



COIN Newsletter

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COIN Vision

“By 2020 enterprise collaboration and interoperability services will become an invisible, pervasive and self-adaptive knowledge and business utility at disposal of the European networked enterprises from any industrial sector and domain in order to rapidly set-up, efficiently manage and effectively operate different forms of business collaborations, from the most traditionally supply chains to the most advanced and dynamic business ecosystems.”

The mission of the COIN IP is to study, design, develop and prototype an open, self-adaptive, generic ICT integrated solution to support the above 2020 vision, starting from notable existing research results in the field of Enterprise Interoperability and Enterprise Collaboration.

COIN has been awarded financial support by the European Commission through the contract No. 216256 in the EU FP7 area of “ICT in support of the networked enterprise”; work programme “ICT-2007-1.3 Enterprise Interoperability”

More about COIN at www.coin-ip.eu

Word from the editor

You are viewing the second issue of the biannual COIN newsletter. This newsletter provides news on the COIN project and its members and information about project related events, project progress and results.

In this issue we'll take a deeper look into the first scientific results from COIN, introduce the second one of our end-users, VEN Group from Yorkshire, UK, provide an insight to COIN community, and give some information on past and upcoming COIN-related events.

Yours sincerely,
Editor-in-chief

COIN scientific results

Results from Enterprise Collaboration Baseline

Enterprise Collaboration is a widely discussed subject. Due to this fact a variety of different opinions can be formed mainly based on the scientific discipline behind it. From our understanding Enterprise Collaborations are based on inter-organizational relationships between network members. The analysis and support of those relationships is one of the main objectives of the COIN project. In the first year of the project the main objective for the *Baseline Enterprise Collaboration (EC) Services* team was to consolidate and harmonize results from previous RTD projects concerned with Enterprise Collaboration. As a scientific result EC Baselines Services are able to support most dynamic enterprise collaborations, like Business Ecosystems, by harmonization of individuals and organizations profiles under the same model.

The formal duration of enterprise collaborations describes the contractually fixed duration of that collaboration. It can be classified as unique if the intention is to realize just one product or offering based on a specific customer request. The collaboration can be classified as limited if the intention is to realize a fixed

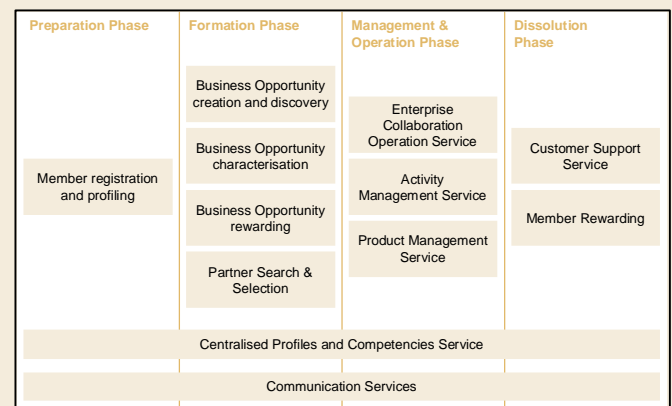


Figure 1 – Life-cycle phases

series of complex products. To support ability of collaboration and rapid formation of collaborative networks, the researchers came to the conclusion that it is necessary to have potential partners ready and prepared to participate in such collaboration. Therefore collaborative networks can be differentiated in different *life-cycle phases*. The different phase of the life-cycle does require various baseline services. Finally in COIN a set of Enterprise Collaboration Services has been designed and implemented. The above picture (Figure 1) shows these EC services on a high level along the collaboration life-cycle.

During the *Preparation Phase* of a collaborative network interested parties register and are able to define their profiles, e.g. editing administrative, contribution (product/ service), processes and performance data. The innovation lies in the combination in the management of originations and also individual profiles. This combination supports the management of highly dynamic collaborative networks like Business Ecosystems. Life-cycle independent com- [>>]

munication web services are implemented to be used to announce news (like new members) and support communication between network members. The further innovative EC Baseline Service provides the possibility to either create a Business Opportunity (product/ service) from inside (based on the network competencies) or optional discovering Business Opportunity by market research. For the creation option a new serious game has been implemented that supports the creative ideation process between networks members. One member opens a creative session to seek for Business Opportunities and is able to sent invitation to other members by the Communication Service.

