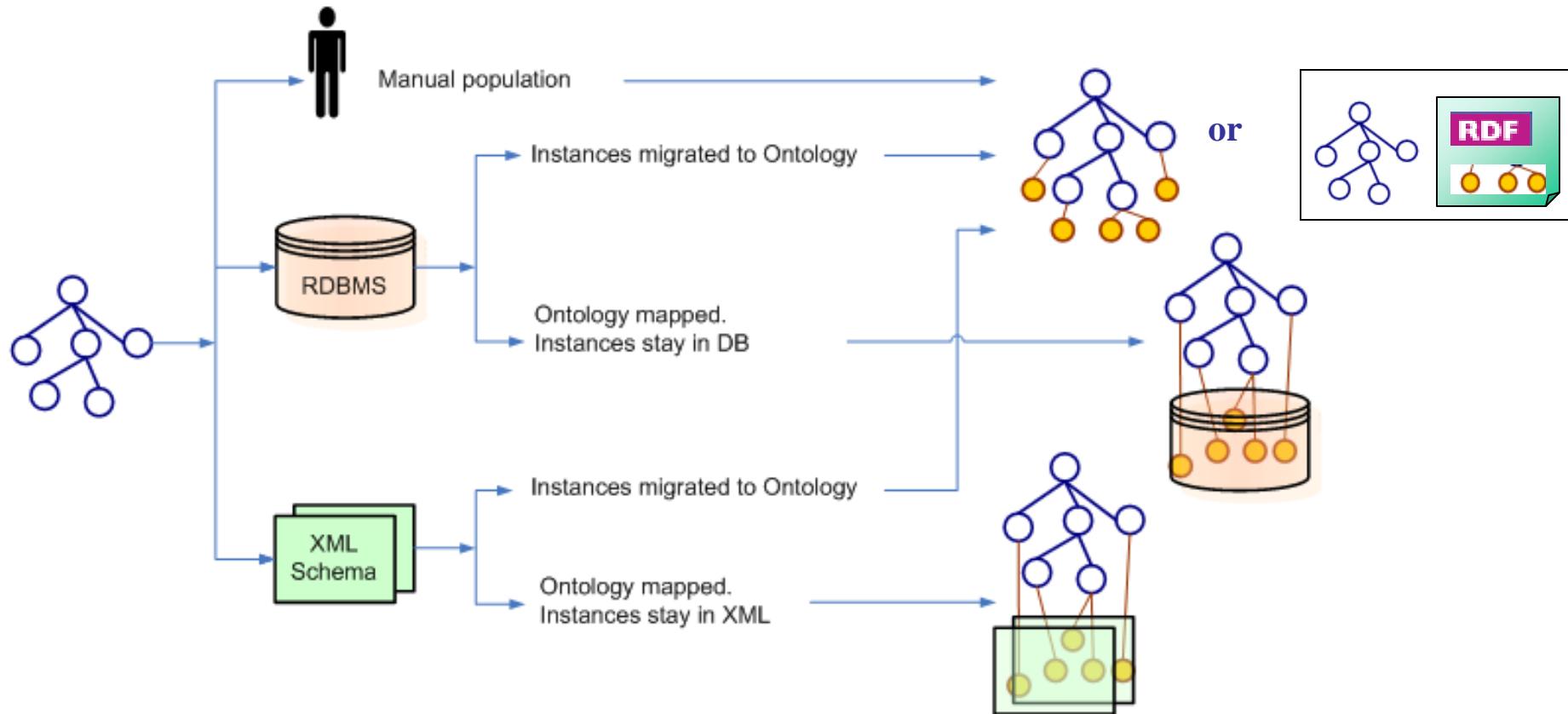
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-



Key aspects of Ontological Engineering

- **Ontologies**
 - Single versus network of ontologies?
 - Are ontologies built from scratch or reusing knowledge-aware resources?
 - Are mappings used for solving conceptual mismatches?
- **Instances**
 - Where are the data/instances?
 - Instances are in the ontology
 - Instances are in RDF files independently of the ontology
 - Data are kept in the original sources
 - Are instances distributed or centralized?
 - Have instances a very high rate of changes?
 - Heterogeneous provenance of instances
 - Degrees of data quality
 - Permissions

Where are the instances?

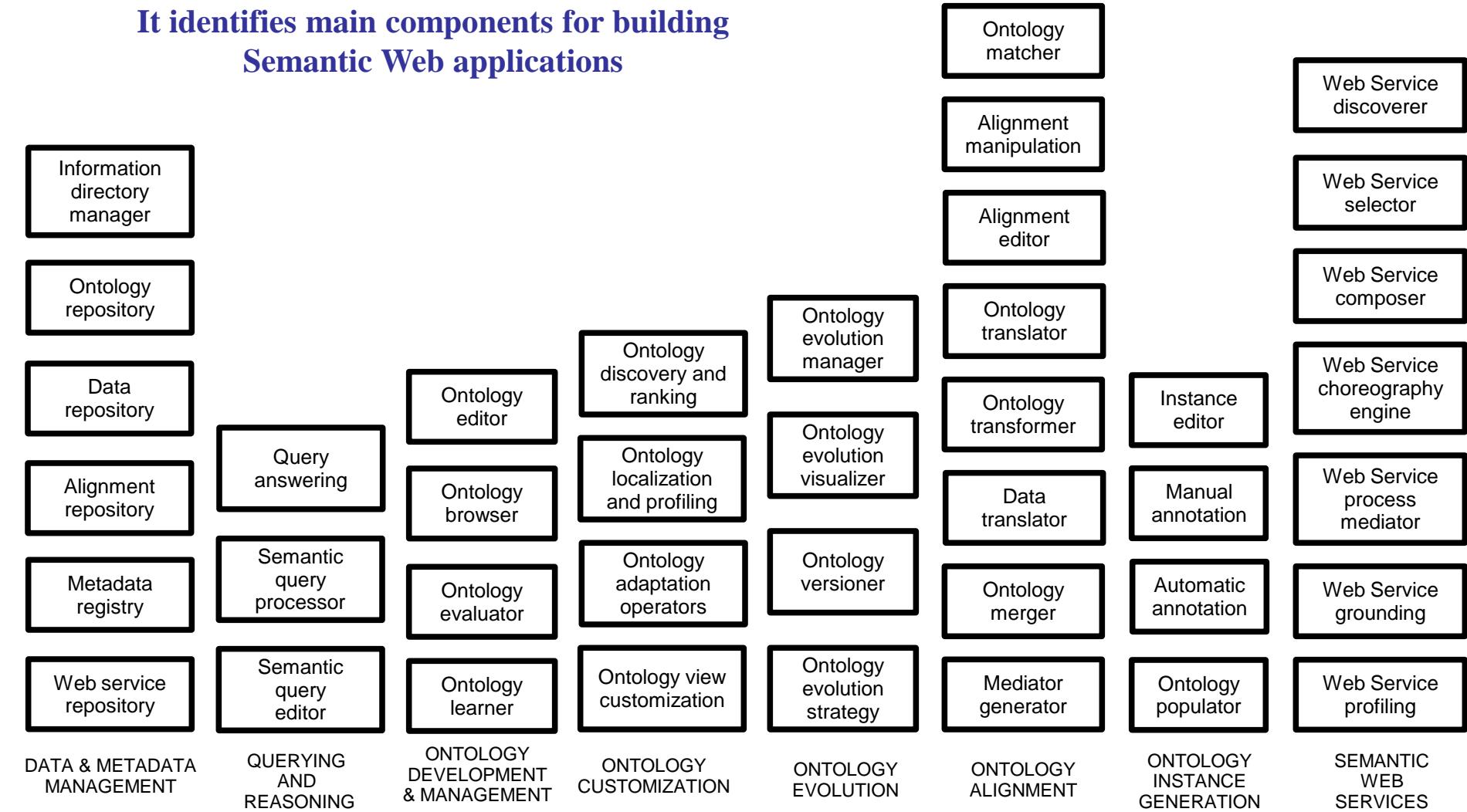


Key aspects of Semantic Applications

- Hugeness on semantic markups
- Conceptual Heterogeneity: Sem. markup based on many different ontologies
- Interoperability with other semantic resources
- Open to Web resources
- Open to Web services
- Web 2.0 like
- Mobile devices
- Geo-spatial information

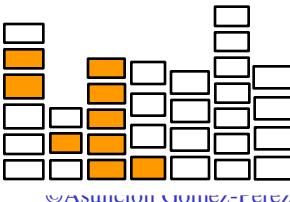
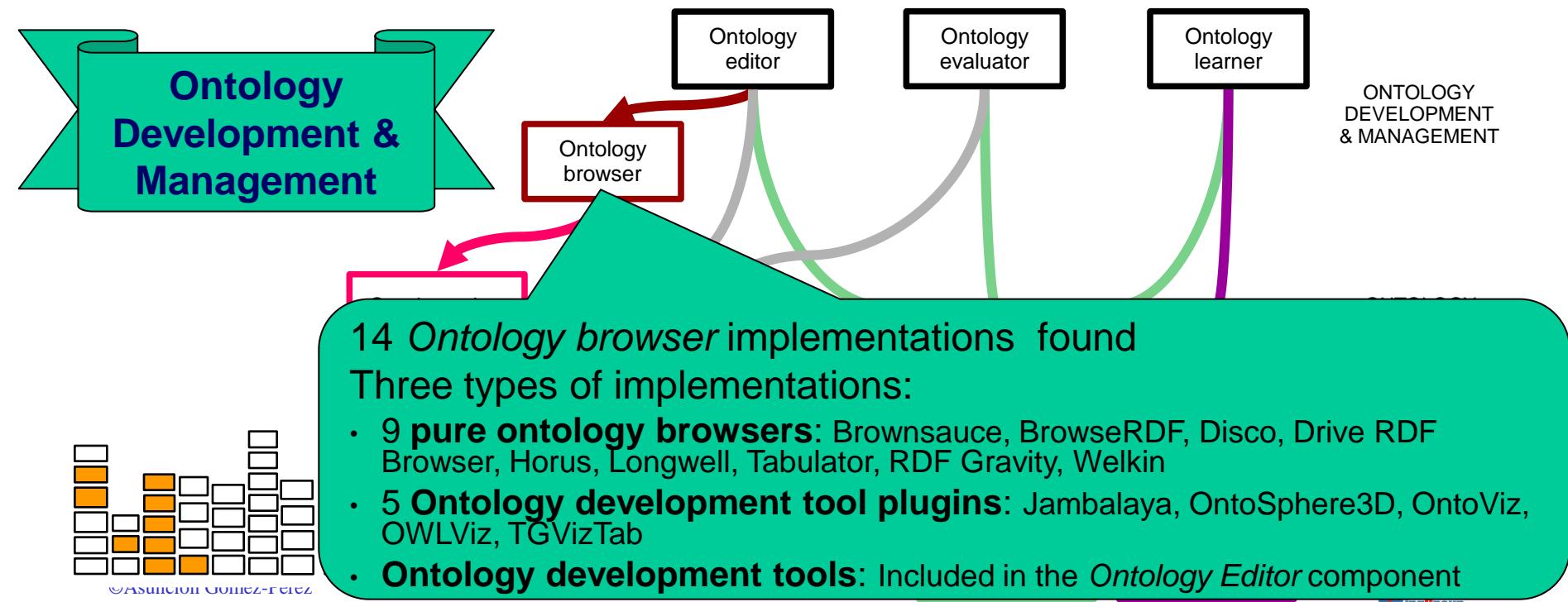
Semantic Web Framework

It identifies main components for building Semantic Web applications



Dimensions of the SWF

- For each dimension, we have identified:
 - Components
 - Component dependencies
 - Existing implementations



Criteria to compare applications

Single versus network of ontologies		Type of Application		Software Components Used
Ont. Built from scratch or reusing resources		Hugeness: Operates at scale?		
Conceptual Heterogeneity (mappings)		Open to semantic resources?		
Where are the data/instances?		Open to web resources?		
Are instances distributed or centralized?		Open to web services?		
Very high rate of change in instances?		Web 2.0 like?		
Heterogeneous Provenance of instances		Mobile devices?		
Various degrees of data quality		Geo-spatial Information		

Overview

- Semantic-based Applications
 - preSemanticWeb Applications
 - Annotation
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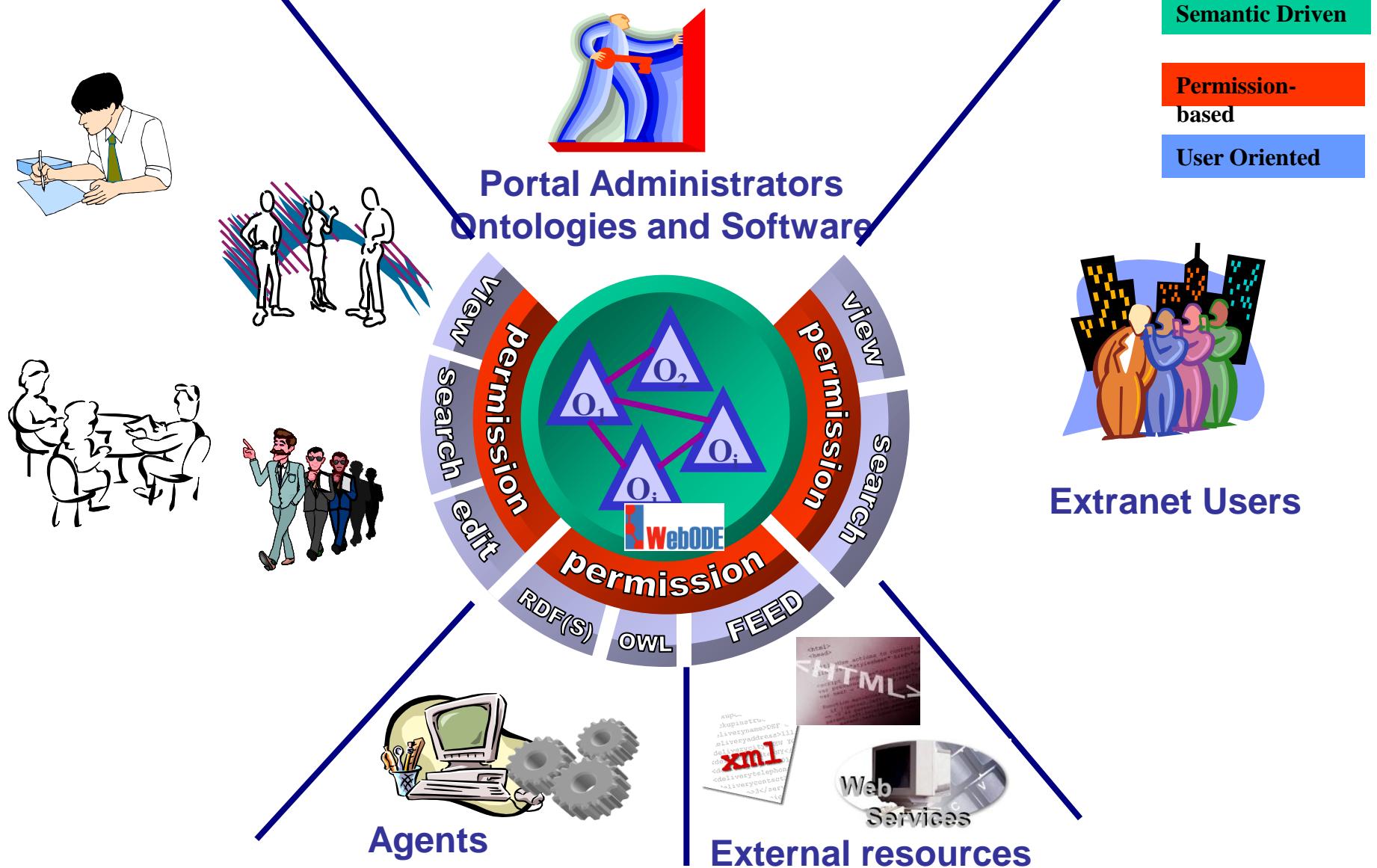
Annotation in the pre-Semantic Web

- (KA)²

The screenshot illustrates the annotation process for Siegfried Handschuh using the OntoAgent tool. The interface is divided into three main sections:

- Ontology Browser (Left):** Shows a class hierarchy tree. A red arrow labeled ① points to the "Student" node under "Person".
- HTML Browser (Right):** Displays a profile page for Siegfried Handschuh. The page includes fields for Email, Institute, Phone, Fax, Office, Address, and Projects. A red arrow labeled ② points to the "Projects" field, which lists "OntoAgent", "PADLR", and "SUMARK".
- Table View (Bottom Left):** Shows a table of attributes and their values for Siegfried Handschuh. A red arrow labeled ③ points to the "Projects" row in this table.
- Relationship Browser (Bottom Center):** Shows a list of relationships such as publication, supervisor, worksAt, and studies. A red arrow labeled ④ points to the "worksAt" relationship, which is associated with the "PADLR" project.

Semantic Web Portals



Extranet view

Linked Data Applications | L... http://linkeddata.deri.ie/sit... Knowledge Web NoE (FP6-...) +

http://knowledgeweb.semanticweb.org/semanticportal/sewView/frames.html

Knowledge Web Portal Industry@KWeb Education@KWeb

Knowledge Web FP6-507482

Research Deliverables

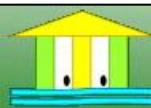
Delivered:

- » [D2.1.1: State of the art on the scalability of ontology-based technology](#)
- » [D2.1.2.v1: Report on realizing practical approximate and distributed reasoning for ontologies](#)
- » [D2.1.2.v2: Report on realizing practical approximate and distributed reasoning for ontologies](#)
- » [D2.1.2: Report on methods for approximate reasoning, using knowledge compilation, language weakening and approximate deduction](#)
- » [D2.1.3.1: Report on modularization of ontologies](#)
- » [D2.1.4: Specification of a methodology, general criteria, and benchmark suites for benchmarking ontology tools](#)
- » [D2.1.5: Prototypes of tools and test suites for benchmarking ontology building tools](#)
- » [D2.2.10: Specification of delivery alignment format \(v2\)](#)
- » [D2.2.1v1: Specification of a common framework for characterizing alignment](#)
- » [D2.2.1v2: Specification of a common framework for characterizing alignment](#)
- » [D2.2.2: Specification of a benchmarking methodology for alignment techniques](#)
- » [D2.2.3: State of the art on current alignment techniques](#)
- » [D2.2.4: Description of alignment implementation and benchmarking results](#)
- » [D2.2.5: Integrated view and comparison of alignment semantics](#)
- » [D2.2.6: Specification of delivery alignment format](#)
- » [D2.2.7: Analysis and implementation of knowledge transformation and merging techniques](#)
- » [D2.2.9: Description of alignment implementation and benchmarking results](#)
- » [D2.3.1: Specification of a methodology for ontology syntactic and semantic versioning](#)
- » [D2.3.2: Specification of knowledge acquisition and modelling of the process of the consensus](#)
- » [D2.3.3v1: Full RDF versioning system](#)

RDF Metadata

Content Edition

KnowledgeWeb Project FP6-507482


[Documentation](#) [Event](#) [Organization](#) [Person](#) [Project](#)
[Administration](#) [Logout](#)


RDFS

Person

- Person
 - University Staff
 - Company Staff
 - Project Officer
- Student
 - Master Student
 - PhD Student
 - Undergraduate

Instance of PhD Student: Angel López-Cima

 Move instance to: [Administrative Staff](#)
[Continue to relations >>](#)

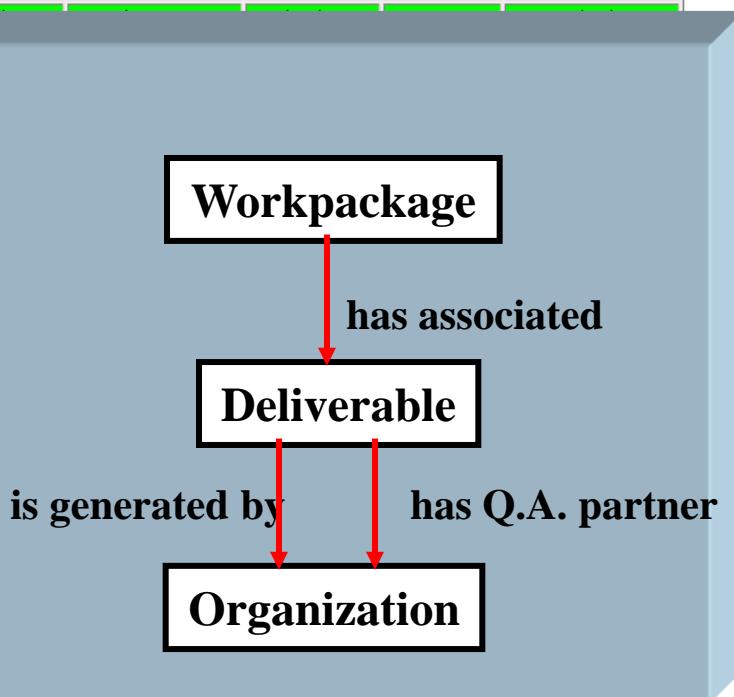
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Instance Attribute	Range	Cardinality	Value
Full Name	String	(1,1)	Angel Lopez-Cima
			<input type="text" value="Angel.jpg"/> <div style="margin-top: 10px;"> <input type="button" value="Enter an URL"/> <input type="button" value="or upload a file"/> <input type="button" value="upload"/> </div>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Upload a file to Angel López-Cima.Photo: <input style="width: 100%; height: 15px; margin-bottom: 5px;" type="file"/> <input type="button" value="Examinar..."/> <input type="button" value="Enviar consulta"/> </div>			
Homepage	URL	(0,1)	<input type="text"/> <div style="margin-top: 10px;"> <input type="button" value="Enter an URL"/> <input type="button" value="or upload a file"/> <input type="button" value="upload"/> </div>
Date	Date	(1,1)	16/10/1976
	String	(1,N)	<input type="text"/> <div style="margin-top: 10px;"> <input type="button" value="Enter an URL"/> <input type="button" value="or upload a file"/> <input type="button" value="upload"/> </div>
City	String	(1,1)	Madrid
Zip code	String	(0,1)	28660
Street Address	String	(1,1)	Campus Montegancedo, s/n
Telephone	String	(0,1)	+34 91 336 6604
Fax	String	(0,1)	+34 91 352 4819

