EI2N 2009 PC Co-chairs' Message

After the successful third edition in 2008, the fourth edition of the Enterprise Integration, Interoperability and Networking workshop (EI2N 2009) was organized as part of the OTM 2009 Federated Conferences and was supported by the IFAC Technical Committee 5.3 "Enterprise Integration and Networking" and the IFIP Working Group 5.12 "Architectures for Enterprise Integration."

It is a fact that enterprises need to collaborate in order to prosper in the current extremely dynamic and heterogeneous business environment. Enterprise integration, interoperability and networking are the major disciplines that have studied how to allow companies to collaborate and communicate in the most effective way. These disciplines are well-established and are supported by international conferences, initiatives, groups, task forces and European projects where different domains of knowledge and points of view (e.g., technological or managerial) are used to achieve a variety of objectives in this domain. The past decade of enterprise integration research has seen the emergence of important new areas, such as research into interoperability and networking, which involve breaking down organizational barriers to improve synergy within the enterprise and among enterprises. The ambition to achieve dynamic, efficient and effective co-operation of enterprises within networks of companies, or in an entire industry sector, requires the improvement of existing, or the development of new, theories and technologies. An entire research community is, for example, devoted to the technical and theoretical questions of co-operative information systems. Enterprise modelling, architecture, and ontology are the pillars supporting the achievement of enterprise integration and interoperability, and each of these areas needs to produce results to contribute to the ambition. For these reasons, the workshop's objective is to foster discussions among representatives of these neighboring disciplines and to discover new research paths within the enterprise integration community.

To answer the needs of industry, the European commission has also started a new cluster (FinES) dedicated to studying new approaches to cope with the complexity of the future networked enterprises which will be able to exploit a set of business services supporting collaboration and interoperability, based on the Future Internet connectivity. Ideally the business process needs to become interactive, and the business flow needs to vary and evolve according to the behavior of the actors who cope with the external (market) requirements.

After peer reviews, eight papers were accepted out of 15 submissions to this workshop. In addition to the presentations of the accepted papers, to involve workshop participants, groups were organized into what E2IN traditionally calls "workshop cafés" to discuss and debate the presented topics. The two "workshop cafés" enabled discussions related to the "Science foundation of Enterprise Integration and Interoperability" discussion (led by Herve Panetto, Ted Goranson and Ricardo Gonçalves) and to the "Management Aspects of the Next Generation of Enterprise Architecture" (discussion led by Peter Bernus, Pat Turner and John Gøtze). These groups reported the results of the respective discussions.

To complete the workshop discussions, Claude Feliot, Core Competence Network Leader at Alstom Transport, was invited as a keynote speaker, and talked about

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"systems as foundations for MBSE (model-based systems engineering)." Systems engineering has been an important contributor to the field of enterprise architecture and enterprise engineering, as these fields can be considered to be "applied systems engineering," whereupon the objective is to achieve integration and various systemic properties, such as interoperability, in systems that are complex and hybrid (human + technical) entities. Model-driven systems engineering and enterprise engineering are thus close relatives, with the opportunity to open mutually beneficial exchange of ideas.

The papers published in this volume of proceedings present samples of current research in the enterprise modelling, systems interoperability, services orchestration, and, more globally, systems engineering and enterprise architecture domains. One architecting principle that has gained currency in the recent past is service-oriented architecture with its principles, reference models and technology, and *if applied correctly* can be an important contributor to the future of interoperable, networked and collaborative enterprises. A quality of these reference models has to be evaluated through maturity models and metrics before engineering the interoperability characteristics of the enterprise applications involved in the product value chain. The success of this complex field also depends on the maturity and coherency of the management of the involved enterprises, a topic covered by the second workshop café.

It has been a great pleasure to work with the members of the international Programme Committee who dedicated their valuable effort for reviewing the submitted papers; we are indebted to all of them.

We also would like to thank all authors for their contribution to the workshop objectives and discussions.

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Peter Bernus
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Ted Goranson