Once the Business Opportunity has been identified the *Formation Phase* starts and with the Business Opportunity Characterization Service it is possible to define the Work-Break-Down-Structure (WBS), the tasks to be performed and the special competencies needed. Active members can be rewarded for their activities in seeking for Business Opportunities. Right partners for the characterized Business Opportunity are to find with the EC Partner Search Service following chosen search criteria. While finding the right partners the support of communication, discussion and agreements between members is also provided by the communication service. The selected partners for the specific Business Opportunities are to register and collaboration performance indicators are to be set for the Operational Phase.

Enterprise Collaboration Service and Product Management Services (PSM) support the *Operational Phase* of the collaborative network where the added value for the customer is to be realized. The PSM Service provides a structured storage in catalogues of all relevant product information and documentation to be realized. Complex products can be stored in different configurations. Following the WBS, planned and mediated tasks can be defined for each network partner. Ad-hoc task force teams can be set up in critical collaboration situations. The execution of the defined tasks is supported by an activity service, which links acting people with used resources, and tracks the state of each task. Exchange of product data and progress information related to the tasks are supported by the communication service again. Good collaboration performance can be rewarded and has a positive impact on the member's profile.

Finally during the *Dissolution Phase* it is possible to gather feedback from all active partners and the end customer and store the collaboration experience gained for a reuse in future Business Opportunities. Finally the end customer receives access to the product catalogue and product information.

Results from Enterprise Interoperability Baseline

In the COIN context, Enterprise Interoperability (EI) services provide functionality for applying IT solutions that overcome interoperability gaps between two or more enterprises and thus enabling them to set-up and run collaborations. The five categories of the baseline EI services are defined by the *COIN EI Services Framework* (originating from the Athena Interoperability Framework) as shown in the Figure 2.

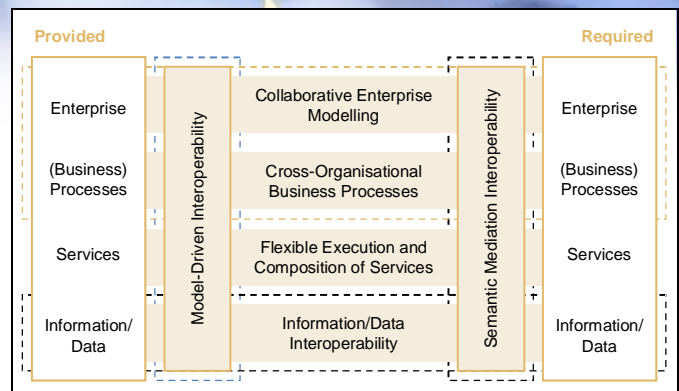


Figure 2 – The Interoperability Reference Model

Model-driven interoperability services

- The *COIN Model Transformation Service Engine* hosts and provides relevant transformations that can be used to align the huge diversity of models used in the design, integration and implementation tasks of enterprise applications and systems.

Enterprise modeling interoperability services

- The *COIN POP* Transformation Service* provides the functionality of modeling in the context of POP* to JPDL transformation.
- The *COIN Enterprise Interoperability Maturity Assessment Service* supports the assessment of an organization's maturity level concerning the use of enterprise models as well as the capability of these models to enable the company to be part of collaboration.

Business process interoperability services

- The *COIN Semantic Business Process Modeling Service* supports reduction of the complexity of tasks related to transformation between different business process models as well as transformation in executable process models with semantic annotations.
- The *COIN Semantic Business Process Management Service* supports the life cycle management of deployed business process models independently on the underlying engines actually executing the model.