[Continue to relations >>](#)

Semantic-based Visualisation

Status of the Deliverables

Workpackage	Deliverable	Generated By	Q.A. Responsibility	Delivery Date	Project Month	Status
WP1: Ontologies	D1.1: State of the art in ontologies from the SW perspective	UPM	IFI	11/08/2002	2	Final
	D1.2: Kernel Ontology Specification, Knowledge architecture	UPM	UdS	09/24/2003	27	Final
	D1.3: Ontology Workbench Specification	UPM	UniLiv	09/26/2003	27	Final
	D1.4: Ontology Alignment Solution	IFI	UPM	09/12/2003	27	Final
WP2: Window on Semantic Web languages	D2.1: State of the art on Semantic Web languages	IFI	UPM	02/17/2003	2	Final
	D2.2: Report on SW languages evolution	IFI	iSOCO	08/28/2003	30	Final
WP3: Annotation services	D3.1: State of the art on annotation tools and services	iSOCO	UdS	02/28/2003	2	---
	D3.2: Methodology for the development of wrappers and annotation tools	iSOCO	UdS	09/15/2003	10	---
	D3.3: Annotation services for static resources	iSOCO	UPM	---	10	---
	D3.4: Annotation services for dynamic resources	iSOCO	UniLiv	---	23	---
	D3.5: Annotation services for multimedia content					
	D3.6: Annotation services for web services					
WP4: Semantic indexation and routing	D4.1: State of the art on indexation, routing techniques and negotiation techniques					
	D4.2: Semantic Index Solution					
	D4.3: Routing Solution					
WP5: Multilinguality	D5.1: State of the art on multilinguality for ontologies, annotation services and user interfaces					
	D5.2: Multilinguality and ontologies					
	D5.3: Multilingualism and annotation services					
	D5.4: Multilingual user interface					
WP6: User interface and visualisation services	D6.1: State of the art on visualisation technologies feasible for the Semantic Web					
	D6.2: Ontology visualisation core services					
	D6.3: Semantic Web content visualisation services					
	D6.4: Semantic Index and Routing Monitor service					
WP7: Definition and integration	D7.1: System specification					
	D7.2: Cooperation protocol definition					
	D7.3: Application development guidelines					
	D7.4: Integration test plan					
WP8: Test case 1. Fund finder for	D8.1: Test case system specification					



Extranet View (RDF lives behind)

Knowledge Web FP6-507482

Knowledge Web Portal Industry@KWeb Education@KWeb

Home KWeb showcases Delivered

RDF data

```
- <rdf:RDF>
  - <rdf:Description rdf:about="#D235v1_Integration_of_Concessus_Making_Environment_with_RDF_versioning_system">
    <j:0:Status>Final</j:0:Status>
    <j:0:Deliverable_number>D2.3.5v1</j:0:Deliverable_number>
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    /sew/rdfView?_sew_var_name=ontology&_sew_ontology=Project+Ontology#WP23_Dynamics"/>
  - <j:0:Title>
    Integration of Consensus Making Environment with RDF versioning system
  </j:0:Title>
  <j:0:is_associated_with_5 rdf:resource="http://knowledgeweb.semanticweb.org/semanticportal
  /sew/rdfView?_sew_var_name=ontology&_sew_ontology=Project+Ontology#Knowledge_Web"/>
  - <j:0:Online_PDF_Version>
    /semanticportal/servlet/download?ontology=Documentation+Ontology&concept=Deliverable&instanceSet=kweb&
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    line+PDF+Version&value=d235-final-v1.1.pdf
  </j:0:Online_PDF_Version>
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  /RDFS/Documentation_Ontology.rdf#Deliverable"/>
  <j:0:has_lead_participant rdf:resource="http://knowledgeweb.semanticweb.org/semanticportal
  /sew/rdfView?_sew_var_name=ontology&_sew_ontology=Organization+Ontology#University_of_Innsbruck"/>
  <j:0:is_generated_by rdf:resource="http://knowledgeweb.semanticweb.org/semanticportal
```

Semantic markup based on many different ontologies



Home News Projects Technologies Publications People

People

[People/All Members]

Members [78]

<foaf:Person rdf:about="http://identifiers.kmi.open.ac.uk/people/enrico.motta">

<foaf:name>Enrico Motta</foaf:name>

<foaf:firstName>Enrico</foaf:firstName>

<foaf:surname>Motta</foaf:surname>

<foaf:phone rdf:resource="tel:+44-(0)1908-653506"/>

<foaf:homepage rdf:resource="http://kmi.open.ac.uk/people/motta">

<foaf:workplaceHomepage rdf:resource="http://kmi.open.ac.uk/">

<foaf:depiction rdf:resource="http://kmi.open.ac.uk/img/members/enrico.jpg"/>

<foaf:topic_interest>Knowledge Technologies</foaf:topic_interest>

<foaf:topic_interest>Semantic Web</foaf:topic_interest>

<foaf:topic_interest>Ontologies</foaf:topic_interest>

<foaf:topic_interest>Problem Solving Methods</foaf:topic_interest>

<foaf:topic_interest>Knowledge Modelling</foaf:topic_interest>

<foaf:topic_interest>Knowledge Management</foaf:topic_interest>



 Research Assistant [[info](#)] [[homepage](#)] [[email](#)] [[RDF/XML](#)]

 **Cristian Barlaadeanu**
Consultant [[info](#)] [[email](#)] [[RDF/XML](#)]

 **Robbie Bays**
Systems & Network Administrator [[info](#)] [[email](#)] [[RDF/XML](#)]

Ontology Engineering Group, Powered by ODESeW - Mozilla Firefox
Archivo Editar Ver Historial Marcadores Herramientas Ayuda
http://paraa.fl.upm.es/deg/oeg/personsOEG.html
Personalizar vínculos http://pobladores.lyc... http://pobladores.lyc... Iberia.com
Google Buscar Marcadores Corrección ortográfica Traducir Enviar a...
Configuración Log In
RDF Metadatos

Ontology Engineering Group

People (22)

Dra. Asunción de María Gómez Pérez  asun@fi.upm.es Phone: 34 913367439 Fax: 34 913524819 More	Dra. Guadalupe Aguado de Cea  lupe@fi.upm.es Phone: 34 913367415 Fax: 34 913565472 More	Dr. Mariano Fernández-López  mffernandez@fi.uom.es Phone: 34 913366605 Fax: 34 913524819 More
Dra. Inmaculada Álvarez de Mon Roca  dra.alvarez@fi.upm.es	Dra. Rosario Plaza Arteche  rosario.perez@fi.upm.es	Jesus Barrasa Rodriguez  jbarra@fi.upm.es

<rdf:Description rdf:about="Asunción_Gómez_Pérez">
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<NS0:Academic_Degree>Ph.D.</NS0:Academic_Degree>
<NS0:E-mail>asun@fi.upm.es</NS0:E-mail>
<NS0:Telephone>34 913367439</NS0:Telephone>
<NS0:Fax>34 913524819</NS0:Fax>
<NS0:Address>Campus de Montegancedo</NS0:Address>
<NS0:City>Boadilla del Monte</NS0:City>
<NS0:Country>Spain</NS0:Country>
<NS0:Date_of_Birth>03/09/1967</NS0:Date_of_Birth>

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Conceptual Mismatch

Corporate Semantic Web: ODESeW

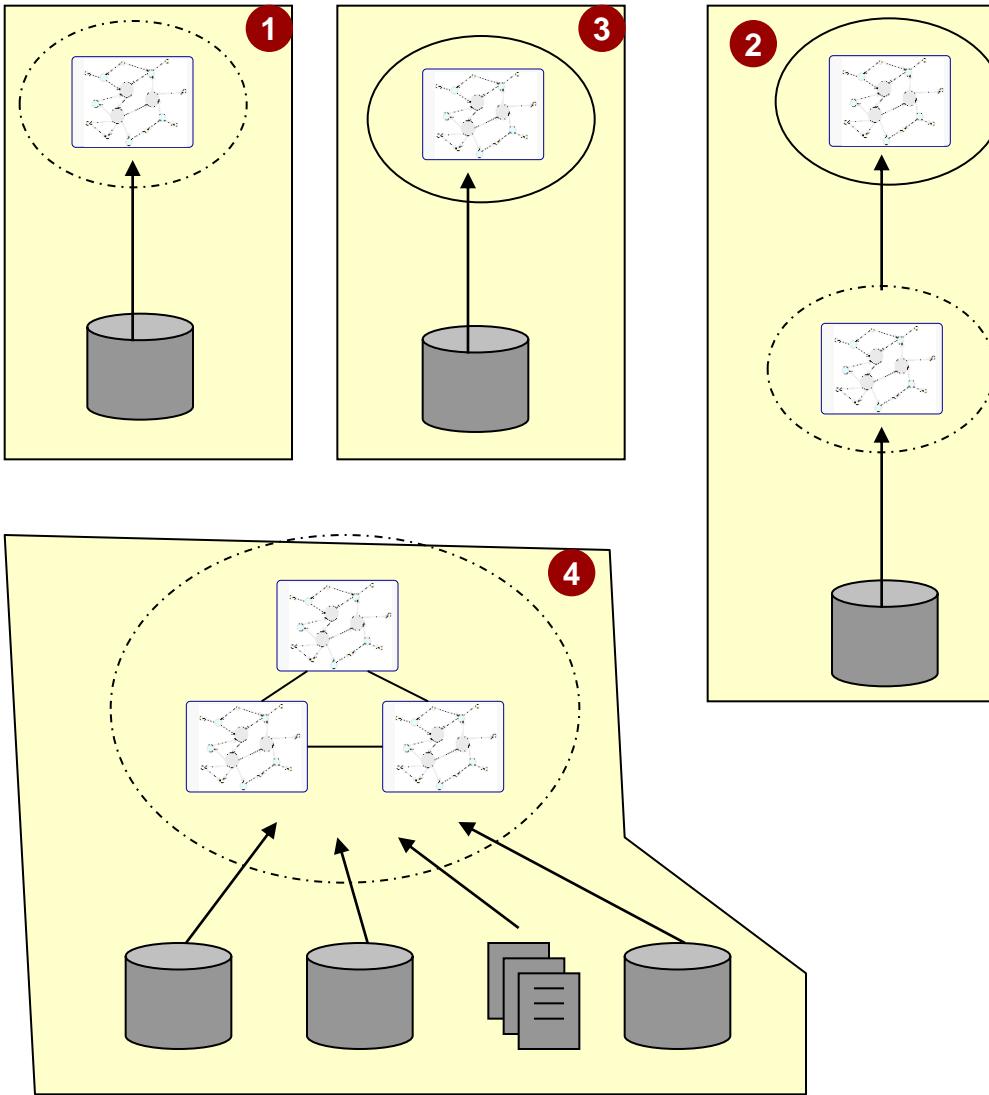
Single versus network of ontologies	Ontology Networks	Type of Application	Corporate Semantic Web	Software Components Used from the SWF
Ont. Built from scratch or reusing resources	From scratch	Hugeness: Operates at scale?	Partially	<ol style="list-style-type: none"> 1. Ontology repository 2. Data repository 3. Metadata registry 4. Query answering 5. Semantic query processor
Conceptual Heterogeneity (mappings)	No	Open to semantic resources?	Yes	<ol style="list-style-type: none"> 6. Ontology browser 7. Ontology view customization 8. Instance editor 9. Manual annotation.
Where are the data/instances?	In the ontology	Open to web resources?	Yes	<ol style="list-style-type: none"> 10. Ontology Populator
Are instances distributed or centralized?	Centralized	Open to web services?	No	
Very high rate of change in instances?	No	Web 2.0 like?	No	
Heterogeneous Provenance of instances	Yes	Mobile devices?	No	
Various degrees of data quality	Yes	Geo-spatial Information	NO	

Overview

-
- Semantic-based Applications
 - preSemanticWeb Applications
 - Annotation
 - Semantic Web 1.0 Applications
 - Annotation, Data Integration and Decision Support Systems
 - Semantic Web 3.0 Applications
 - (Collaborative) Annotation and Data Integration
-

Ontology-based Access to DBs

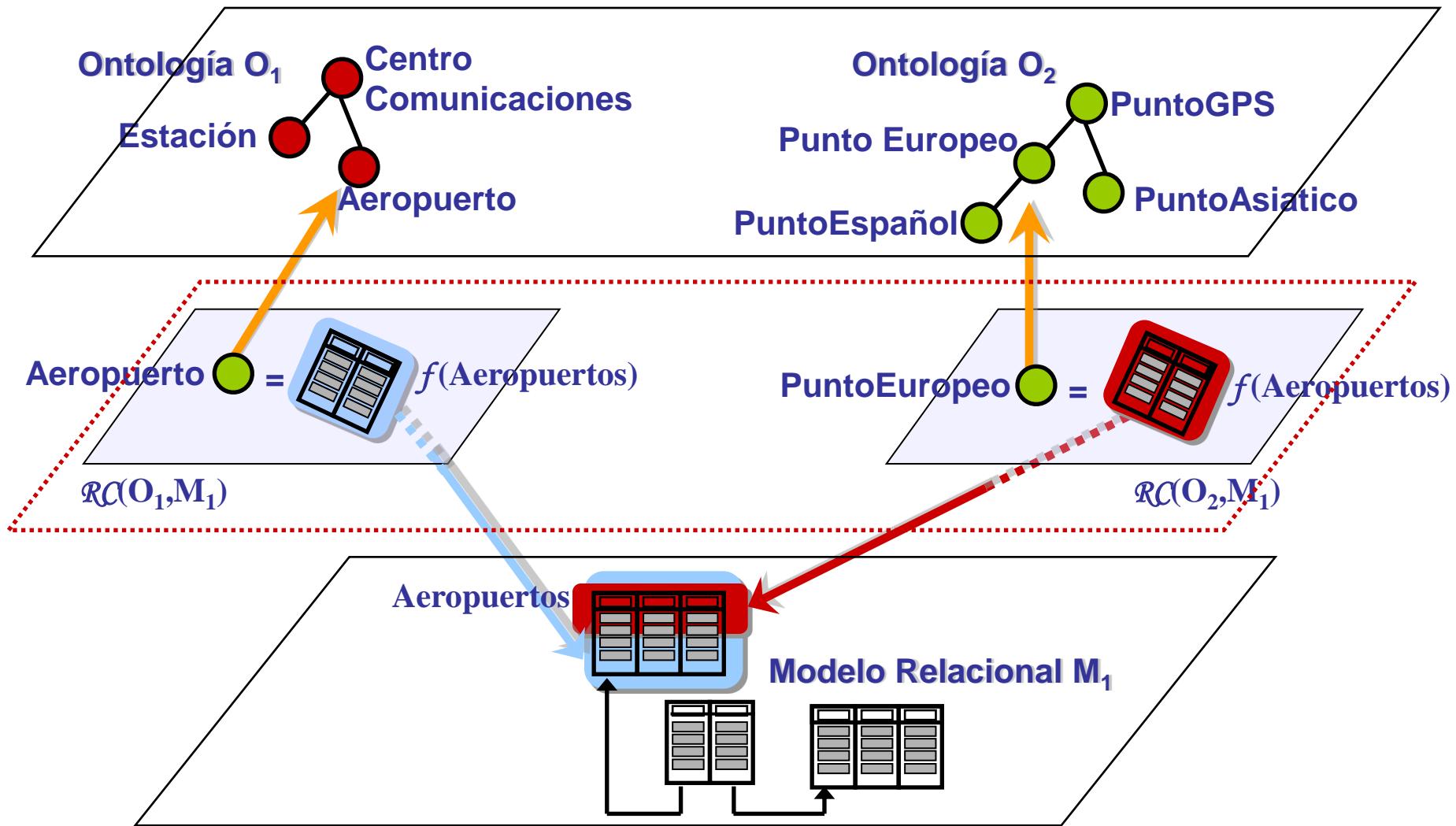
1. Build a new ontology from 1 DB schema and 1 DB
2. Align the ontology built with approach 1 with a legacy ontology
3. Align an existing DB with a legacy ontology
 - a) Massive dump (semantic data warehouse)
 - b) Query-driven
4. Align an ontology network with n DB schemas and other data sources
 - a) Massive dump (semantic data warehouse)
 - b) Query-driven



Ontology-based Access to Databases



Align existing data sources with legacy ontologies



ID	TITLE	BENEFICIARIES	BEGIN-END	LEG_REF	FUND_C
623	PROFIT - Program: 1. Empreses 2. Agrup	Des de 19 de novembre fins el 19 d	Ordre de 7 de març de 2000 (BOE 59, 9-03-2000). Els ajuts que es po		
614	PROFIT - Program: 1. Pimes 2. Empreses	Des de 19 de novembre fins el 19 d	Ordre de 7 de març de 2000 (BOE 59, 9-03-2000). Els ajuts que es po		
582	PROFIT - Program: 1. Associacions empresar	Des de 19 de novembre fins el 19 d	Ordre de 7 de març de 2000 (BOE 59, 9-03-2000). SUBVENCIÓNS:<E		
581	PROFIT - Program: Empreses; Agrupacions i : ernacional	Fins al 2 de setembre	Ordre de 13 de juny del 2000 (BOE 148, 21-06-2000). SUBVENCIÓNS:<E		
576	PROFIT - Program: Pimes, Empreses, Agrupa	Des de 19 de novembre fins el 19 d	Ordre de 7 de març del 2000 (BOE 59, 9-03-2000). SUBVENCIÓNS:<E		
574	PROFIT - Program:	Des de 19 de novembre fins el 19 d	Ordre de 7 de març del 2000 (BOE 59, 9-03-2000). Els ajuts que es po		
573	PROFIT - Program:	Des de 19 de novembre fins el 19 d	Ordre de 7 de març del 2000 (BOE 59, 9-03-2000). Els ajuts que es po		
572	PROFIT - Program:	Des de 19 de novembre fins el 19 d	Ordre de 7 de març del 2000 (BOE 59, 9-03-2000). Els ajuts que es po		
571	PROFIT - Program: Pimes; Empreses; Agrupa	Des de 19 de novembre fins el 19 d	Ordre de 7 de març del 2000 (BOE 59, 9-03-2000). Els ajuts que es po		
	ies; Empreses; Agru	des; Empreses; Agru	el 2000 (BOE 59, 9-03-2000). Els ajuts que es po		

Attribute Direct Mapping

Attribute Mapping with transformation (Regular Expression)

Relation Mapping w. Transformation (Regular Expression)

Relation Mapping w. Transformation (Keyword search)

```

- <rdf:RDF>
- <rdf:Description rdf:about="http://cidem.gencat.es/ajut_581">
  <fo:title xml:lang="es">PROFIT - Programa nacional de l'espai</fo:title>
  <fo:deadline>2-setembre-2003</fo:deadline>
  <fo:legalRef rdf:resource="http://official-pub/BOE-148-2000"/>
  <fo:legalRef rdf:resource="http://official-pub/BOE-74-2001"/>
  <fo:legalRef rdf:resource="http://official-pub/BOE-272-2001"/>
  <fo:legalRef rdf:resource="http://official-pub/BOE-261-2002"/>
  <fo:legalRef rdf:resource="http://official-pub/BOE-273-2002"/>
  <fo:provided_by rdf:resource="http://cidem.gencat.es/Administraci? Central__Ministerio de Ciencia y Tecnolog?a"/>
  <rdf:type rdf:resource="http://www.esperonto.net/fundFinder/fundFinder/fundingOpp#Subvention"/>
</rdf:Description>
- <rdf:Description rdf:about="http://cidem.gencat.es/ajut_548">
  - <fo:title xml:lang="es">
    Cinqu? programa comunitari d'acci? per a la igualtat d'oportunitats entre homes i dones (2001-2005)
  </fo:title>
  ...

