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Management Summary

This report summarizes the efforts on dissemination of network results and collaboration with ICT SSAI&E (Software and Service Architectures, Infrastructures, and Engineering) projects for the first 12 months of the network. It reports on how foreground project results have been disseminated and used, and summarizes the specific activities that have been performed jointly with other projects and ICT SSAI&E Projects.

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City University London	U.K.
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The French National Institute for Research in Computer Science and Control	France
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Published S-CUBE documents

The documents are all available from the project website located at http://www.s-cube-network.eu/

Table of Contents

List of acronyms

CWG   Collaboration Working Group
NESSI   Networked European Software & Services Initiative
SSAI&E   Software and Service Architectures, Infrastructures, and Engineering

1   Introduction

The community outreach workpackage focuses on the spread of research outcomes, innovation and knowledge orientation across the wider scientific community, special subsections of the industry, and user communities, and consider opportunities of applying S-Cube to novel or emerging application fields. To spread S-Cube results to the wider community, beneficiaries have circulated initial research outcomes in working paper series, presented papers at international workshops, seminars, and international conferences thereby receiving valuable feedback on their research work. They published joint papers in leading journals as well as to circulated workpackage results among the wider academic community. Some of the above actions were used for external dissemination and communication using the S-Cube Web-portal. The beneficiaries also involved in many SSAI&E (Software and Service Architectures, Infrastructures, and Engineering) Collaboration Working Groups (CWGs) and to leverage the spread of excellence through the activities of these groups.

This deliverable reports the work performed on dissemination of network results, including collaboration with ICT SSAI&E Projects for the first 12 months of the project. It is also a follow-up deliverable (of CD-SoE-1.2.2: Collaboration Plan for Joint Activities with ICT SSAI&E Projects) and will be prepared at the end of each reporting period (i.e., after each 12 months after the start of the NoE).

This deliverable only discusses the specific collaboration activities that are performed to foster community outreach. Other S-Cube dissemination and collaboration work packages and tasks (such as WP-IA-2.2 "Alignment with European Industry Practices", WP-IA.1.2 "Pan-European Distributed Service Laboratory", and WP-SoE-1.1 "Virtual Campus") cover the individual activities of S-Cube with respect to dissemination, plans for reaching out to other communities and spread of excellence activities and are reported in relevant deliverables.

This deliverable is organized as follows. In Section 2, we will describe the S-Cube's involvement in international conferences, workshops and other events. Section 3 outlines the upcoming book series; Section 4 summarises joint publications, presentations and invited talks; and Section 5 then outlines the S-Cube web portal as an instrument for dissemination and outreach. Section 6 will present the actions based on the areas of collaboration for S-Cube in relation with the SSAI&E collaboration groups that were inaugurated during the European launch event (in 31 March - 2 April 2008). The sections that follow will discuss the specifics of the areas of collaboration, including collaboration through partner involvement in other EU projects, and cooperation with NESSI.

2   Organizing and Participating in Conferences, Workshops and Other Events

Conferences and workshops are one of the key instruments that would enable knowledge to be spread to the wider community. S-Cube co-organized and participated a series of such dissemination events.

2.1   ICSOC

S-Cube is strongly committed to the organization of the premier scientific conference in the field of software service, the International Conference on Service Oriented Computing (ICSOC). Not only researchers from the network are involved in the program committee, but also, some of them take part in its steering committee and organizational board. The Sixth International Conference on Service-Oriented Computing was held in Sydney, Australia, University of Technology in December 1-5, 2008.

ICSOC'08 builds on the success of previous conferences in this series, establishing bridges between established and new service research and applications communities and fostering cross-community

scientific excellence. 2008's themes are focusing on building bridges with the business community because of its ongoing contribution to the emerging field of Services Science. ICSOC'08 acted in close collaboration with NESSI, ACM and the D3-unit on Software and Service Architecture and Infrastructures.

2.2   ServiceWave

The ServiceWave conference series aims to establish the premier European forum for researchers, educators and industrial practitioners to present and discuss the most recent innovations, trends, experiences and concerns in Software Services (or the "Future of the Internet of Services") and related underlying network technologies.

ServiceWave fosters the creation of cross-community scientific excellence by gathering industrial and academic experts from various disciplines such as business process management, distributed systems, computer networks, wireless and mobile communication networks, grid computing, networking, service science and software engineering.

The inaugural ServiceWave conference was held immediately after the Future Internet Assembly event organised by the European Commission and hosted by UPM on the 9th and morning of the 10th December 2008.

The conference was organised by NESSI and hosted in Madrid by UPM in cooperation with:

- European Technology Platforms eMobility, EPoSS, ISI and NEM
- Spanish Technology Platform INES
- Networks of Excellence CoreGrid and S-Cube
- Support actions Eiffel, 4NEM and NESSI 2010
- ICSOC, the International Conference on Service Oriented Computing

To attract a wider community of researchers and practitioners, ICSOC'09 and ServiceWave 2009 will be co-located in Stockholm, Sweden in November 2009 with the theme 'Internet of Services'.

