



# D03 v0.1 Usage Scenarios

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## 1. Introduction

In this draft we want to sketch some user requirements and definition of services for a semantic web portal. Depending on different point of views, user groups and levels we will describe at least two scenarios in detail. First we give a definition for an information portal, a web portal and then expand it to semantic ones see ref. [2].

Information society turns into a knowledge society. So not only the access of current and reliable information is essential but also a structured context. Up to now scientific communities started years ago to set up information portals tailored to their needs in order to ensure visibility and communication round the world. They try to integrate all kinds of heterogeneous online resources which were also distributed on several servers. Some examples are given below see [5](#).

If we take over this concept for the research area of semantic web we can define the following features:

## 2. Information Portal for Semantic Web

As a central starting point for this topic it should provide different features related to specific content which we explain further on:

### 1. Lists as an overview for browsing and navigation

In the academic/ learned fields this are

- Research Groups/ Experts
- Research Institutes and Organisations
- Projects
- Relevant Publications
- Conferences
- Jobs
- Education

Addresses and personal contact data are given in the first two ones. Ongoing research work is given in the project and the most relevant output can be found in the publications. Dates of conferences allow time scheduling whereas jobs and education help to gain qualification.

For business the following categories are important

- Companies / Vendors
- Research and Development
- Products
- Fairs
- Jobs

These categories are very similar to the academic ones. Both lists can be done only by syntactical linking.

### 2. Glossary Function

A glossary function can serve as an introduction for people who are not familiar with the topic. This can be introduced by given

- Definitions
- Thesaurus
- Subclasses and Classification

This can also offer an electronic library, archive and e-docs. For interdisciplinary context it is also important because researchers are often only used to their own terminology and keywords. Ontologies help here to verify the meanings and wider the navigation inside the semantic structure.

### 3. Search

A search function is also essential for an information portal. More and more people are so much used to 'google' that there should be this one field interface for beginners and of cause a more specified search possibility for advanced. Up to now mainly full text is indexed so the results are even rough. But meta data and of cause

ontologies help to narrow the sets.

#### 4. Visualization of Context

Up to this point we have mentioned mainly plain text without interaction and interrelation. The four questions (problems) tags: When, where, who and which can not be answered in this way. If someone e.g. is looking for a person s/he met at the last conference and only remember the city and the area of interest of the person there is no way to find her/him. Here annotations based on ontology will combine the different entries like person's research groups, conference data and attendance etc to fill a profile.

#### 5. Authoring Tools

In contrast to the features described so far authoring tools change the point of view from information as a resource to the creation them. Now the community aspect becomes important. Humans want to self contributing, upload and update their data. The portal should offer tools to do so and also should offer the opportunities to enrich the data e.g. a website or a document with meta data and ontologies.

#### 6. Trusted Net

To come back to reliable information the content being provided by a portal of excellence have to be reviewed in some case. For existing information portals a charter can be signed where a kind of policy and netiquette is common sense. Based on ontologies the FOF concept tries the same.

### 3. DERI web site

In chapter 2 we outlined the features of an information portal in general. Now we want to adopt and concretise it for the DERI website(s). We start with a survey and then discuss further developments.

At the moment there are three domains

- Deri.org for DERI International
- Deri.at for DERI Innsbruck, Austria
- Deri.ie for DERI Galway, Ireland

All of these offer lists of persons and organisations involved like partners, sponsors, members. Publications, research projects, working groups and teaching by DERI are given as well. This correlate with the categories mentioned in 2.1 but simply in relation to DERI. The only content not obviously all DERI is the list of international conferences although there are people from DERI involved, too e.g. as committee member, attendee, speaker, etc. No search function is integrated at any of the sites.

So the DERI websites can be seen as one starting point, as hub to the others and as an authority see ref. [1] in the syntactical way. DERI is part of the worldwide community, relates to many ongoing activities and can easily become an important node in the semantical way by annotations see 2.4. This would strengthen DERI's leading position in this area. A newsletter can provide further information and help to stay in touch.

### 4. Conclusion & Future Work

In Chapter 2 and 3 we pointed out the differences between an Information Portal for Semantic Web and a Semantic Web Portal for the DERI Homepage. In general the two positions should not be mixed although some features like glossary function 2.2., search 2.3 and other tools may appear in both concepts. The DERI domain names clearly indicate homepages and not an overall portal for the community.

It would of course be good for kudos if DERI also hosts or supports an Information Portal like SemanticWeb.org. This domain is easy to remember but not updated any longer (19th June 2003).

So the usage and user groups have to be exactly specified. Promotion and integration (interlinking) is also necessary to attract user to both sites. How long to take to establish good information service can be seen in chapter 5.

## 5. Examples of Scientific Information Portals

At last we will give a brief description of existing, well known and used Information Portals mainly in the area of natural science (detailed description see ref. [3, 4]). The overview starts with the name and URL followed by the self description in quotes. Then the responsible organisations are mentioned and the date of the first occurrence:

a) PhysNet ([www.physnet.de](http://www.physnet.de))

'the worldwide Physics Departments and Documents Network' under the umbrella of the European Physical Society and hosted by the Institute for Science Networking (ISN) Oldenburg, Germany online since 1995, now with international mirrors

b) Math-Net ([www.mathnet.de](http://www.mathnet.de))

'an International Information and Communication System' for mathematics with mirrors since 1997 hosted by the Konrad Zuse Institute (ZIB) Berlin, Germany under the aegis of the International Mathematical Union (IMU)

c) MareNet ([www.marenet.de](http://www.marenet.de))

'the worldwide Network of Marine Research Institutes and Documents' offers Online Information Services for Marine and Earth Science since 2000 under the auspice of the German Society for Marine Research (DGM) also hosted by ISN

d) Vascoda ([www.vascoda.de](http://www.vascoda.de))

'Discover Information' in an interdisciplinary scientific context part of the digital library project in Germany started in 2003

## 6. References

[1] Kleinberg, J., Lawrence, S.: The Structure of the Web, Science, Vol. 294, p. 1849, November 2001

< <http://www.sciencemag.org/cgi/content/full/294/5548/1849> >

[2] Zhdanova, Anna V.: People's Community Semantic Web Portal and Metaportal, D14, April 2004

< [http://www.deri.at/research/projects/sw-portal/papers/deliverables/peoples\\_portal\\_v01.pdf](http://www.deri.at/research/projects/sw-portal/papers/deliverables/peoples_portal_v01.pdf) >

[3] Zimmermann, K: Academic Information Portals Proc. inforum, Prague May 2003

< <http://www.inforum.cz/inforum2003/english/prispevek.asp?CisloSekce=8&Kod=7> >

[4] Zimmermann, K: A Research Information Portal for Telecommunications IEEE Proc. ISTAS'02, pp. 143-149, Raleigh, NC, June 2002

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webmaster