```

```

<attributemap-def
  name="http://net.esperonto/fundfinder#Title">
  <selector>
    <aftertransform>
      <operation oper-id="constant">
        <arg-restriction on-param="const-val">
          <has-column>Titol</has-column>
        </arg-restriction>
      </operation>
    </aftertransform>
  </selector>
</attributemap-def>

```

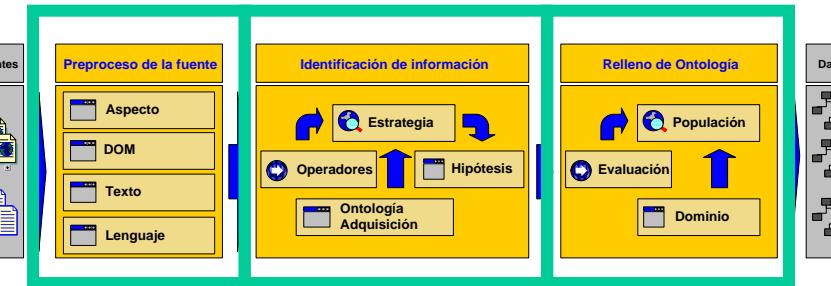
Ontology-based Access to Documents



4.2.1) Documentación administrativa:

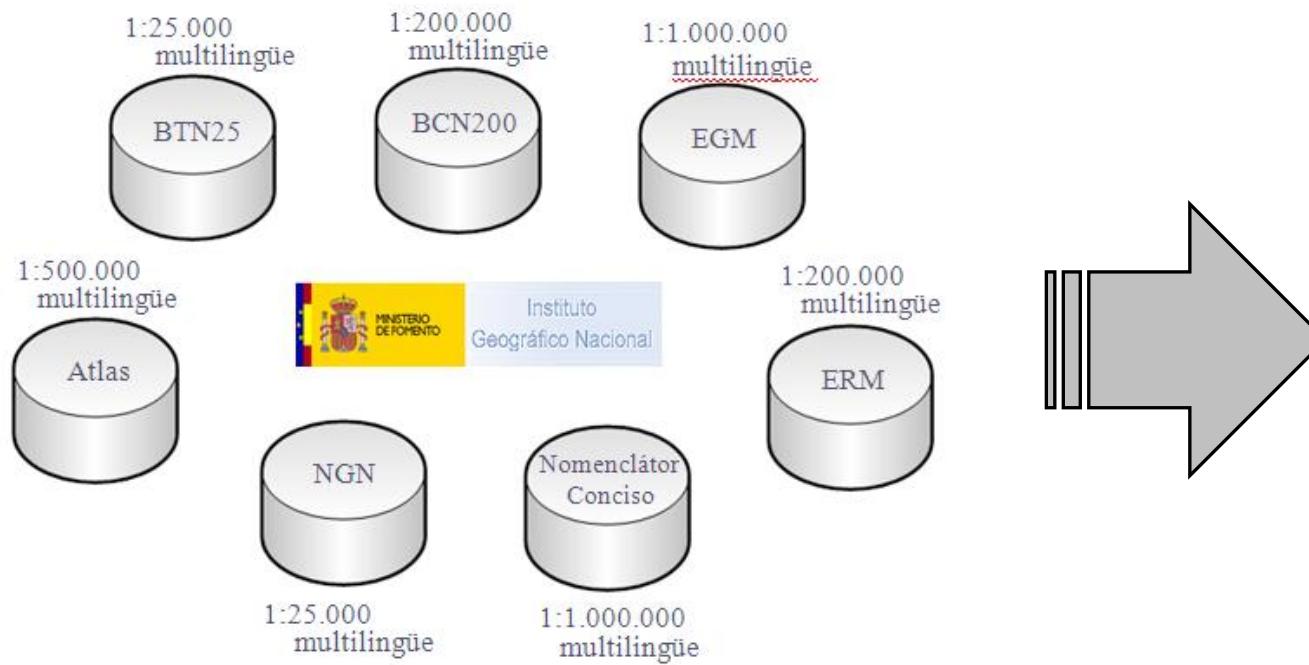
- a) Original o fotocopia compulsada del documento acreditativo de la personalidad de la entidad solicitante.
- b) Poder notarial bastante del representante de dicha entidad, o documentación acreditativa de dicha cualidad.
- c) Fotocopia compulsada de la tarjeta de identificación fiscal de la Entidad.
- d) Original o copia con el carácter de auténtica o fotocopia compulsada de los Estatutos debidamente legalizados.
- e) Original o fotocopia compulsada de la siguiente documentación acreditativa del cumplimiento de Obligaciones Tributarias y de Seguridad Social:

Recibo del año anterior a la convocatoria del Impuesto sobre actividades económicas, o en su caso, exención concedida por el órgano competente. Certificaciones administrativas correspondientes de la Agencia Estatal de Administración Tributaria y de la Tesorería Territorial de la Seguridad Social, de conformidad con lo establecido en la Ley General Presupuestaria y en su caso, exenciones del Impuesto del Valor Añadido y del Impuesto de Sociedades.



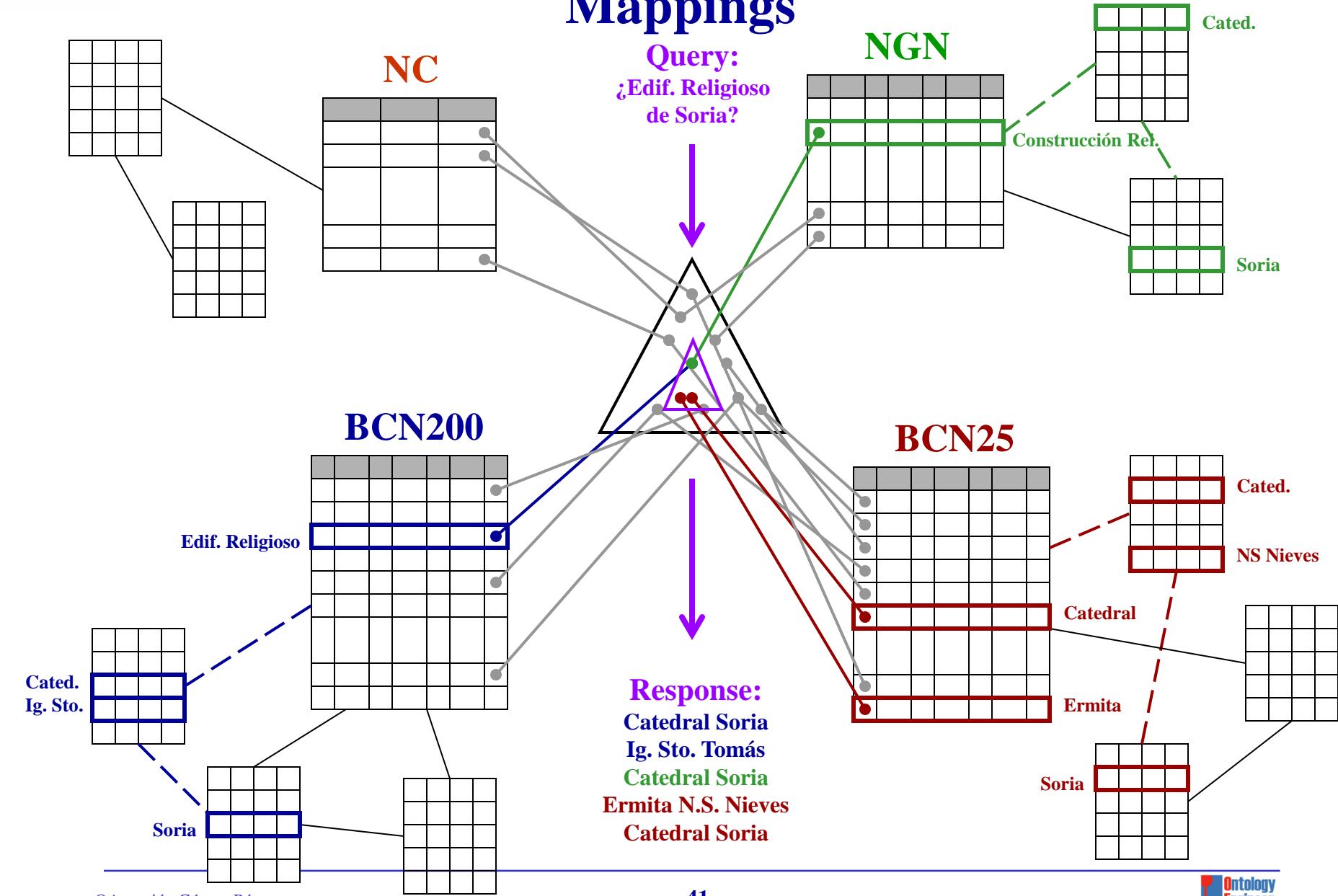
<tmp_namespace:Description>Fotocopia compulsada de la tarjeta de identificación fiscal de la Entidad.</tmp_namespace:Description>
 <Funding_Opportu:DocumentationItem
 rdf:about="http://protege.stanford.edu/tmp_namespace#tmp_Instance_10032" rdfs:label="BOE">
 <tmp_namespace:Description>Original o copia con el carácter de auténtica o fotocopia compulsada de los Estatutos debidamente legalizados.</tmp_namespace:Description>
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 <tmp_namespace:Description>Original o fotocopia compulsada de la siguiente documentación acreditativa del cumplimiento de Obligaciones Tributarias y de Seguridad Social: Recibo del año anterior a la convocatoria del Impuesto sobre actividades económicas, o en su caso, exención concedida por el órgano competente. Certificaciones administrativas correspondientes de la Agencia Estatal de Administración Tributaria y de la Tesorería Territorial de la Seguridad Social, de conformidad con lo establecido en el artículo 81 de la Ley General Presupuestaria y en su caso, exenciones del Impuesto del Valor Añadido y del Impuesto de Sociedades.</tmp_namespace:Description>

Migrating IGN (Instituto Geográfico Nacional) sources



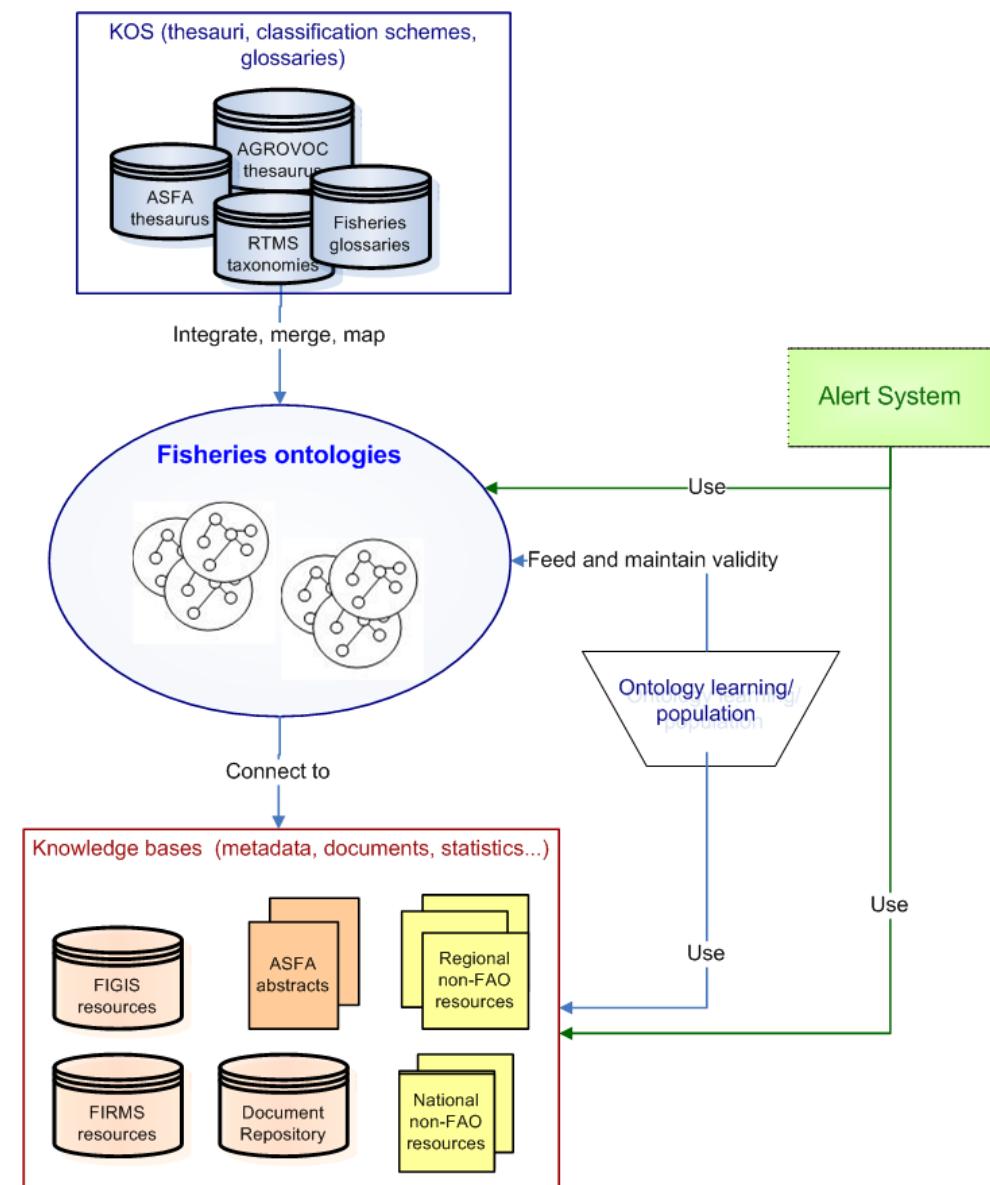
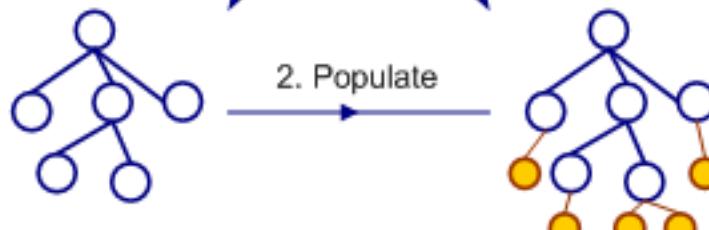


IGN Catalogue Integration: Exploitation of Mappings

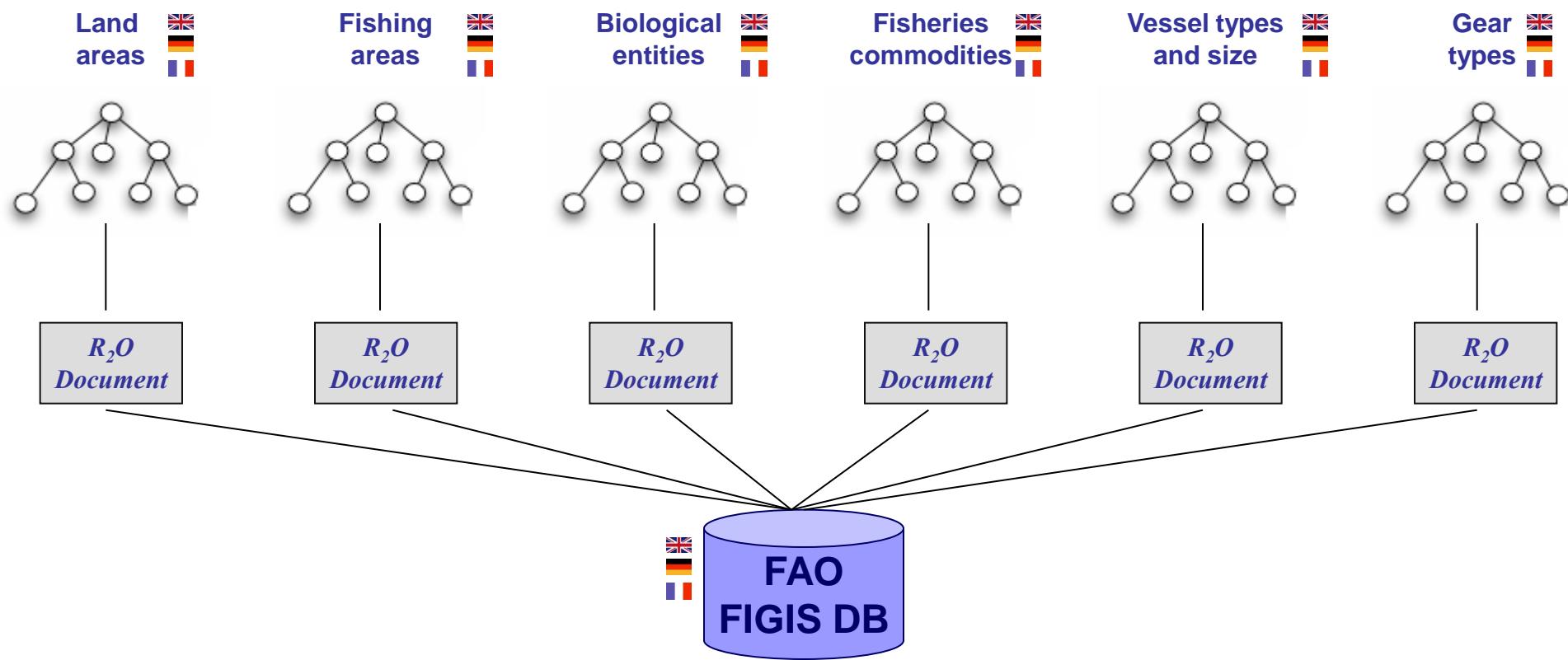


UN FAO Example

1. Conceptualize
2. Populate
3. Conceptualize & populate iterations



Alignments between ontologies and the DB



Land areas	
Concepts	4
Properties	25
Instances	289

Fishing areas	
Concepts	5
Properties	14
Instances	134

Biological entities	
Concepts	5
Properties	21
Instances	11571

Fisheries commodities	
Concepts	5
Properties	14
Instances	1380

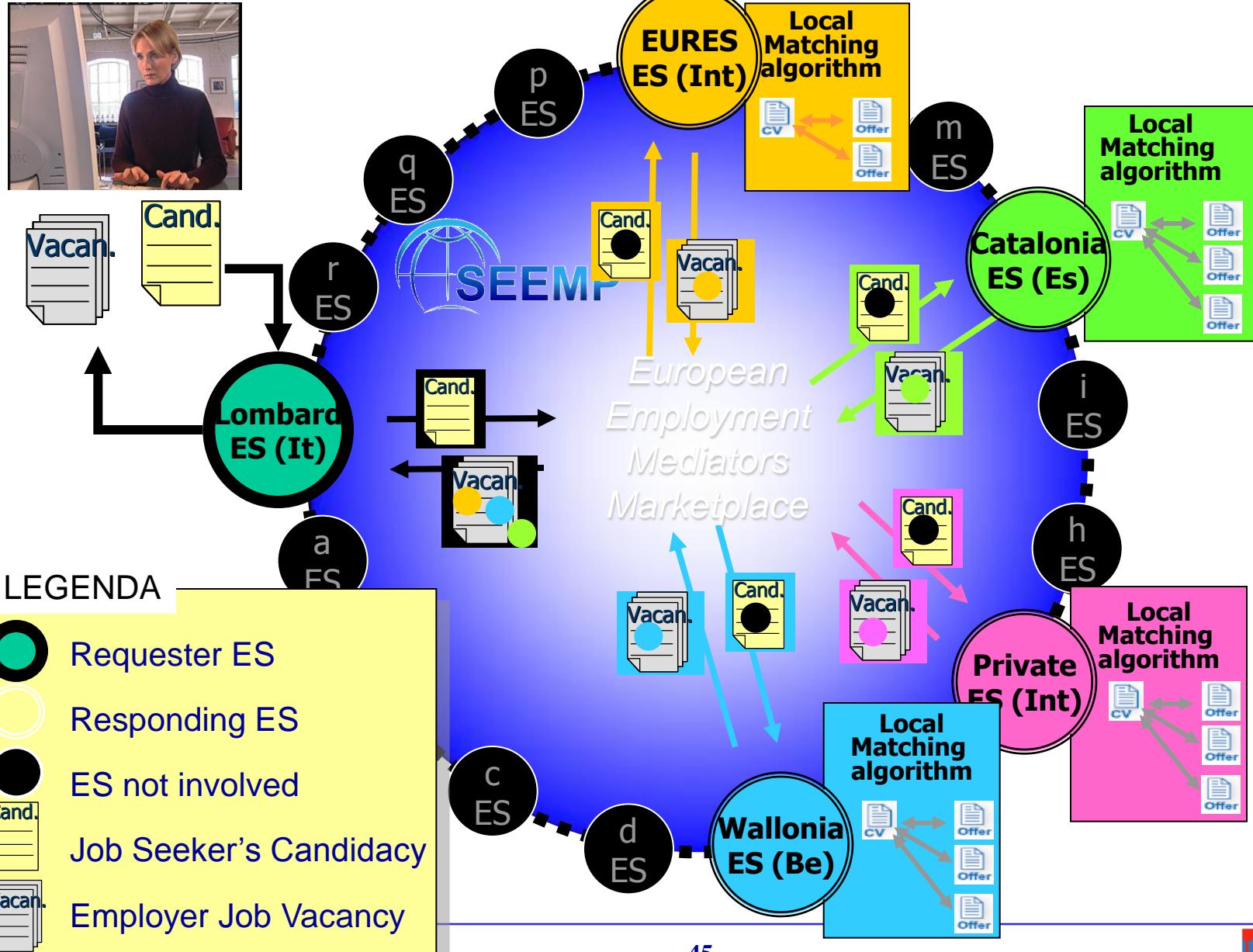
Vessel types and size	
Concepts	5
Properties	20
Instances	120

