Enterprise COllaboration & INteroperability

COIN Workshop: COIN EI / EC Services for Collaborative networks in the Enlarged European Union

COIN EI / EC Services in the EEU from requirements to first adoption

Aachen, June 22nd 2010
Sergio Gusmeroli
TXT e-solutions SPA, COIN Technical Coordinator
Project participants

University of Cyprus

University of Kaunas

Jožef Stefan Institute, Ljubljana, Slovenia

WIRELESS INFO

favit

LöDER

Lojistik Derneği

e-solutions

ESoC NET

Produced by the Cartography Research Lab, University of Alabama
The GSP Federation

COIN Project
- COIN GSP1: EI
- COIN GSP2: EC
- COIN GSP3: Open-to-All
- COIN GSP4: SRDC
- Other GSPs: Odette, SOA4ALL, SAP IBM

COIN Evolution
- Other GSPs: Odette, SOA4ALL

Individual & IT Users

COIN Front End

Industrial Users

The CP Federation

COIN Project
- 12 COIN Pilots
- COIN Gen. CP
- COIN Tuscany CP
- Non COIN CP: Sironta

COIN Evolution
- Non COIN CP: Ecospaces
- Non COIN CP: ITA CDCP
COIN SP7 Technical relevance

• In the Lower cloud
  ➢ Additional test cases for COIN architecture, CP and services
  ➢ New business scenarios, new sectors, new application domains
  ➢ New countries, new cultures, new languages
  ➢ Different maturity levels, different technology awareness-adoption
  ➢ Requirements for adaptation of existing EI/EC services and for new EI/EC service developments

• In the Upper cloud
  ➢ Services Development & Adaptation (e.g. language, character set)
  ➢ Registration of the new services in the GSP federation
  ➢ At disposal of the original 6 COIN pilots and for additional networked enterprises
# COIN SP7 Use Cases

<table>
<thead>
<tr>
<th>Pilot/Topic</th>
<th>Sector Domain</th>
<th>COIN Platforms</th>
<th>COIN Services</th>
<th>New Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPB, RM</td>
<td>Civil Construction</td>
<td>Yes</td>
<td>WP4.2-4-5 WP5.3</td>
<td>C-PD C-HIMS Project</td>
</tr>
<tr>
<td>UCY, CY</td>
<td>Marine Shipping</td>
<td>Yes</td>
<td>WP4.1-5 WP5.2</td>
<td>UBL i/op DA-DESK</td>
</tr>
<tr>
<td>FAVIT, BG</td>
<td>Media &amp; Content</td>
<td>Own CMS FAVIT</td>
<td>WP4.5 WP5.2</td>
<td>Cyrillic, Ont FAVIT-CP</td>
</tr>
<tr>
<td>Loder, TK</td>
<td>Transport &amp; Logistics</td>
<td>Yes</td>
<td>WP4.4 WP5.1-2</td>
<td>UBL Turkish axapta lams</td>
</tr>
<tr>
<td>KTU, LT</td>
<td>Discrete Manufact.</td>
<td>Yes</td>
<td>WP4.1-3 WP5.2</td>
<td>UBL i/op centas rivile</td>
</tr>
<tr>
<td>Wireless info, CZ</td>
<td>Agriculture &amp; Food</td>
<td>Own DSS Pre-Farm</td>
<td>WP4.2-5 WP5.1</td>
<td>Ontology Geospatial</td>
</tr>
</tbody>
</table>
Enterprise COllaboration & INteroperability
COIN (SP7)

LODER
TURKISH LOGISTICS ASSOCIATION
Big Potential: Logistics Sector in Turkey

- Total Logistics Sector Business Volume in Turkey is € 70 Billion and Total Logistics & Transportation Companies Business Value is € 40 Billion.