Semantic mediation interoperability services

- The *Athos Ontology Service* provides functionalities for ontology management. Ontology is a prerequisite for semantic-based mediation and reconciliation of business documents.
- The *Astar Semantic Annotation Service* supports management of semantic annotations allowing digital resources to be described in terms of a common reference represented by a domain specific ontology.
- Functionalities for management of transformation rules that represent the semantic mapping able to drive the mediation and reconciliation are provided by the *Argos Semantic Transformation Rules Service*.
- *Ares Semantic Reconciliation Service* represents the final step towards the actual mediation and reconciliation of business documents among heterogeneous information systems. [>>]

Data interoperability services

- Support for communication among a set of multiple data providers and a set of multiple data consumers is provided by the *COIN Massive Data Interoperability Service*.
- The *COIN Transactional Data Interoperability Service* provides functionality to allow the exchange of business documents between two actors.

Results from Service Platform Baseline

The EU is currently leading research efforts towards the Future Internet; an Internet where more and more devices will be connected (sensors, computers, PDAs, mobile phones, etc.) to create what is called the "Internet of Things". Potentially each device will be able to consume and publish services on the Internet. On top of this, current trends towards Service Oriented Architecture will lead to a huge increase on available Web services, finally bringing the availability of machine-to-machine interfaces to a number equivalent to the number of Web pages currently available. The Future Internet will create an Internet of Services standing on top of the Internet of Things. This vision requires new technologies to enable automation in order to make it Web scalable. Semantics, thanks to its native support for automatic composition, discovery and mediation, have already been proven as a viable approach to achieve automation in many contexts. Semantically-enabled Service Oriented Architectures (SSOA) are meant to support the "Internet of Services" by enabling integration of Enterprise Services and Internet Services in a seamless way. The COIN Generic Service Platform is a ground breaking innovation in the field of SSOA that, together with traditional functionalities of SSOA, aims at deliver functionalities such us: Discovery, Mediation and Composition, and latest scientific results from:

- Support for communication among a set of multiple data providers and a set of multiple data consumers is provided by the COIN Massive Data Interoperability Service.
- Agent based computing research to enable automatic Negotiation among clients and providers;
- Pervasive and Evolutionary computing research to enable creation of ecosystems of providers behind the platform;
- Trust computing research to enable reliable communication between clients and providers and the platform.

These features will enable the platform to become a perfect market place for the Software as a Service Utility (SaaS-U) paradigm, bringing EU research to new valuable achievements.

Introduction of the COIN end-users, Part II

The COIN project involves six end-user partners coming from a variety of industrial branches and geographical distribution. The industrial partners will demonstrate, experiment, trial and assess the project results into realistic Industrial Scenarios with test cases in following

sectors: *Aeronautics* (Spain), *Automotive* (Slovenia), *Aerospace* (Italy), *Pulp & Paper plants design and management* (Finland), *Healthcare* (U.K.), and *ICT* (Hungary). The scenarios represent a wide spectrum of collaboration contexts varying from supply chains, to collaborative networks, and to the most dynamic forms of enterprise business ecosystems.

In the previous issue we began by presenting our Finnish end-user Pöyry Forest Industry. In this issue we will continue with an introduction of Yorkshire, UK -based VEN Group. The rest of the end-users will be introduced in the subsequent issues of COIN newsletter.

VEN Group, U.K.



VEN helps companies to collaborate to compete for large contracts that are normally out of their reach. By combining the capabilities, competencies and resources of multiple SMEs in one working group, they are collectively able to offer a powerful alternative to big companies.

VEN, founded by UK regional development agency Yorkshire Forward as part of their commitment to encouraging business growth in Yorkshire and Humber, has brought together the best practice worldwide to develop techniques and tools for working as a collective. The businesses in VEN's collaborative groups are characterised by genuine co-operation, and supported by a strong governance framework and pre-agreed contract about obligations and rewards.

Buyers and purchasers use VEN to create bespoke supply networks to match their needs. As they work with multiple suppliers under just one communal contract, the time and management costs associated with larger supply chains are significantly reduced.

VEN works globally and cross-sector with a focus on Advanced Engineering & Manufacturing (AEM), Chemicals, Digital Services, Green Energy & Sustainability, and Healthcare. VEN employs specialists in each of its core sectors who understand the marketplace and are able to identify suitable commercial opportunities for the SMEs that it brings together.

