Preface

This book contains the short papers of the Third International IFIP Working Conference on Enterprise Interoperability, IWEI 2011, held March 22-23, 2011, in Stockholm, Sweden, and the papers of the co-located IWEI Workshops, held on March 21, 2011. IWEI 2011 was the third in a series of international events on enterprise interoperability. Previous events took place in Munich, Germany (2008) and Valencia, Spain (2009). The IWEI series of events aim at identifying and discussing challenges and solutions with respect to enterprise interoperability, with the purpose of achieving flexible cross-organizational collaboration through integrated support at business and technical levels.

The IWEI Working Conference highlighted developments in the following areas: scientific foundations for specifying, analyzing and validating interoperability solutions; architectural frameworks for addressing interoperability challenges from different viewpoints and at different levels of abstraction; maturity models to evaluate and rank interoperability solutions with respect to distinguished quality criteria; and working sets of practical solutions and tools that can be applied to interoperability problems to date. Furthermore, a special theme was chosen for IWEI 2011, which crosscuts the aforementioned areas, namely: "Interoperability and Future Internet for Next-Generation Enterprises." This means that special attention was given to the interoperability needs of Next-Generation Enterprises and how these needs are shaped and supported by the emerging Future Internet.

The IWEI Workshops complemented the topics of the IWEI Working Conference and explored new issues and solutions in enterprise interoperability. This was done in four separate workshops: (1) Enterprise 2.0 – Using Internet 2.0 Technologies in Enterprise Management; (2) Semantic Interoperability in the Scope of Future Energy Smart Grids; (3) Advanced Results in MDI/SOA Innovation; and (4) Standards Ensuring Enterprise Interoperability and Collaboration – State of the Art and Perspectives. More than the Working Conference, the Workshops offered opportunities to discuss issues raised during the paper presentations and to brainstorm about possible solution directions.

The first workshop explored the results, experiences, required action and potential value of the Enterprise 2.0 with industry practitioners and members of the academic community. Enterprise 2.0 is the use of emergent social internet focused software platforms within companies, or between companies and their partners or customers.

The second workshop elaborated emerging topics of enterprise architecture and semantic interoperability in the scope of the future Energy Smart Grids. In particular, it considered the Enterprise Architecture of Utilities focusing on Smart Grids and the semantic integration of Smart Grids layers, data models and transport technologies.

The third workshop presented the latest results in the domain of Model Driven Interoperability (MDI) and Service Oriented Architecture (SOA) concerning research

projects and the transfer towards industry. Topics of Interoperability Services, Reference Ontologies and Business-IT alignment were addressed. The workshop is a follow-up of the I-ESA 2010 workshop in Coventry, UK.

The fourth workshop focused on awareness of interoperability standards enabling real life collaboration of enterprises. Furthermore, the workshop identified new approaches of the evolution of standards for services in the Future Internet perspective as well as implementation of standards in SME networks.

IWEI 2011 was organized by the IFIP Working Group 5.8 on Enterprise Interoperability in cooperation with INTEROP-VLab. The objective of IFIP W G5.8 is to advance and disseminate research and development results in the area of enterprise interoperability. The IWEI series of events provide an excellent platform to discuss the ideas that have emerged from IFIP W G5.8 meetings, or, reversely, to transfer issues that were raised at the conference to the IFIP community for further contemplation and investigation.

We would like to take this opportunity to express our gratitude to all those who contributed to IWEI 2011. We thank the workshop organizers for creating a stimulating environment for discussions; we thank the authors for presenting their papers and enabling valuable information exchange; and we thank the attendants for their interest in this event. We are indebted to IFIP TC5 and WG5.8 for recognizing the importance of enterprise interoperability as a research area with high economic impact. Finally, we are grateful to KTH, the Royal Institute of Technology, for hosting IWEI 2011.

Martin Zelm Marten van Sinderen Guy Doumeingts Pontus Johnson April 2011

Organization

IWEI 2011 was organized by IFIP Working Group 5.8 on Enterprise Interoperability, in cooperation with INTEROP VLab.