2.3   Specialised (Thematic) Workshops and Seminars

S-Cube beneficiaries were also involved in the organization of specialised (thematic) workshops targeting particular communities, which were held in conjunction with well-known international conferences.

During the 16th IEEE International Requirements Engineering Conference held in Barcelona, Spain in Sept. 8-12, 2008, S-Cube participated in the organization of International Workshop on Service-Oriented Computing Consequences for Engineering Requirements (SOCCER'08). The objective of the workshop was to host significant and high-quality contributions in all topics related to requirements engineering for service-oriented software, with the goal of letting participants gain insights into the current state of the art and future challenges, create synergies through integration, and foster cross-cooperation. The workshop featured eight paper presentations and a keynote.

During the ServiceWave 2008 conference, S-Cube members have organized the first Workshop on Monitoring, Adaptation and Beyond (MONA+). The workshop aims at bringing together researchers and practitioners from different disciplines with varying research background, with the goal of trying to understand and establish the shared knowledge-base necessary for developing comprehensive approaches for SBA monitoring and adaptation. The workshop featured five paper presentations and an invited talk. Around 20 people have attended MONA+ on Saturday, December 14, 2008 in Madrid Spain.

The 5th SPLiT workshop (SPLiT 2008), which took place in conjunction with the 12th International Software Product Line Conference (SPLC 2008, Sept. 8-12, Limerick, Ireland), addressed open challenges of testing in a product line setting. S-Cube partners were members of the SPLiT organizing

and programme committee. In addition to previous SPLIT workshops, SPLiT 2008 sought contributions, which discuss how we can exploit knowledge from service-based systems engineering (including Grid, SOC and BPM) and how service-based systems engineering can benefit from product line testing solutions.

In addition, a research seminar on service engineering was organized at Dagstuhl, from January 4-7 2009, Saarland, Germany. This seminar was co-organized by S-Cube members; F. Leymann (USTUTT) and W-J van den Heuvel (Tilburg), and an external researcher from IBM Research (Olaf Zimmermann). The seminar aimed to assess existing methods, techniques, heuristics, and practices from related fields such as requirements engineering, software engineering, object-oriented analysis and design, component-based development, and method engineering to harness service oriented architecture methods and tools, and define a road map for the creation of a unified software service engineering method. The next seminar (on Service Networks) to be held in July 2010 will aim to discuss at software service systems both from the service economics and the service computing communities points of view. S-Cube member Christos Nikolaou will be in the organizing committee.

Principles of Engineering Service Oriented Systems (PESOS) workshop will be held in conjunction with the 31st International Conference on Software Engineering (ICSE 2009) in Vancouver, Canada in May 16-24, and will be chaired by S-Cube members. The PESOS workshop is intended to provide a forum for presentation and discussion of a wide range of topics related to the new paradigm of service centric software engineering. It will bring together researchers as well as practitioners working in the areas of software system engineering and service-oriented computing to discuss future challenges, recent developments, applications, methods, techniques, experience reports, and tools to support the engineering and use of service centric systems.

Lastly, S-Cube has also organized an international summer school and training workshops on Service Science Management and Engineering (SSME). Section 6.6.1 gives more details about this series of events.

2.4   *Collaboration Meeting for FP-6 and FP-7 projects*

The Conference on the Future of the Internet, which was held prior to the Collaboration Meeting for FP-6 and FP-7 projects, had the objective of understanding what is being researched in the EU and worldwide in the area of the Future Internet and shedding light onto the areas that have to be researched on. It was hosted by the Slovenian Government in Bled, Slovenia in 31 March – 2 April 2008. The Conference and the associated technical workshop aimed at initiating the planning for a coherent approach to the Future of the Internet. Representatives from over 80 projects have attended the event, including representatives of S-Cube, which were representing the "Internet of Services" domain. During the conference, the participants to the 'Services session' organised by the D3-unit on Software and Service Architecture and Infrastructures, identified three important cross-cutting topics. These cross-cutting topics were:

- Architectures and Infrastructures of the Future Internet

- Trust at Scale and Granularity

- Management and Governance of the Future Internet

The European Commission, DG Information Society, "Software and Service Architectures and Infrastructures" Unit organised together with the projects IRMOS and SLA@SOI the Internet of Services Concertation meeting in Brussels, Sept. 22-23, 2008, for FP6 and FP7 projects in the area of Software & Services, Grid and Software and Service Architectures and Infrastructures. The key objective of the meeting was to raise the impact of the results of individual projects through networking, sharing experiences and participation to collaboration activities. Each collaboration working group organised a half-day session to progress their activities.

The plenary sessions at the Internet of Services Collaboration event in Brussels hosted three panels on the above topics (indentified in the Future of the Internet conference) with stakeholders from the different domains. S-Cube participated in organizing a panel on the 'Architectures and Infrastructures of the Future Internet', which was moderated by Mike Papazoglou. Contributions were gathered from stakeholders from various domains, including Networking, Services, Security, Broadcasting, and Internet of Things.

In addition to the panel, S-Cube members actively participated in the Internet of Services Collaboration event in Brussels. Briefly:

- Schahram Dustdar organized and moderated the "Service Engineering" session.

