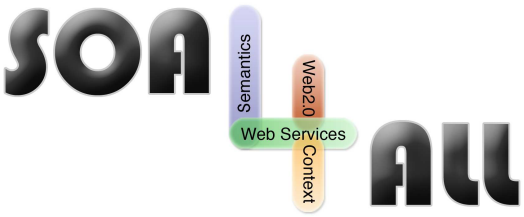

Project Number: **215219**

Project Acronym: **SOA4All**

Project Title: **Service Oriented Architectures for All**

Instrument: **Integrated Project**

Thematic Priority: **Information and Communication Technologies**

D13.2.2 Second External SOA4All Tutorial

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Dissemination Level		
PU	Public	**X**
PP	Restricted to other programme participants (including the Commission)	
RE	Restricted to a group specified by the consortium (including the Commission)	
CO	Confidential, only for members of the consortium (including the Commission)	

Version History

Version	Date	Comments, Changes, Status	Authors, contributors, reviewers
0.9	26/04/2011	Deliverable finished	Jacek Kopecky (OU)
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Table of Contents

Glossary of Acronyms

Acronym	Definition
D	Deliverable
EC	European Commission
WP	Work Package

Executive summary

This deliverable report describes the tutorials aimed at presenting the SOA4All technologies and tools that took place during the second half of the project and contributed to the elaboration of training material in the form of slide sets and tools demonstrations.

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

- Summer schools
- Conference Tutorials and Demonstrations
- Regular courses in academia and industry

This report discusses a selection of these events representing the nature and modalities of SOA4All training, and it outlines a mature generic structure of an external SOA4All tutorial.

1. Introduction

This deliverable report builds on a selection of tutorials and training activities that are related to SOA4All and that took place during the second half of the project. These activities contributed to the elaboration of training material in the form of slide sets and tools demonstrations.

This report uses the description of these activities to outline a generic SOA4All external tutorial.

1.1 Purpose and Scope

The purpose of this deliverable is to describe a complete SOA4All tutorial, based on various tutorials performed. The main aims of a prototypical SOA4All tutorial are to present i) the foundational tenets of SOA4All, ii) the main lightweight semantic technologies, iii) the tools developed in SOA4All to support semantic processing, and iv) the applications of these technologies and tools.

1.2 Deliverable relation with the use cases

The three use cases of the project provide strong scenarios that can be used as the back story of a SOA4All tutorial. Because every tutorial is tailored for its venue and audience, the organizers may choose to present one or more of the use cases, or they may build their own scenarios that are better suited for the occasion.

1.3 Structure of the document

This document first presents in Section 3 the SOA4All tutorial experiences from the second half of the project, and then in Section 4 it outlines a complete SOA4All external tutorial based on these experiences.

2. SOA4All training activities

During the second half of the project, SOA4All partners have contributed to a significant number of training activities including the full-fledged organisation of summer schools, the design and delivery of tutorials attached to conferences and in-house academic courses. The initially generated training materials have been revised and updated throughout the training events based on the current state of the project's technology.

The following subsections 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 main kinds of training activities carried out by SOA4All partners:

1. Summer schools
2. Conference tutorials and demonstrations
3. Regular curriculum courses, academic and professional

Using the well-developed set of training materials, a very successful hands-on session was carried out during the M30 project review. It started with a theoretical overview of the SOA4All technologies and tools. Based on the this introduction, the participants were asked to created semantic service descriptions by using SWEET, perform some service discovery by using iServe and finally execute a service in SPICES, all using the semantic description which they created themselves. This training session was very well accepted.

In addition, some of the already available web-casts (Deliverable D13.3.2) were presented as an illustration of the overall concept of providing training materials based on a predefined set of modules.

2.1 Summer Schools

The current results of the project have been presented at three major summer schools:

- 2010 SSAIE Summer School
- 1st Karlsruhe Summer School on Service Research
- IEEE 2010 Summer School on Semantic Computing

2.1.1 The Summer School on Service and Software Architectures, Infrastructures and Engineering (SSAIE) 2010

Organized in June/July 2010 by S-CUBE, this summer school deals with material closely related to SOA4All, therefore it is natural that it not only contains a major tutorial on Linked Services, but also that SOA4All members are in the summer school's steering committee.

Tutors: Carlos Pedrinaci and Maria Maleshkova

http://www.ssaie.eu/

2.1.2 1st Karlsruhe Summer School on Service Research

Co-located with the 2nd Karlsruhe Service Summit in July 2010, this summer school included renowned international speakers, and industry excursions. At this summer school, SOA4All organized a lab on Semantic Web Services.