Executive Committee

General Chair: Pontus Johnson KTH, Sweden
Program Chair: Marten van Sinderen University of Twente,

Netherlands

Workshop Chair Martin Zelm INTEROP-Vlab, Germany IFIP Liaison: Guy Domeingts INTEROP-VLab/Univ.

Bordeaux 1, France

Local organization: Joakim Lilliesköld KTH, Sweden

Workshop Organizers

Enterprise 2.0 - Using Internet 2.0 Technologies in Enterprise Management

Ricardo Chalmeta University Jaume 1, Spain

Veronica Pazos ESTIA II, Spain

Semantic Interoperability in the Scope of Future Energy Smart Grids

Mathias Uslar OFFIS, Germany Ulrike Steffens OFFIS, Germany Matthias Postina OFFIS, Germany Sebastian Rohjans OFFIS, Germany

Advanced Results in MDI/SOA Innovation

Guy Doumeingts INTEROP-VLab

Standards Ensuring Enterprise Interoperability and Collaboration - State of the

Art and Pers pectives

Piero De Sabbata ENEA, Italy

Martin Zelm INTEROP-VLab, Germany

International Program Committee

Stephan Aier University of St. Gallen, Switzerland Khalid Benali LORIA – Nancy Université, France Peter Bernus University Griffith, Australia Jean-Pierre Bourey Ecole Centrale Lille, France Ricardo Chalmeta University of Jaume I, Spain

David Chen

Antonio DeNicola

Guy Dou meingts

Yves Ducq

Ip-Shing Fan

Université Bordeau x 1, France

LEKS-IASI-CNR, Italy

INTEROP-VLab/GFI, France

Université Bordeau x 1, France

Cranfield University, UK

Ricardo Goncalves New Univ. of Lisbon, UNINOVA, Portugal

Claudia Gug lie lmina TXT e-solutions, Italy
Sergio Gus mero li TXT e-solutions, Italy

Axel Hahn University of Oldenburg, Germany
Jenny Harding Loughborough University, UK
Roland Jochem University of Kassel, Germany

Paul Johannesson KTH, Sweden Pontus Johnson KTH, Sweden

Leonid Kalinichenko Russian Academy of Sciences, Russian Federation

Bernhard Katzy University of Munich, Germany Kurt Kosanke CIMOSA Association, Germany

Stephan Kassel University of Applied Sciences, Zwickau, Germany

Lea Kutvonen University of Helsinki, Finland

Jean-Pierre Lorre PEtALS Link, France

Michiko Matsuda Kanagawa Institute of Technology, Japan

Kai Mertins Fraunhofer IPK, Germany

Jörg MüllerTechnische Universität Clausthal, GermanyPhilipp OffermannDeutsche Telecom T-Labs, Germany

Andreas Opdahl University of Bergen, Norway

Angel Ortiz Polytechnic University of Valencia, Spain

Hervé Panetto UHP Nancy I, France

Hervé Pingaud École des Mines d'Albi-Carmaux, France Raul Poler Polytechnic University of Valencia, Spain Raquel Sanchis Polytechnic University of Valencia, Spain

Ulrike Steffens OFFIS, Germany Mathias Uslar OFFIS, Germany Piero de Sabbata ENEA, Italy

Ray mond Slot Hogeschool Utrecht, Netherlands Bruno Vallespir Université Bordeaux 1, France

Alain Weg mann Ecole Polytechnique Federal de Lausanne,

Switzerland

Xiaofei Xu Harbin Institute of Technology, China

Martin Zelm CIMOSA, germany

Additional Reviewers

Thomas Knothe Camlon Asuncion Alexis Aubry Holger Kohl Luiz Olavo Bonino da Silva Santos Mario Lezoche Markus Buschle Pia Närman Moustafa Chenine Matthias Postina Michele Dassisti Waldo Rocha Flores Luís Ferreira Pires Brah mananda Sapkota Christian Fischer **Teodor Sommestad**

Ulrik Franke Bettina Gleichauf Sven Glinizki Hannes Holm Frank Jaekel Vikram Sorathia Sergey Stupnikov Johan Ullberg Sven Wusher Es ma Yahia

Sponsoring Organizations

IFIP TC5 W G5.8
INTEROP-VLab
KTH, Royal Institute of Technology
CTIT, Centre for Telematics and Information Technology