- Elisabetta di Nitto organized and moderated the 'Use Cases' session (refer to Section 6.4 - Collection of Use Cases for details)

- Christos Nikolaou organized and moderated the "Summer Schools" session (refer to Section 6.6.1 - Summer Schools and Training for details)

- Klaus Pohl presented S-Cube's vision on service architectures during the "Service Architectures" session.

- Willem-Jan van den Heuvel presented Springer's upcoming book series with Mike Papazoglou as one of the editors in charge.

2.5   *Workprogramme 2009/10*

The European Commission encouraged the scientific and industry communities to contribute to the preparation of the Software and Services priorities for the work programme for 2009-2010 in the 7th Framework Programme. In fact, ICT Work Programme for 2009-10 that resulted from this interaction between the EC and the research community is currently publically available[1]. In the area of Software and Services, a consultation committee was established and multiple inputs from individuals, projects, expert groups, etc., were received. These documents were taken into account for the preparation of the Work Programme.

S-Cube participated through its network manager and scientific director in a series of meetings with other experts and EU officials who all contributed and edited a research document on future service research paper entitled "Longer term research challenges in Software and Services".

These activities are expected to continue in 2009.

3   **Books and Book Series**

Currently, dissemination efforts throughout SSAI&E activities are highly dispersed and diffused. Typically, projects publish their research output using their own communicational channels, resulting in undesirable fragmentation of the research community. What is urgently needed is a shared dissemination outlet through which EU FP-7 projects and networks can spread excellence.

We organized discussions with the executive editor of Springer-Verlag and the publisher officially accepted to launch a book series and a book on Services. This book series will serve as the central home for publishing project results on software services. The dedicated book series will be published in April 2009 under the banner 'Services Science'. It will be under the Lecture Notes on Computer Science series and will have Mike Papazoglou (S-Cube Scientific Coordinator) as one of the editors in charge. The series will have its own cover and ISSN so that institutes can subscribe separately if interested. Together with the proceedings of new conference & workshops, existing established

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[1] *http://cordis.europa.eu/fp7/ict/programme/home_en.html*

conference & workshop proceedings will be published under the new series. The series has an international editorial board comprising well-known researchers in the field of services.

S-Cube specific book under this series will capture all state-of-the-art reports in S-Cube research activities.

4 Joint Publications, Presentations and Invited Talks

S-Cube project members are encouraged to publish articles for journals, special journal issues, international conferences and workshops on services-related topics. During the first 12 months of the project, the participants published 24 joint papers in highly respected journals, conferences and workshops. The list of joint publications is given in Appendix A. Project members also communicated project results though presentations and invited talks in conferences, workshops, panels and meetings. Appendix B provides the list of presentations given by project members during this period.

5 S-Cube Web Portal and Newsletter

The S-Cube web portal is one of the key instruments for external dissemination and communication to spread network knowledge to wider community. It provides an efficient and controlled mechanism to distribute electronically the information and to communicate over the Web with interested persons or institutions outside the consortium as well as with beneficiaries inside the NoE.

The portal is accessible at the following URL: http://www.s-cube-network.eu/. The portal is a web site that publishes foreground produced by the S-Cube members, provides access to news and events about the network, and publishes further information about the S-Cube consortium as well as the activities jointly carried out in the network. In addition to the public pages of the Portal, the S-Cube Web Portal provides a restricted working area, which is accessible to the S-Cube researchers only.

The web portal has been visited over 11,000 times by approx. 5.800 unique visitors in the period from 24.02.2008 to 23.02.2009. S-Cube's Google page rank is 6 (of 10) as of February 23, 2009. In addition, 145 users (including members) have registered for the S-Cube Web Portal.

6 Collaboration with ICT SSAI&E Projects

The overarching aim of the collaborative working groups is to accommodate collaboration between projects and leverage knowledge sharing and joint learning, apply each other's (intermediate) research results, and increase awareness of novel developments beyond projects to harmonize and adjust their goals accordingly.

6.1 Areas of Collaboration

In deliverable CD-SoE-1.2.2, we defined the areas of collaboration in line with the SSAI&E CWGs, in order to ensure that our activities can be aligned with the other projects in the FP7 Call 1 activities. In particular, these CWGs can work on a topic of interest that results into increased understanding and sharing of project results, including new knowledge and experimental toolsets, leveraging the impact of participating projects on the services science research community. Relevant collaboration areas included:

1. Service Architectures,
2. Service Engineering,
3. Collecting of Use Cases,

4. Software and knowledge Repositories,

5. Joint Dissemination Activities, and

6. Participation in Standardization activities.

The following sections outline our contribution to each CWG.

6.2   Service Architectures

For joint activities with ICT SSAI&E projects on the topic of Service Architectures, S-Cube has been coordinating and contributing to the SSAI&E Collaboration Working Group (CWG) on Service Architectures, and contributing to NEXOF-RA by means of the Open Architecture Specification Process.

