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## D3.2.10 Summer School 2006

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**Abstract.**

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UPM

## Changes

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## **Executive Summary**

The intention of this deliverable is to describe the Fourth Summer School on Ontological Engineering and the Semantic Web (SSSW'06).

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## 1. Introduction

According to the revised KnowledgeWeb Technical Annex a report on the Fourth Summer School on semantic web technologies is required at the end of the third year of the Network's existence. This report will give information about the Fourth European Summer School on Ontological Engineering and the Semantic Web (SSSW-2006).

This is the fourth SSSW summer school following the third school held under the auspices of KnowledgeWeb in 2005.

The school's web site is at: <http://torresq.dia.fi.upm.es/sssw06>

The principal difference this year was in a change of director. Enrico Motta was unable to undertake these duties this year and was ably succeeded by John Domingue who has been a tutor at the summer school since its inception.

The school was held in an excellent conference facility belonging to the Universidad Politécnica de Madrid, in the Sierra de Guadarrama Mountains about 50 km from Madrid.

While the school was underwritten by the KnowledgeWeb, we had six other sponsors ranging from universities to private companies including the Universidad Politécnica de Madrid, The Open University and Lispworks.

We continued with several topics rather than the three topic areas of 2004.

We had six tutorials this year with one new tutor - Jérôme Euzenat:

Ontology Matching and Alignment	Jérôme Euzenat
Ontology Validation and Evaluation	Aldo Gangemi
Semantic Web Services	John Domingue
Ontologies: Theory, methods and tools	Asunción Gómez Pérez
Human Language Technologies and Machine Learning for the Semantic Web	Fabio Ciravegna
Knowledge Representation Languages for the Semantic Web	Sean Bechhofer

Another innovation in 2005 was a poster session for students. This was included in response to a student comment from SSSW 2004. This turned out to be a lively, well-attended and fruitful session with the result that has become a permanent part of the school with students now being required to produce a poster.

As in previous years, the school was designed to be an intense, focused, week-long learning experience for students (and tutors) with formal, theoretical sessions followed by hands-on practical sessions. These sessions were conducted by researchers active in the semantic web and gave students an opportunity to become acquainted with state of the art ideas and tools. In addition, as a means of integrating the work on the seven topic areas, students had to work in groups of 4 or 5 on a mini-



project related to one of the topic areas. The students presented their project work on the last day of the school and a prize was given for the best presentation.

Five talks by invited speakers gave additional perspectives on the tutorial material and were unanimously welcomed by all the participants at the school. This year the speakers were Guus Schreiber, Enrico Motta (in a new role), James Hendler (a welcome return), Richard Benjamins (making it 4 schools out of 4), and Stephan Baumann.

Of the 50 students at the summer school, 40 returned completed questionnaires, an 80% return rate.

## 2. Organization Model followed

As in previous years, a simple organizational model was followed with John Domingue as director making the overall decisions about location, student numbers, tutor selection and so on. The director consulted with the co-director (Asunción Gómez Pérez) on overall strategy and before making detailed decisions. The co-director also acted as local organizer, making decisions on the detailed logistics based on the overall strategy. Once the decisions were made about the summer school components (number of tutorial strands, hands-on sessions, mini-project) and the tutor team selected, they, along with some of the invited speakers, formed an ad hoc management board in which any remaining decisions about, for example, the format of and detailed interaction among the various components of the school, were made, usually by email or telephone conferences.

## 3. Sponsors

There were 7 sponsors:

- KnowledgeWeb
- The Open University
- Universidad Politécnica de Madrid
- KMi
- Departamento de Inteligencia Artificial
- Ontology Engineering Group
- Lispworks, Cambridge, UK

## 4. Statistics

The summer school had 50 students, mostly in the 1<sup>st</sup> or 2nd year of their PhDs, from 15 countries<sup>1</sup>. Th 6 tutors and 5 invited speakers originated from 7 countries. 79 submissions were received and 30% of those accepted were from KnowledgeWeb participants which is slightly less than last year (34%).

Austria	1
France	4
Germany	6
Greece	1
Ireland	1

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<sup>1</sup> Country of study

Italy	6
Korea	2
Netherlands	3
Poland	1
Portugal	2
Russia	1
Spain	9
Sweden	1
Switzerland	2
UK	10

Table 1: number of (selected) students per country

Males: 33	Female: 17
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Table 2: Female/male percentage: i.e., 34% of the students were women

Following 2004 where only 26% of the students were women we are glad to report that there has again been a slight increase in the number of female students (33% last year). A slightly higher percentage of women students were selected than applied (25%).

The rest of this report will give an analysis of important aspects of the completed questionnaires.

