INTEROP Network of Excellence

**Partnership**

INTEROP consortium is composed of 50 members coming from 15 countries (13 EU Member States, Norway and Switzerland). The network co-ordinates around 180 researchers and 100 Doctoral Students.

- University Bordeaux 1 (LAP/GRAI) – France
- GRAISOFT – France
- Université Henri Poincaré – Nancy 1 – CRAN & LORIA – France
- University of Namur – Belgium
- Fraunhofer Gesellschaft zur Foerderung der angewandten Forschung e.V. IPK-Berlin – Germany
- Cimosa Association e.V – Germany
- Institute for Information Systems at the German Research Center for Artificial Intelligence GmbH - DFKI – Germany
- Università degli Studi di Torino – Italy
- C.R.F. Societa Consortile per Azioni – Italy
- Consiglio Nazionale delle Ricerche – CNR-IASI – Italy
- TXT e-solutions – Italy
- GRUPPO FORMULA SPA – Italy
- Technische Universität Eindhoven – Netherlands
- Stiftelsen for Industriell log Teknisk Forskning ved NTH – SINTEF – Norway
- COMPUTAS AS – Norway
- UNINOVA – Portugal
- Universidad Politecnica de Valencia – Spain
- AIDIMA – Spain
- Cimmedia Limited – UK
- University of Helsinki – Finland
- Ecole Centrale de Nantes – France
- University of Valenciennes and Hainaut Cambresis – France
- Ecole Centrale de Lille – France
- University of Nantes – France
- Institut für Informatik-Systeme der Universität Klagenfurt – Austria
- BOC Information Systems GmbH – Austria
- University of Oldenburg – Germany
- Technische Universität Berlin – Germany
- Universität Duisburg-Essen – Germany
- National and Kapodistrian University of Athens – Greece
- Singular Software SA – Greece
- Universita degli Studi di Milano – Italy
- Universita di Brescia – Italy
- Free University of Bolzano-Bozen – Italy
- Universita Politecnica delle Marche – Italy
- Politecnico di Bari – Italy
- University degli Studi di Roma “La Sapienza” – Italy
- Politecnico di Milano – Italy
- Centro Studi Sistemi Concettuali – Italy
- Centre de Recherche Public Henri Tudor – Luxembourg
- Stichting Telematica Instituut – Netherlands
- Tilburg University – Netherlands
- Norwegian University of Science and Technology – Norway
- University of Bergen – Norway
- Kungl Tekniska Högskolan – Sweden
- Hogskolan i Skövde – Sweden
- Universität Jaume I – Spain
- The University of Kent – UK
- University of Geneva – Switzerland
- University of Lausanne – Switzerland
Project Main Goals

Research in the interoperability domain in Europe remains insufficiently structured, is fragmented, sometimes overlapping. There is no global vision of research consistency, no co-ordination between European research centres, university laboratories or other bodies. This situation is not only true for research, but also in the training and education areas.

Consequently, the primary goal of INTEROP is the sustainable structuring and shaping of European research activities on Interoperability for Enterprises Applications and Software and the emergence of a lasting European Research Community that will influence standards, affect policy and solve recurrent problems in networked enterprises.

Key Issue

The Interoperability is seen as the capability of a system or a product to work with other systems or products without specific effort from the user. For INTEROP, it means the capacity of an enterprise software or application to interact with others.

Today enterprises and organizations must be able to adapt to market changes through efficient outsourcing and collaboration strategies. Collaborative business requires reliable exchange of commercial, financial and technical data as well. Legacy ERP, SCM, LCM and CRM enterprise applications commonly manage the information required for collaboration, but the software itself was for the most part conceived and programmed to be run within specific organizational boundaries.

Even if many applications use unified technologies, business and data models remain heterogeneous. Despite standardisation efforts, describing and orchestrating business processes across multiple systems is at best a semi-manual process.

Meanwhile, IT budgets are shrinking and new intrinsically interoperable systems are unfeasible for most IT directors.

In Europe, the cost of non-interoperability is estimated to 40% of enterprises IT budget. Reducing this factor of cost is one of the keys of European industry’s competitiveness.

**Application integration license revenue**

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(Source: the Yankee Group 2001)

**System implementation budget**

- Integration: 40%
- Software: 10%
- Imp. Services: 20%
- Hardware: 10%
- Misc.: 20%
Technical Approach

The originality of the project is to take a multidisciplinary approach by merging three research areas supporting the development of Interoperability of Enterprise Applications and Software:
- Architecture & Platforms: to provide implementation frameworks (A&P),
- Enterprise Modelling: to define Interoperability requirements and to support solution implementation (EM),
- Ontology: to identify Interoperability semantics in the enterprise (ONT).

Knowledge integration for Interoperability research

INTEROP work programme comprises the following activities:

- **Integrating Activities**
  - INTEROP Knowledge map
  - INTEROP method of work and collaboration platform
  - Mobility of researchers
  - Method for Scientific Integration and Assessment

- **Joint research activities**
  - Common Enterprise Modelling Framework in distributed environments
  - Generation of customised Enterprise Software from Enterprise
  - Ontology-based Integration of Enterprise Modelling and Architecture & Platforms
  - New architectures and platforms for Interoperability

- **Spreading of Excellence activities**
  - Training by e-learning
  - Dissemination and Communication
  - Transfer of research to Industry

Expected Achievement / Impact

The main expected achievement of INTEROP is the emergence of a durable European research community on interoperability of enterprise applications and software by setting up a virtual laboratory on Enterprise Interoperability with maximum research and industrial audience.
The provision of e-learning services and the set up of an European Master on Interoperability will impact the awareness of Interoperability requirements and spread excellence in the field.

To ensure a significant industrial impact, in particular through future standardisation, INTEROP specifically and explicitly interacts with FP6 IST ATHENA Integrated Project “Advanced Technologies for interoperability of Heterogeneous Enterprise Networks and their Applications” (www.athena-ip.org).

From a scientific point of view, the value-added by INTEROP is the achievement of the knowledge integration process which will turn three initial disciplinary components (Architectures and Enabling technologies, Enterprise Modelling and Enterprise Ontologies) into a new multi-disciplinary knowledge corpus specifically addressing Interoperability of Enterprise application software.

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Project details

Contract Number: IST 508011

Project Name: Interoperability Research for Networked Enterprises Applications and Software

Priority/ Priority Component: Sixth Framework Programme - Priority 2 - Information Society Technologies (IST).

INTEROP NoE addresses “Priority 2.3.1.9. Networked businesses and governments” both focusing on ‘Management of dynamic collaborative networks’ and ‘Technologies for interoperability’.

Commission support European Contribution: 6.5 M€ on 36 months - Total Budget: about 12 M€