

**In conjunction with EDOC 2009**  
**(13<sup>th</sup> IEEE International Enterprise Computing Conference)**

**The First Workshop on Service oriented Enterprise Architecture for  
Enterprise Engineering**

**SoEA@EE'09**

**September 1<sup>st</sup> 2009, Auckland, New Zealand**

**Deadline for workshop paper submissions: 31 May 2009**

Services have become an impressive factor for growth and the creation of jobs. 93% of the new jobs created in the U.S. between 1970 and 2000 are jobs in services<sup>1</sup>. Leading enterprises in the U.S. derive more than 50% of their revenues from services<sup>2</sup>. This applies not only to pure services such as transportation but also for material products that are augmented by services such as maintenance, consulting and training. Through services, enterprises stabilize their revenues. There is no accepted general definition of service, but many definitions contain the idea, that a service is “the application of specialized competences (knowledge and skills) for the benefit of another entity, rather than the production of units of output”<sup>3</sup>. Services are more and more considered as part of a so-called service system. A service system is defined<sup>4</sup> “as a value co-production configuration of people, technology, other internal and external service systems, and shared information (such as language, processes, metrics, prices, policies, and laws)”.

Therefore it is no surprise that the term service has also become very popular in enterprise computing. However, the term service may have different meanings in enterprise computing. Three flavours of services can be differentiated: technology services, software-services, and business services.

1. Technology services are more hardware flavoured services which are provided using computers. They may have a human addressee but contain many infrastructure services such as providing computing power, storage etc. They are an important topic in management and practice collections such as ITILV3 or standards such as ISO/IEC 20000 have gained a high popularity.
2. Software services are managed in so-called Service-Oriented-Architectures<sup>5</sup> that are a popular paradigm for creating enterprise software. A service in the context of SOA is a special kind of interface for an encapsulated unit of software.
3. Business services are services which directly support business processes. They may be further differentiated into those visible to the customer and those that are not. Business processes can also be developed dynamically (on-the-fly) using business services which are available in a repository for a given business domain.

In the field of Information Systems and -in a broader sense- Enterprise Computing, the notion of “Enterprise modelling” refers to a collection of conceptual modelling techniques for describing different facets of the organisation including operational (IS), organisational (business processes, actors, flow of information etc), and teleological (purposes) considerations<sup>6</sup>. Existing enterprise modelling frameworks stress the necessity of representing and structuring enterprise knowledge taking into account all these facets in order to develop IS and IT architectures that enterprises need. The contribution of the software systems to the realization of the business processes and consequently to the objectives of the company is of primary importance. A change in one of these facets of the organization implies multiple impacts on the two other facets. In other words, it seems unrealistic to consider an organizational change without any impact on the information system or an evolution of the IS which does not call into question the processes or even the objectives of the organization.

An enterprise architecture<sup>7,8,9</sup> defines the interactions and articulations between business and information technology and their alignment or congruence. A service-oriented enterprise architecture uses services to describe the articulations of business and information technology. It has to identify the business services needed to support the business processes of the enterprise, and to map the business services to technology and software services as shown in the figure below. Technology and software services are both called IT services in the following.

<sup>1</sup> J. Howells, B. Tether, and C. Europea, *Innovation in Services: Issues at Stake and Trends*, Office for Official Publications of the EC, 2006.

<sup>2</sup> G. Allmendinger and R. Lombreglia, “Four strategies for the age of smart services,” *Harvard business review*, vol. 83, Oct. 2005, pp. 131-4

<sup>3</sup> R.F. Lusch, S.L. Vargo, and G. Wessels, “Toward a conceptual foundation for service science: Contributions from service-dominant logic,” *IBM Systems Journal*, vol. 47, 2008.

<sup>4</sup> Jim Spohrer, “Steps Toward a Science of Service Systems,” Jan. 2007.

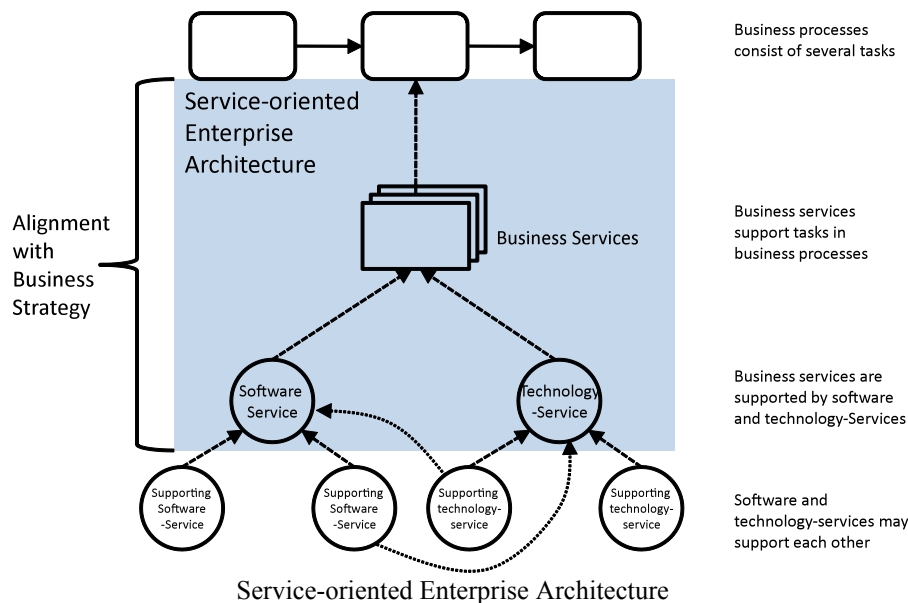
<sup>5</sup> M.P. Papazoglou and W. Heuvel, “Service oriented architectures: approaches, technologies and research issues,” *The VLDB Journal*, vol. 16, 2007.