Gear types	
Concepts	4
Properties	14
Instances	0

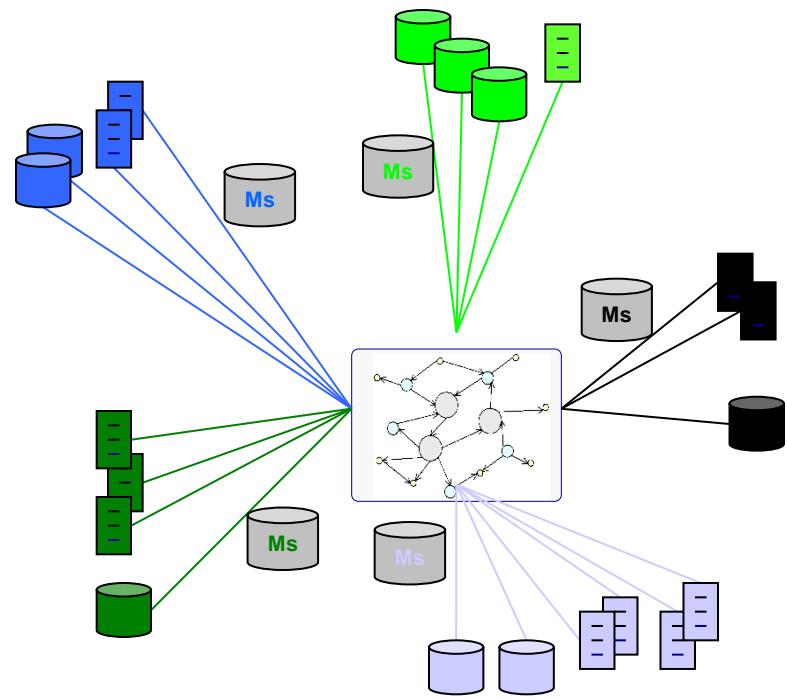
FAO case study

Single versus network of ontologies	Network of ontologies	Type of Application	Desktop application	Software Components Used
Ont. Built from scratch or reusing resources	Reusing resources	Hugeness: Operates at scale?	Yes	<ol style="list-style-type: none"> 1. Information directory manager 2. Ontology repository 3. Data repository 4. Alignment repository 5. Metadata registry 6. Query answering 7. Semantic query proccesor 8. Ontology editor 9. Ontology browser 10. Ontology evaluator 11. Ontology learner 12. Ontology matcher 13. Ontology localization and profiling 14. Ontology adaption operators 15. Ontology view customization 16. Ontology evolution manager 17. Ontology evolution visualizer 18. Ontology versioner 19. Instance Editor 20. Manual annotation 21. Automatic annotation 22. Ontology populator
Conceptual Heterogeneity (mappings)	Yes	Open to semantic resources?	Yes	
Where are the data/instances?	DB + XML + RDF files	Open to web resources?	Yes	
Are instances distributed or centralized?	Distributed	Open to web services?	No	
Very high rate of change in instances?	Yes	Web 2.0 like?	No	
Heterogeneous Provenance of instances	Yes	Mobile devices?	No	
Various degrees of data quality	Yes	Geo-spatial Information	Yes	

The Goal: Helping Job Seekers on their way

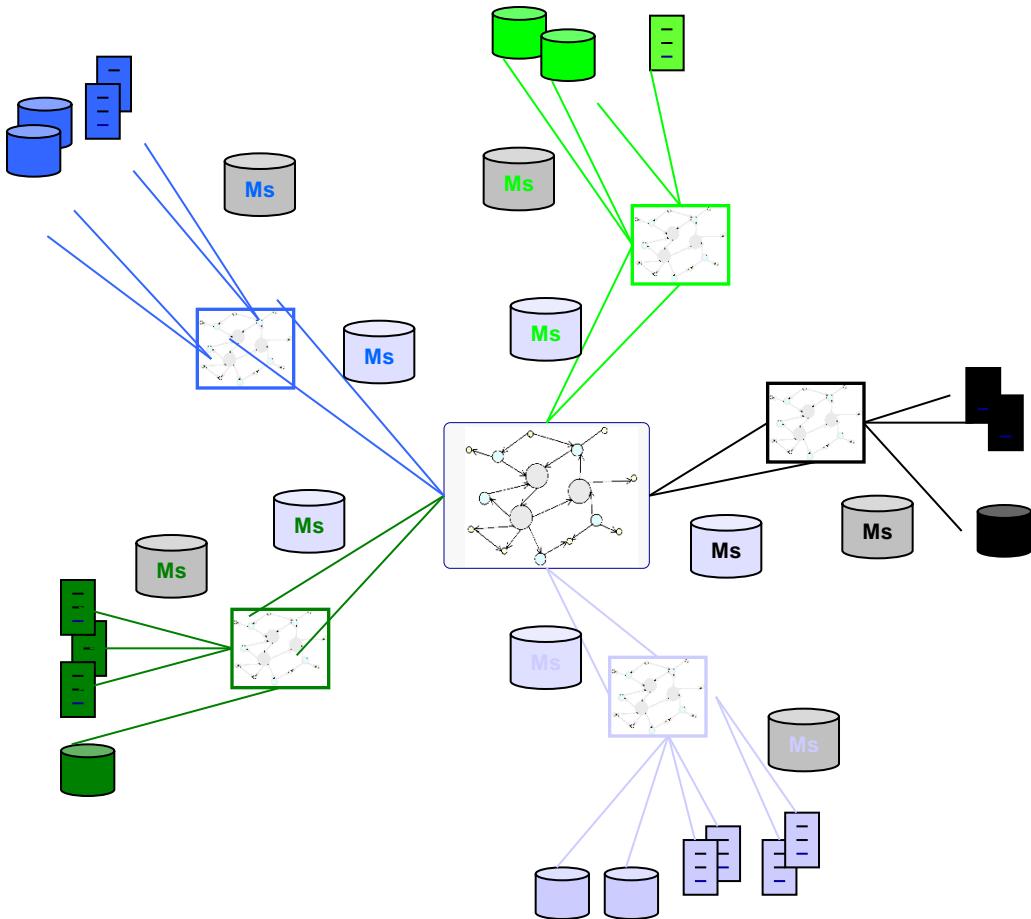


Centralized network of ontologies



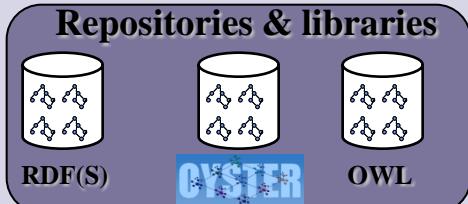
1. Build a reference ontology
2. Build mappings between the reference ontology and the data sources

Federated network of ontologies

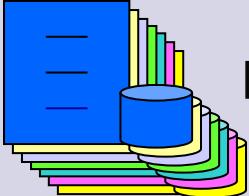


1. Build a reference ontology for the domain
2. Build local ontologies
3. Build mappings between the core and local ontologies
4. Build mappings between the local ontologies and the data sources

ISCO-88 (COM),
ONET,
EURES taxonomy,
FOET, ISCED97,
NACE, ISO 4217,
ISO 3166, ISO 6392,
HR-XML, ...



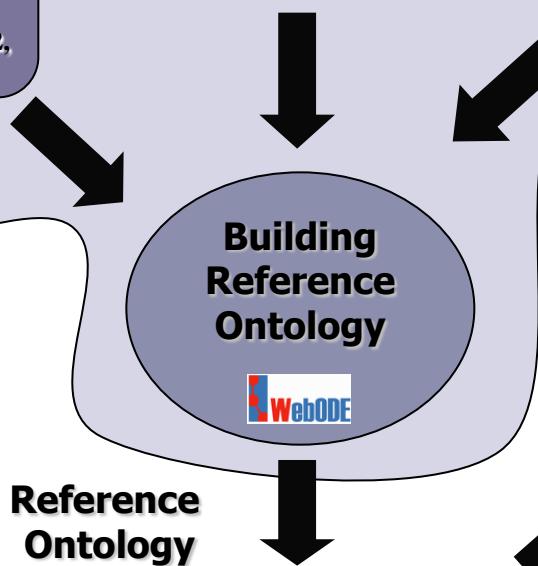
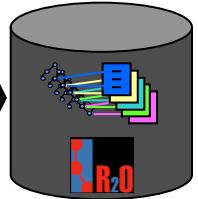
ES Data Sources



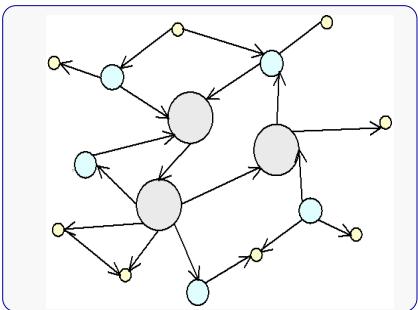
Building Mappings L.O. - ES Data Sources



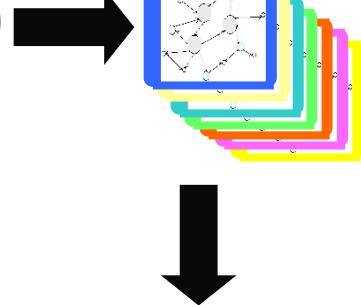
Mappings L.O. - ES Data Sources



Reference Ontology



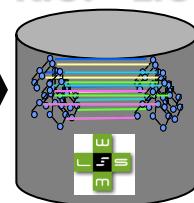
Local Ontologies

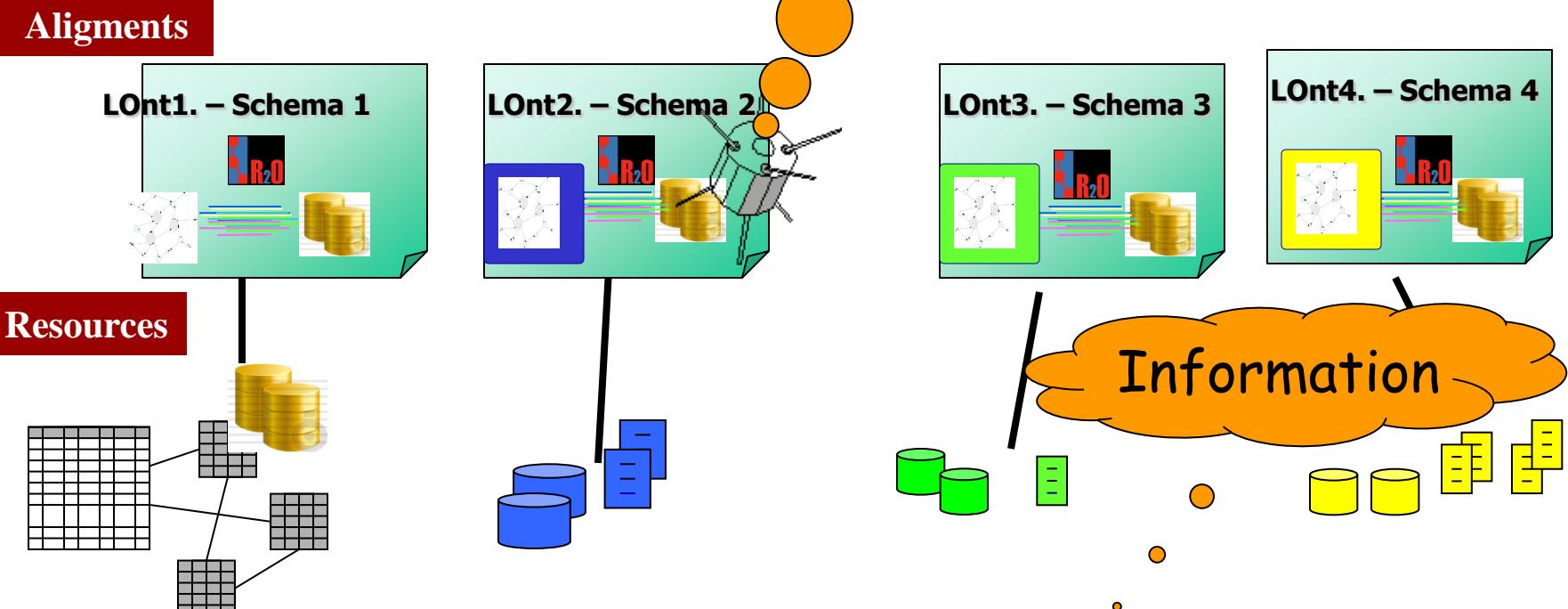
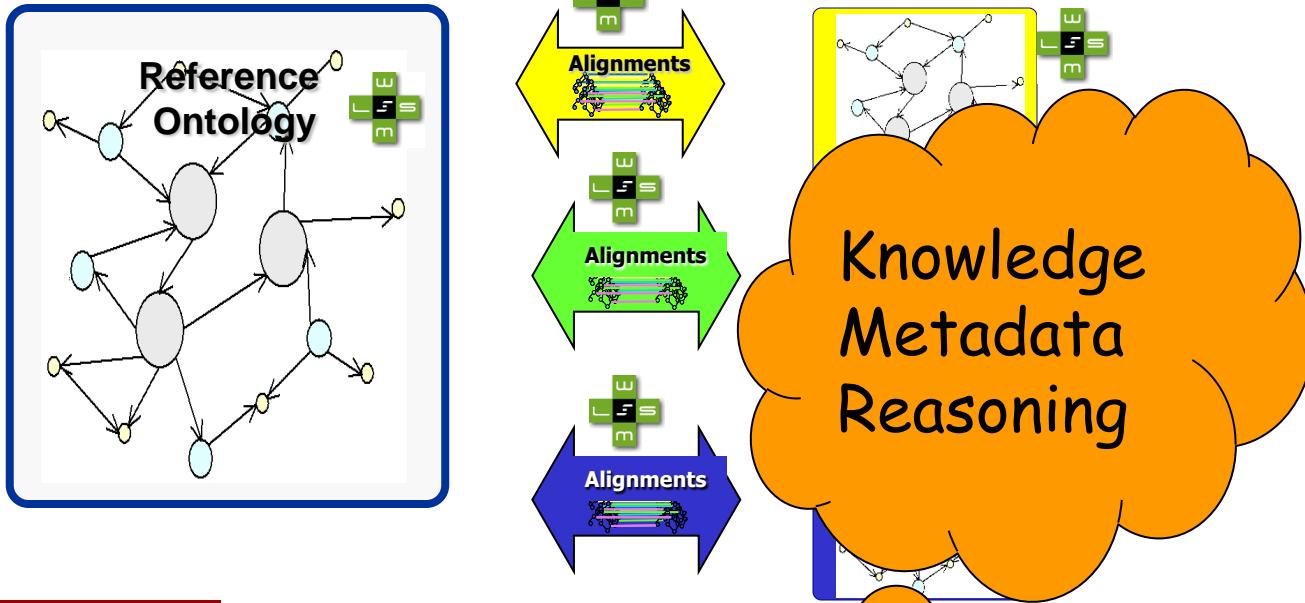


Building Mappings R.O. - L.O.



Mappings R.O. - L.O.





SEEMP

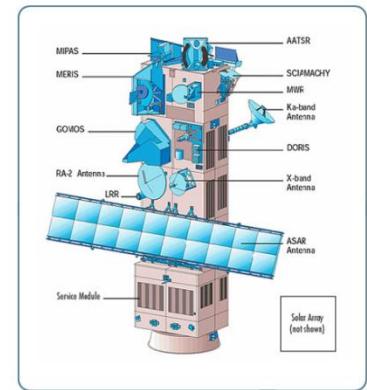
Single versus network of ontologies	Network of ontologies	Type of Application	Data integration	Software Components Used
Ont. Built from scratch or reusing resources	Reusing standardized resources	Hugeness: Operates at scale?	Yes	<ol style="list-style-type: none"> 1. Ontology repository 2. Data repository 3. Alignment repository
Conceptual Heterogeneity (mappings)	Yes	Open to semantic resources?	No	<ol style="list-style-type: none"> 4. Metadata registry 5. Query answering 6. Semantic query processor
Where are the data/instances?	In the original sources	Open to web resources?	No	<ol style="list-style-type: none"> 7. Semantic query editor 8. Ontology editor
Are instances distributed or centralized?	Distributed	Open to web services?	Yes	<ol style="list-style-type: none"> 9. Ontology browser 10. Ontology localization and profiling
Very high rate of change in instances?	Yes	Web 2.0 like?	No	<ol style="list-style-type: none"> 11. Ontology adaptation operators 12. Ontology view customization 13. Instance editor
Heterogeneous Provenance of instances	Yes	Mobile devices?	No	<ol style="list-style-type: none"> 14. Manual annotation 15. Ontology populator 16. Web Service discoverer
Various degrees of data quality	Yes	Geo-spatial Information	No	<ol style="list-style-type: none"> 17. Web Service selector 18. Web Service choreography engine 19. Web service grounding

Overview

- Semantic-based Applications
 - preSemanticWeb Applications
 - Annotation
 - Semantic Web 1.0 Applications
 - Annotation, Data Integration and Decision Support Systems
 - Semantic Web 3.0 Applications
 - (Collaborative) Annotation and Data Integration
-

Procesamiento de información de satélites

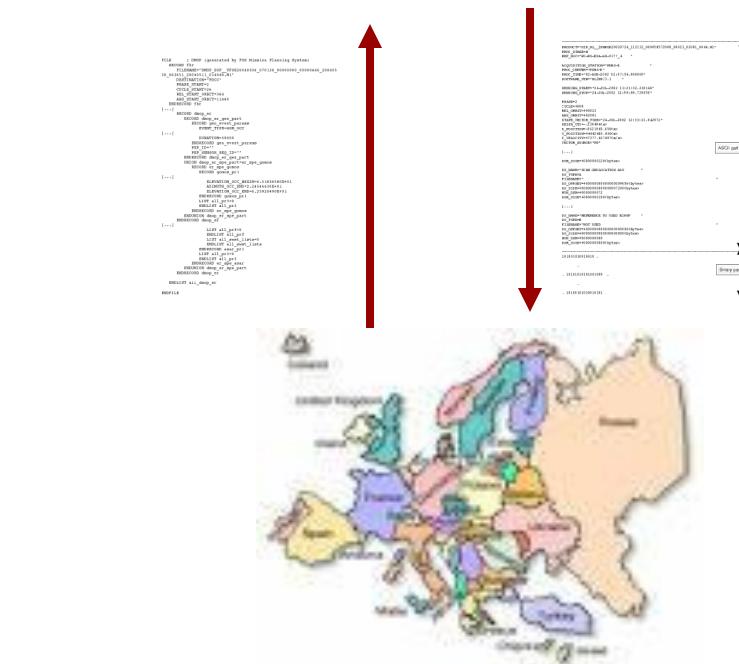
- Geographically distributed organizations
- Organizations send plans to the Envisat
- Envisat has Instruments on board that take “pictures”
- Envisat sends back information to the Earth



