1 Introduction

This is the program of the organization and contents of the *"Semantic labelling of philosophy texts and computational ontologies"* workshop in Bergen, 14-17 June 2007.

2 Organization

- 14th June Arrival

- 15th and 16th June Workshop

- 17th June Departure

3 Contents

Understanding computational ontologies (i.e., ontologies as used in computer science) means also to have knowledge in other related topics, i.e., Knowledge Representation (KR) and logical formalisms. Hence, we think that the best way to organize the workshop is to make short introductory presentations of these topics, without going into much details, and then discuss their content all together. This will help in clarifying doubts and also in keeping the attention higher.

We also think that examples can help too, so we would put some emphasis on them, therefore a relevant part of the workshop will be dedicated to exercises, questions and answers, and discussions about the topic presented.

The programme of the workshop is presented in the table 1 below.

The content of each session is described below. We have put the arguments that in our opinion are necessary to have a good understanding of computational ontologies, how to deal with them, and for starting the development of the domain ontologies.

Semantic labelling Here we shall present and discuss each content partner?s ideas on how to organize the semantic enrichment, both in relation to application of ontologies and in relation to less formal applications, including something which we here in Bergen call ?semantic labelling?: we enrich every remark in the Wittgenstein Nachlass which is to be included in the Discovery material with semantic metadata: words, phrases which tell the

	15 June	16 June
09:00-10.45	Semantic Labelling	Semantic Web
10.45-11.15	Break	
11.15-13.00	Semantic Labelling	Semantic Web Tools
13.00-14.30	Lunch	
14.30-16.15	Knowledge Representation	Exercises
16.15-16.45	Break	
19.45-19.00	Knowledge Engineering	Exercises

Table 1: Program of the workshop

reader in a few words what this remark is about. I?ll soon be able to point you to a website where this is exemplified with Wittgenstein?s Lecture on Ethics and where you can investigate all the files which we produce for this work. The same can and shall, I suppose, be done with RAI?s, ILIESI?s and HyperNietzsche?s materials. Thus, please prepare a short presentation for Os about how you plan this work, and how you plan to relate it to WP7:

WP7: Define Ontologies To formalize a foundation ontology for the structural enrichment of content. To formalize and encode in OWL suitable domain ontologies and thesauri for semantic enrichment of philosophical content.

Also, I?d wish that samples of the work, incl. the source files, were made available already before the workshop in the Groupware space so that we are well prepared for Os in order to learn from each other.

Knowledge Representation This will be the most hard and perhaps difficult to understand session. It will briefly present the theoretical aspects of KR, logical formalism, and ontologies. However, since the requirements for writing ontologies have dropped from OWL to RDF(S), we decided not to emphasize the logical aspect. In particular, we will discuss:

1. KR, Knowledge Bases (KBs), their components and properties.

2. Logical formalism. A very brief overview of Description Logics formalism: syntax and semantics, inference.

3. Ontologies. Definition, use of ontologies, analogies with Databases.

This and the above items, although vast and complicated, will only be introduced to provide the basic concepts and the necessary knowledge for working with ontologies.

Some example will be presented, that will help in the understanding of the topic.

Knowledge Engineering A simple methodology for the development of knowledge bases (and ontologies). We will apply the methodology by describing a domain and building a knowledge base.

Semantic Web This session will describe the Semantic Web, its purposes, and its components, starting from the SW layer *"cake"* to the languages for the Semantic Web (XML, RDF(S), OWL, etc), particularly focusing on RDF(S).

One of the goals of the Semantic Web is to provide means for annotation of existing resources, hence we will present some framework (e.g., DCMI, the Dublin Core Metadata Initiative), that might result useful in the Discovery Project.

Semantic Web Tools Tools for ontology editing. An introduction to software tools that ease the creation, modification, and management of ontologies, examples of how to create ontologies in the tools.

For the development of ontologies, we suggest the use of Protégé[1], a Java application developed at the Stanford University, that allows to edit ontologies. We will provide an introduction to Protégé and to its functionalities.

Exercises A session to practice what has been learned in the previous sessions and to ask question about unclear stuff. The idea is to start with the development of the domain ontologies, by applying what has been learned in the workshop.

4 Bibliography

1. Stefano David and Cesare Rocchi *Philosophy and Computational Ontologies*. In Proceedings of the 30th international Wittgenstein Symposium. This short paper shows the differences between ontologies in philosophy

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[1]`http://protege.stanford.edu`

and in computer science and can be found under the work package 7 on the discovery groupware, `http://groupware.discovery-project.eu/`

2. Natalya F. Noy and Deborah L. McGuinness *Ontology Development 101: A Guide to Creating Your First Ontology*.
   A good guide to start working with ontologies. Contains notions on ontologies and a good engineering method to develop ontologies. Online in both pdf and html versions.
   `http://protege.stanford.edu/publications/ontology_development/ontology101.html`

3. There is also a pdf presentation of a revised version of the previous article, which contains also a lot of information about Knowledge Representation.
   `http://www.semantic-conference.com/Presentations_PDF/Kendall-Elisa-Monday.pdf`

4. *Semantic Web page at W3C* This page contains a lot of resources about the Semantic Web. Among them, we suggest the *W3C Semantic Web Frequently Asked Questions*: A collection of questions about the Semantic Web. `http://www.w3.org/2001/sw/SW-FAQ`, and the presentations about the SW. `http://www.w3.org/2001/sw/#events`.

5. Frank Manola and Eric Miller *RDF Primer*. W3C Recommendation.
   A very good introduction in the world of RDF(S).