<sup>6</sup> J. Barrios, S. Nurcan. *Model Driven Architectures for Enterprise Information Systems*. the 16th Conference on Advanced Information Systems Engineering, (CAISE'04), Springer Verlag (pub) , June 7-9, 2004, Riga, Lettonie.

<sup>7</sup> J.A. Zachman, “The Framework for Enterprise Architecture: Background, Description and Utility,” *Zachman International*, 1996.

<sup>8</sup> A. Wegmann, “The systemic enterprise architecture methodology,” at the International Conference on Enterprise Information Systems, 2003.

<sup>9</sup> J.W. Ross, P. Weill, and D.C. Robertson, “Enterprise Architecture as Strategy,” *Harvard Business School Press*. August, vol. 1, 2006.



The enterprise computing systems which shall manage Service-oriented Enterprise Architectures have to support the creation, administration and execution of services. Thus, they must be able to store the service definitions and make them available for a consumer in a service catalogue. The same applies to the so-called service-level agreements that define the quality of service agreed upon with consumers. Upon a service request from a consumer entity, the service support system has to monitor the fulfilment of the service-level agreements and also to provide remediation procedures which contain so-called escalation mechanisms. Furthermore, based on the monitoring, improvement procedures shall be established.

## Goal and Objectives

The goal of the workshop is to clarify the relationship between business process management and service provisioning. The objective of this workshop is twofold:

- (i) To characterise the strong relationship existing between Business Process Management and Service oriented Enterprise Architecture (SoEA)
- (ii) To develop concepts and methods to assist the engineering and the management of Service-Oriented Enterprise Architectures (SoEA) and their support systems;

## Topics for Discussion

During the workshop we will discuss the following topics:

### 1. Service engineering

- Do we need new paradigms to cope with service engineering?
- How are business services discovered, defined, composed, adapted?
- How are business services assigned to business processes?
- How are technology-services discovered, defined, composed, adapted?
- How are technology-services assigned to business services?
- Are there design patterns for developing service-oriented systems?
- How can the MDA/MDD techniques and methods be applied for engineering SoEA?
- Which test methods exist for technology-services?
- How are business services and technology-services rolled out?
- Which change management procedures have to be applied during the deployment of SoEA?

### 2. Service management

- Which benchmarks and key performance indicators should be applied to services?
- Which information system architectures are adequate for services?
- Which approaches exist for mastering the migration of legacy systems to SoEA?
- Which triggers exist and what mechanisms should be applied for escalation?
- Which approaches exist for the continual improvement of services?
- Which evaluation and validation techniques can be applied for SoEA?

### 3. Alignment with business strategy

- Which interdependencies exist between services and business strategy?
- Which concepts and methods are necessary to align services with the business strategy?
- Which new potentials to reengineer business processes are created by services?
- How are services aligned with compliance requirements?
- How are compliance and governance requirements enforced?

## Submission

Full papers (8-10 pages in the IEEE-CS format) describing mature results are sought. In addition, short papers (4 pages in the IEEE-CS format) may be submitted to facilitate discussion of recent research results and ongoing projects. The paper selection will be based upon the relevance of a paper to the main topics, as well as upon its quality and potential to generate relevant discussion.

All papers published in the EDOC 2009 workshop proceedings must be in the IEEE Computer Society format ([http://www.computer.org/portal/site/cscps/information\\_for\\_authors](http://www.computer.org/portal/site/cscps/information_for_authors)). It is strongly recommended that all papers are already in this format when they are first submitted to workshops. This gives precise picture of the paper length and avoids rework if the paper is accepted.

All papers will be peer reviewed based on the paper. Please submit your paper to [Selmin.Nurcan@univ-paris1.fr](mailto:Selmin.Nurcan@univ-paris1.fr)

At least one author of each accepted workshop paper will have to register for the whole EDOC 2009 conference and attend the workshop to present the paper. Analogously to previous years, there will be no workshop-only registration at EDOC 2009. If a paper is not presented in the workshop, it will be removed from the workshop proceedings published in the IEEE Xplore digital library.

## Expected results

All papers will be published in the workshop wiki before the workshop, so that everybody can learn about the problems that are important for other participants. The workshop will consist of long and short paper presentations, brainstorming sessions and discussions. A workshop report will be created collaboratively using the workshop wiki.

## Important dates

**Paper submissions deadline:** 31 May 2009

Paper acceptance notification: 12 July 2009

Camera-ready papers due: 24 July 2009

Workshop: September 1<sup>st</sup>, 2009

## Organizers

Selmin Nurcan – University Paris 1 Panthéon Sorbonne, France

Rainer Schmidt – University of Applied Sciences, Aalen, Germany

## Workshop Program Committee

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