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D13.2.1 First External SOA4All Tutorial

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Glossary of Acronyms

Acronym	Definition
D	Deliverable
OU	The Open University
SOA	Service Oriented Architecture
UKARL	Universitaet Karlsruhe
UIBK	Leopold-Franzens-Universitaet Innsbruck
WSML	Web Service Modelling Language
WSMO	Web Service Modelling Ontology

1. Executive summary

This deliverable report describes the tutorials that took place during the M6-18 period and contributed to the elaboration of training material in the form of slide sets, tools demonstrations (software prototypes and demonstration movies). The tutorials aimed at presenting the foundational tenets of SOA4All, the advanced state-of-the-art, and the current state of development of SOA4All technologies.

Several SOA4All or SOA4All-related training events were organised by different partners. They fell under one of three categories:

- School and retreat
- Conference and Workshop Tutorial
- Teaching

The present report discusses a selection of these events representing the nature and modalities of SOA4All training. It then presents the outline of a first external tutorial as forthcoming from these activities.

The tutorial is typically a short event that covers fundamentals of SOA and Semantic Web Services and their annotation. It contains either a hands-on session or some support for SOA4All tools demonstration.

2. Introduction

2.1 Introductory explanation of the deliverable

This deliverable report builds on a selection of tutorials and training activities that are related to SOA4All and that took place during the M6-18 period. These activities contributed to the elaboration of training material in the form of slide sets, tools demonstrations (software prototypes and demonstration movies). In the main, the activities discussed here aimed at presenting the foundational tenets of SOA4All, the advanced state-of-the-art, and the then-current state of development of SOA4All technologies.

The present report uses the description of these activities to present the outlines of a base SOA4All external tutorial.

2.2 Purpose and Scope

The purpose of this deliverable is to specify a first SOA4All external tutorial. The main aims of a prototypical SOA4All tutorial are to present i) the foundational tenets of SOA4All, ii) the advanced state-of-the-art, and iii) the current state of development of SOA4All technologies.

2.3 Structure of the document

This document first presents SOA4All tutorial experiences in section 3 and then sketches a prototypical SOA4All external tutorial based on this experience in section 4.

3. SOA4All training activities

3.1 Summary of training activities

During the last period, SOA4All partners have contributed to a significant number of training activities including the full-fledged organisation of Schools, the design and delivery of tutorials attached to conferences and workshop and an in-house academic course. A compiled list of events can be found in Annex A. We wish to highlight the fact that SOA4All partners (UIBK) were involved in the organisation and delivery of the first IEEE Summer School on Semantic Computing bringing the project to distinguished recognition. Another noteworthy participation of SOA4All is its presence (through training and as part of the steering committee) at SSAIE organised by S-CUBE.

In the remainder of this section, we will abstract over a selected number of events in order to delineate the scope and modalities of training events focused on SOA4All research and technology. There have been three kinds of training activities carried out during the period by SOA4All partners:

1. Schools and retreat tutorials
2. Workshop and conference tutorials
3. Teaching

3.2 Schools and retreat tutorials

3.2.1 Semantic Web Services Retreat

This event took place in the Seefeld Olympic Region in Austria during 1-7 March 2009. It was co-organised by UIBK and STI International. Out of 8, 7 tutors were from 3 SOA4All partners (UIBK: 5, OU: 1, SEEKDA: 1). The programme also featured invited talks. The event lasted for 5 days and its programme featured 20 sessions combining theoretical presentation, hands-on sessions and group projects that covered all aspects of Semantic Web Services and intersecting largely SOA4All's motivations, foundations, research and development.

Tutors from SOA4All partners: Mick Kerrigan (UIBK), Jacek Kopecky (UIBK), Barry Norton (OU), Dumitru Roman (UIBK), Katharina Siorpaes (UIBK), Nathalie Steinmetz (SEEKDA), Ioan Toma (UIBK)

Material produced: Slides and videos are available from the following URL

<http://education.sti2.org/events/sws-retreat-09/>

3.2.2 The Service and Software Architectures, Infrastructures and Engineering (SSAIE) Summer School (SOA4All sessions)

SOA4All was represented at SSAIE in Heraklion during June 2009. It was represented through participation in the summer school's steering committee and through the 2-parts presentation of a SOA4All tutorial titled "Lightweight Semantic Annotation for Services on the Web".

Tutor: Carlos Pedrinaci (OU)

Material produced: Slides (138 slides) and Video are available from the following URL:

http://www.ssme2009.tsl.gr/index.php?option=com_content&task=view&id=33&Itemid=74

(Scroll down to June 18, afternoon session slots 2 and 3 for direct links.)

This tutorial and its slide set forms the basis of a robust external SOA4All tutorial. This is was the most extensive run of a dedicated SOA4All tutorial slide set subsequently reused in parts or full in SOA4All conference and workshop tutorials (next section).

3.3 Conference and Workshop Tutorials

3.3.1 SOA4All Tutorial at the Semantic Week'09

This tutorial took place during the SOA4All parallel track of the STASIS' Semantic Week organised in Amsterdam (22-26 June, 2009). The session titled "SOA4All Technology – A fusion: Semantic Web, Web2.0, SOA" occurred on June 23 and featured an introduction to SOA4All's vision and principles and a detailed presentation of the SOA4All studio with, in particular, a demonstration of SOA4All's tool for the annotation of RESTful services (SWEET).

Tutors: John Domingue (OU), Carlos Pedrinaci (OU), Maria Maleshkova (OU)

Material produced: Slide set that reused material from SSAIE presentation and demonstrable tool prototype.