## 5. Organization

75% of the students said they were 'Very Happy' with the organization of the summer school. Two central questions relating to the structure of the summer school were asked: firstly, about student's rating of the importance of including a component; secondly on their enjoyment of a component. Student scores ranged from 1 = lowest rating to 5 = highest. (Note that in 2003-4 the range was from 1 to 4.)

As Table 3 indicates, the greatest number of students gave 5s to all the school components apart from tutorials which had a mode of 4, thus indicating that they felt that all components should have been included. The responses to the second question show that students enjoyed all parts of the school. For the first time students both ranked the mini-project highly and enjoyed the experience.

*As I really think that the organisation has been very good I don't have any suggestions.*

*Very good organisation. Tutors add to excellent atmosphere.*

Inclusion				Enjoyment				
tutorials	hands-on	talks	project	tutorials	hands-on	talks	project	
4	3	4	4	3	4	4	2	2003
4	4	4	4	3	3	4	3	2004
5	5	5	4	4	4	5	4	2005
4	5	5	5	4	4	5	5	2006

Table 3 showing the statistical mode for the student responses

## 6. Poster session

As we said above, this was an innovation in 2005 which was generally well received. In fact it was as much a social, networking event as a formal presentation of ideas. 50% of the students found the poster session useful while 47.7% found it very useful. 60% found the feedback from tutors useful while 32.5% found it very useful. 57.5% found the feedback from other students useful while 32.5% found it very useful.

*Leave the posters up after session so that also the ones presenting at the same time can later go around and have a look*

*There could be some more criticism to posters and suggestions how to improve*

An overwhelming 92.5% (37 students) would include posters in future years with no students opposed and only 3 students don't know.

## 7. Topics

Ont. Engineer.	KRL/OWL	Ont. Mapping	Ont. Valid.	HLT	SWS	
5	5	5	3	5	4	2005
173	178	187	146	184	181	
4	4	4	3	4	4	2006
144	150	151	138	161	149	

Table 4 Modes and totals for topic fulfilment of expectations

Ont. Engineer.	KR/OWL	Ont. Mapping	Ont. Valid.	HLT	SWS	
4	5	5	3	5	5	2005
181	186	187	152	183	182	
4	4	4	3	4	4	2006
152	159	148	123	156	153	

Table 5 Modes and totals for topic enjoyment

Note that the totals in the fourth row are lower than those in the second row since there were slightly fewer students answering the questionnaire (40 rather than 45). The figures are therefore only indicative of relative scores for THIS year.

As Table 4 indicates, when asked to rate how well a topic fulfilled their expectations most students gave 4s for all topics with 3 for Ontology Validation (a similar result to last year for this topic). As Table 5 indicates, the results were the same when students were asked to rate their enjoyment of the topics. The totals for fulfilment and enjoyment perhaps give a slightly more nuanced picture. While it is clear that Ontology Validation fulfilled fewer expectations and was enjoyed less, it is clearer from this that HLT fulfilled most expectations and KR/OWL was enjoyed most. Note though that the spread of scores is not great with only a difference of 23 for the fulfilment question and 36 for the enjoyment question.

The following list indicates what topics students feel should be added:

- Social Web
- Knowledge Management
- A focus on reasoning mechanisms, how to extend them
- Ontology population
- OWL DL Reasoning, OWL DL Modelling, Coding SW application, the use and deep-understanding of reasoning mechanisms
- Semantic Grid and Semantic peer-to-peer networks
- Rules, query languages (SPARQL)
- Ontology linking and extensions of SW languages (fuzzy, rules)
- Ontology patterns
- Ontology Evolution, Ontology Modularisation, Simple concepts about web services
- Reasoning, in a more formal way
- Logical foundations of semantic web

Most students were either happy (75%) or very happy (20%) with the topic associated hands-on sessions and the assistance given by tutors (40% and 55%, respectively).

