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Enterprise Interoperability

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Preface

One of the characteristics of our economy today is that enterprises increasingly (need to) compete and collaborate in a global market, using the Internet and other technical means to overcome the traditional barrier of geographical distribution. Another characteristic is continuous and rapid change and innovation, which may be internal or external to individual enterprises, but nevertheless affecting the way these enterprises can perform in relation to other enterprises and their market environment. The success of an enterprise therefore more and more depends on its ability to seamlessly interoperate with other agile enterprises, and to be able to adapt to actual or imminent changes, instead of making some product or providing some service in the most efficient way.

The role of the current Internet for enterprise interoperability is essential but at the same time still limited in light of its potential. The future Internet should be much more than a universal access and communication infrastructure. It should be able to empower enterprises to innovate by creating new business value in competition and together with other enterprises, based on relevant knowledge about each other and the market. It should do so in a sustainable and socially responsible fashion, making efficient use of physical resources with a minimal environmental footprint. Therefore, the Internet as we know it should evolve into a universal business support system in which enterprises enjoy interoperability services that can be invoked on the fly according to their business needs. Such interoperability services may require physical sensing capabilities as well as extensively exploiting knowledge assets.

This background provided the inspiration for the International IFIP Working Conference on Enterprise Interoperability, IWEI 2011, held March 22–23, 2011, in Stockholm, Sweden. 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. Contributions to the development of the following results are highlighted: a scientific foundation for specifying, analyzing and validating interoperability solutions; an architectural framework for addressing interoperability challenges from different viewpoints and at different levels of abstraction; a maturity model to evaluate and rank interoperability solutions with respect to distinguished quality criteria; and a working set of practical solutions and tools that can be applied to interoperability problems to date.

The special theme chosen for IWEI 2011 was “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.

IWEI 2011 was organized by the IFIP Working Group 5.8 on Enterprise Interoperability in cooperation with INTEROP-VLab. The objective of IFIP WG5.8 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 WG5.8 meetings, or, reversely, to transfer issues that were raised at the conference to the IFIP community for further contemplation and investigation.

This volume contains the proceedings of IWEI 2011. Out of 47 submitted full papers, 15 papers were selected for oral presentation and publication (31.91% acceptance rate). In addition, five short papers were selected for oral presentation and publication in a companion book. The selection was based on a thorough reviewing process, in which each paper was scrutinized by at least three experts in the field. The papers are representative of the current research activities in the area of enterprise interoperability. The papers cover a wide spectrum of enterprise interoperability issues, ranging from foundational theories, frameworks, architectures, methods and guidelines to applications and case studies.

The proceedings also include the abstracts of the invited talks at IWEI 2011, given by two renowned keynote speakers: Andreas Friesen (Research Program Manager of Service Science, SAP) and Gérald Santucci (Head of the Unit on Networked Enterprise & Radio Frequency Identification, INFOSO DG, EC).

We would like to take this opportunity to express our gratitude to all those who contributed to IWEI 2011. We thank the keynote speakers for their excellent and forward-looking talks; we thank the authors for presenting the accepted papers, which resulted in valuable information exchange and stimulating discussions; we thank the reviewers for providing useful feedback on the submitted papers, which undoubtedly helped the authors to improve their work; and we thank the attendants for their interest in this working conference. 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.

March 2011

Marten van Sinderen
Pontus Johnson

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

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