Key S-Cube and NEXOF-RA collaboration activities consist of clustering/ concertation meetings that have a major impact on creating links between projects and projects participants. In this context, both, Stefano De Panfilis (coordinator of NEXOF-RA) and Klaus Pohl (network coordinator of S-Cube) jointly coordinate and contribute to the SSAI&E (Software and Service Architectures and Infrastructures) Collaboration Working Group on "Service Architectures", thereby strengthening the links between S-Cube and NEXOF-RA on what concerns the technologies for service-based systems.

In this context, S-Cube and NEXOF-RA have taken advantage of several concertation meetings collocated in related events in order to display what the SSA&I consists of, main objectives, plans and activities to be carried out. During the first year of the NEXOF-RA project, the SSAI&E Collaboration working group has been represented in the events listed below:

- One concertation meeting hosted by the European Commission, DG Information Society, SSA&I Unit, aimed at preparing the Work Programme 2009-10 and to launch the FP7 projects. As a result of the concertation meeting, the SSAI&E working group has been set up in March '08.

- S-cube has presented – in collaboration with NEXOF-RA – the main objectives for the "Service Architectures" Collaboration WG. The plans have been presented and discussed in dedicated sessions at the concertation meeting, which have taken place in September '08.

- Joint Organization between NEXOF-RA and S-Cube of one Collaboration Working Group meeting co-located with the Future Internet Assembly, co-located at the Service Wave 2008 conference.

A further collaboration between S-Cube and NEXOF-RA has been established and maintained to organize the scientific track of the Service Wave 2008 in December '08 (Section 2.2)

Further, several people from S-Cube member organizations have participated in the Open Construction Cycle and there exist plans that further contributions will be provided in the future.

There has been a strong bond and alignment between S-Cube and NEXOF-RA by means of the S-Cube Industrial Advisory Board. Key people from NEXOF-RA, namely, Stefano De Panfilis (Chair of the NESSI SRA Committee and coordinator of NEXOF-RA), Pascal Bisson (Member NESSI SRA Committee and NEXOF-RA member), Frederic Gittler (Vice-Chair NESSI Steering Committee and NEXOF-RA Chief Architect), Franz Kudorfer (Chair of NESSI Standardisation committee and NEXOF-RA member), are members of the S-Cube IAB, thereby providing guidance to the S-Cube project with respect to industry relevance and alignment.

6.3   Service Engineering

The Service Engineering CWG is coordinated by Schahram Dustdar (coordinator of the NESSI-project COMPAS and participant in S-Cube). The objective of this CWG is to enable the development of a joint research agenda for the area of Service Engineering.

In the first meeting in Brussels (March 4-5, 2008) several projects and people mentioned their interest in participating in this working group. An invitation was sent out to representatives from the following projects: DiVA, SHAPE, PERSIST, ROMULUS, SCUBE, SeCSE, COMPAS, MOST and DEPLOY. The first meeting took place in August 29, 2008 in Vienna.

In the first meeting the working group participants identified the following research challenges:
1. Specification of Services
2. Engineering of Service Compositions
3. Service Engineering Methodology
   a. Relationship to Software Engineering Methodology
   b. Relationship to Business Process Modelling techniques
   c. Relationship to Ontology-driven techniques
   d. Model-driven approaches
   e. Mashup-approaches
4. Autonomic Adaptation - Service Engineering Techniques
   a. Engineering of Self-* properties
5. Service Testing and Simulation
6. Service Governance Techniques
   a. Management and Monitoring techniques for services
   b. Service Evolution and Versioning
7. Engineering techniques for Human provided Services

These research challenges will provide the basic structure for a future book mentioned in Section 3. The book will revolve around a case study, which will be the basis of all chapters discussing novel research contributions. Therefore, the plan is that the book is not merely an aggregation of project outcomes, but that it will integrate and align them according to the shared case study. This will make it easier for the reader to fully grasp the research contributions as well as make it easier to follow the current state of the art.

A first discussion of the structure, topics and planned contribution was presented in Sept. 22-23, 2008 in Brussels at the SSAI&E event. The contributions of this CWG will be used by NEXOF-RA.

6.4   Collection of Use Cases

The Collecting Use Cases CWG is coordinated by Elisabetta Di Nitto and Carlo Ghezzi (leading IA-2.2 workpackage "Alignment with European Industry Practices" within S-Cube). The objective of this CWG is to enable the creation of a repository of use cases that could be used as a reference by the various projects in the area. The information about use cases will be enriched overtime with pointers to the specific solutions for these cases, including their evaluation in realistic contexts.

S-Cube members continued the interaction with industry within WP-IA-2.2 and chaired the meeting of the collecting use cases working group that was held in Internet of Services Collaboration meeting for FP6 & FP7 projects in Sept. 22-23, 2008 in Brussels.

According to the plan, a survey was conducted among companies to identify those that could be willing to share case studies that are at the same time interesting for S-CUBE. A proper use case description method was identified that will be used to have use cases all described in a uniform way. Collection of use cases and related information is currently ongoing.

6.5   Repository

There is a desire to build a Repository of Open Source Software reference implementations for software emanating from the Information Society and Media - Software & Service Architectures and Infrastructures (ISM-D3) Projects. This will maximise the impact of the projects by focusing on innovative research rather than repetitive software development. The Repository could also become a key component for dissemination and exploitation within a future technology platform such as NESSI.

