

# **Report: Research visit to Free University of Bozen-Bolzano**

## **June 28<sup>th</sup>-July 8<sup>th</sup> 2004**

*Jos de Bruijn, DERI, University of Innsbruck, Innsbruck, Austria*

### **Topic/Goals:**

The goal of the visit was to cooperate in the logical reconstruction of RDF. It was not entirely clear what the exact relationship is between the RDF(S) semantics and classical languages such as OWL DL. We have investigated the RDF semantics and redefined the semantics in a more classical framework. Furthermore, we have defined classical logic extension of RDF.

### **Activities:**

#### *(1) Logical reconstruction of RDF*

It was not entirely clear what the exact relationship is between the RDF(S) semantics and classical languages such as OWL DL. We have investigated the RDF semantics and redefined the semantics in a more classical framework. Furthermore, we have defined classical logic extensions of RDF, compatible with OWL DL.

#### *(2) Extensions for HiLog and F-Logic*

HiLog and F-Logic are two extensions of classical logic which allow some higher-order style modeling, while semantically staying in the First-Order framework. We have made initial efforts to extend the logical reconstruction of RDF (1) towards HiLog and F-Logic.

The first outcome of the exchange are these publications:

Jos de Bruijn, Enrico Franconi and Sergio Tessaris. Logical reconstruction of normative RDF. In *OWL: Experiences and Directions Workshop (OWLED-2005)*, Galway, Ireland, 11-12 November, 2005.

Jos de Bruijn, Enrico Franconi and Sergio Tessaris. Logical reconstruction of RDF and ontology languages. In *Third Workshop on Principles and Practice of Semantic Web Reasoning*, Dagstuhl, Germany, Sept. 11--16, 2005.

We will continue our cooperation via email and possible future visits.