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8th International Workshop on Applications and Services in Wireless Networks

October 9th – 10th, 2008 in Kassel, Germany

Wilhelmshöher Allee 73, Entrance C, Room -1606

Programme – 1st day

Time	October 9th 2008 (Thursday)
9:00	Opening
9:30	Tutorial: "IMS vs. P2P and Web 2.0 - Understanding the Role of the IP Multimedia System (IMS) in face of a converging telco and internet service world" Prof. Dr. Ing. habil. Thomas Magedanz, FOKUS
12:30	Lunch
14:00	Keynote: "Trends and Challenges of Wireless Sensor Networks" Dr. Louis Latour, European Microsoft Innovation Center (EMIC)
14:30	Session on Wireless (Sensor) Networks Session Chair: Dr. Louis Latour "Collaborative Transmission in WSNs by a 1+1-EA" (Stephan Sigg, TU Braunschweig) "USEME: A Service-oriented Framework for Wireless Sensor and Actor Networks" (Eduardo Cañete Carmona, University of Málaga)
15:30	Coffee Break
16:00	Session on Authentication, Trust, and Security Session Chair: Martti Mäntylä (tbc) "Combining Passive Autoconfiguration and Anomaly-based Intrusion Detection in Ad-hoc Networks" (Lars Völker, Universität Karlsruhe (TH)) "Tandem smart cards : enforcing trust for TLS-based network services" (Prof. Pascal Urien, Telecom ParisTech)
17:00	Closing
18:00	Social Event

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Programme – 2nd day

Time	October 10th 2008 (Friday)
9:00	Opening
9:30	Keynote: "The OtaSizzle Project: Large-Scale Service Experimentation Testbed" Prof. Dr. Sc. Martti Mäntylä, Helsinki University of Technology
10:00	Session on Services Session Chair: Dr. Olaf Drögehorn "A P2P-based Middleware for Wide-area Service Discovery" Dr. Wassef Louati, TELECOM & Management SudParis
10:30	Coffee Break
11:00	"Adaptive Services in a Distributed Environment" Nermin Brgulja, University of Kassel "Delivering RSS-feeds over SIP" Johannes Jari Korpela, University of Helsinki
12:00	Lunch
13:30	Session on Context Awareness Session Chair: Dr. Stephan Sigg "Dynamic Context Monitoring Service for Adaptive and Context-Aware Applications" Antti Juhani Laitakari, VTT - Technical Research Center of Finland "DAGR – DAG based Context Reasoning: An Architecture for Context Aware Applications" Bernd Niklas Klein, University of Kassel "Analysing Context-Aware Service Development under MUPE Platform" Anssi Jääskeläinen, Lappeenranta University of Technology
15:00	Closing

Programme version 7
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Keynotes

Dr. Louis Latour from European Microsoft Innovation Center (EMIC) will present the following keynote speech:

Trends and Challenges of Wireless Sensor Networks

The interest for sensor networks has been rapidly growing in the last years and the number of applications using sensor networks is increasing rapidly. However, the adoption of wireless sensor network technology has been hindered by the difficulty to program them in a simple and efficient way. In this key note we will talk about trends of development of sensor networks and a forward looking way to tackle some of the related challenges for broad deployment. In particular, we will present some of the work done at the European Microsoft Innovation Center (EMIC) to develop an integrated programming model based on the .Net technology. The programming model enables the development of a sensor network application as a set of connected services (filters and aggregators) forming a data flow. The set of defined services is dynamically deployed on the sensor networks where the runtime associated to the programming model and running on the nodes of the sensor networks, applies some optimization strategies in order to limit the amount of communications required to execute the application. This programming model is based on the Coordination Decentralized Software Services (DSS) and the Concurrency and Coordination Runtime (CCR) developed by the Microsoft Robotics Studio team and further apply to the wireless sensor domain. It has been validated by the development of several applications in the context of collaborative projects in which EMIC is involved.

Prof. Dr. Sc. Martti Mäntylä from Helsinki Institute for Information Technology (HIIT) will present the following keynote speech:

The OtaSizzle Project: Large-Scale Service Experimentation Testbed

Our accumulated experience in designing digital customer services, such as Jaiku.com, www.kuvaboxi.fi, and comeks.com, suggest design principles dealing with the service life-cycle. They include: how to gain the interest of the user at first encounter; how to hold it during the process of service appropriation; and how to make the contact durable.
However, even though the evidence towards these principles is clear, and comes from several parallel sources, a number of open lines of research remain:

- How do the principles scale with the size of the user population? Are some further design rules needed to deal with larger crowds?
- Just how general are these rules? Are there also domain-specific rules (what it yes, what distinct domains are identifiable)?
- The successful services are also characterised by continuous contact with users and very rapid evolution (daily builds). Is there some larger principle behind this?

The recently started OtaSizzle project is designed to study these issues. We plan to build services following the above principles, focusing on service initiation; hooking the user; and building a durable relation. We will test the services them with sufficiently large user populations and over sufficiently long time to see the dynamics of service diffusion and the impact of various principles. To achieve this, we will involve partners with access to large user populations and service infrastructures for reaching the users and deploy multi-disciplinary researcher resources for really studying, understanding and explaining the phenomena taking place.

Tutorial

Prof. Dr. Ing. habil. Thomas Magedanz from Fraunhofer Institute for Open Communication Systems (FOKUS) will present the following tutorial:

NGN Services in Face of SOA and Web 2.0 - The Role of the IP Multimedia System (IMS) for implementing converged Multimedia Services

In face of converging fixed and mobile networks towards all-IP based Next Generation Networks (NGNs), the focus of international research and development is moving from networks towards services engineering. In this context the globally standardised IP Multimedia Subsystem (IMS) represents the current state of the art for the transition of legacy networks and value added service platforms into service oriented multimedia networks. In this half day tutorial we will introduce the basics of IMS in terms of the main business drivers, the architectural principles, and the current standards around IMS. Based on this we will investigate how applications in IMS can be built with different application server types. We illustrate how IMS should be positioned within Service Delivery Platforms (SDPs) and how so-called IMS service enablers could be positioned within the context of Service Oriented Architectures (SOAs). Subsequently we will look at the Web 2.0 world and its principles and investigate the impacts of this world onto IMS. Based on this we will present potential integration options for IMS and Web 2.0 infrastructures and the related research challenges. Finally we will motivate the need for open service testbeds and show the IMS-based Facebook prototype developed within the FOKUS Open SOA Telco Playground.

Session 1: IMS Basics: Motivation, Architecture, Standards
IMS Motivation – Internet plus Telecommunications = Secure value-added Internet services
IMS Drivers - Fixed Mobile Convergence, Triple Play, IPTV, Communities/Secure Social Networks
IMS Architecture Principles - Split of IMS Core and Applications Layers
IMS Standards Review - 3GPP IMS, 3GPP2 MMD, ETSI TISPAN NGN, Packet Cable IMS, A-IMS

Session 2: IMS Applications and Integration into SOA and Web 2.0
IMS Application Server Options (CAMEL, Open Service Access/Parlay, Servlets, OMA SE)
IMS Services Examples (VoIP, Messaging, PoC, FMC, Triple Play, Quad Play, IPTV)
IMS vs. SDPs vs SOA
SOA and IMS: OMA service enablers (Presence, XDMS, Messaging, OSE, etc.)
Quick review of Web 2.0 Principles
IMS + Web 2.0 - Converged Service Brokers and IMS-based Web Services
Towards emerging Open Service Testbeds
Examples from the Open SOA Telco Playground (www.opensoaplayground.org)
Questions & Answers

Thomas Magedanz

Martti Mäntylä