SMART EXCHANGE OF KNOWLEDGE OBJECTS

For content to become valuable in the knowledge economy, its relationship with knowledge workers’ tasks needs to be explored. The primary scientific objective of the METOKIS project is to make a substantial contribution to the development of self-describing knowledge and content structures, by clarifying the relationships between content and the knowledge that may be encoded in the content. METOKIS was submitted and accepted under the European IST strategic objective Semantic-based Knowledge Systems (Framework Programme 6).

METOKIS Expected Results

METOKIS will
- create a prototype “knowledge content carrier architecture” that enables the exchange of advanced content objects. These content objects combine multimedia resources with semantic annotations whose vocabulary is derived from ontologies. In METOKIS, the idea is to enhance the semantic annotations by task-related concepts, so as to provide an operational context for each content object. The description of possible operational context is deemed to be a necessary precondition for the trading and exchange of knowledge objects.
- create three applications that test and validate the knowledge content carrier architecture by putting it into action. The following real-world applications - each with different knowledge content requirements - will be built:
  - a decision support system for senior executives;
  - an educational on-line learning system;
  - definition and evaluation of treatment protocols for clinical trials.

SCOPE AND EMPHASIS OF WORK

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<th>Methodology and Process Engineering</th>
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<td>Knowledge Economy &amp; Business Modells</td>
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<td>Application for Senior Executives</td>
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<td>Applications for on-line Learning</td>
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<td>Domain specific middleware</td>
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Knowledge Workers’ e-publication and collaboration Platform

Knowledge / Content Trading Platform

Knowledge Content Objects and Knowledge Content Carrier Architecture for semantic interoperation of knowledge content objects

KEY

Work area of specific interest of METOKIS
Work area of relevance to METOKIS
Dark: Theory and Methodology
Light: Software Prototypes
METOKIS Research Objectives

METOKIS addresses several major objectives of Semantic-based Knowledge Systems.

- By providing a deeper understanding of “knowledge types” METOKIS will contribute to the definition of self-describing knowledge- and media content objects.
- Through defining a knowledge exchange architecture, which integrates current advances in semantic content, METOKIS aims to improve the efficiency of knowledge workers. METOKIS will provide valuable input to the Semantic based knowledge systems at three levels: foundational research, component level research and system-level integration.
- Through research targeted at a semantic interoperation layer, METOKIS will lay a foundation for future tools needed by knowledge workers whose tasks will increasingly be based around the use of multimedia content.

METOKIS Milestones

January 2004: Project starts
March 2004: Initial Public Project Presentation
June 2004: Report on “Task Taxonomies for Knowledge Content”
June 2004: Report on “Knowledge Services Methodology”
September 2004: Workshop “Knowledge and Content Technologies”
January 2005: Software prototype “Knowledge Content Carrier Architecture”
May 2005: Workshop “Industrial Applications and Commercial Take-up”
September 2005: Workshop “Pervasive Smart Content Technologies”
October 2005: Final Report and Software Showcases

METOKIS Participants

The consortium consists of companies from different professional backgrounds and sizes including SMEs.

- Salzburg Research Forschungsgesellschaft mbH (Austria)
- Knowledge View Ltd (United Kingdom)
- Empolis GmbH (Germany)
- YMega Establishment (Liechtenstein)
- Templeton College, University of Oxford (United Kingdom)
- Institute for Media and Communications Management University St. Gallen (Switzerland)
- Laboratory for Applied Ontology (LOA), Institute of Cognitive Science and Technology, Italian National Research Council (Italy)
- Ernst Klett Verlag, Educational Concepts (Germany)

METOKIS Basic Project Information

Submitted and accepted under strategic objective:
IST-2002-2.3.1.7, Semantic-based Knowledge Systems
Planned efforts: 360 person months
Planned budget: EUR 3,705,297.-
EC funding: EUR 1,700,00.-
Additional funding: Swiss Federal Government

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