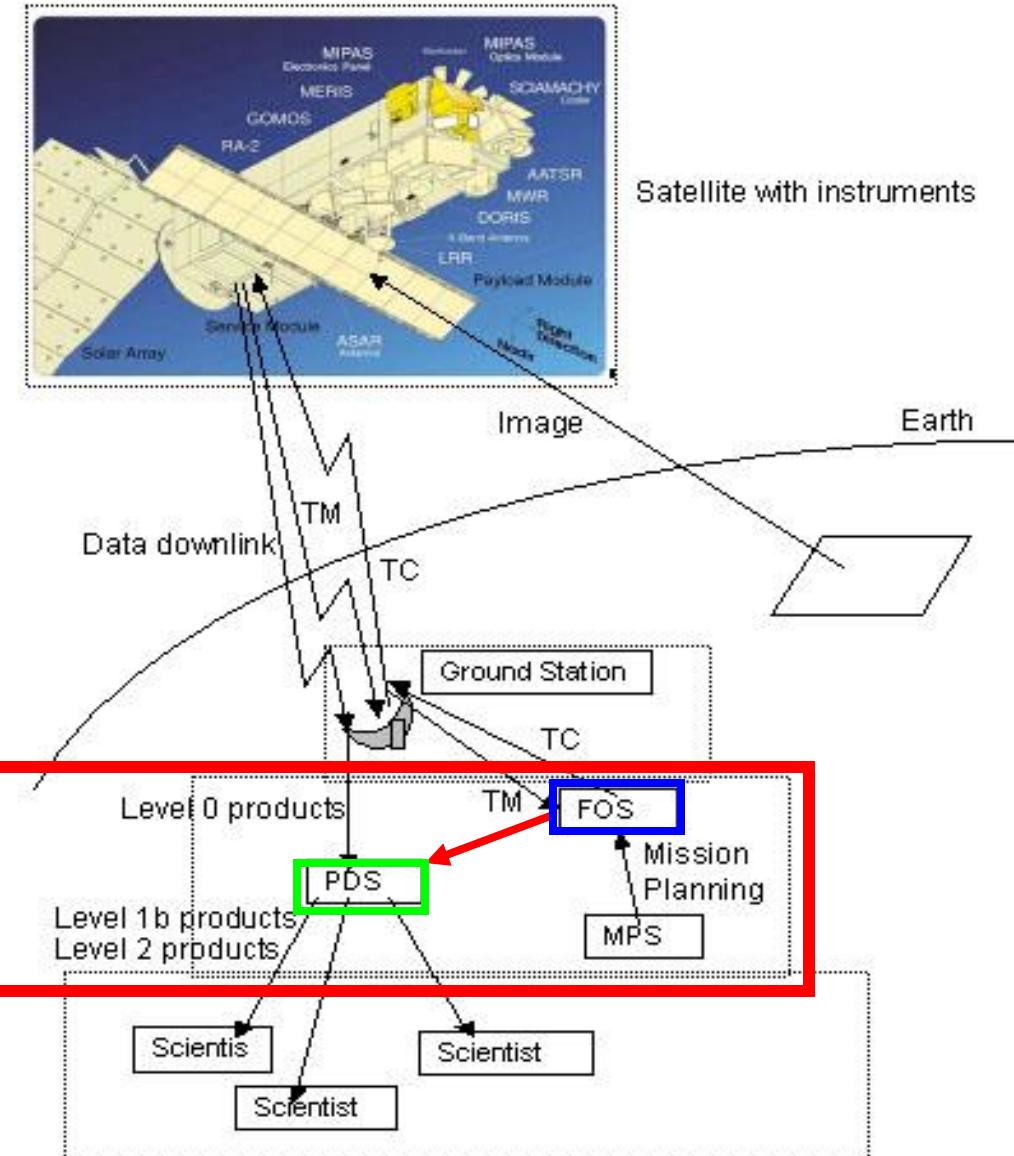
USE CASE DIMENSION:

- 1 planning file (DMOP) is generated per planning day
 - Parameters for instrument operation (taking pictures)
 - Parameters for the satellite general configuration.
 - MacroCommands (MCMD's): translation from planning
- For each DMOP file:
 - Hundreds of planning activities per instrument and instrument mode
 - Hundreds of Product files are generated per instrument and instrument mode
 - Each product file corresponds with a planning activity

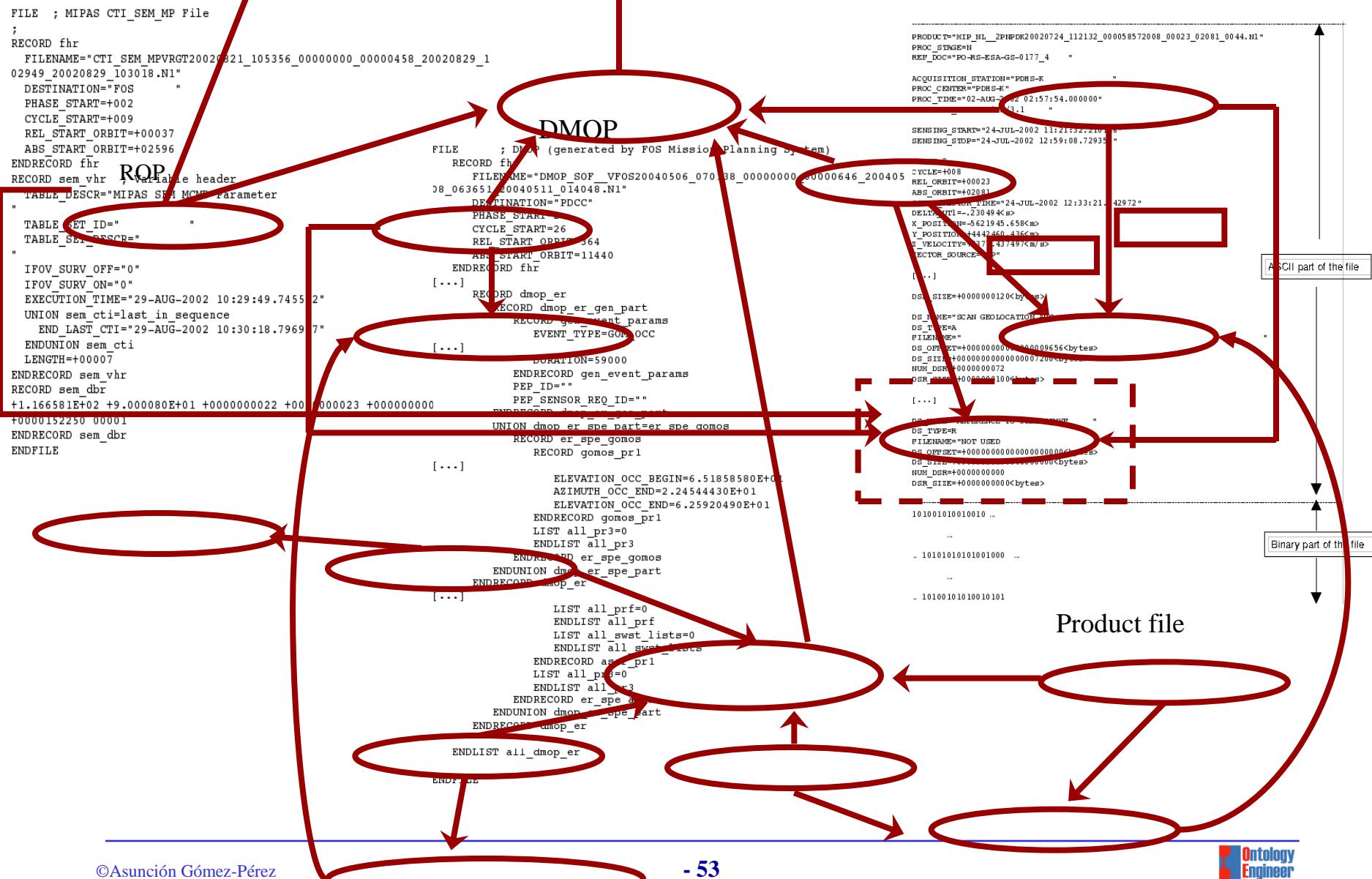
Analysis needs to be carried out on the existence, contents and correlation of these files



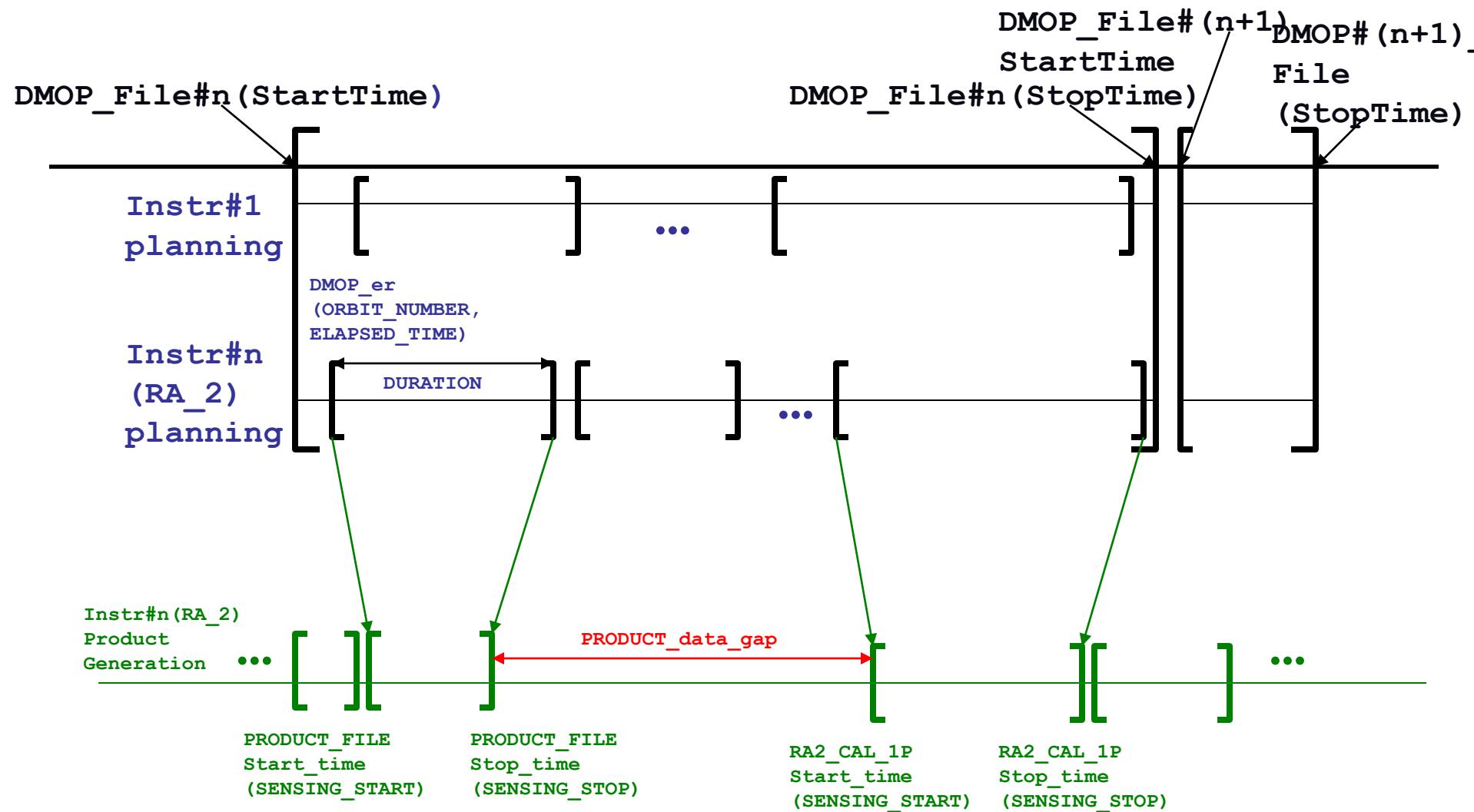
Satellite Image Processing



Anotar las fuentes de datos



Comparison between planning and product generation



Generating files in RDF



```

FILE      ; DMOP (generated by FOS Mission Planning
System)

RECORD fhr
  RECORD ID

  FILENAME="DMOP_SOF_VFOS20060124_103709_00000000_000
  01215_20060131_014048_20060202_035846.N1"
  DESTINATION="PDCC"
  PHASE_START=2
  CYCLE_START=44
  REL_START_ORBIT=404
  ABS_START_ORBIT=20498

ENDRECORD fhr
.....
RECORD dmop_er
  RECORD dmop_er_gen_part
    RECORD gen_event_params
      
```

**RECORD
parameters**

```

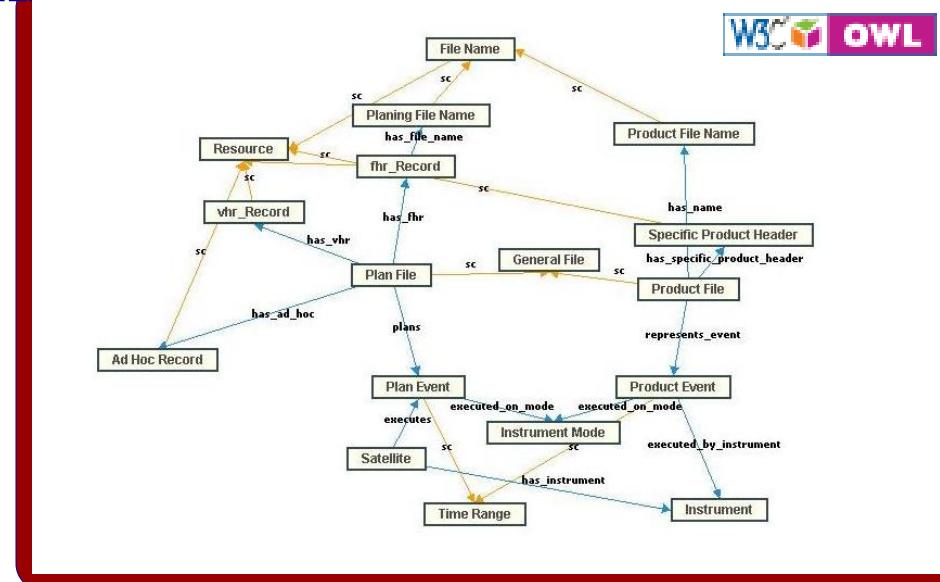
        EVENT_TYPE=RA2_MEA
        EVENT_ID="RA2_MEA_00000000002063"
        NB_EVENT_PR1=1
        NB_EVENT_PR3=0
        ORBIT_NUMBER=20521
        ELAPSED_TIME=623635
        DURATION=41627862
      ENDRECORD gen_event_params
    ENDRECORD dmop_er
  ENDLIST all_dmop_er
ENDFILE
  
```

**RECORD
parameters
corresponding to
other RECORDS**

```

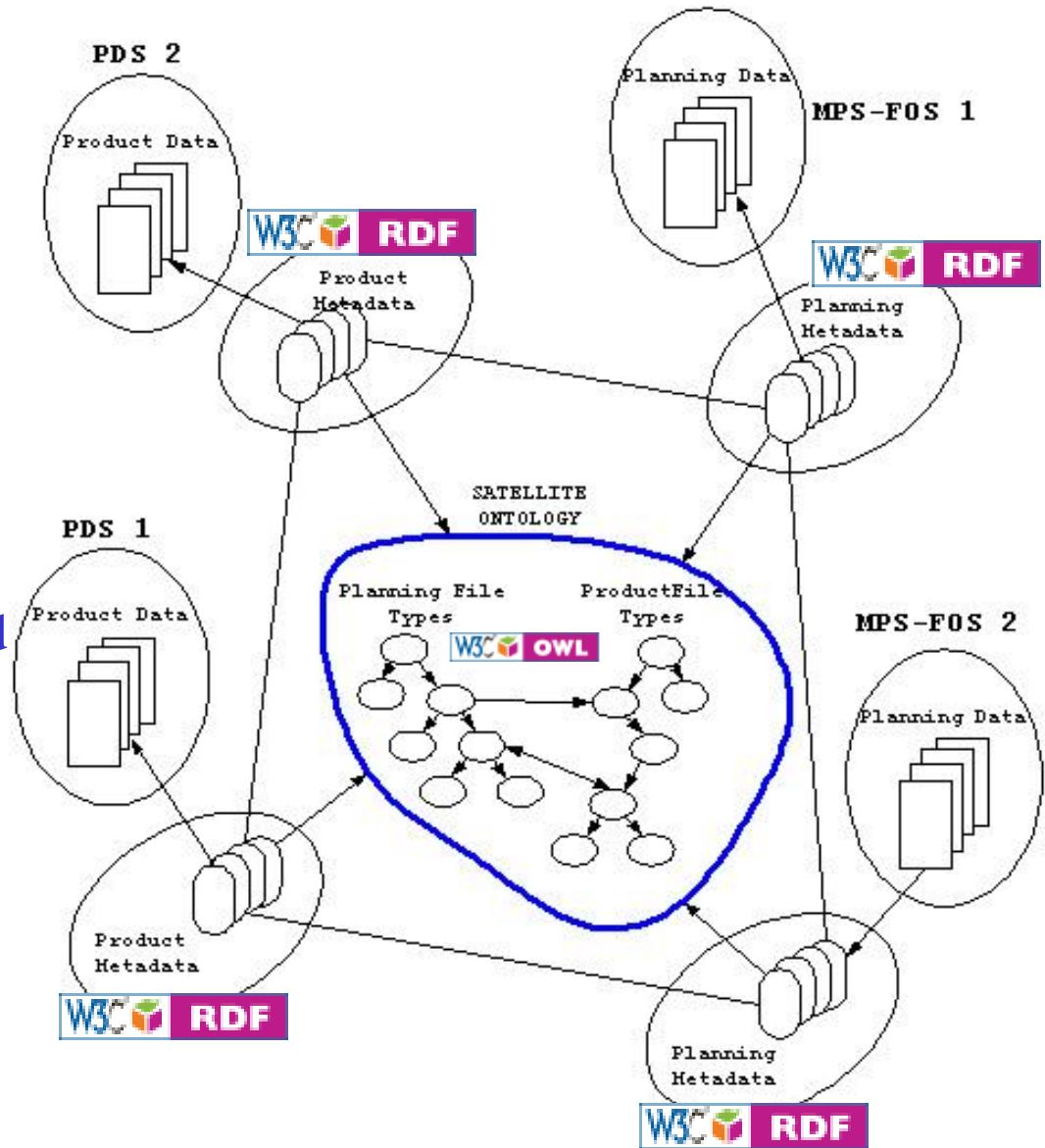
<?xml version='1.0' encoding='ISO-8859-1'?><rdf:RDF
  xmlns:rdf='http://www.w3.org/1999/02/22-rdf-syntax-ns#'
  xmlns:rdfs='http://www.w3.org/2000/01/rdf-schema#'
  xmlns:NS0='http://protege.stanford.edu/kb#'

>
<rdf:Description rdf:about='http://protege.stanford.edu/kb#10822'>
  <rdf:type rdf:resource='http://protege.stanford.edu/kb#Instrument_mode'/>
  <NS0:instrument_mode_id>MS</NS0:instrument_mode_id>
</rdf:Description>
<rdf:Description rdf:about='http://protege.stanford.edu/kb#11224'>
  <rdf:type rdf:resource='http://protege.stanford.edu/kb#DMOP_ER'/>
  <NS0:event_id>&quot;GOM_OCC_00000000541299&quot;</NS0:event_id>
  <NS0:duration rdf:datatype='http://www.w3.org/2001/XMLSchema#int'>53000</NS0:duration>
  <NS0:orbit_number rdf:datatype='http://www.w3.org/2001/XMLSchema#int'>20552</NS0:orbit_number>
  <NS0:elapsed_time rdf:datatype='http://www.w3.org/2001/XMLSchema#int'>2452293</NS0:elapsed_time>
  <NS0:event_type rdf:resource='http://protege.stanford.edu/kb#10713'>
</rdf:Description>
  
```

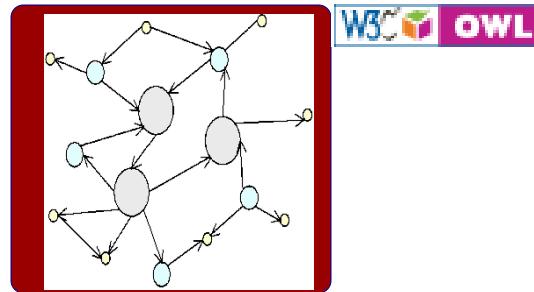


Satellite Use Case: Technical issues

- Methodology for building the ontology:
 - Methontology
- Ontology Development tools:
 - WebODE & Protégé
- Metadata generation:
 - GridKp
- Metadata access in distributed environment:
 - Atlas
- Ontology access:
 - WS-DAIOnt-RDF(S)
- Query Language:
 - SPARQL



1 Ontology



**1 reference ontology for annotating all files
RDF files are distributed**

Distributed Metadata for Planning files

RDF

<RDF
triple>
<RDF
triple>
<RDF
triple>
<RDF
triple>

Distributed Metadata for Product files

1
r
s

W3C RDF

<RDF triple>

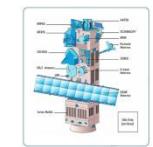
<RDF triple>

<RDF triple>

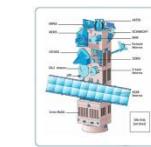
<RDF triple>

<RDF triple>

The planning files



The product files



Satellite use case

Single versus network of ontologies	Single Ontology	Type of Application	Data integration	Software Components Used
Ont. Built from scratch or reusing resources	Built from scratch	Hugeness: Operates at scale?	Yes	1. Ontology repository 2. Data repository 3. Metadata registry 4. Query answering 5. Semantic query processor 6. Ontology editor 7. Ontology browser 8. Instance editor 9. Automatic annotation 10. Ontology populator
Conceptual Heterogeneity (mappings)	No	Open to semantic resources?	No	
Where are the data/instances?	RDF files	Open to web resources?	No	
Are instances distributed or centralized?	Distributed	Open to web services?	No	
Very high rate of change in instances?	Yes	Web 2.0 like?	No	
Heterogeneous Provenance of instances	No	Mobile devices?	No	
Various degrees of data quality	No	Geo-spatial Information	No	



Fraud detection in car insurance

Ne constitue pas une reconnaissance de responsabilité mais un relevé des identités et des faits servant à l'accélération du règlement.