The Collaboration Task was re-launched at the 2007 Concertation Meeting. The BEinGRID project, currently leading the task, is making available Gridipedia, its project repository for contributions from other projects; currently from NESSI's NEXOF-RA and S-Cube.

The S-Cube Convergence Knowledge Model (KM) aims to become a free, open-content "living" encyclopedia that will collect, cross-correlate, and summarize services-related terminology and knowledge. The next version (v2) of S-Cube Convergence KM, which has been enriched in terms of size and content, is currently in process.

Aligning the work on S-Cube Knowledge Model with the NEXOF-RA repository and Gridipedia will help achieve a common view of architectural issues. The first teleconference to discuss this idea of a federated, cross-linked knowledge model across these projects and S-Cube was held in July 25, 2008. On the basis of this kick-off telecon, a number of telephone meetings have been organized to exchange ideas on the high-level integration backbone architecture. In the meanwhile, Gridipedia and S-CUBE reached an agreement for terms to be used on the S-CUBE Knowledge Map, in exchange for references to Gridipedia. The terms have been taken from Gridipedia GridDic[2], the Grid computing Glossary. In order to represent the repositories in more detail, short descriptions of the respective repositories were circulated in the Repository Collaboration Task (CT4) mailing list.

As an important step, S-Cube participated in the Concertation Meeting in Sept. 22-23, 2008 presenting and discussing the integration of the knowledge models along three SSAI&E projects, viz. NESSI, BEinGRID. It was clarified that these Project Repositories (from S-Cube, BEinGRID, and NEXOF-RA) are complementary in nature for the role of the standard FP7 repository. As an important future step, it was agreed that the necessity and feasibility of an evaluation and possible redefinition of the goals set by the CT towards producing a unified repository should be investigated and discussed in upcoming collaboration meetings and in CT4 mailing list. In addition, ideas including the technologies that might make sustainability easier will also be discussed.

6.6   Joint Dissemination

The Joint Dissemination CWG is coordinated by Christos Nikolaou (S-Cube member and WP leader of Community Outreach), and addresses two powerful joint dissemination instruments; viz. books and other publishable material, and summer schools and training. Section 3 gave the details of the upcoming book series on Services Science to be published by Springer-Verlag. The next section highlights the works done on summer schools and joint training activities.

6.6.1   Summer Schools and Training

Summer schools and training activities constitute an important means to spread excellence across the scientific and other communities. As a foundational step, we have taken stock of joint educational themes and expertise. The outcome of this process was presented in Deliverable CD-SoE-1.2.2 (Collaboration Plan for Joint Activities with ICT SSAI&E Projects).

The first subsection below lists the partners from the SSAI&E initiatives that are involved in this activity. The remaining subsections present the joint activities performed for the organization of the summer school program.

6.6.1.1 Involvement of FP6 and FP7 projects

The SSAI&E representatives of FP6 and FP7 projects that participate in this CWG are listed in the following table:

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[2] http://www.gridipedia.eu/grid-computing-glossary.html

Project Name	Main Contact	e-mail	Training Contact	e-mail
NEXOF	Stefano de Panfilis	stefano.depanfilis@eng.it		
DEPLOY	Alexander Romanovsky	alexander.romanovsky@ncl.ac.uk	Jean-Raymond Abrial	jabrial@inf.ethz.ch
SOA4ALL	Carlos Pedrinaci	c.pedrinaci@open.ac.uk	Carlos Pedrinaci	c.pedrinaci@open.ac.uk
CoreGrid	Rosa Badia	rosa.m.badia@bsc.es	Rosa Badia	rosa.m.badia@bsc.es
S-Cube	Klaus Pohl	Klaus.Pohl@sse.uni-due.de	Christos Nikolaou	nikolau@tsl.gr
COMPAS	Shahram Dustdar	dustdar@infosys.tuwien.ac.at	Shahram Dustdar	dustdar@infosys.tuwien.ac.at
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RESERVOIR	Eliot Salant	SALANT@il.ibm.com	Philippe Massonet	phm@cetic.be
PERSIST	Kevin Doolin	kdoolin@tssg.org	John Whitmore	john.whitmore@lakecommunications.com
SERVFACE	Steffen Goebel	steffen.goebel@sap.com	Steffen Goebel	steffen.goebel@sap.com
PROTEST	John Derrick	J.Derrick@dcs.shef.ac.uk	Francesco Cesarini	francesco@erlang-consulting.com
DIVA	Geir Horn	Geir.Horn@sintef.no	Ruzanna Chitchyan	r.chitchyan@lancaster.ac.uk
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IRMOS	Eddie Townsend	eddie_townsend@xyratex.com	George Kousiouris	gkousiou@telecom.ntua.gr
OPEN	Fabio Paternò	fabio.paterno@isti.cnr.it	Fabio Paternò	fabio.paterno@isti.cnr.it

6.6.1.2 The S-Cube Summer School

S-Cube has organized a summer school and training workshop of an international and interdisciplinary character that helped forge a new research and scientific community on Service Science Management and Engineering (SSME).

