

SAKE Project – Second Prototype of Groupware System

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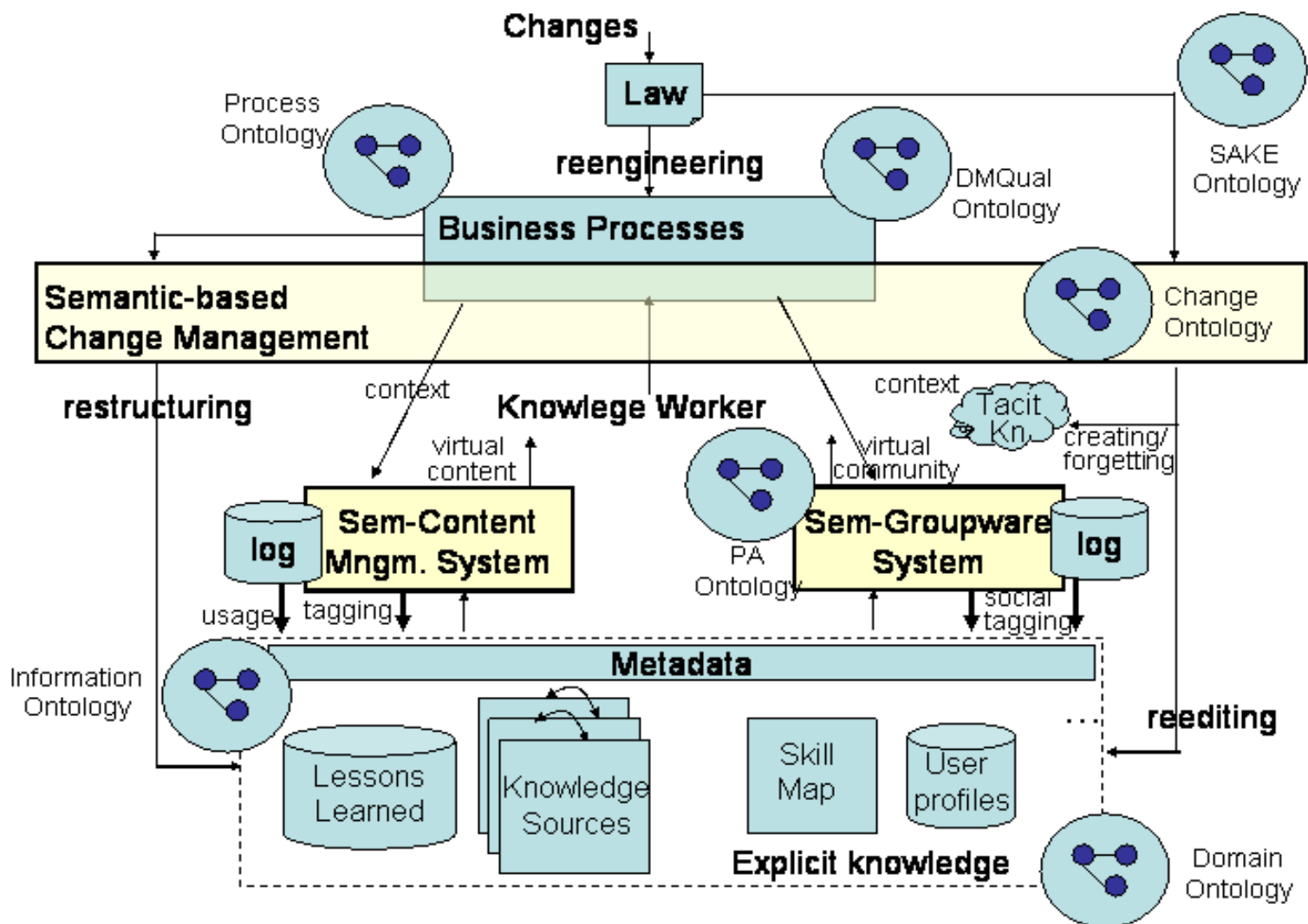
Outline

- ✿ Introduction to SAKE
- ✿ SAKE overall architecture
- ✿ Second prototype of the Groupware system
 - ✿ Implementation and architecture
 - ✿ Main features/functionality
- ✿ Pilot applications