1. date de l'accident	heure	12. lieu, pays, commune, rue	lieu de l'accident	3. blessé
11.06.97 23h30		NY Regier	die 14	non <input type="checkbox"/>
		Colmar		oui <input type="checkbox"/>
5. témoins nom, adresses et tél. (à souligner si il s'agit d'un passager de A ou B)		REGULATUR & REPARATUR		

A6

6. assuré souscripteur (voir doc. d'assurance)
Nom Marion
Prénom Wulff
Adresse (rue et nr) Stubbenhof 4
21147 Hamburg
Localité (+ code post.)
nr. tel. (de 9 h à 17 h) 040/7965628
L'assuré peut-il être contacté au travail? non <input type="checkbox"/> oui <input checked="" type="checkbox"/>
7. véhicule MB
Marque, type Mercedes-Benz 210
Num. matr. HH-JW-13
8. sté d'assurance Generali
N° de contrat
Agence (ou courtier)
N° de carte verte
Carte verte valable jusqu'au
Les dégâts matériels du véhicule sont-ils assurés? non <input type="checkbox"/> oui <input checked="" type="checkbox"/>
9. conducteur (voir permis de conduire)
Nom Jens
Prénom Wulff
Adresse
Permis de conduire n° 3121/81
Catégorie (A, B, ...) B Délivré par
date 31.01.80



11. dégâts apparents
Heckdeckel
Seitenteile Stopst

14. observations Blinker

Ich hält bei Rot an

* En cas de blessures ou en cas de dégâts aux véhicules A et B, relever les indications

12. circonstances
Mettre une croix (x) dans chacune des cases ci-dessous pour préciser le croquis.
en stationnement
quittait un stationnement
perrait un stationnement
sorit d'un parking, d'un lieu privé, d'un chemin de terre
s'engageait dans un parking, ou privé, un chemin de terre
engagéait sur une route à sens giratoire
roulait sur une place à sens giratoire
sortait l'autre véhicule qui roule dans le même sens et sur la même file
roulait dans le même sens et sur une file différente
changeait de file
doublet
virait à droite
virait à gauche
reculait
complétait sur la partie de chaussée réservée à la circulation en sens inverse
venait de droite (dans un carrefour)
n'avait pas observé un signal de priorité
Indiquer le nombre de marques d'une croix.

13. croquis de l'accident
Préciser: 1. le tracé des voies - 2. la direction des véhicules A, B - 3. leur position au moment du choc - 4. les signes portuaires - 5. le nom des rues (ou routes)

10. indiquer par une flèche (→) le point de choc initial.



11. dégâts apparents

Heckdeckel-Stopst

Seitenteile Links

Rechts Blinker

14. Remarques

Ich hält bei Rot an

Signature et la

Voir déclaration de l'assuré au verso



Unfallbericht

Ne constitue pas une reconnaissance de responsabilité, mais une Wiedergabe des Umstage fr schnelleren Schedenregulierung.

1. Tag des Unfalls	1. Uhrzeit	2. Ort Straße, Haus-Nr. bzw. Kilometerstein
3.06.97	16:40	Niederland N59 Zierikzee/215 Richtung Middelharnis
3. Andere Sachen		5. Zeugen Name, Anschrift, Telefon (hervassen unterstreichen)

X nein ja

Von beiden Fahrzeuglenkern auszu fllen!

3. Verletzte?

X nein ja

Fahrzeug B

6. Versicherungsbaher Name und Adresse (Großbuchstaben)

Ahmetovic

M

3255 TC

Oude Tonge

Telefon (privat/dienstlich)

Mazda 626

ND-46-VZ

Amtliches Kennzeichen

Centraal Beheer

Vorname

27.04.98

2

Bestand eine Volkssko-Versicherung

NI 1523036-590/1107925

Anmeldung oder Grüne Karte (für Ausländer)

2

Bestand eine Volkssko-Versicherung

27.04.98

2

Bestand eine Volkssko-Versicherung

20.02.96

10. Bezeichnen Sie durch einen Pfeil den Punkt des Zusammenstoßes

B

12. Unfallzusammenstoß

4. Pfeilstrichen

1. Straßen

B

N 215 Middelharnis

A

Heckdeckel-Stopst

Seitenteile Links

Rechts Blinker

15. Unterschrift der Fahrzeuglenker

B

14. Bemerkungen

ik had best was tegen

ik heb achter bos

Nach Unterschrift und Trennung der Blätter nicht mehr ändern

Detección del Fraude en seguros de coches

Single versus network of ontologies	Single Ontology	Type of Application	Data integration	Software Components Used
Ont. Built from scratch or reusing resources	Built from scratch	Hugeness: Operates at scale?	Yes	<ol style="list-style-type: none"> 1. Ontology repository 2. Metadata registry 3. Query answering 4. Semantic query processor 5. Ontology editor 6. Ontology browser 7. Instance editor 8. Manual annotation 9. Automatic annotation 10. Ontology populator
Conceptual Heterogeneity (mappings)	No	Open to semantic resources?	No	
Where are the data/instances?	RDF files	Open to web resources?	No	
Are instances distributed or centralized?	Distributed	Open to web services?	No	
Very high rate of change in instances?	Yes	Web 2.0 like?	No	
Heterogeneous Provenance of instances	Yes	Mobile devices?	No	
Various degrees of data quality	Yes	Geo-spatial Information	Yes	

Overview

- Semantic-based Applications
 - preSemanticWeb Applications
 - Annotation
 - Semantic Web 1.0 Applications
 - Annotation, Data Integration and Decision Support Systems
 - Semantic Web 3.0 Applications
 - (Collaborative) Annotation and Data Integration



Geobuddies

Semantic & Collaborative annotation using mobile devices in the “Camino de Santiago”

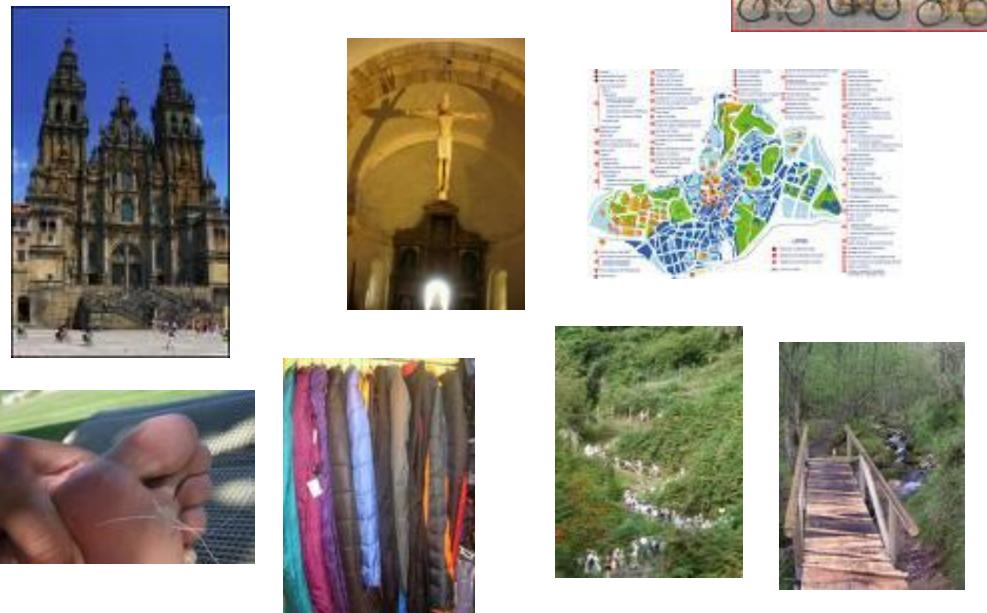
- Ontologies
- Web 3.0
 - Semantic Web
 - Web 2.0
- Mobile devices
- Data Grid
- Geographic information





A pilgrim in St. James' Way (Camino de Santiago)

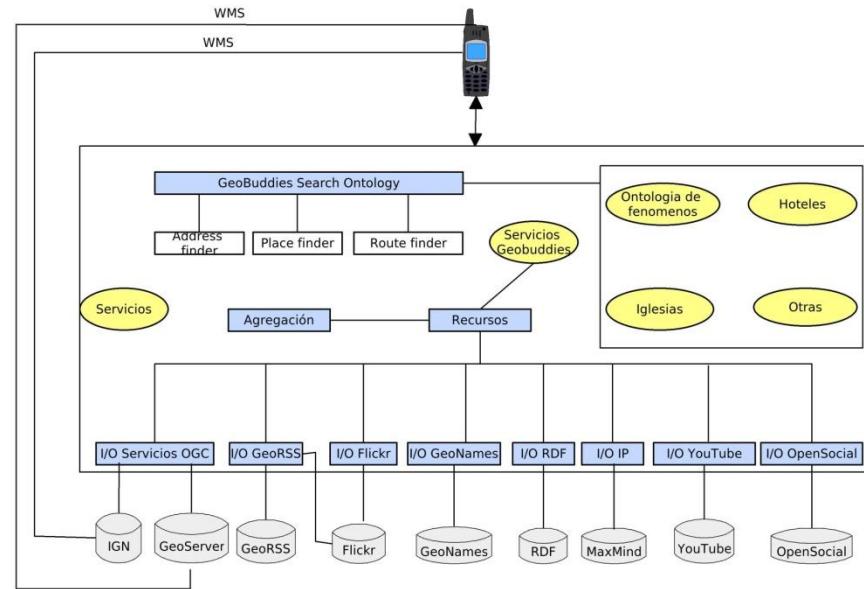
- Diverse routes for pilgrims
- Self-emergent community of pilgrims
 - People that talk about their experiences during the way
 - People that join together in the joy of walking
 - Mobile users
- People want to
 - Find interesting locations
 - Find community services
 - Provide information





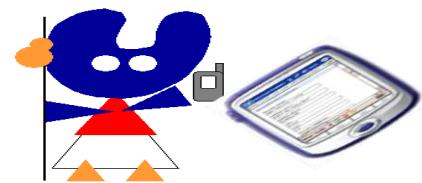
GeoBuddies: architecture and main themes

- Agile methods for Web2.0 data integration
 - Facebook
 - Flickr
 - ...
- Mobile applications exploiting user generated content
- Evolution of folksonomies and ontologies





Las anotaciones se guardan y los objetos se consolidan con bases de datos geográficas y anotaciones existentes



El usuario ve un punto de interés y envía una foto con sus correspondientes anotaciones



BBDD geográficas



Motor de recomendaciones
(sólo geográfico)

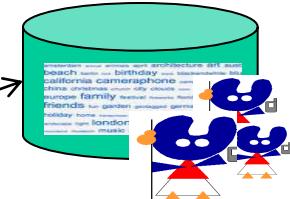


El usuario quiere saber qué puntos de interés le pueden interesar en la zona en la que se encuentra

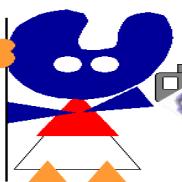
Motor de recomendaciones
(geográfico + tags + ontologías)



Servidor de anotaciones
(todos los usuarios)



mezcla



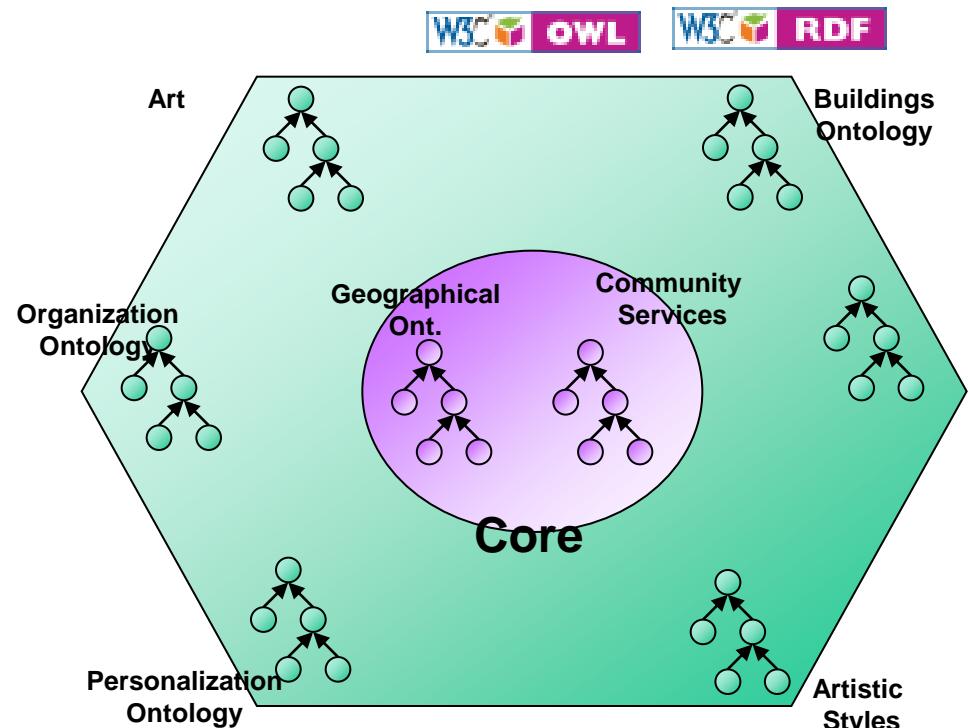
©Asunción Gómez-Pérez

Camino Personalizado



Geobuddies Networks of Ontologies

- Localizaciones Geográficas y puntos de interés:
 - Ciudades, ríos, colinas
- Edificios
 - Iglesias, catedrales, etc.
 - Estilos de arquitectura
- Arte
 - Pinturas, escultura, música, etc.
 - Estilos de
- Servicios comunitarios
 - Comida, salud, alojamiento
- Gustos, preferencias, personalización





Geographical ontologies



- Monolingual **Knowledge bases** of IGN (spanish):
 - NC (Nomenclátor Conciso),
 - NGN (Nomenclátor Geográfico Nacional),
 - **BCN200** (Base Cartográfica Nacional escala 1:200.000),
 - **BCN25** (Base Cartográfica Nacional escala 1:25.000)
- Monolingual **Knowledge bases** of CC.AA. (spanish, basque, galician): Castilla y León, Cataluña, Euskadi, Extremadura, Galicia, La Rioja, Madrid, Murcia, Navarra.
- Creation of an **ontology** from IGN resources and creation of mappings with IGN knowledge bases

Nomenclátor conciso - Bloc de notas

Comunidad Autónoma	Provincia	Comarca administrativa	Capital	Población 1	Población 2	Sierra	Pico	Puerto	Área geográfica	Río	Canal	Lago	Embalse	Cabo	

Bcn200.tbl - Bloc de notas

CODIGO	LV	COL	PS	LC	SIMB.	NOMBRE
010101	01	000	00	6	00006	LIMITE_MUNICIPAL
010102	01	015	00	6	03846	LIMITE_MUNICIPAL_PROVISIONAL
010201	01	030	03	4	07708	LIMITE_PROVINCIAL
010301	01	045	06	2	11570	LIMITE_AUTONOMICO
010401	01	060	06	3	15411	LIMITE_NACIONAL
010501	01	075	00	1	19201	AGUAS_JURISDICCIONALES
015101	01	090	00	6	23046	MUNICIPIO_CONTORNO
015131	01	105	00	6	26886	MUNICIPIO_ANEJO
015191	01	120	00	6	30726	MUNICIPIO_ENCLAVE
015201	01	135	03	4	34588	PROVINCIA_CONTORNO
015231	01	150	03	4	38428	PROVINCIA_ANEJO
015291	01	165	03	4	42268	PROVINCIA_ENCLAVE

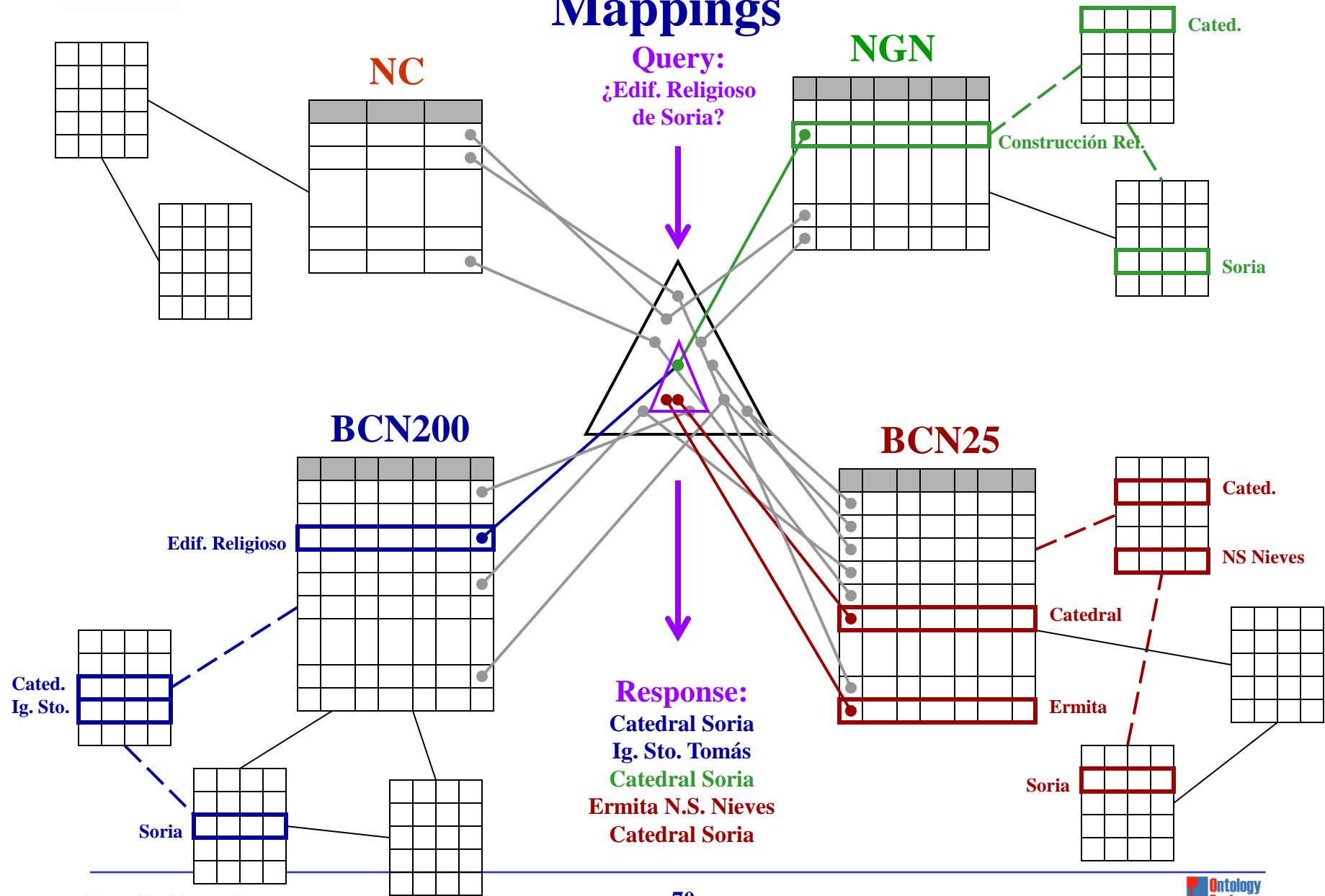
Dgn.cod - Bloc de notas

Entidad	Tipo_istram	Código_bcn	Trato	Formato:		
104	polilínea			Tipo_dgn Entidad Tipo_istram Grupo Código_bcn Cerrado Trato [!comentario]		
203	célula se convierte a simbolo			FORMATO:		
-1	célula se explota en sus componentes			Tipo_dgn Entidad Tipo_istram Grupo Código_bcn... TTGGSS		
304	rótulo			NN : Nivel elemento TT : Tema		
				S : Estilo linea dgn GG : Grupo		
				CCC : Color linea dgn SS : Subgrupo		
				GG : Grosor linea dgn		
				Entidad	Tipo_istram....???	
				104	polilínea	
				203	célula se convierte a simbolo	
				-1	célula se explota en sus componentes	
				304	rótulo	
				Grupo		
				0	sin determinar	
				1	carreteras	VE
				2	hidrografía	
				3	conducciones	
				4	administrativo	
						En textos el grupo corresponde a la fuente Microstation + Mayúsculas (M) / Ma
				Cerrado		
				en líneas		
				1	perimetral	
				0	entidad lineal abierta	
				-1	cultivo perimetral	
				-2	cultivo linea abierta	
				Trato		
				I: Intocable A: Altimetría N: No tratar T: Textos Asociados		
				S: Textos Sueltos C: Cultivo F: solo salida !: Tratar normalmente		
				TTGGSS		
02000900	104	1	0	090101	1	! Marco de hoja
02300902	104	2	0	100200	0	! Base Geodésica de Madridejos
06003900	104	3	0	025102	0	! Acantilado
06006900	104	4	0	025302	0	! Costa rocosa no acantilada
06009900	104	5	2	037402	1	! Playa fluvial dc guijarreros. Contorno
06010000	104	6	0	025501	1	! Lava. Contorno
06015900	104	7	0	058303	0	! Dique de hormigón >15 metros
06018900	104	8	0	058304	0	! Dique de hormigón < 15 metros
07013400	104	9	0	058302	0	! Dique de tierra
07016400	104	10	0	055401	1	! Vertedero. Contorno
11003003	104	11	1	062202	0	! Autopista. Enlace
11012000	104	12	0	056091	1	! Patio. Contorno
13003300	104	13	1	060101	0	! Autopista. Eje
13303300	104	14	1	060131	0	! Autopista en construcción. Eje
14002401	104	15	1	066901	1	! Puesto de S.O.S.
14003301	104	16	1	067901	1	! Peaje
15003003	104	17	1	062204	0	! Autovía. Enlace
15003004	104	18	1	060701	0	! Autovía