The first workshop in the series was held in Crete, during the last week of May 2007 (from May 30 to June 3). The topic of this first workshop was: "The Business Process in the Service Science". The second workshop was held in Palermo, Italy (June 2-6, 2008) with 40 participants to facilitate exchange of ideas and help researchers, both senior and young researchers and graduate students from around the world, to understand each other's work, network and start new cooperative research projects. The topic was 'Perspectives on Services'. Funding for the summer school participants was provided by the S-Cube Network of Excellence, while Engineering Ingegneria Informatica and IBM generously supported the event by covering meeting room expenses and lunches.

The third workshop and summer school[3] will be held in Crete, Greece (June 16-19, 2009). It is widened in scope and themes to address educational requirements of other FP7 SSAI&E related projects. Time and location was chosen carefully by a local organization committee to attract high profile instructors and maximize attendance.

6.6.1.3 Joint Training Initiatives

The role of the activity "Organization of Joint Training Initiatives" is to define an action plan for the working group in order to co-ordinate the different training activities organized by the different partners that are involved. In the Internet of Services Collaboration event in Brussels, Sept. 22-23, 2008, Christos Nikolaou organized and moderated the "Summer Schools" session for the "Training and Summer School Collaboration Working Group (CWG)" to communicate and serve the following objectives:

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[3] http://www.ssme2009.tsl.gr/

- Define common areas of technical interest among all projects in SSAI&E.

- Identify the best lecturers for these technical areas who can train graduate students and young researchers and professionals.

- Establish a Europe-wide self-sustainable Center for Training on SSAI&E.

The group discussed the objectives, the work that has been done, the strategy and plan for achieving these objectives. The session also contributed to the stack of joint educational themes and expertise.

6.7   *Standardization Activities*

S-Cube partners are currently involved in several standardization bodies like OASIS, W3C, OMG, NIST, ISO, GGF/OGF. However, S-Cube is not going to pursue its own standardization initiatives but rather collaborate with NESSI to achieve this purpose. More specifically, work on standardization as already stated in the DoW document, will be performed through the European Technology Platform NESSI. This implies that S-Cube partners who are involved in standardization efforts will closely work together and align their activities with the industrial members of NESSI.

During current reporting period, S-Cube partners did not initiate any particular standardization activity regarding S-Cube results.

The standardization efforts of S-Cube are also reported in task T-IA-2.2.3 (Alignment with Industrial Research Agendas) of workpackage WP-IA-2.2 (Alignment with European Industry Practices). This task is supported by the Standardization Chair of the ETP NESSI as member of the S-Cube Industrial Advisory Board (IAB).

Appendix A   List of Joint Publications

Reference	Partners involved (Short name)
M. P. Papazoglou, F. Leymann "Business Process Management" *Encyclopedia of Software Engineering*, in P. Laplante (ed), Taylor & Francis LLC Encyclopedia Program, New York, U.S.A, forthcoming 2008.	Tilburg, USTUTT
S. Dustdar, M. P. Papazoglou "Services and Service Composition: An Introduction" *Information Technology*, vol. 50, issue 2, 2008.	TUW, Tilburg
V. Andrikopulos, S. Benbernou, M. P. Papazoglou "Managing the Evolution of Service Specifications" *Procs. Advanced Information Systems Engineering Conf.: CAISE 2008*, Springer- Verlag, Lecture Notes in Computer Science, Montpellier, France, June 2008.	UCBL, Tilburg
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R. Mietzner, F. Leymann, M. P. Papazoglou "Defining Composite Configurable SaaS Application Packages Using SCA, Variability Descriptors and SaaS Multi-Tenancy Patterns", 3rd Int'l Conference on Internet and Web Applications and Services: *ICIW 2008*, June, 2008 - Athens, Greece.	Tilburg, USTUTT
M. Comuzzi, K. Kritikos, P. Plebani. Semantic-aware Service Quality Negotiation. In *ServiceWave* 2008, 10-13 December 2008.	POLIMI, UOC, City
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E. Di Nitto, C. Ghezzi, A. Metzger, M. Papazoglou, K. Pohl. A journey to highly dynamic, self-adaptive service-based applications. *Automated Software Engineering Journal*, Numbers 3-4, December, 2008, ISSN: 0928-8910 pp. 313-341.	POLIMI, UniDue, Tilburg
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M. Baazizi, S. Sebahi, M.S. Hacid, S. Benbernou, M.P. Papazoglou: Monitoring Web Services: A Database Approach. ServiceWave 2008, Springer Verlag, *Lecture Notes in Computer Science*, Volume 5377, ISBN-10 3-540-89896-4, December 2008.	UCBL, Tilburg

