

Travel Report

Project DSLpc

10 October, 2009

Travel Details

Destination

University of Maribor,
Slovenia

Date

5 October - 9 October, 2009

Visitors

Pedro Rangel Henriques, Universidade do Minho (Portugal)
Daniela da Cruz, Universidade do Minho (Portugal)
Nuno Oliveira, Universidade do Minho (Portugal)

Travel Purpose

The purpose for this visit was to follow up the project “Program Comprehension for Domain Specific Languages”.

Financial Support / Grant

This visit was supported by: FCT – Departamento das Relações Europeias, Bilaterais e Multilaterais (previously GRICES).

Travel Report synthesis

Aims & Objectives

The specific objectives for this travel were:

- to follow up the work on research direction one (and discuss Marjan's WAPL talk);
- to follow up the work on research direction two (and discuss Nuno's WAPL talk);
- to prepare CoRTA joint paper to submit to ComSis Journal.

Achievements

The objectives above were fulfilled as detailed in next section.

Travel Report details

In the first day, the slides to present the WAPL'09 paper *Influence of domain-specific notation to program understanding* were discussed in detail and finished.

After discussion about the follow up of this 1.st project component we realized that until the end of the year we have no human and time resources to continue on this research direction doing more experiments. On one hand we cannot apply again the previous questionnaires to other groups of students, and on the other hand it is not feasible to create new questionnaires.

It was agreed that during the first semester of next year more experiments should be designed and implemented, possibly using Linq versus Arrays, or JavaFX versus Swing. It was said that industrial partners should be invited to participate in the experiments (Critical Software, EFACEC, Alert, CPCs).

In the afternoon, we discussed the 2.nd project component. Nuno presented the Lavanda implementation on Alma², and then Slovenian partners answered the questionnaire Alma², *DSL program comprehension tool* previously prepared to assess the approach and the tool with portuguese students. The answering process was carefully observed, and results were recorded and discussed for a long time and in detail. At the end, a comparison between the answers of the students and the Slovenian partners was done.

The immediate outcomes of this discussion were:

- to create an **Alma Lab** that allows us a finer control over the experiment environment (for instance, to hide windows selecting those that should be used each time) to go on with the experiments;
- to introduce in the questionnaire the confidence degree in the answer (how sure the participant was when answering the questions);
- and to study how to adapt the interaction layer for each domain.

In the second day (morning part) Daniela presented her work concerning *eXVisXML* and also *VCGen Lab*. Also, Pedro discussed their work on *GuessXQ*. Some improvements were suggested by Slovenian team to all of these projects.

After that, started the discussion on the joint paper to ComSis journal taking as starting point the revised version sent days ago by Maria João. After a long, interesting, and fruitful discussion, the decision was:

- to take CoRTA paper *Comparison of XAML and C# Forms using Cognitive Dimensions Framework* as the basis;
- to make (Marjan) a revision to section 2 built up from our CoRTA paper (*Domain Specific Languages: A Theoretical Survey*);
- and to identify in the WAPL paper (*Influence of domain-specific notation to program understanding*) some remarkable paragraphs to merge into CoRTA paper.

In the context of this task we had a detailed discussion about Nuno's survey (the above referred CoRTA paper), and in general around programming languages and their characterization. Many suggestions were written to make a major revision in Nuno's M.Sc. dissertation (chapter 2).

In the last day, Marjan presented his recent work on Context Sensitive Graph-Grammars Parsing, and on Converting Meta-Models to Graph-Grammars in order to be possible to work out formally those models and add them formal semantics.

Then Nuno's slides to present the WAPL'09 papers *VisualLISA, a Visual Programming Environment for Attribute Grammars Specification* and *Applying Program Comprehension Techniques to Karel Robot Programs* were discussed in detail and finished.

Future work

As planned along previous section.

Next meeting

We just expressed to willing for a next visit to Braga happening soon, however as this was the last meeting of this DSLpc project, nothing can be yet planned, before news about our proposal for 2 more years.