COIN's fifth objective is to demonstrate, experiment, trial and assess the COIN project results into realistic industrial scenarios. In collaboration with other companies participating in the project, VEN is demonstrating a Healthcare scenario by combining business interoperability, comprising intelligent reasoning and negotiation capabilities.

In a Healthcare Business Ecosystem, where companies are left free to evolve naturally, it is the adaptive species which survive (i.e. open networks, de-focused networks). The ecosystem supports and encourages this emergent and evolutionary approach by increasingly providing SMEs with access to the services required for growth (e.g. legal, organisational, ICT). VEN is helping smaller companies to stay strong and innovative by offering them access to these tools which are ever more imperative to their development. To find out more about VEN visit www.vengroup.com.

COIN Community launch

ESoCE-Net Industrial Forum

Rome, Italy. December 1, 2008

In the frame of the ESoCE-Net Industrial Forum 2008, the COIN project has organized a dedicated workshop during which the COIN Community was launched. The Community is a strategic tool for the COIN project and it is aimed at supporting the development and deployment of the COIN project, through the active participation in identified project's tasks and through the identification of additional relevant business cases.

The COIN Community will operate as a Virtual Professional Community and is based on the following key actors:

- *Coordinator* (ESoCE-Net) - in charge of supervising the basic activities of the Community, planning the development of the activities and ensuring that the COIN community will be constantly growing and active on the topics identified by the project;
- *Moderators* - chosen among the COIN partners, to support a task force of community members on the development of specific tasks, phased with the main project achievements.
- *Angels and Testimonials* - individuals not belonging to COIN beneficiary organizations, recognised as experts at international level in the fields of Enterprise Interoperability and Enterprise Collaboration, willing to contribute to the Community's activities by leading and inspiring task forces of community members on specific COIN related topics, jointly identified with COIN moderators.
- *Individual members* - individuals willing to *participate in the COIN Community activities*, to be part in task forces, to be invited in COIN dissemination and exploitation initiatives, by sharing documents and knowledge, and earning and enjoying special COIN Gadgets
- *Multiplier Organisations* - organizations willing to support actively the *adoption of COIN results*, expressing their commitment by signing a Letter of Intent. Multipliers' engagement can be characterised by different levels of commitment spanning from supporting the organisation of COIN related information events to the *implementation of COIN pilots*.

More information on the actual tasks launched inside the Community and, more in general, on the on-going opportunities can be found on the COIN Community website, at www.coin-ip.eu.

To this end, initial input for Community tasks were provided in the workshop by Prof Guy Doumeingts, Research Director GFI, General Manager of INTEROP-VLab, who spoke about the challenges and opportunities relevant to the transfer of research results in the domain of interoperability towards SMEs, Elmar Husmann from IBM, who spoke about the challenges in the implementation of new business models in the IT industry, namely SaaS, and Hendrik Hendrik Holsboer from the University of Applied Sciences of Northwestern

Switzerland), who spoke about additional requirements on interoperability services and solutions coming for international collaboration, namely with Chinese Networks.

COIN Community next event is planned within the ICE 2009 Conference, which will take place in Leiden (the Netherlands) from 22nd to 24th June 2009.

There is only one way not to miss any COIN news and opportunities: join now the Community at www.coin-ip.eu.

Past COIN events

COIN Workshop @ ICE 2008

Lisbon, Portugal. June 25, 2008

The second COIN workshop was held in Lisbon on the 25th of June from 9.30 am to 5.30 pm at the ICE Conference 2008. The workshop was structured with the main aim to introduce Enterprise Interoperability and Enterprise Collaboration scenarios, selected among promising cases in Europe, representing different business sectors and to validate the requirements collected from the presented business cases with a wider audience, external to the COIN project. The objectives were:

- To familiarize the audience with the COIN project and relevant technical objectives;
- To collect need's and users' requirements for COIN IT services, suitable for supporting advanced cooperation among companies in collaborative cluster's related models and business ecosystems.
- Increasing the awareness on the potential associated with EI/EC models adoption;
- Gathering suggestions on how to remove perceived barriers from a technical, implementation and wide take-up point of view

The audience played an active role during the workshop by stimulating the speakers with several questions, in order to:

- Discuss the needs/requirements
- Analyze collected needs
- Structure the relevant requirements.

