

ICEIMT'97

International Conference on Enterprise Integration and Modelling Technology

Turin, Italy, October 28-30, 1997

The ICEIMT'97 Conference has been a major event of the *Enterprise Integration - International Consensus (EI-IC)* initiative, jointly supported by the European Commission through *ESPRIT Project 21.859*, and by the United States through the *DOC/NIST Manufacturing Enterprise Integration* project. The initiative is sponsored by FIAT and both the IFAC and IFIP organisations. 100 experts in the fields of engineering, business administration, and computer science attended the conference. Participation was from 21 countries and all continents with more than one third of the participants from industry.

The goal of the initiative is to improve international consensus on issues in enterprise engineering, modelling, and integration technologies. The conference identified barriers, proposed solutions, and communicated results, thereby helping to justify the technology to industry so that key technology can be moved profitably from the international R&D domain to broadly based implementation.

The ICEIMT'97 Conference was organised on the basis of invited papers that presented many different views on enterprise integration. The conference began with position papers on standardisation from both Europe and the USA. The different players in the field, academia, IT users and vendors, presented views on the current state of enterprise integration, future needs and developments, and basic principles of enterprise engineering and integration. Selected papers from major European (ESPRIT), USA, and international (IMS) initiatives provided details on ongoing work in this area.

The conference was accompanied by a demonstration of advanced modelling and simulation tools, which support enterprise integration.

There was special emphasis on the results from the five ICEIMT workshops that preceded the conference. The workshops produced a number of proposals for R&D projects. These proposals have been discussed individually in a special conference session to become the starting point

for research projects at national, European or international level. Following here are highlights from the workshops:

- Integration-improvement efforts must consider and address human aspects in addition to technical aspects (processes and technologies) of the enterprise operation. Human aspects like skill, trust, learning, communication and team organisation play an increasingly important role in enterprise integration.
- New concepts were proposed to model processes and organisations in networks of enterprises.
- The business benefits of enterprise integration have to be identified and communicated. Several formats were proposed to help illustrate the degree of integration of business processes, operational systems and technologies. Metrics is needed to measure these.
- The IFAC/IFIP-developed enterprise engineering and integration framework GERAM (Generalised Enterprise Reference Architecture and Methodologies) was used to harmonise the many efforts in research and development.
- A global integrating infrastructure is needed that is as pervasive as Internet but much more powerful.

At the conference several areas of work to be done were identified:

- Maintenance of current ICT installations with their legacy in old applications represents a significant barrier for improved technical integration. Migration of these systems is seen as a very important subject for both research and standardisation.
- Many research opportunities arise from conflicting solutions and lack of a common base and terminology.
- Standardisation is considered to be very important and necessary for pushing EI

forward, but industry is hesitant in supporting the effort. Industry is recognising the need for strategic standardisation policies in the information-technology domain.

- One predominant issue identified in the promotion and implementation of EI in industry is how to convince management and decision makers to invest in enterprise-level integration. Vendors must provide better, more integrated, applications to support EI users. Users must find metrics to justify their investment in enterprise integration.

From a technical viewpoint, integration of information and communication technologies (ICT) looks feasible today: highly integrated prototypes and commercial solutions with limited integration capability through middleware, componentware and integration protocols are available. Research in ICT is moving in the direction of more interoperability of components and distributed control.

The Conference Proceedings printed by Springer-Verlag (ISBN 3-540-63402-9) with about 70 papers provide a very comprehensive overview on the state-of-the-art in enterprise integration.

The ICEIMT initiative will hold further workshops. The latest workshop, linked to the European IT Conference, took place in Brussels, on the 27th of November 1997, with the goal to further consolidate the EI consensus, to elaborate awareness and acceptance in industry and to pursue the proposals for projects. Additional workshops scheduled for 1998, with emphasis on information dissemination, will try to involve industry by demonstrating results from applications, modelling tools and standardisation.

For further information on the ICEIMT initiative see <http://www.cimosa.cnt.pl> or <http://www.mel.nist.gov/workshop/iceimt97/>

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