C. Cappiello, K. Kritikos, A. Metzger, M. Parkin, B. Pernici, P. Plebani, M. Treiber: A Quality Model for Service Monitoring and Adaptation. *Workshop on Monitoring, Adaptation and Beyond* (MONA+, ServiceWave 2008).	POLIMI, UniDue, TUW, Tilburg.
M. Caeiro, Zs. Németh and T. Priol: A Chemical Workflow Engine to Support Scientific Workflows with Dynamicity Support. *3rd Workshop on Workflows in Support of Large-Scale Science*, in conjunction with SC 2008, Austin, TX, November, 2008	SZTAKI, INRIA
M. Comuzzi, K. Kritikos, P. Plebani, Semantic-aware Service Quality Negotiation, in Proc. of First European Conference, ServiceWave 2008, *Lecture Notes in Computer Science*, Volume 5377, ISBN-10 3-540-89896-4, December 2008.	POLIMI, UOC
M. Bitsaki, O. Danylevych, W.J. van den Heuvel, G.D. Koutras, F. Leymann, M. Mancioppi, C. Nikolaou, M.P. Papazoglou: Model Transformations to Leverage Service Networks. *WESOA2008*	USTUTT, Tilburg, UOC
B. Wetzstein, O. Danylevych, F. Leymann, M. Bitsaki, C. Nikolaou, W.J. van den Heuvel, M.P. Papazoglou: Towards Monitoring of KPIs Across Partners in Service Networks. *MONA+. ServiceWave 2008*	USTUTT, Tilburg, UOC
A. Gehlert, J. Hielscher, O. Danylevych, D. Karastoyanova: "Online Testing, Requirements Engineering and Service Faults as Drivers for Adapting Service Compositions" *In MONA+ Service Monitoring, Adaptation and Beyond Proceedings of the International Workshop Collocated with the ServiceWave 2008 Conference*, Madrid, Spain, December 2008	USTUTT, UniDue
E. Di Nitto, D. Karastoyanova, A. Metzger, M. Parkin, M. Pistore, K. Pohl, F. Silvestri, W.J. Van den Heuvel: "S-Cube: Addressing Multidisciplinary Research Challenges for the Internet of Services", submitted to Future Internet Conference Prague 2009	Polimi, USTUTT, Tilburg, FBK, CNR, UniDue
R. Mietzner, A. Metzger, F. Leymann, K. Pohl: "Variability Modeling to Support Customization and Deployment of Multi-Tenant-Aware Software as a Service Applications", Full Paper at PESOS, ICSE 2009.Workshop, Vancouver, May, 2009	USTUTT, UniDue
M. Caeiro, Z. Nemeth, T. Priol: Execution of Scientific Workflows based on a Higher Order Chemical Language. PARA'08 9th International Workshop on State-of-the-Art in Scientific and Parallel Computing (post-conference proceedings, to appear)	INRIA, SZTAKI

Appendix B   List of Presentations and Talks

Conference / Forum	*Presenter*	*Title/Reference*
Crete, May 29th (invited talk)	WJ van den Heuvel	Services Science: Assessment, Programs and Outlook
Crete	WJ van den Heuvel	From Service Value Networks to Business Processes
Dutch National Policy Force, April 11th (invited talk + session chair)	WJ van den Heuvel	Overview of SOC and implications on Dutch Government"
ICSOFT July 2008, Porto, Portugal	M. P. Papazoglou	"What's in a Service?" Keynote address
Face to Face meeting at UoC, May'08	F. Leymann	Cloud Computing Lecture
WEBIST / ENASE	K. Pohl	S-Cube: Enabling the Next Generation of Software Services", 3rd International Working Conference on Evaluation of Novel Approaches to Software Engineering (ENASE 2008) 4-7 May, Funchal, Madeira, Portugal, 2008
MSR 2008	C. Ghezzi	C. Ghezzi, "Dynamically Evolving Software—Some Radical Changes of Perspective", Keynote at MSR 2008: 5th Working Conference on Mining Software Repositories, in conj. with ICSE 2008, 10-11 May
EU FP7 Collaboration Meeting: Internet of Services, 23 Sept	V. Andrikopoulos	SSAIE Repository Collaboration Working Group – reporting on S-Cube Knowledge Model