<http://www.stasis-project.net/workshop/workshop2/agenda.cfm>

3.3.2 SOA4All Tutorial at ICEC 2009

This tutorial took place as part of the ICEC'09 (11th International Conference on Electronic Commerce) in Taipei (12-15 August 2009). The 3-hour tutorial session titled "Lightweight Semantic Annotations for Services on the Web" occurred on August 12. The tutorial aims were to introduce and develop understanding of SOA and Web services, the Semantic Web and the lightweight annotation of services (WSMO-Lite and MicroWSMO) and featured demonstration of the SOA4All SWEET tool.

Tutors: Dumitru Roman (UIBK) and Florian Fischer (UIBK)

Material produced: This tutorial was largely based on the slide set developed for the SSAIE presentation and a movie demonstration of SWEET first prepared for this occasion.

http://www.icec09.org/program.htm#Tutorial_C

3.3.3 Future Internet Symposium SOA4All tutorial (forthcoming)

This tutorial is forthcoming at the time of writing this report. It will be held at the Future Internet Symposium in Berlin on September 1, 2009. The full day tutorial titled "Web Service Crawling and Annotation" introduces to Web services crawling and annotation and contains hands-on sessions, in particular on the SOA4All's SWEET RESTful services annotation tool.

Tutors from SOA4All partners: Nathalie Steinmetz (SEEKDA) and Maria Maleshkova (OU)

Detailed programme: <http://events.seekda.com/FIS2009/>

3.4 Teaching

During its summer 2009 term, UIBK organised a lecture series for its master's students titled "Service-Oriented Computing 2". The series was given in the form of 3 lectures of 150 minutes. The topic covered included SAWSDL, WSMO, WSMO-Lite and Semantic Discovery of Service based on these. 15 students attended the course. Tutors estimated that the course was successful in introducing students to semantic web services, but that it remained abstract given that at the time there were no adequate tools that would have facilitated hands-on work.

Tutors: Rudi Studer (UKARL), Sudhir Agarwal (UKARL), Sebastian Speiser (UKARL)

Material produced: The course was supported by a series of slides for the lecture.

UIBK's course catalogue for Summer 2009:

<http://www.ksri.uni-karlsruhe.de/Default.aspx?PagelId=543&lang=en>

4. First External SOA4All Tutorial

The events described in the previous section enabled the elaboration of a large, robust and reusable slide set. The initial slide set for an extended SOA4All external tutorial was developed for the SSAIE presentation and subsequently reused, in particular, at ICEC'09. The forthcoming features of a prototypical are presented in the remainder of this section.

4.1 Tutorial title

Lightweight Semantic Annotations for Services on the Web

4.2 Outline

- SOA and Web services
- Principles of the Service Web
- Semantic Web and Semantic Web Services
- Lightweight annotations for services: WSMO-Lite & MicroWSMO
- Hands-on Session / Demonstration

4.3 Material

4.3.1 Slide set

There is a slide set of about 140 slides in size that can be adapted or tailored to suite contextual needs. This slide set is open to evolution and updating based on feedbacks received from the tutors.

4.3.2 Hands-on

The tutorial uses the SOA4All's SWEET tool for demonstrating RESTful services annotation (MicroWSMO editor) that is described in details in D2.1.3. The tutorial also uses the dashboard.

4.3.3 Demonstration

For non-hands-on demonstration, there are movies demonstrating the functionalities of the dashboard and of SWEET. The material may evolve through refinement. It can be found at: <http://sweet.kmi.open.ac.uk/demo.html> Moreover, once prototypes are available, online testing and try-outs will become supported.

4.4 Duration

The typical duration for the tutorial would be that of a half-day event. Its actual duration may be shorter in case it only contains a demonstration, whether live or based on movies, and longer in case it includes an hands-on part.

4.5 Tutors

The tutorial appears to be suitable for a single tutor, although it may be preferable to have at least two tutors, especially for longer variants of the tutorial.

5. Conclusions

In this report, training activities related to SOA4All during the past period were presented and an outline of an established prototypical or base external tutorial was given. Material is available in the form of slide sets, software prototypes and demonstration movies. This material has already been used in different events and will evolve towards a matured version of the tutorial through a series of refinements led by upcoming training activities.

Annex A. List of training events involving SOA4All partners

1. Tutorial at the 6th Summer School on Ontological Engineering and the Semantic Web (SSSW08), July 2008

<http://kmi.open.ac.uk/events/sssw08/programme.php>

2. Introduction to the Semantic Web - Invited tutorial at 7th International Semantic Web Conference (ISWC 2008), October 2008

<http://iswc2008.semanticweb.org/tutorials/introduction-to-the-semantic-web/>

3. Tutorial at the 2nd Asian School on Semantic Web (ASWS 2008), December 2008

<http://www.asws2008.org/index.php?id=4>

4. Semantic Web Services Retreat, March 2009 (Tutorials on Internet of Services, SOA and Semantics)

<http://education.sti2.org/events/sws-retreat-09/>

5. Presentation at Semantic Days, May 2009

https://www.posccaesar.org/svn/pub/SemanticDays/2009/Session_3_Dumitru_Roman.pdf

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6. Tutorial at the Service and Software Architectures, Infrastructures and Engineering (SSAIE) Summer School, June 2009

http://www.ssme2009.tsl.gr/index.php?option=com_content&task=view&id=33&Itemid=74

7. IEEE School on Semantic Computing, July 2009

<http://sssc2009.org/>

8. Tutorial at the 11th Intl Conf. on Electronic Commerce (ICEC 2009), August 2009

http://www.icec09.org/program.htm#Tutorial_C

9. Tutorial at the Future Internet Symposium 2009 (FIS 2009), September 2009

<http://www.fis2009.org/conference-program/tutorials/21>

10. Tutorial at the 3rd Asian School on Semantic Web (December 2009)