SAKE Project

- ★ SAKE IST Project “Semantic-enabled Agile Knowledge-based e-Government”
 - ★ Started in March 2006
 - ★ 3 years, STREP
 - ★ 11 partners (Greece, Germany, Poland, Hungary, Slovakia)
 - ★ Pilots
 - ★ UMC, Urząd Miasta Czestochowy, Poland
 - ★ MIT, Ministry of Informatics and Communication, Hungary
 - ★ LATA, Mestska cast Kosice – Sidlisko Tahanovce, Slovakia
- ★ Objective
 - ★ Specify, develop, deploy
 - ★ Holistic framework
 - ★ Supporting tools
 - ★ Agile knowledge-based e-government
 - ★ Flexible to adapt to changing environments and needs
 - ★ The approach is primarily focused on the New Member States
 - ★ Frequent changes are expected
 - ★ European integration has paved the way for new legislation and regulations

SAKE overall architecture (1)



SAKE overall architecture (2)

- ✦ Semantic-based attention (change) management system
 - ✦ Consistent propagation of changes to knowledge stakeholders
- ✦ Semantic-based content management system
 - ✦ Efficient provision of knowledge in the context of public administration processes
- ✦ Semantic-based groupware system
 - ✦ More efficient knowledge sharing and interaction between public administrators
- ✦ Workflow management system
 - ✦ Main integration component

Implementation – Software Engineering Approach

- ✦ Two-phase iterative prototyping approach
 - ✦ Superior waterfall approach
 - ✦ Requirement analysis, design, implementation/integration, and test
- ✦ Prototypes
 - ✦ Basic functionality prototype
 - ✦ First version of SAKE prototype
 - ✦ **Second version of SAKE prototype**
- ✦ Evaluation
 - ✦ **Basic functionality prototype**
 - ✦ Second version of SAKE prototype

SAKE Second Prototype - Technologies

- ✦ Extended First prototype
- ✦ Technologies/OpenSource used
 - ✦ SAKE Portal
 - ✦ JBOSS Portal
 - ✦ EJB/Portlets JSR168
 - Connection to subsystems in business tier using EJB
 - ✦ CMS
 - ✦ Daisy
 - ✦ GWS
 - ✦ Coefficient, Mail service, Calendar (iCal)
 - ✦ Common Knowledge Space – ontology subsystem
 - ✦ KAON2
 - ✦ AMS – Attention (Change) management system – Preference management, Change Notification Service (CNS)
 - ✦ From scratch, CNS – Nutch Web Service Engine
 - ✦ Workflow
 - ✦ jBPM directly used in JBOSS Portal
- ✦ ‘Adaptor’ mechanism implemented
 - ✦ Support for existing GWS, CMS on pilot sites

Second Prototype of Groupware System - Architecture

- ★ *Back-end Persistence Layer*
 - ★ Storage necessary for supporting GWS functionalities
 - ★ Hibernate framework
- ★ *Back-end Business Logic Layer*
 - ★ Logic behind provided functionalities of the groupware component
 - ★ Management of a shared workspace and user access control to resources
- ★ *Tool Functionalities Back-end Layer*
 - ★ Support of different tool functionalities which are provided to the users
 - ★ Different types of communication/collaboration are provided e.g. discussion forums, e-mail, shared calendar, file sharing provided by corresponding modules
- ★ *Interfaces Layer*
 - ★ Layer responsible for integration with other SAKE components
 - ★ Connections to services provided by other components as well as services which are provided by GWS for other parts of the whole integrated system

Second Prototype of Groupware System – Features

- ✦ Full support/usage of semantic context within GWS
- ✦ Semantic log of user's activities within GWS
- ✦ Annotation of discussion messages
 - ✦ Keyword annotation
 - ✦ Personal relevance feedback
- ✦ Metadata/semantic search
- ✦ Extraction of potential experts by their ranking according to their previous discussions

Conclusions - Evaluation of Pilot applications

- Next step -> Evaluation of pilots
 - December 2008 – February 2009
 - Preparing, running and evaluation of pilots
 - Evaluation of three pilots
- Pilot applications
 - Košice – City Ward Sídliisko Ťahanovce
 - Focused on process of adopting a global national or European law into local authority environment
 - Selected process is “The making of local legal regulations”
 - Hungarian Ministry of education in Budapest
 - Selected process is “Higher Education Portfolio Alignment with World of Labour Needs”
 - Town of Czestochowy - Town Hall
 - The application is focused on processing the changes in legislature and the consecutive identifying of fields influenced by the change according to material resources for education institutions and their needs for repairs and reconstructions
 - Management of educational institutions’ material resources