Abstract. In the last few years both Scientists and Practitioners have been discussing the issue of Service Oriented Computing (SOC). But facing the challenge of reconciling the business process requirements and the IT landscape especially in the design time of a SOA implementation, one needs to consider both methodological and technological aspects. On the one hand, methodologies are needed for integrating the business driven view and the technology driven perspective in one consistent approach. On the other hand, semantic technologies have recently emerged as a promising approach for reducing data and process heterogeneities and automating tasks within SOA and Business Process Management. Coping with these two aspects, the proposed workshop will bring together academia and industry to discuss solutions towards bridging the gap between business requirements and IT implementations.

Workshop Motivation and Aim

In the last few years both Scientists and Practitioners have been discussing the issue of Service Oriented Architectures (SOA). Lately vendors of enterprise information systems presented first releases of their service enabled system architectures. From the business perspective the paradigm of service orientation promises more flexibility by aligning business requirements and information technology functionalities. It is widely recognized that SOC has brought BP management a step forward in respect to flexible and cost-effective implementation, especially for business processes across organization boundaries. However, many problems remain to be solved in order to achieve a feasible and realistic dynamic integration. On the one hand methodologies help to integrate the business driven view and the technology driven perspective in one consistent approach. Semantics on the other side has been emerging as a key technology for reducing data and process heterogeneities and automating some tasks within application integration processes. These two topics are combined in the SeMSoC workshop. It should cover business oriented methodological approaches as well as semantic approaches to business process management within a SOA. As many researchers in the SOA domain follow the principles of design research, the exchange between practitioners and researchers will be of mutual interest.

Description of the Workshop Topic and Focus

The proposed workshop deals with a business oriented view on semantics and methodologies in a SOA environment. Within this domain many technical as well as methodological challenges are open for research and discussion. Amongst other topics the following are to illustrate the topics of interest for the workshop.

- **SOA Modeling Methodology:**
  - SOA modeling procedure
  - Model types and their dependencies at different abstraction levels
  - Model-driven approaches
  - SOA modelling patterns
  - Integration of user interaction into existing models
  - Integrated modeling environments for modeling a SOA end to end
  - SOA Management Methodologies
Managing the different levels of abstraction within the SOA modeling procedure
Role concepts: Who does what? Modeling on diverse layers requires different roles to be integrated.
SOA Evaluation Methodologies

- **Semantics and Semantic Services for business process management (BPM)**
  - Business process (BP) design and modelling
  - BP configuration and assembly
  - BP execution and monitoring
  - BP mining and analysis
  - BP management automation
  - BPM systems architecture
  - Semantics and Semantic Services for (automated) BP engineering:
    - BP discovery
    - BP similarity and compatibility
    - BP integration (composition and mediation)
    - BP dynamic adaptation and planning
    - BP agility and extensibility
    - BP reliability and QoS
    - BP validation and verification
  - Business Cases: Real life experience in bringing SOA concepts to enterprise IT systems.

**Workshop Format**

The workshop will consider two kinds of submissions short/position papers and regular papers. The submitted papers will be limited to 6 pages for short/position papers and to 12 pages for regular papers and should be formatted in Springer's LNCS style. The workshop will be a full day workshop where up to 10 papers are expected to be accepted.

**Organizers**

Frank Leymann

- Full professor of computer science and director of the Institute of Architecture of Application Systems at the University of Stuttgart, Germany.
- Before accepting his professor position he worked for two decades for IBM Software Group building database and middleware products:
- As an IBM Distinguished Engineer and elected member of the IBM Academy of Technology he contributed to the architecture and strategy of IBM's entire middleware stack as well as IBM's On Demand Computing strategy. From 2000 on, Frank worked as co-architect of the Web Service stack.
- Co-author of many Web Service specifications, including WSFL, WS-Addressing, WS-Metadata Exchange, WS-Business Agreement, and the WS-Resource Framework set of specifications; together with Satish Thatte, he was the driving force behind BPEL4WS.

