CIMOSA - News

Editor: Martin Zelm, Gehenbuehlstr. 18A, D-70499 Stuttgart, martin.zelm@cimosa.de

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INTEROP (IST-2003-508011)

INTEROP Network of Excellence is now close to enter its final 6 month-period, a project extension granted by the European Commission to collect the results achieved and to start the INTEROP-VLab, the sustainable European research organisation, which will succeed the NoE to co-ordinate, develop and promote the research on Enterprise Interoperability.

A major effort of the project is the so-called Knowledge Map (KMap), which captures R&D competences in interoperability. The KMap enables a diagnosis of the research, research collaboration and coordination with the five objectives:

1) To diagnose current interoperability research inside INTEROP and in Europe; 2) To receive an overview of all European research activities on interoperability and subordinated topics; 3) To receive an overview of organisations and experts as well as research results; 4) To quickly find relevant information for specific user needs; 5) To find potential partners for collaborating in research activities.

The KMap is a Knowledge Management application, exploiting recent research results in the area of Semantic Web, Text Mining, Information Retrieval and Ontology Enrichment. These techniques have been used to create a *semantically indexed* information repository, storing data on active collaborations, projects, research results, and organizations. A query interface allows users to retrieve information about partner collaborations, research results and available (or desired) competences, as well as to obtain summary information (presented in graphical or tabular format) on the overall degree of collaboration and overlapping competence, using a measure of *semantic similarity* between pieces of information. The semantic indexing is based on an ontology of research domains in the area of interoperability (INTEROP ontology).

The Knowledge Acquisition Value Chain adopted to acquire the INTEROP ontology works as follows. Progressively richer knowledge structures (Lexicon, Glossary, Taxonomy, Ontology) are first bootstrapped through automatic text mining techniques, and then refined through manual validation and enrichment, supported by appropriate tools and collaborative web-based user interfaces.

Other results: a) Interoperability framework, which identifies current barriers in the different sub domains of the interoperability domain and proposing research activities in those areas. At present, four levels of interoperability (data, services, process and business) and three categories of barriers (conceptual), technological and organisational (responsibility, authority, organisation structure) have been defined The framework has been introduced into European and international standardisation (CEN/ISO) leading to a new work item (see below),

Reminder of the I-ESA'07 Conference

I-ESA'07 the INTEROP and ATHENA conference on 'Interoperability for Enterprise Software and Applications' will be held in Funchal, Madeira Island, Portugal, 2007-03-26/30.

Topics include: Enterprise Modelling, Ontologies, Semantic Web, Enterprise Architectures, Enterprise Application Integration, Infrastructures and IT platforms, related standards, legal and security issues, performance analysis, tools, mobile and (ambient) intelligent technologies as well as Interoperability in knowledge creation, transfer, and management. Further information via http//www.i-esa.org/i-esa2007

CIMOSA Association e.V., at WZL Forum/ADITEC, Steinbachstr. 25, D-52074 Aachen,

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b) Glossary on interoperability, with about 280 terms selected from a set of more than 1500 terms selected from SoA documents,

c) new version of UEML (Unified Enterprise Modelling Language), which includes the UEML template approach to identify correspondences between the constructs of different modelling languages and

d) life cycle model for synchronisation and management of enterprise models consisting of 5 phases (identification of needs/target, requirements, update/design, use of synchronised models, finish synchronisation).

Reports from Events

PRO-VE'06, 7th IFIP Working Conference on Virtual Enterprises, Helsinki, Finland, 2006-09-25/27, on 'Network-Centric Collaboration and Supporting Frameworks' addressed network characteristics, creation phase, management, platforms and reported on industrial networks reaching from aeronautics and automotive to health care and touristics. About 100 people from around the world attended the conference. http://www.pro-ve.org

MoMo'2006 Workshop INTEROP Task Group on Model Morphism was held jointly with the PRO-VE'06, The workshop papers provided at first overviews on both the InterOP project and on the MoMo Task Group activities and went on with presentations of specific subjects of model morphisms, like an analysis of model transformation approaches, a comparison between ontology- and model-based semantics and a description of the MoMo ontology. A paper submitted by the Institute of Mathematical Machines in Warszawa, Poland, on integration of IDEF0 and IDEF1X models complemented the work of the MoMo Task Group presenting results from work in Polish SMEs. The announced Toolbox demo could not be held, due to some problems with the supporting software, and was postponed to future dissemination activities.

EE&I Standardisation

ISO TC 184 SC5/WG1 meeting Paris, 2006-10-11/13. Major subjects where collaboration with JTC1 SC7/WG42 the study group on architectures and its relevance to the revision of ISO 15704 'Requirements for enterprise reference architectures and methodologies' and the finalisation of the new work item proposal on 'Requirements for establishing interoperability in manufacturing-enterprise processes and their

models Part 1 Interoperability Framework'. The latter is to be submitted for ballot. Discussions on the former included direct participation from WG42 as well as via Video conferences with Australian SC7 members and interested people from the UK. Next meeting to be held jointly with the I-ESA'07 conference.

ISO/IEC SC 65 A/JWG 15, results of the Houston Meeting 2006-10-16/18. Part 62264-3 has passed voting on the CDV from IEC, with no negative votes. There is a NWI proposal for enterprise interoperability that will be balloted and sent to TC310 and ISO TC184 SC5 in Q4 2006.

Development of future 62264-5: ISA will submit Draft 11 of ISA SP95 Part 5 as part of a NWIP to JWG15. Next JWG15 meeting is proposed for 2007-05-07/09, location yet tbd.

Upcoming Events

- ICT Standardisation and Research – towards FP7, Brussels, 2007-01-17 http://www.w3.org/2004/copras/meetings/open07/Overview.html

- I-ESA'07 Conference, Funchal, Portugal, 2007-03-27/30, Pre-conference: 2007-03-25/26 http://www.i-esa.org/i-esa2007

- 12th EURAS Workshop on Standardisation, Thessaloniki, Greece, 2007-05-16/17, www.euras.org

- CAISE 2007 19th Intern. Conference on Advanced Information Systems Engineering, Trondheim, Norway, 2007-06-11/15, http://caise07.idi.ntnu.no/

- EMMSAD'2007, 11th International Workshop on Exploring Modelling Methods in Systems Analysis and Design, Trondheim, Norway.2007-06-11/12, http://www.emmsad.org

- IFAC-CEA 07 Monterrey Nuevo León, México, 2007-10-02/05, IFAC conference on Cost Effective Automation in Networked Product Development and Manufacturing, http://cidyt.mty.itesm.mx/ifac-CEA07/

- PRO-VE'07 8th IFIP Working Conference on Virtual Enterprises, Guimrèes, Portugal, 2007-09-10/12, www.pro-ve.org

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