## 8. Mini-Project

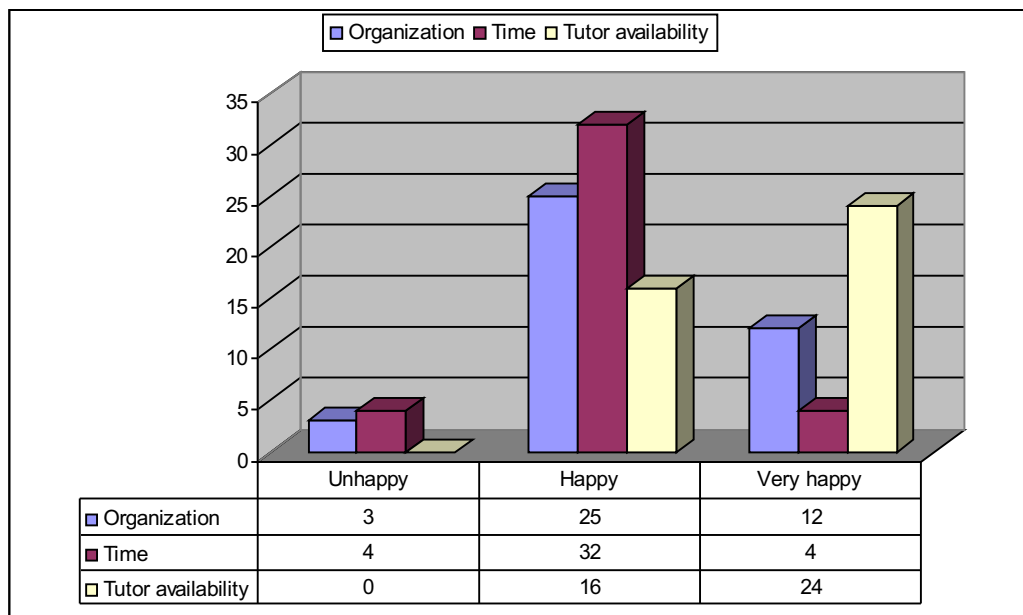


Figure 1 Answers to questions about the project

Figure 1 indicates that in general students were happy or very happy with the project organization, time allocated, and tutor availability. It is clear however that few students were very happy about the time allocation for the project (10%) although most expressed themselves happy. This pattern is similar from previous years. It is also clear that students were overwhelmingly inclined to be happy with the input from tutors.

*Maybe asking students for project ideas (I mean original) during the inscription on the website could reduce the time to choosing a subject.*

*The tutors could make sure 2 same projects are not chosen by different groups at the same time.*

## 9. Selected Student Suggestions and Comments

<p>Have you any suggestions as to how organization might be improved?</p>	<p>Give swimming pool afternoon totally off (instead of putting 'project' on the timetable).</p> <p>Add some more information about Social Network Analysis. Not have too many information about ontology engineering.</p> <p>Add some free time: - to visit village - to go to mountains</p> <p>Add some more introduction of all students and tutors at the first day</p> <p>Maybe the same content scheduling one more day</p> <p>More/longer breaks. The program was too full</p> <p>Improve the vegetarian food...</p> <p>Make it two weeks rather than one</p> <p>Some tutorials are too short to get a real grip on the tools</p> <p>The online services for registration etc. and response-time to questions in advance were a bit of a mess</p>
<p>Would you add any additional components, and if so, what?</p>	<p>Hands on sessions about coding SW applications</p> <p>It would be interesting some students talks, if they want</p> <p>More 'fireplace chats'</p> <p>Tutorial on best practices in research?</p> <p>Focus more on where current research is now, rather than stuff which I have seen previously</p> <p>More hands-on sessions</p>
<p>Any other comments on the organization of the summer school?</p>	<p>Improve food quality</p> <p>Too many events in too little time</p> <p>Just congratulations! :-)</p> <p>Probably it would also be useful to have printed the material of the hands-on sessions</p> <p>Maybe make parallel tracks and extend the time for the individual topics.</p> <p>Very flexible when facing with some problems</p>
<p>Have you any suggestions as to how poster sessions might be improved?</p>	<p>It is important to include more one session. For me it was impossible to see the other posters in the day I presented my poster.</p> <p>Make all tutors give useful comments (some did not)</p> <p>Specify place where you put your computer</p> <p>Not really...maybe it is a good idea to indicate an hour for 'being aside to your poster' another hour to take a look of the posters of others</p> <p>Allocate more time to the session OR Leave the posters in place so that people can see all OR Give 2 minutes to each person to say what their poster is about (I mean in front of everyone)</p> <p>If it is possible to be able to see all the posters because the day you present yours you cannot see the rest, maybe leave the posters on the walls for two days</p> <p>There could be some more criticism to posters and suggestions how to improve</p> <p>Distinguish between first year students and second/third year students</p> <p>Let posters hang all the time More overall feedback (discuss 3 well done posters and their strengths)</p> <p>2 tutors per poster to obtain different professional points of view</p> <p>Shorter a hands on and have poster session after lunch</p>

