

Travel Report

Séjour invité au LIP6

14th March, 2006

Travel Details

Destination

LIP6 Université Pierre et Marie Curie Paris 6 (UPMC), Paris–France

Date

13 February to 11 March, 2006

Visitors

Pedro Henriques / UM (Portugal)

Travel Purpose

The main purpose of this visit is two-fold; on one hand, the aim is to look for the possibility to start a bilateral project between our two institutions; and, on the other hand, is to continue the joint work in the “OntXQuery”, the Post-Doc project of Alda Gançarski started last year in January.

Financial Support / Grant

UPMC invitation.

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Aims & Objectives

The visit has the following objectives:

- to have a deeper understanding about the research work on databases undergoing at the DBgroup of LIP6, and to present the researching and teaching activity of gEPL group, at DI/U.Minho, in order to find possible fields of common interest to set-up joint projects;
- to work on the project OntXQuery, concerned with interactive information retrieval on XML documents using XQuery++ (an extension to XQuery+Full-Text with "select" operators), following the approach *IXDIRQL* and taking advantage of available ontologies.

Achievements

The reported working visit was successful, as the above objectives were completely attained:

- Concerning the understanding of the research areas of both groups:
 - I gave a talk (slides attached in annexe) to present the *Language Processing group at DI/UM, gEPL*, covering our five research areas, and illustrating our approach to programming (attribute grammar based) with details about three projects (*Alma*, *IXDIRQL*, and *Metamorphosis*);
 - The dialog with the DBgroup members led to the identification of topics like: distributed database, replication, and freshness control; XML documents archiving in databases; data analysis (OLAP, etc.); web-services.
- Concerning the follow-up of "OntXQuery":
 - we discussed the approach followed in the implementation of *IXDIRQL* based on compilers technology (AGs and structured editors generators) and the way how to proceed to the implementation of XQuery++, not necessarily using the same approach. Namely we decided to work with XML documents stored in databases;

- we also discussed the core of this post-doc project: “Interactive information access in XML documents associated with ontologies”. We detected different possibilities to use the ontological information in the querying process—on one hand, we can assume that documents are attached to the ontology as *occurrences* and then query the ontology itself and get as result the subset of interesting resources; on the other hand, we can directly query the XML resources and use (implicitly, or explicitly) the ontologies to compute relevance scores. These ideas require a deep analysis, which will yield to a new technical paper;
 - a project to develop a visualizer to present the results of a IX-IRQL query was proposed to a UPMC student that accepted. Details were settled down;
 - we discussed the evolution of the IADIS 2005 conference paper to a journal paper; we decided to accept the invitation and draw the new structure, keeping some material and adding new material produced in the meanwhile.
 - a project proposal extending OntXQuery, to submit to FCT in the next call (Juin/July) was discussed in detail. The contacts with prospective partners at FEUP, IPCA, and Brasil were done, and a first draft was written under the title “MIRA: Multi-media Information Retrieval on a semantic web of XML specific domain Archives”;
 - We also created and updated the OntXQuery Project WebPage at the URL “<http://wiki.di.uminho.pt/wiki/bin/view/OntXQuery/WebHome>”.
- one of the major outcomes of the two previous items was the preparation a project proposal to submit to PAI, program Pessoa, with title “Recherche d’information interactive sur des bases de données répliqués avec contrôle de fraîcheur”
 - A quick, but important meeting with Jean-François Perrot, gave me the chance to get the contacts of people and research centers, at Paris, working in areas like Program Comprehension (Harald Wertz and Françoise Balmas) and Natural Language engineering and corpora processing (Monique Slodzian, at CRIM). As an immediate outcome, a meeting with Françoise Balmas and Harald Wertz took place to discuss topics of mutual interest. We talked about basic ideas of program comprehension at a formal and practical levels, as well as the

role of animation and different levels of views. Also information visualization concerns were discussed, and an approach based on analogies was shown. I have invited F. Balmas and H. Wertz to give a talk at JOIN'06, and I'm waiting an answer;

- A fruitful appointment with Jacques Malenfant, teaching compilers and researching in language processing subjects near the gEPL interests, led to the identification of projects in the area of XML and attribute grammars to start up an eventual colaboration. I have invited J. Malenfant to give a talk at JOIN'06. As it was impossible due to other activities scheduled for the date, a future invitation will take place.