2008, Brussels		
University of Stuttgart	M. Bitsaki	Presentation about Service Networks
EU FP7 Collaboration Meeting: Internet of Services, 23 Sept 2008, Brussels	S. Dustdar	Chair of SSAIE Service Engineering Group
University of Singapore (2008).	M.-S. Hacid	Change Impact Management in Web Services
IEEE Services Computing Conference (SCC'08), Honolulu	P. Leitner	Leitner, P., Michlmayr, A., Rosenberg, F., Dustdar, S.: End-to-End Versioning Support for Web Services, IEEE Services Computing Conference (SCC), 2008
Summer School SSME	F. Leymann	Tutorial: "BPEL4People" at the SSME Summer School, Palermo, Italy, 2.-6.6.2008
CoreGRID Symposium, collocated with EuroPar 2008	A. Metzger	"S-Cube: Addressing Multi-disciplinary Research Challenges for Software Services" Keynote address
EU FP7 Collaboration Meeting: Internet of Services, 23 Sept 2008, Brussels	C. Nikolaou	SSAIE Group on Summer schools
Summer School SSME	M. Papazoglou	Tutorial: "Service Analysis and Design" at the SSME Summer School, Palermo, Italy, 2.-6.6.2008
EU FP7 Collaboration Meeting: Internet of Services, 22 Sept 2008, Brussels	M. Papazoglou	Panel Chair of Architectures and Infrastructures of the Future Internet panel
Future Internet Assembly - 1 April 2008 – Networks Break-Out Session	M. Pistore	Self-managing service based applications
NESSI Steering Committee Meeting	K. Pohl	Overview on S-Cube Research
EU FP7 Collaboration Meeting: Internet of Services, 22 Sept 2008, Brussels	K. Pohl	S-Cube Presentation during Service Architecture working group session
Bentley University (Boston)	WJ van den Heuvel	SOC in Education
Issues cross cutting the different objectives of Challenge 1 as identified during the EU Future Internet Assembly	M. Papazoglou	Michael Papazoglou, University of Tilburg (moderator & presenter) Panel 1: "Architecture and Infrastructure of the Future Internet"
Servicewave 2008	S. Guinea	An Integrated Approach for the Run-Time Monitoring of BPEL Orchestrations
Workshop on Monitoring, Adaptation and Beyond 2008 (MONA+)	S. Guinea	S. Guinea, "Monitoring and Adaptation in Open-world Software", Invited Keynote Speech
ServiceWave 2008	K. Kritikos	Semantic-aware Service Quality Negotiation
MONA+ Workshop	K. Kritikos	A quality model for service monitoring and adaptation
Servicewave 2008	D. Ardagna	Model Driven QoS Analyses of Composed Web Services
ServiceWave 2008	O. Danylevych	An Architecture for Managing the Lifecycle of Business Goals for Partners in a Service Network
ServiceWave 2008, MONA+	O. Danylevych	Monitoring of KPIs Across Partners in Service Networks.
EU FP7 Collaboration Meeting: Internet of Services, 22 Sept 2008, Brussels	K. Pohl	S-Cube presentation during Service Architecture working group session
SOCCER workshop @ Requirements Eng. Conf.	A. Gehlert	Paper presentation "Goal-Driven Alignment of Services and Business Requirements"
Yearly Madrid meeting on Technological Awareness	M. Carro	Informes de vigilancia tecnológica: impacto y expectativas en una PTN. II Jornada CITIC

		"Vigilancia Tecnológica en las TIC". CEIM, Madrid. 24 Nov. 2008
GALAXY Project	O. Barais	http://galaxy.gforge.inria.fr/
ServiceWave08	G. Nain	Using MDE to Build a Schizofrenic Middleware for Home/Building Automation. In In ServiceWave'08: Networked European Software \& Services Initiative
Faculty Colloquium	W. Lamersdorf	"S-Cube: Overview and Main Objectives", Faculty of Informatics and Statistics, University of Economics, Prague, Czech Republic, February 2009
9.Internationale Tagung Wirtschaftsinformatik' (WI 2009)	S. Zaplata	Zaplata, S, Bade, D, Vilenica, A: "Service-based Interactive Workflows for Mobile Environments", in Hans Robert Hansen, Dimitris Karagiannis, Hans-Georg Fill (Eds.): Proc. 'Business Services: Konzepte, Technologien, Anwendungen - 9. Internationale Tagung Wirtschaftsinformatik' (WI 2009), Österreichische Computer Gesellschaft, Wien, 2009, 631-640 pp.
ServiceWave 2008 Conference	A. Gehlert	Gehlert, A.; Heuer, A.: Towards Goal-Driven Self Optimisation of Service Based Applications. In: Mähönen, P.; Pohl, K.; Priol, T. (Eds.): Proceedings of the 1st International Conference of the Future of the Internet of Services (ServiceWave 2008), December 10–13, 2008, Madrid, Spain, p.13–24
MONA+ Workshop	A. Gehlert	Gehlert, A.; Hielscher, J.; Danylevych, O.; Karastoyanova, D.: Online Testing, Requirements Engineering and Service Faults as Drivers for Adapting Service Compositions. In: Karastoyanova, D.; Kazhamiakin, R.; Metzger, A.; Pistore, M. (Eds.): Proceedings of the International Workshop on Service Monitoring, Adaptation and Beyond (MONA+ 2008), December 13, 2008, Madrid, Spain, 2008, p. 39–50
NASSE workshop (associated to ServiceWave 2008)	M. Carro	Towards Software Service Evolution: Checking for Replaceability. M. Mancioppi, M. Carro, I. Trajkovska, W-J van den Heuvel, M.P. Papazoglou. Unpublished.
COST action IC0701 meeting on "Verification of Distributed Object-based Systems"	M. Carro	Towards Software Service Evolution: Checking for Replaceability. M. Mancioppi, M. Carro, I. Trajkovska, W-J van den Heuvel, M.P. Papazoglou. Unpublished.
ServiceWave 2008	M. Pistore	Raman Kazhamiakin, Andreas Metzger and Marco Pistore. Towards Correctness Assurance in Adaptive Service-Based Applications. In ServiceWave 2008, Nr. (5377), Springer, 10-13 December 2008
Enabling Service Business Ecosystems (EBE 2008), co-located with the 6th ICSOC, December 1-5, 2008, Sydney, Australia	M. Treiber	M. Treiber, H.-L. Truong, S. Dustdar, (2008). On Analyzing Evolutionary Changes of Web Services.