- According to the Gross Domestic Product values in 2009, transport, storage and communication sub-sectors constitute 13% of total GDP value.
Scenario

**Sector:** Chemical/Paint  
**Subject:** “Collaborative Transportation of paints from paint manufacturer to its customers”  
**Case SME:** Dinçer Lojistik  
**Selected Clients:** Polisan and Kayalar  
**Objective:** Increasing the customer services to the highest level by decreasing the logistics costs  
**Factors Effecting The Objective:** vehicle occupancy, route optimization, delivery time, resource optimization, transportation damage rate, defective shipping rate  
**Business Specification:**  
- Dinçer Lojistik provides the transportation of paints for 225,000 Ton/Year where the total paint industry production value in Turkey is 800,000 Ton/Year.  
- Total Logistics Sector Business Volume in Turkey is € 70 Billion and Total Logistics & Transportation Companies Business Value is € 40 Billion  
- The total number of course is 28,695 per year where Dinçer Lojistik revenue is € 12,820,513 per year and total distance is 12,510,000 km/year
Collaborative Transportation of paints from paint manufacturer to its customers

is an SME, member of LODER.

Dinçer Lojistik

– Domestic and inner-city transportation,
– Domestic and inner-city distribution,
– Complete and partial transport,
– Fleet Transport services,
– Storage services,
– Round transport

Mainly in the Chemical Sector

Dinçer Lojistik is located in İstanbul and provides logistics services in all over Turkey (3 zones: 1=1 day, 2=2 days, 3=3 days distribution zones)

Services
Transportation and Logistics
Project Management
Storage and Distribution Services
Inventory Management
Domestic Distribution Service
Added Value Services
Collaborative Transportation of paints from paint manufacturer to its customers

Dinçer Lojistik transports paints of the paint producers (Polisan and Kayalar) to the paint producers’ clients: distributors, construction market chains, hardware dealers and construction yards by making agreements with carriers and plans the transportation service in collaboration with the clients of the client.

Dinçer Lojistik (LOGO Software & Logistics Associates Transportation Management Software (LATMS)) collaborates with the clients of the client. It provides web service for loading process, contract for order sending, contract for SPOT carriers (daily), contract for own vehicles (daily) and collaboration for loaded transport tracking.

CLIENTS

Paint Companies
- Marshall (SAP, AS/400)
- Polisan (SAP)
- MEGES (AXAPTA)
- DUPONT (SAP, AS/400)
- Kayalar (AXAPTA)

CLIENTS of CLIENTS

Distributors
- Özyurt (Univera) - İst
- Aycan (LOGO) - Ank

Construction Market Chains
- Bauhaus (SAP)
- Praktiker (TEKZEN)

Hardware Dealers
- Over 2 tons of goods

Construction Yard

Own Vehicles OV

Contractual SPOT Carriers (Daily) CSC

Contractual Dedicated Carriers (Long Term) CDC

Interoperability

Domestic transport, packaged goods (IBS) and a process without storage
Business Processes
(6 Use Cases Selected)

1. Contract management between Logistics Company & Supplier
   - negotiations
   - Contract Document
   - Work Plan
   - Supplier’s Clients Address List

2. Contract management between Logistics Company & Vehicle Owners and Client’s clients

3. Performance Measurement Controls
   - Reports according to the Performance Indicators

4. Each Project

Projects:
- project1, project2, project3
- Supplier Agreement
- End of Agreement

Order-Delivery Process

1. Receive the order of the client
2. Group the orders by date and by location
3. Plan the freight & routing (own properties and rental vehicles)
4. Send the vehicles to the Client’s loading place
5. Load the vehicles and receive the deliveries
6. Unloading the vehicles in the delivery place
7. Tracking the vehicle
8. Unloading the vehicles in the delivery place
9. Take the return and Empty containers
10. Unloading return and empties
11. Reporting to the client
12. Prepare and send the invoice
13. Receive the payment (collection)

14. Yes
   - Are there any return and Empty container?
   - Yes
   - 4. Send the vehicles to the Client’s loading place
   - 5. Load the vehicles and receive the deliveries
   - 6. Vehicles depart from the Client
   - 7. Tracking the vehicle
   - 8. Unloading the vehicles in the delivery place
   - 9. Take the return and Empty containers
   - 10. Unloading return and empties
   - 11. Reporting to the client
   - 12. Prepare and send the invoice
   - 13. Receive the payment (collection)

15. No
   - 2. Group the orders by date and by location
   - 3. Plan the freight & routing (own properties and rental vehicles)
   - 4. Send the vehicles to the Client’s loading place
   - 5. Load the vehicles and receive the deliveries
   - 6. Vehicles depart from the Client
   - 7. Tracking the vehicle
   - 8. Unloading the vehicles in the delivery place
   - 9. Take the return and Empty containers
   - 10. Unloading return and empties
   - 11. Reporting to the client
   - 12. Prepare and send the invoice
   - 13. Receive the payment (collection)

16. End of Agreement
Enterprise COllaboration & INteroperability

COIN SP7
Lithuanian Business Use Case
VAE Legetechea was founded in 1995 as turnout producer.