The first results obtained were:

- Substantial validation of the collected requirements
- Input for a common definition (and consequent re-phrasing) of the collected requirements.

COIN General Meeting

Madrid, Spain. October 8-10, 2008

The second COIN general meeting took place at Atos Origin premises in autumnal Madrid. The three-day meeting covered all the aspects of the COIN project including the present advancements and the challenges of the future work. In the multiple tracks of workshops the separate work packages had their opportunities to co-operate to ensure the best possible future out- [>>]

come of the project. Next general meeting is planned to be held in May 2009.



Figure 3 – COIN General Meeting at Atos Origin.

COIN Networking Session @ ICT 2008 Event

Lyon, France. November 25-27, 2008

In the ICT 2008 Event, COIN presented a networking session “*An affordable and personalized health care system for independent ageing – Future challenge for healthcare deployment: how to make it happen?*” The Networking Session was organised by ENEA and DG INFSO Unit ICT for Health, and supported by COIN.

After a short overview of the EU Programmes on ICT for eHealth (FP7, CIP, AAL) and practical case studies (OLDES project, COIN project, etc..) a panel of experts discussed how innovative eHealth services, as the ones

developed by projects like OLDES, can be integrated in healthcare systems in a sustainable manner.

The goal of the session was to share experiences and common pathways between the healthcare sector and experts from the enterprise interoperability world, with the final aim of learning from each other and build possible partnerships for future activities and collaborative solutions, taking into account also the eHealth standardization aspects.

EI Cluster Meeting

Lyon, France. November 28, 2008

In EI Cluster Meeting, taking place in Lyon after the ICT 2008 Event, COIN was organising the afternoon session on the next FP7 work programme (WP2 2009-2010) and the Future Internet and Enterprise Systems.

2nd FIA Future Internet Assembly

Madrid, Spain. December 9-10, 2008

COIN was invited to the second Future Internet Assembly held in Madrid.

Starting with the Bled event early this year, with the Bled declaration and the set-up of the Future Internet Assembly (FIA), a momentum of European Future Internet research has been created, which keeps on growing. Today, some 87 European projects are actively engaged within the various working groups creating value for their research, their organisation, their project and FIA in general. For more information about Future Internet Assembly, visit www.future-internet.eu.

Upcoming events

I-ESA 2009 – International Conference on Interoperability for Enterprise Software and Applications

Beijing, China, 20-23 April 2009

I-ESA brings together the world's leading researchers and practitioners in the area of enterprise interoperability, and it is a unique forum for the exchange of visions, ideas, research results and industrial experiences, dealing with a wealth of interoperability research subjects for business, enterprise applications and software. <http://www.i-esa.org/cn/>

Future of the Internet Conference

Prague, Czech Republic, 11-12 May 2009

The Future of the Internet Conference aims to review the strategic orientations and trends governing the future societal and economic developments of on-line Internet and Mobile societies and to present interesting ideas and projects in this area. <http://www.fi-prague.eu/>

Next event for the COIN Community @ ICE 2009 – 16th International Conference on Concurrent Enterprising

Leiden, The Netherlands, 22-24 June 2009

The ICE conference is a premier forum to enable practitioners, researchers as well as tool vendors to present, demonstrate and share the results and achievements of their work in the broad domain of Concurrent Enterprising. <http://www.ice-conference.org/>

The ICE Conference will be the main event for the COIN Community in 2009. Two full day workshop will be scheduled, one focused on the scientific aspects of the COIN project and the other more oriented to industrial and societal applications, with specific attention to business cases definition and Open Innovation (Living Labs). Again, two different sides of the same COIN. Don't miss any information and opportunities for getting involved in COIN supporting tasks and stay tuned on the COIN Community.