Tutors: Barry Norton and Maria Maleshkova

http://www.service-summer.org

2.1.3 IEEE 2010 Summer School on Semantic Computing

In this summer school in July 2010 in Berkeley, California, sponsored by the IEEE, SOA4All was a major co-organizer. As the topic of this summer school is semantic computing in general, service-oriented architectures and linked services were among the advanced topic presentations.

Tutors: John Domingue, Elena Simperl, Barry Norton

http://www.sssc2010.org/

2.2 Conference tutorials and demonstrations

SOA4All technologies were (and will be) the main topic of the following tutorials:

- Linked Open Services (LOS) tutorial at the International Semantic Web Conference (Nov 2010)

  http://www.linkedopenservices.org/

- Automating the Use of Web APIs through Lightweight Semantics tutorial at the 11th International Conference on Web Engineering, June 2011

  http://icwe2011.webengineering.org/AcceptedTutorials/

Further, SOA4All collaborated on parts of the following tutorials:

- LarKC 2nd Early Adopters Tutorial at ISWC09 (October 2009)

  http://www.larkc.eu/early-adopters/2nd-early-adopters-tutorial/

The following conferences included a SOA4All demonstration in a shared session, or even a demo stand for the duration of the event:

- Demo of SOA4All technologies at 3rd Future Internet Symposium 2010
- Demo stand at ICT 2010
- “SOA4All in Action" demonstration at the ServiceWave, FIA and FIRE 2010 joint demonstrator evening (December 2010)

2.3 Regular curriculum courses, academic and professional

The training materials of SOA4All have also been used as part of regular academic and professional courses:

- Universidad Politécnica de Madrid Summer Course: Linked Data: opportunity or risk?
- Semantic Technologies course at AIFB, KIT
- Semsphere Semantic Technologies Professional course (in collaboration with SOA4All)

3. Outline of SOA4All External 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 in the early stages of the project, but it was elaborated during each subsequent event. Here, we outline a prototypical tutorial that can be readily built from the available materials.

3.1 Tutorial title

Lightweight Semantic Annotations for Linked Services

3.2 Outline

Every tutorial is tailored for its particular venue and audience. To illustrate, let us analyze two concrete events where SOA4All technologies are presented: the IEEE Semantic Computing summer school, and the SOA4All tutorial at ICWE 2011.

At a Semantic Computing summer school, the SOA4All sessions will want to introduce the key principles of the Service Web, while they do not need to spend time on semantics and linked data (which would be covered earlier in the summer school), and they also cannot go deeper into topics such as service composition which would require too much time for the scope of the event.

On the other hand, a tutorial at a Web engineering conference must introduce semantics, SOA, and it should contain a hands-on session with the basic tools, but it can likely skip the WSDL-oriented half of Web services, including the tool SOWER.

Therefore, the outline of the SOA4All external tutorial is itemized below as a set of modules that can, to a large degree, be mixed and matched as appropriate:

- Semantics, Linked Data
- SOA and Web services
- Principles of the Service Web
- Semantic Web Services
- Lightweight annotations for services: WSMO-Lite & MicroWSMO, SWEET and SOWER
- iServe semantic service registry
- Service composition with lightweight semantics
- Hands-on Sessions / Demonstrations of the tools: SWEET, SOWER, iServe, SPICES, Composer and Monitoring

The three project use cases: Business Process Management, Offers4All, and eCommerce, can be used where appropriate to provide the example scenario, both for the presentations and for the hands-on sessions.

3.3 Materials

3.3.1 Slide set

There is a slide set of more than 140 slides in size that can be adapted or tailored to suit particular needs. This slide set undergoes constant evolution and updating based on feedback from every event.

3.3.2 Hands-on

The hands-on sessions use the SOA4All Studio, whose Dashboard makes it easy to transition from one tool to another, as appropriate in the scenario sequence of the tutorial.

3.3.3 Demonstration

For non-hands-on demonstration, especially of a shorter format, Deliverable D13.3.2 provides a comprehensive set of videos that explain the background and technologies of the project, and that show the key features of the tools and use cases.

3.4 Duration

The typical duration for a SOA4All tutorial would be a half-day event. It may be shorter where only a high-level overview and demonstration is required.

On the other hand, a comprehensive tutorial that explains all the modules in some depth would likely fill more than a day. For example, the 2009 Winter Retreat in Innsbruck was based primarily on SOA4All technologies and it spanned a whole week.

3.5 Tutors

The typical half-day tutorial appears to be suitable for a single tutor, although multiple tutors with diverse experise may be preferable, especially for the longer variants of the tutorial.

4. Conclusions

In this report, we have summarized the training activities related to SOA4All during the second half of the project. We have also given an outline of an established prototypical external tutorial. Materials are available in the form of slide sets, software and demonstration movies. These materials have already been used in numerous events and have evolved into a mature version of the tutorial.