[GN Catalogue Integration: Exploitation of Mappings

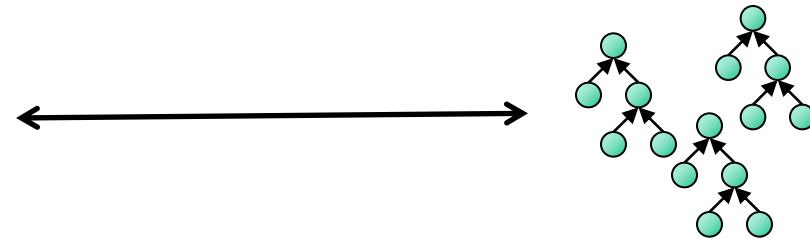




When folksonomies meet ontologies

Users annotate with their own tags

- The system provides hints about commonly used tags on a predictive style (like SMSs)
- Tag clouds can be generated out of this, based on geographical information, services or in general

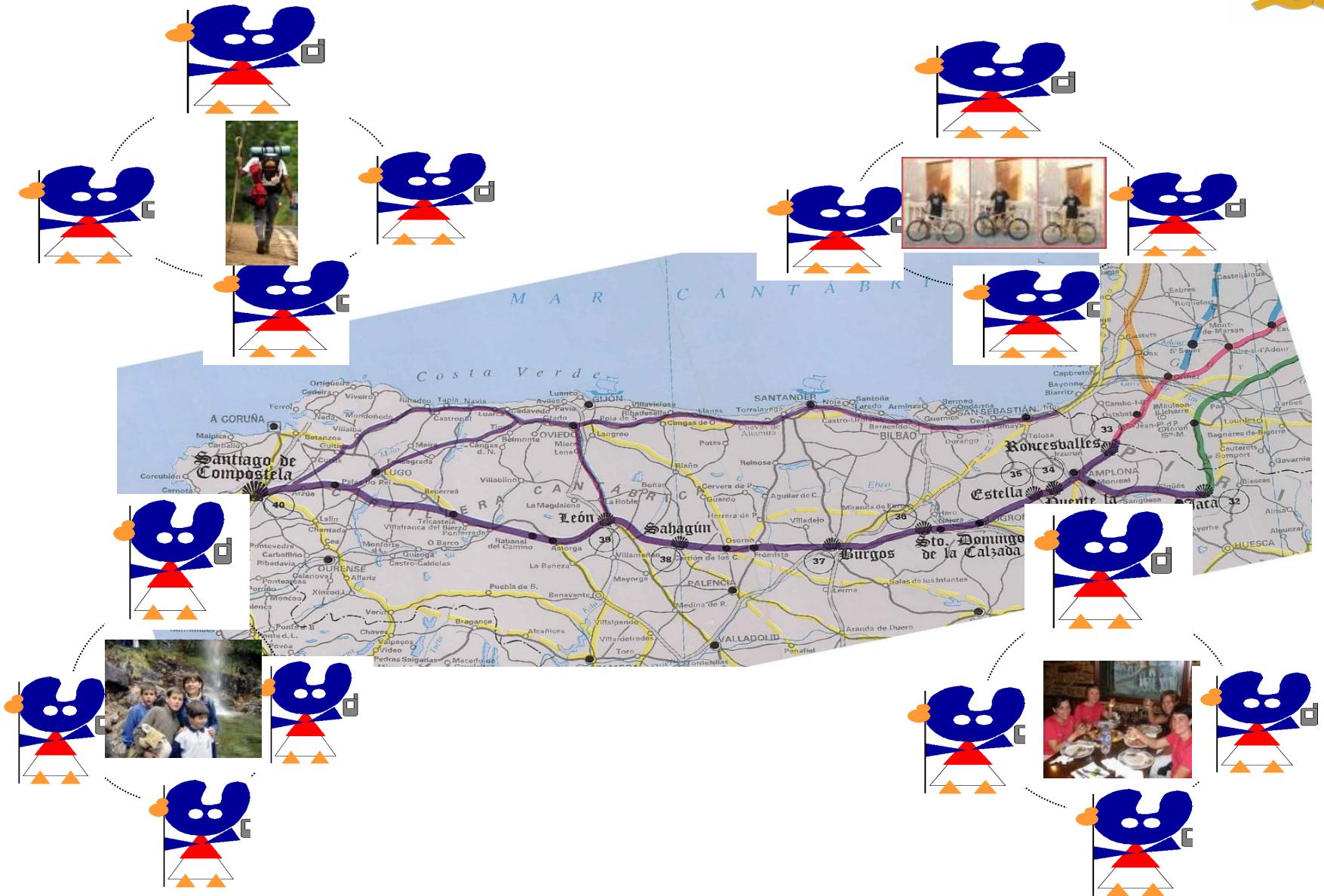


Tags are indexed according to ontologies
Predictive tags are enriched with ontologies

Users request information using their own tags

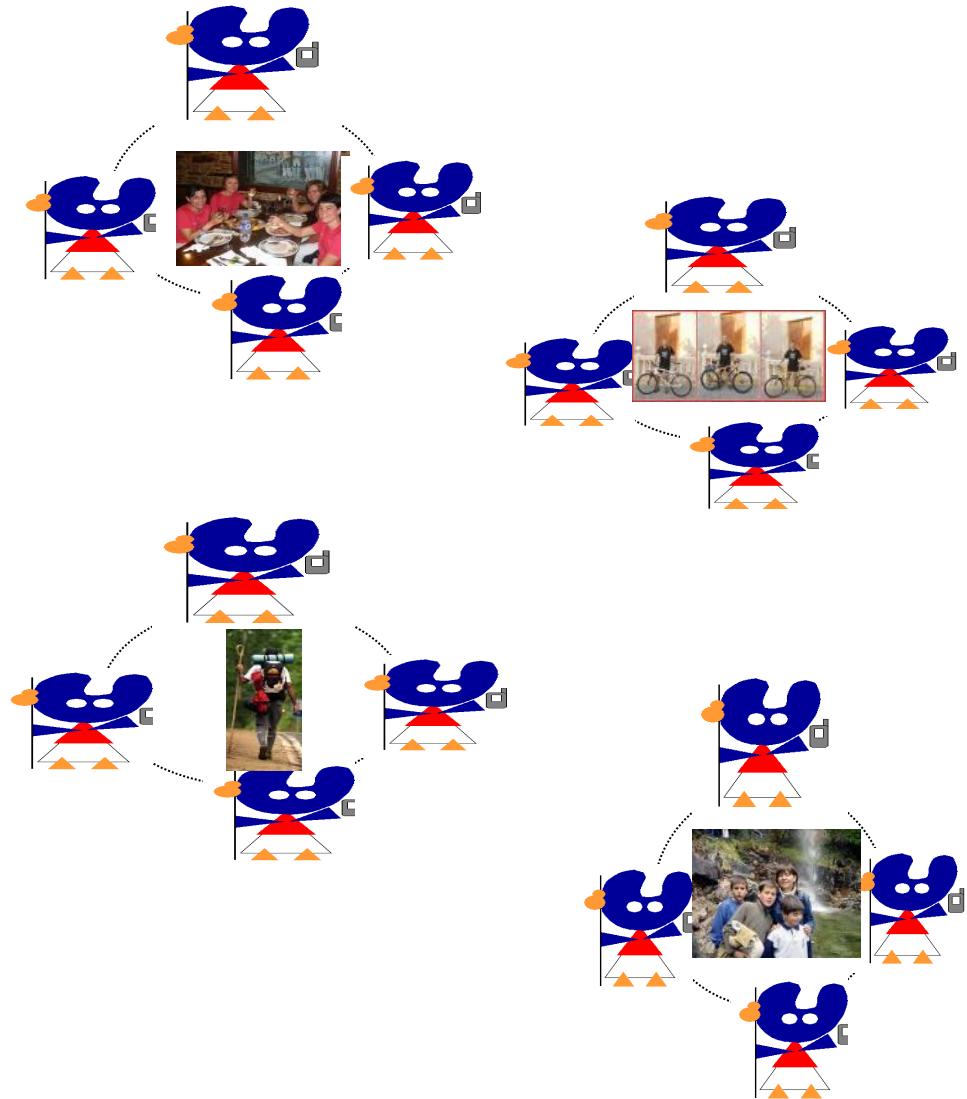
- The system provides hints about commonly used tags on a predictive style (like SMSs)
- Collaborative filtering techniques can be used to recommend the most closely-related tags
- Requests can be extended with ontology-based annotations

Comunidades Sociales en Geobuddies





Recomendaciones basadas en el usuario



Transferencia de la comunidad generada



facebook

Profile edit Friends | Networks | Inbox | home account privacy logout

News Feed Preferences

F Updated: 5 of your friends added friends on Flixster Movies. Suzy Eyden is now using Flixster to compare movie taste, share recommendations and take movie quiz challenges with Edward. Add Flixster >

Ismael Juma joined the group Support Bernard in Climbing Kilimanjaro in a modified wheelchair.

Luigi Iannone is sure it is not Sunday since hours ago but...

Ismael Juma and Nuno Simao are now friends.

Here are some of the largest college networks on Facebook.

- Temple
- LSU
- Oklahoma
- N.C. State

Mikel Egana Aranguren joined the group O'Reilly Media.

Duncan Hull is enjoying unknown pleasures.

Ismael Juma joined the group The Conch.

Updated: Luciano Gerber, Cristina Vicente Torres and David Buján added the Superlatives application.

Ismael Juma and Glory May are now friends.

Updated: John Goodwin, Omer F. Rana and Andrew Gibson received new movie compatibility scores. Ronald and Omer Rana scored 59 (Friends) on the Movie Compatibility Test. Check your score >

Andrew Gibson is in your sled, mushing your huskies.

Luciano Gerber and Ian White are now friends.

Requests

1 emote request
1 you're nominated request

Status Updates see all

Update your status... show friend updates

Birthdays see all

No upcoming birthdays.

Invite Your Friends

Invite your friends to join Facebook.

New Stuff hide

Today's New Gift: (\$1 USD)

L Tile Availability: Until sold out Number Available: 1,000,000 total

give today's gift | browse gifts

The Next Step see all

Check out what's new on Facebook.

Find Your Friends close

Uso de contactos importados

Regístrate para comentar. Entrá si ya estás registrado.

más de elio colombo

Siguiente »

Fotos cercanas

Siguiente »

© elio colombo Todos los derechos reservados

Vista 1 vez Detalles técnicos

Posición de la foto (ver esta zona):

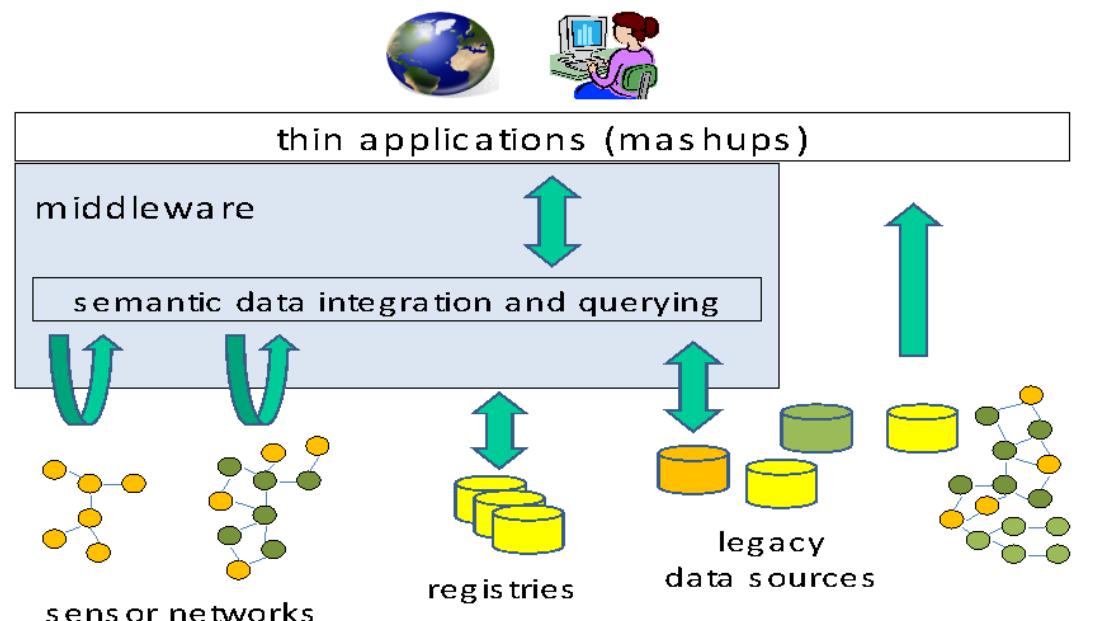
45° 52' 29.96" N 9° 23' 38.02" E

Generated social communities are transferred into social community sites (facebook, Google social API)
 Reuse of other off-the-shelf services
 Sustainability of people links found during the walk
 Ease of implementation

Geobuddies Application

Single versus network of ontologies	Ontology Networks	Type of Application	Web 3.0 application	Software Components Used from the SWF
Ont. Built from scratch or reusing resources	Reusing standardized and web resources	Hugeness: Operates at scale?	Yes	1. Information directory manager 2. Ontology repository 3. Data repository 4. Alignment repository 5. Metadata registry 6. Query answering 7. Semantic query proccesor 8. Ontology editor 9. Ontology browser 10. Ontology learner 11. Ontology matcher 12. Ontology localization and profiling 13. Ontology view customization 14. Instance Editor 15. Manual annotation 16. Ontology populator
Conceptual Heterogeneity (mappings)	Yes. .- Ontol-Catalogues .- Onto - BD	Open to semantic resources?	Yes	
Where are the data/instances?	DB + RDF files	Open to web resources?	Yes	
Are instances distributed or centralized?	Distributed	Open to web services?	Yes	
Very high rate of change in instances?	YES	Web 2.0 like?	Yes	
Heterogeneous Provenance of instances	Yes	Mobile devices?	Yes	
Various degrees of data quality	Yes	Geo-spatial Information	Yes	

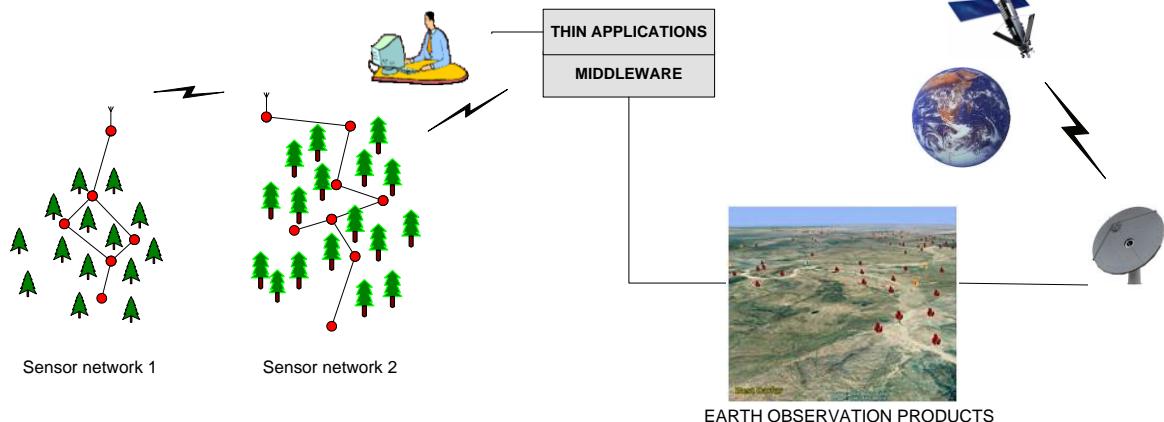
1. Development of an integrated information space where new sensor networks can be easily discovered and integrated with existing ones and possibly other data sources (e.g., historical databases),
2. Rapid development of flexible and user-centric decision support systems that use data from multiple autonomous independently deployed sensor networks and other applications.



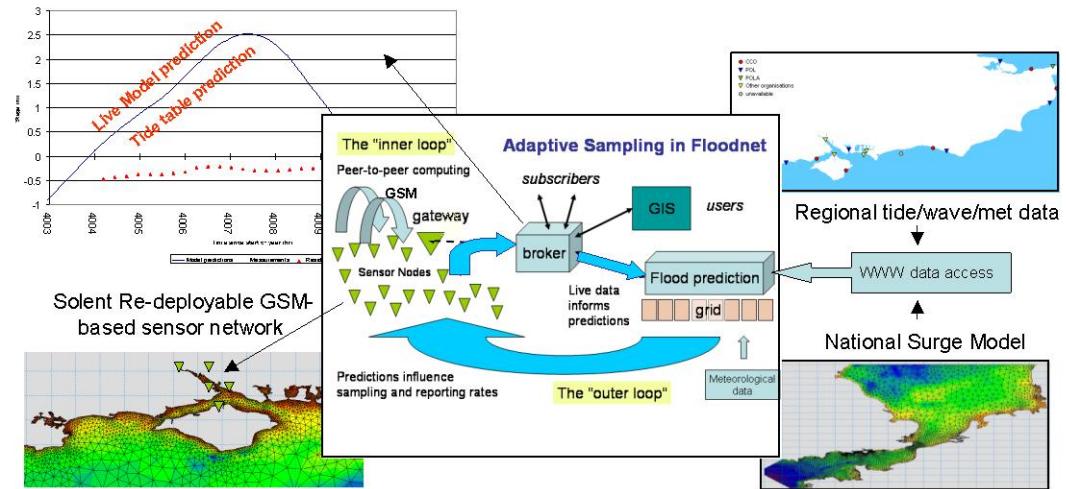


Main Outcomes: Two large-scale environmental management use cases:

Fire Risk Monitoring and Warning in a specific area in the north west of Spain.



Coastal and Estuarine Flood Warning in Southern UK.