	<p>Leave the posters up after session so that also the ones presenting at the same time can later go around and have a look</p> <p>Tutors can be more critical</p> <p>To do a presentation (3 min) for all the group</p> <p>More info on why your poster was not good?</p>
<p>Add any critical comments or positive suggestions as to how hands-on sessions might be improved.</p>	<p>Matching evaluations were not very thrilling</p> <p>Make them available online</p> <p>To shorten some exercises. To add more explanations for exercise instruction.</p> <p>In hand-on sessions, it was good for experiencing the various topics. But most of them were too much work to do in a restricted time.</p> <p>It could be more interesting to make groups of two people (max.) and try to have more time to finish those sessions (all the exercises) probably with more help from the tutors</p> <p>To make a more specific task (small task), not only to use a tool.</p> <p>Could be more constructive work (although it is difficult to do in 1.5h)</p> <p>Maybe asking people to what extent they know the tool before the session could be interesting to mix groups between 'experts' and beginners</p> <p>Probably for the ontological engineering and SWS sessions there should be given more time, or maybe there should be some preparation before the hand-sessions</p> <p>Have assignments which you cannot do without understanding the technology. Not a list of steps</p> <p>Less tasks but more details on what's going on behind the tools</p> <p>More focus/detail - therefore maybe less practicals. It is too few time to learn something really</p> <p>Time for self-session and common sessions to answer questions and maybe open discussion</p> <p>Going more into detail. Sometimes not enough time.</p> <p>Check that ontologies and tools actually work before the session</p> <p>Duration of some tutorials was too short to get a real grasp</p> <p>More time</p> <p>To have more time to practice more the tools that we have see in hand-sessions</p> <p>Focus more on how to understand the techniques rather than how to use a particular tool</p> <p>Print out materials. Better instructions (except SWS)</p>
<p>Add any critical comments or positive suggestions as to how the mini-project sessions might be improved.</p>	<p>Give the presentation before the night out :-)</p> <p>Make the evaluation criteria clearly</p> <p>Allow more time to work</p> <p>It could be good to have a deadline before the real deadline, for us to show the slide to the tutors (and finish them!) Another idea is to give a number for each group in order to make the order of presenters faster.</p> <p>Presentations on Friday instead of after the disco :-)</p> <p>Maybe asking students for project ideas (I mean original) during the inscription on the website could reduce the time (?) to choosing a subject. The tutors could make sure 2 same projects are not chosen by different groups at the same time.</p> <p>I think that it would be better if it was explicitly declared that the goal of the mini-project is more enjoying the process of building a SW application and that there was more time to do it</p> <p>Give us a deadline for submitting the subject, so it becomes impossible to change</p> <p>First topic, then groups, not vice versa</p>

	<p>Certain problems such that everyone does not do FOAF</p> <p>Do it after the club on the Friday rather than the Saturday morning</p> <p>Make discussion with tutor mandatory</p> <p>Time: one week is very short</p> <p>Urge the groups to manage the time dedicated to the mini-project and to finish it in the 8 1/2 hours</p>
Any other comments or suggestions	<p>It was a great summer school! Could you organise an advanced SSSW? So that we could more easily attend next year...</p> <p>The summer school put too many efforts on ontologies which is usually more complex and (?)</p> <p>Excellent work by all organizers. Thank you.</p> <p>Please continue working like this. It has been a really nice experience!</p> <p>Social programme - hiking tour (the area here is very nice, but there was no time to go for a walk)</p> <p>Really really nice week. Thank you!</p> <p>I think that one of the social events could be cultural, such as watching a movie (comedy)</p> <p>It was really great fun!</p> <p>Suggestion: use named seats for meals and mix people sitting at a table every time</p> <p>Not beef every night!</p> <p>Thank you very much for this fantastic week! One thing: the website only offers the bare minimum of services, I would have hoped for a lot more e.g. participants list, foto upload, pre-school forum for the future participants</p> <p>A little spare time to visit the country should improve the experience</p> <p>I suggest to plan a visit to Madrid during the summer school</p> <p>Not actually concentrated on practical issues - just doing some step is not exactly helping!</p>

## 10. Conclusions with regard to the summer school

1. Students obviously feel that the programme was a bit intense with too little time for exploring the surrounding area.
2. We might consider adding something on *Social Networks* to the list of topics
3. We must definitely keep the poster session but ensure that all students get useful feedback on their projects and posters. Posters should be displayed for a longer period and we might include a session on how to produce a good poster.
4. The balance between learning to use the tools and learning concepts/techniques is still an issue. Clear, written instructions for hands-on sessions, tools and project are needed.
5. While there are still some comments about the time for the mini-project and gripes about the effects of the night before on presentations, we finally seem to have this about right. We do need to ensure that the group and topic selection processes are as stream-lined as possible.
6. At least one student would like a more advanced school. Perhaps we should resurrect the idea of a winter school.
7. Food is obviously still an issue even for the non-vegetarians.