VAE Legetechea supplies “Lithuanian railways” with fully assembled turnouts, switch blades, frogs, insulated rail joints and all enterprises of VAE Group with baseplates.

Today Enterprise is exporting its products to more than 10 countries: Latvia, Estonia, Austria, Spain, Italy, USA, Australia, Holland.
Example of relations with Legetecha’s suppliers and customers

**Suppliers**
- Steel supplier: JSC Jogmetis
- Service supplier: JSC Rinanda

**Railway parts manufacturer JSC VAE Legetecha**
- Manufacturing of parts
- Assembling of semimanufactures
- Assembling of final products

**Customers**
- Buyer of semimanufactures: JSC Alkesta
- Buyer of final product: JSC Gelmagis

**VAE**
- GmbH
- VAE Riga
- VAE SOFIA

**Customers**
- Lithuanian railways
- UAB “Hidrostatyba”
- VolkerRail Lietuva
- AB “Panevėžio keliai”
Bottle necks

1. VAE Legetecha’s actions to find suitable suppliers
2. VAE Legetecha’s and potential customer working groups’ actions to prepare initial manufacturing specification and high level work plan
3. VAE Legetecha’s and potential customer’s consideration to make business agreement
4. VAE Legetecha’s actions to negotiate with suppliers
Business use case overview

1. Preliminary order analysis and evaluation
2. Initial production plan preparation and cost estimation
3. Search for manufacturing partners
4. Final order preparation and agreement signing
ERP system “IMI2005”

- Specialized cost accounting and planning system
- Client server architecture
- Hosted on local server
- Borland Interbase DBMS
- Full version available, realistic data available for testing
- JDBC, BDE, or ODBC interface
ERP system “Centas”

• Commercial ERP system
• GUI + DB
• Hosted on local server
• Database: Paradox DB tables
• Demo version available, realistic data for testing
• BDE or ODBC interface
ERP system “Rivile”

• Commercial ERP system
• GUI + DB
• Hosted on local server
• Database: standard FoxPro DBF files
• Demo version available, realistic data for testing
• Custom interface for import/export based on XML
Enterprise COllaboration & INteroperability

COIN (SP7)
University of Cyprus
Shipping sector in Cyprus

- Shipping is a hugely important sector in Cyprus and the wider region
  - The Cyprus Registry is classified as the 10th largest merchant fleet globally and the 3rd largest fleet in the European Union,
  - Contribution to the Cyprus economy is as high as 5.5% GDP (Gross Domestic Product),
  - European merchant fleet capacity was significantly increased upon Cyprus accession (± ±20%).

- ~87% ship-owning/management companies in Cyprus are controlled by EU (including Cypriot) interests.

- ~4,500 persons are employed ashore and ~40,000 seafarers of different nationalities employed onboard vessels controlled/managed from Cyprus.

- Shipping industry hugely successful over last 20 years. Further growth expected with the continued introduction/development of modern infrastructure and ICT
  - A successful pilot of COIN services will contribute to this success
Introduction to use case scenario

- The selected use case scenario describes the process of accomplishing a shipping voyage.
- Donnelly Tanker Management (DTM) is the responsible party for the overall organization of a successful voyage and has to ensure communication between all involved parties are well maintained and correct communications channels are followed.
- The process for voyage establishment includes direct communication between DTM and the other parties and or the monitoring of the communication between the parties in order to receive the acknowledgment and to continue to the next step of the process until the voyage is completed.
- Actors:
  - DTM, United Product Tankers (UPT), charterers, brokers, load port agents, discharge port agents and United Fuel Services (UFS).
Introduction to use case scenario
• e.g., dynaform for voyage setup step in workflow in process maker
Enterprise COllaboration & INteroperability

**COIN Workshop:** COIN EI / EC Services for Collaborative networks in the Enlarged European Union

**COIN EI / EC Services in the EEU from requirements to first adoption**

Aachen, June 22nd 2010

Sergio Gusmeroli
TXT e-solutions SPA, COIN Technical Coordinator