ABP: Pilotage Scenario



www.abports.co.uk
online



Shipping data
(ABP)

Weather
Forecast

Sea state



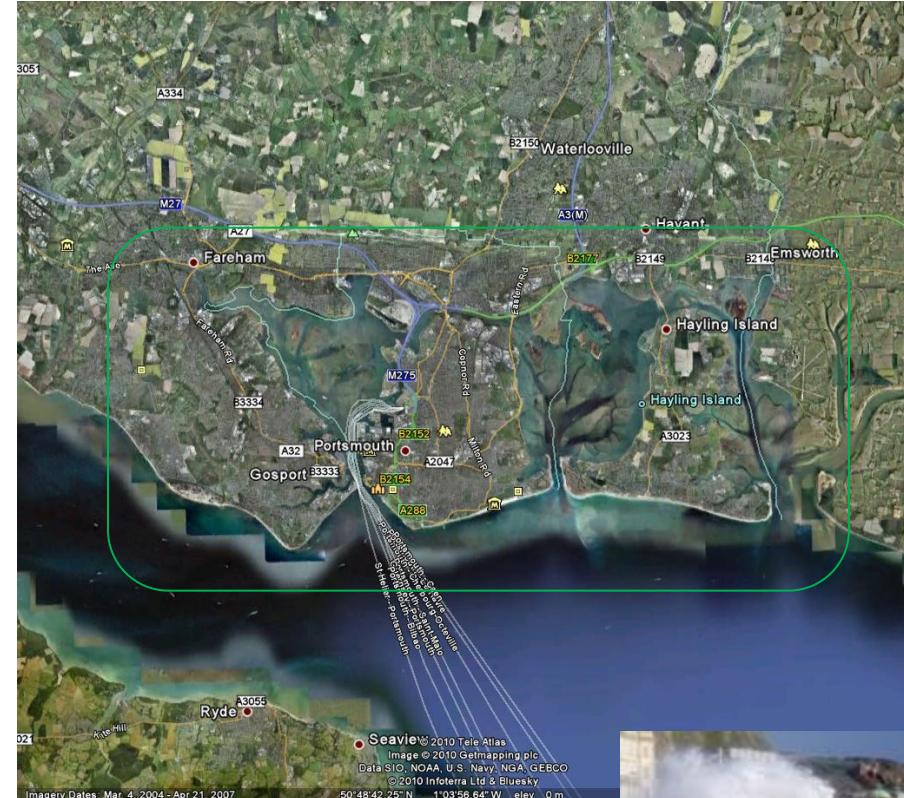
Coastal Defence Partnership (CDP)

Statutory Authorities

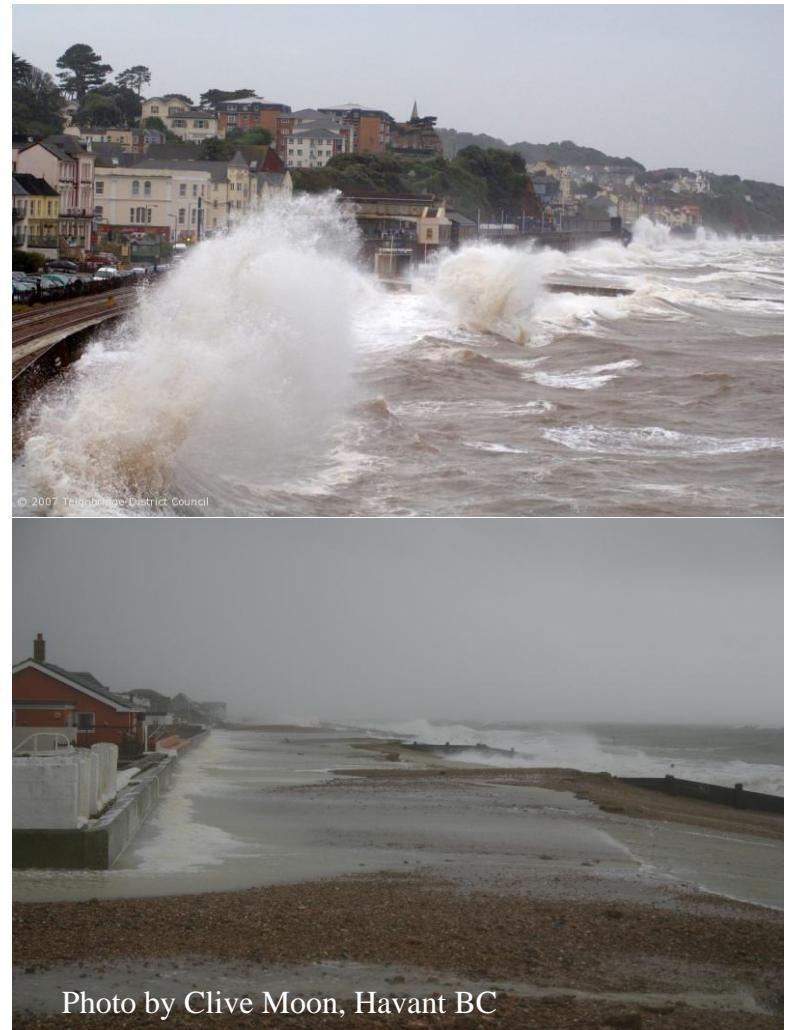
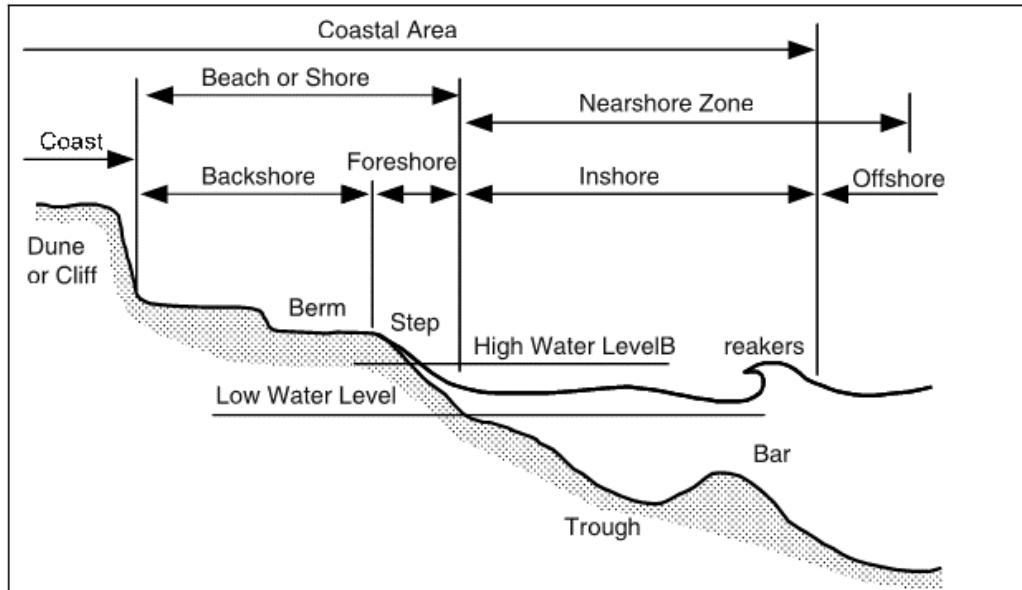
Fareham
Gosport
Havant
Portsmouth

Coastal Flood Forecast

CCTV (CDP)

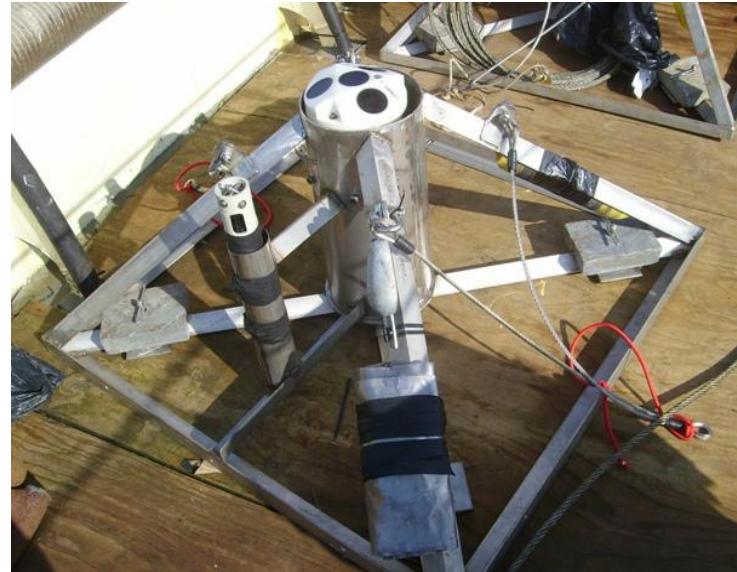


Physical Defence Models



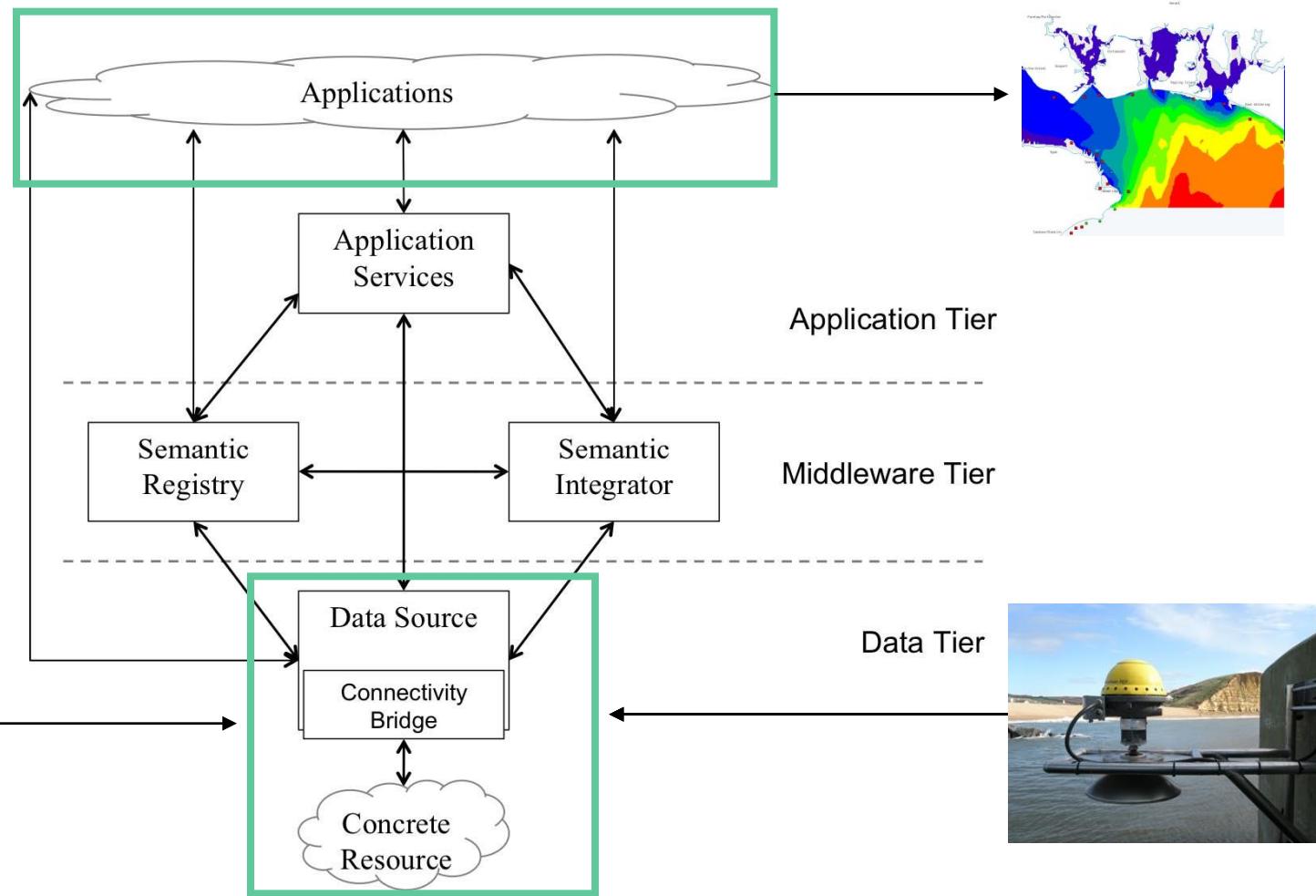
Real time data

- Installation method
- Method of operation
- Cost





Outline Structure

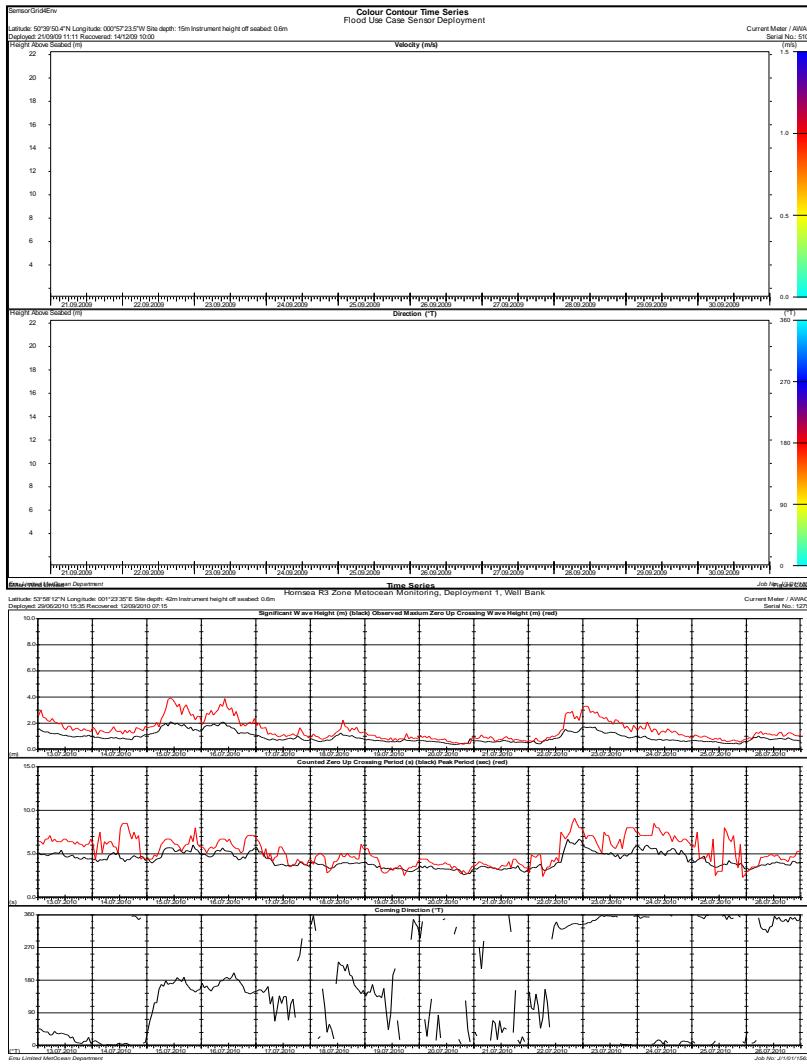
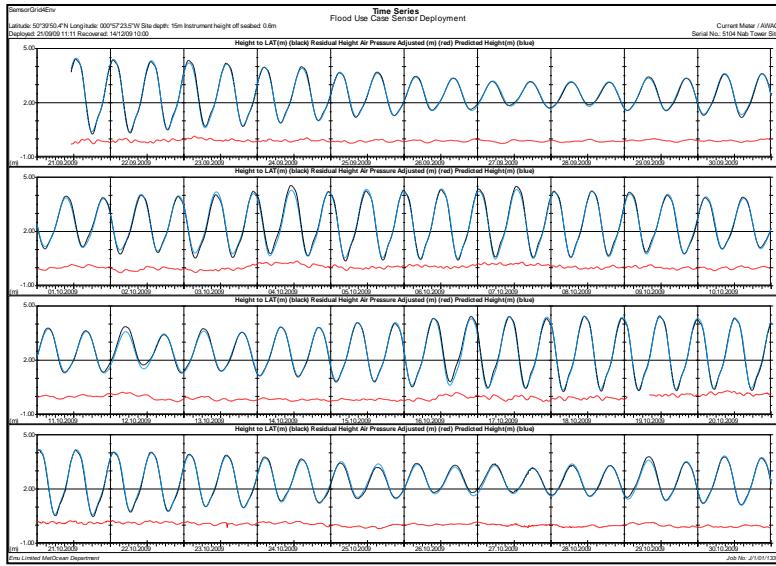


Data

Data generated on:

- Wave heights
- Tidal heights
- Current speed and direction

In support of modelling and to enhance the existing real time networks.



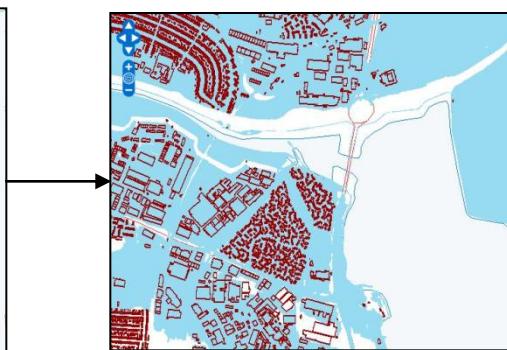
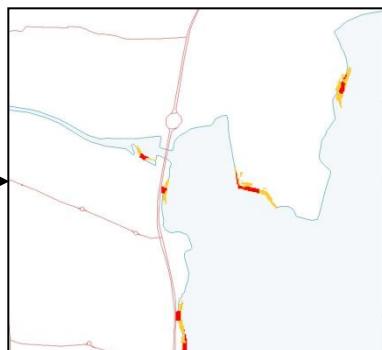
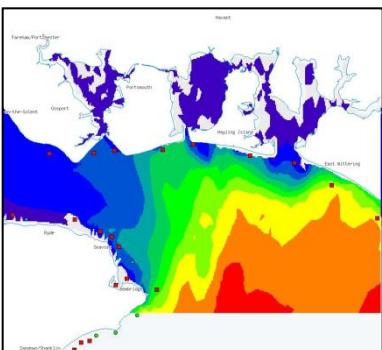
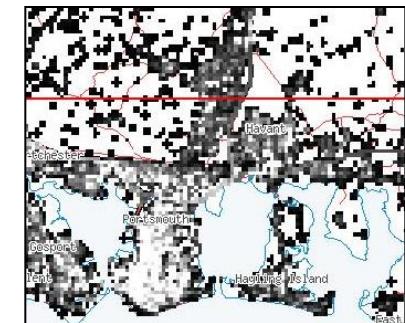
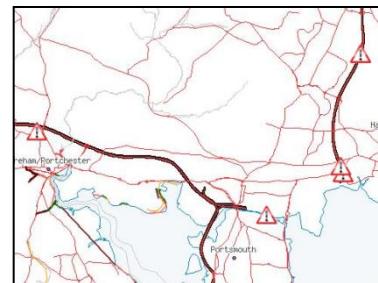
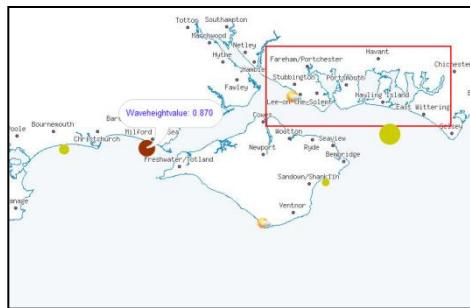
Demonstration of Flood Response

A Coastal Flood Warning:

- Wave heights
- Tidal heights
- Sea defence failure probability
 - Modelled data
 - Observed data

Response requires knowledge of:

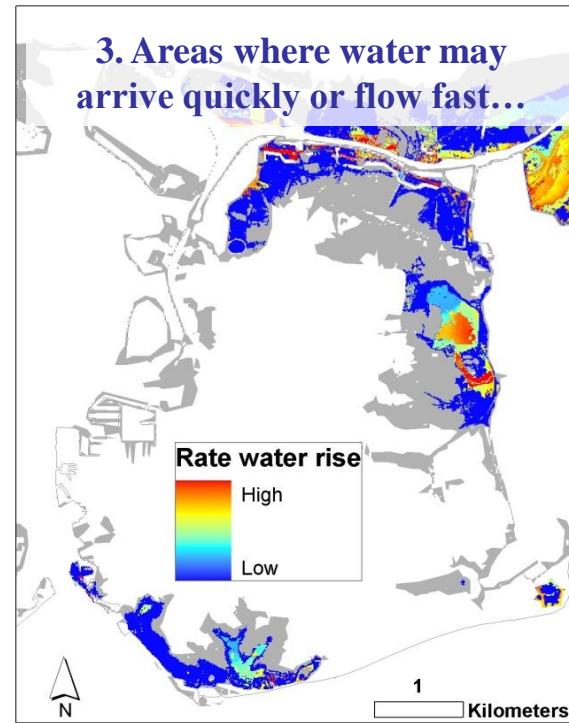
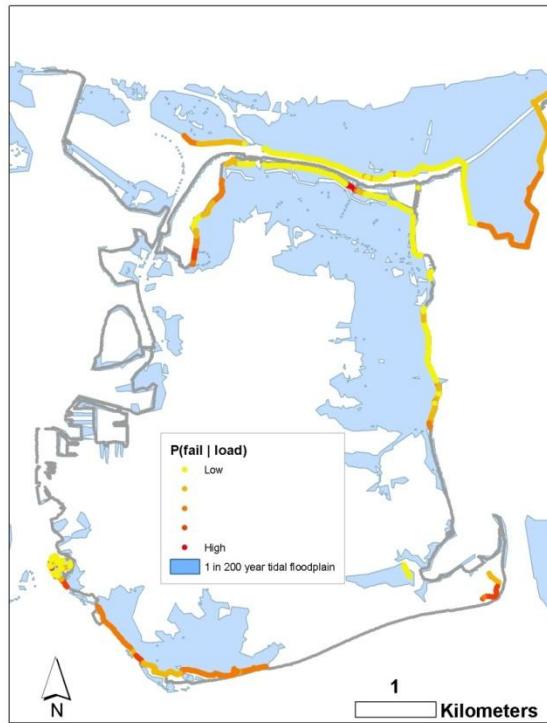
- Where people are
- The state of the roads
- The assets at risk



Portsmouth 1 in 200 year water level event

Real-time defence failure risk using water levels and wave forecasts from MIKE-21.

Accompanied by **pre-modelled** floodplain results. These are from simulations of inundation related to defence responses applicable to a given boundary water level





SemSorGrid4Env

Single versus network of ontologies	Network of ontologies	Type of Application	Decission Support systems	Software Components Used
Ont. Built from scratch or reusing resources	Reusing resources	Hugeness: Operates at scale?	Yes	1. Information directory manager 2. Ontology repository 3. Data repository 4. Metadata registry 5. Query answering
Conceptual Heterogeneity (mappings)	Yes (Onto-BD)	Open to semantic resources?	Yes	6. Semantic query processor 7. Ontology editor 8. Ontology browser 9. Instance editor 10. Manual annotation 11. Ontology populator
Where are the data/instances?	In DB + RDF files + SENSORS!!!	Open to web resources?	yes	
Are instances distributed or centralized?	Distributed	Open to web services?	Yes	
Very high rate of change in instances?	Yes	Web 2.0 like?	No	
Heterogeneous Provenance of instances	Yes	Mobile devices?	yes	
Various degrees of data quality	Yes	Geo-spatial Information	yes	

Conclusions

We are moving into a new generation of semantic applications

- Open to web resources
- Open to semantic resources
- Open to web services
- Open to the physical world and having an impact on it.

where ...

data integration at large scale is one of the main challenge
and ...

everything combined with

1. Social communities
2. Mobile devices
3. Ubiquitous computing

Thanks to

- Jesús Barrasa
- Oscar Corcho
- Angel López Cima
- Oscar Muñoz
- Jose Angel Ramos Gargantilla
- Carmen Suarez de Figueroa
- Boris Villazón

Tendencias en el Desarrollo de Aplicaciones Semánticas

Asunción Gómez Pérez

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