Marten Schönherr

- Phd in Computer Science
- Founder and chief scientist of the Competence Center for Enterprise Architecture (CC EA)/Faculty of Electrical Engineering and Computer Science/University of Technology Berlin/Germany
- Public and industry funded applied research in the field of Enterprise Architecture, Modelling, Enterprise Engineering and - Integration
- 8 years of Experience in industrial projects
- Entrepreneur
- Publisher of the Series "Enterprise Architecture" and many scientific publications
- University teaching position
Manfred Hauswirth

- Vice-Director of the Digital Enterprise Research Institute (DERI), Galway, Ireland
- professor at the National University of Ireland, Galway (NUIG).
- holds an M.Sc. (1994) and a Ph.D. (1999) in computer science from the Technical University of Vienna
- Before coming to DERI he was a senior researcher and research project manager at the Distributed Information Systems Laboratory of the Swiss Federal Institute of Technology in Lausanne (EPFL) and an assistant professor at the Distributed Systems Group at the TU Vienna
- His main research interests are on semantic distributed information systems and applications, including semantic web services, sensor network infrastructures, and peer-to-peer systems
- He has published a large number of papers in these domains, several book chapters on P2P data management and semantics, and has co-authored a book on distributed software architectures
- He has served in over 100 program committees of international scientific conferences and recently was local chair of WDAS2004 and program co-chair of SME05, STD3S, MCISME, and DMC2006. In 2007 he is program co-chair of the Seventh IEEE International Conference on Peer-to-Peer Computing
- He is a member of IEEE and ACM

Maximilian Ahrens

- Research scientist at Deutsche Telekom Laboratories
- Project Manager for innovation projects of Deutsche Telekom
- PhD student at the University of St. Gallen

Organization Committee

Marten Schönherr, Technical University of Berlin
Maximilian Ahrens, Deutsche Telekom Laboratories
Branimir Wetzstein, University of Stuttgart
Thorsten Scheibler, University of Stuttgart
Sami Bhiri, DERI

Program Committee

Frank Leymann (University of Stuttgart, Germany)
Walid Gaaloul (DERI, National University of Ireland Galway, Ireland)
Dimka Karastoyanova (University of Stuttgart, Germany)
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Pontus Johnson (KTH Stockholm, Sweden)
Udo Bub (Deutsche Telekom Laboratories, Germany)
Stephan Aier (Univ. St. Gallen, Switzerland)
Sami Bhiri (DERI, National University of Ireland Galway, Ireland)

Workshop Program

8:00  Conference Registration opens
8:30 – 8:40   Opening
8:40 – 9:30   Keynote
  SOA, Service-Orientation and the Mainstream SOA Methodology (MSOAM)
  Thomas Erl
9:30 – 10:00  Towards a Methodology for Semantic Business Process Modeling and
  Configuration
  Ingo Weber, Jörg Hoffmann, Jan Mendling, Jörg Nitzsche
10:00 – 10:30 Decoupling of Heterogeneous Semantic Service Annotations and their
  Semantic Models – Towards an Integrated Approach in a Multi-Service-
  Provider-Scenario
  Jannis Rake, Marten Schönherr
10:30 – 11:00 Coffee break
11:00 – 11:30 An Execution Engine for Semantic Business Processes
  Tammo van Lessen, Jörg Nitzsche, Marin Dimitrov, Mihail Konstantinov, Dimka
  Karastoyanova, Luchesar
11:30 – 12:00 Goal-Equivalent Secure Business Process Re-engineering
  Hugo Andres Lopez, Fabio Massacci, Nicola Zannone
12:00 – 12:30 Service Composition Strategies for Loosely Coupled Information Chains
  Christoph Schroth, Till Janner und Volker Hoyer
12:30 – 2:00 Lunch break
2:00 – 2:30   Deriving SOA Evaluation Metrics in an Enterprise Architecture Context
  Stephan Aier, Maximilian Ahrens, Matthias Stutz, UdoBub
2:30 – 3:00   Measuring Business Process Similarity based on Graph Transformation Cost
  Yunjiao Xue, Hamada H. Ghenniwa, Weiming Shen
3:00 – 3:30   Querying in Business Process Modeling
  Ivan Markovic, Alessandro Costa Pereira, David de Francisco, Henar Munoz
3:30 – 3:40   Closure
3:40 – 4:00   Coffee Break
4:00 – 5:30   ICSOC Tutorials
6:00 – 7:30   Welcome Reception with Drinks and Fingerfood (Festsaal, TU Vienna)