SMEs Involvement in Projects

KNOW-CONSTRUCT

Internet Platform for Knowledge-based Customer Needs Management and Collaboration among SMEs in Construction Industry

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Current situation in Construction Industry

• Current main restrictions in Construction industry:
  – High fragmentation
  – Low IT level
  – Classical Internet solutions insufficient
  – Need for improvement in communication with customers and effective knowledge sharing as a base for implementation of new co-operation forms

• Overcome these restrictions will have big impact in Europe as Construction Industry represents a significant percentage of European economy.
Research Objectives

• The project aims to develop a **common internet-based platform** for SMEs in **construction sector** to provide two general functionalities:
  
  – **Customer Needs Management (CNM) System**: a decision making support system regarding the **products** characteristics, applications and other **consultancy** services for SMEs’ customers applying "web enabled dialogue"
  
  – **Knowledge Communities Support (KCS) System**: a system for SMEs to support an advanced form of co-operation through the creation of Knowledge Communities of SMEs in CI.

• Platform owned by **Associations**, offering members to establish individual CNM systems and take benefit of KCS System.

• KC system to be used within the Associations to collect and exchange the business area specific **knowledge** among the members (SMEs) in a form of essential expertise, reachable anywhere, at any time.

• A **low-cost** solution, affordable for SME community.

• The system will be tested by project partners and other similar organisations from the CI.
Business objectives

- Technical support to customers, **product technical information**, **problem solving** support, **product/services selection**, **legislative issues**, safety, analysis of **customer feedback**.
- Reduced efforts and time for offers preparation, answer to customer requirements, application instructions, search and selection of products.
- **Technical consultancy** between different actors (architect, manufacturer, supplier, etc.).
- **Best practice** exchange: legislative, health, safety, environment.
- Some possible business scenarios:
  - Search for product information/documents
  - Search for construction work (service) information
  - Search for Partner
  - Customer Feedback
  - Navigate legal information
  - Register problem/solution
  - Consolidate product's application experiences
Customer Needs Management (CNM)

Product & Customer Support

COMMON PLATFORM

Construction Industry

Common Knowledge Base

Collaboration among SMEs

Knowledge Community Support (KCS)
Architecture Model and Functionalities

HTML Client (browser)

Application Server

KCS
OpenCms
mvforum
SnipSnap
Semantic functionalities (Tomcat)

CNM
Product Information
Construction Process
e-Consultancy
Partner search
Customer Feedback

Database

OpenCms
mvforum
SnipSnap
Business Database
KCS Architecture

The traditional way is “text based search” (black arrows)

The extended way is “semantic search” (red arrows). Increased searching capabilities due to the usage of a common CI ontology.
The CNM will extract information from private SME databases in order to provide end users with:

- Searching for Product providers
- Searching for Construction processes providers
- Interactive e-consulting
- Searching for cooperating partners
- Feedback from customer
Development approach

- Create a CMS module
- Implement basic functionalities:
  - Semantic query
  - Document tagging
  - Integration of weblog / forum / IM utilities
- Install the module in associations
- Incrementally add and refine functionalities
  - According to the end-users
  - Online concurrent development using JSP
Conclusions and future work

- Early prototype finalisation
- Training and Feedback from industrial partners
- Full prototype development.
- Ontology localisation (translation into different languages)
- Ontology customisation for each BCs
- Final prototype testing and assessment
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THANK YOU FOR YOUR ATTENTION

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