The THESEUS Research Program on Technologies for the Internet of Services

Dr. Regine Gernert
Federal Ministry of Economics and Technology
The THESEUS Program Framework
The THESEUS Technology Framework
Mission

» THESEUS develops and deploys new technologies for the Internet of Services

» for offering, trading and using conventional and digital services via the Internet in an open service market („Open Service Infrastructure“)
» for a better use of information over the Internet with the aid of semantic technologies („Knowledge Infrastructure“).

THESEUS is not about new search engines!
Budget & Sponsors

» THESEUS Research is funded publicly and privately with a total of 180 Mio. Euro

» THESEUS special projects support (THESEUS Talent Promotion Initiative, THESEUS SME Initiative, THESEUS Venture Capital Initiative) with ~ 10 Mio. Euro
Program Structure

**Scientific Excellence**
- Academic partners
  - address technological breakthroughs
  - lead in technology developments
  - collaborate with standardisation organisations

**Business Strength**
- Business partners
  - secure market relevance
  - develop and market technologies nationally and internationally

**Core technologies**

**Coordination**

**Use Cases**

**THESEUS Program Framework**

Academic Partners: SAP, SIEMENS, Compal, Fraunhofer, Lycos, LMU,mor@soPhy, TUM,VDMA, any,

Business Partners: Intelligent views, FESTO, Technische Universität Dresden, FZI,ontoprise
Collaboration Framework

Technology Watch:
- Subjects, Topics & Trends

Technology Profiling:
- Analysis & Comparison

International Networking:
Institutions & projects in the International Research arena
THESEUS Application Use Case Technologies

**TEXO**
Internet-based service management

**MEDICO**
Medical diagnostics information & knowledge management

**ALEXANDRIA**
Community driven semantic annotation of information

**PROCESSUS**
Knowledge based Business Process Management

**CONTENTUS**
Knowledge based access to the cultural heritage

**ORDO**
Personalized Information & Knowledge Management
THESEUS Core Technology Cluster (CTC)

- Image and Video Analysis
- Video and Audio Codecs
- Ontology Development & Management
- Multimodal Dialogue Shell for various devices
- Visualization Technologies for User Interfaces
- Statistical Machine Learning Technologies
- Information Security & Privacy Technologies
- Standardized Evaluation & Testing
TEXO - The „Internet of Services“ platform

A trusted Service Ecosystem of Service Providers, Consumers and Brokers buying, selling, repurposing and composing services for different needs

- resulting in -

A new way of organizing the interaction between partner ecosystem, the community & service consumers
TEXO - The „Internet of Services“ platform

TEXO focusses on Web Based Business Services and their semi-automatic composition.

Services will
- become tradable &
- composed from services of different providers
- be offered, delivered & executed automatically & supported by IT

Research project TEXO will offer
- customized & personalized services
- community involvement to improve services, both for providers & consumers of services
- seamless & smooth adaptation and integration of services into the user environment

Within the research program THESEUS
- TEXO will provide IT concepts & support for a Services Platform on the Internet supporting Business Webs
Texo addresses the full service lifecycle from innovation to consumption.
Texo Services Descriptions

Service Description Standards

ISE Workbench Development Platform
THESEUS Technology Framework

THESEUS Semantic Technologies: CONTENTUS Application Use Case

Available archives (Storage array)

Photo, Images, Books, Audio-visual material...

Digitizing

Quality Assessment
- Sharpness, Contrast, color space, noise, dirt, motion blur, bit depth, motion quality, etc.

Restoration

Feedback

Available archives (Non digitized material)

Quality Assessment & Quality control
- Sharpness
- Noise, Dirt
- Motion blur
- etc.

Metadata Extraction, aggregation & enrichment

Archiving & indexing

Networking

Optimal and structured archives

Storage optimization

Content analysis
Technologies for the Internet of Services
International THESEUS Symposium 2009

Federal Ministry of Economics and Technology, Berlin
June 29-30, 2009
Preliminary Program

TOPICS
Visions for the Internet of the Future
Business Perspectives
Service Infrastructures
Semantic Technologies

KEYNOTE SPEAKERS
PUBLIC SERVICES:
Parliamentary State Secretary Dagmar Wöhrl, German Federal Ministry of Economics and Technology
Prof. Dr. João Schwarz da Silva, European Commission

BUSINESS:
Prof. Dr. Lutz Heuser, SAP AG
Dion Hinchcliffe, Hinchcliffe & Company
Martin Jetter, IBM Germany
Dr. Markus Junginger, Festo AG
Dr. Rainer Ruggaber, SAP AG

RESEARCH:
Dr. Reinhold Achatz, NESSI & Siemens Corporate Research & Technologies
Agata Filipowska, Poznan University of Economics
Prof. Dr. Yanbo Han, Chinese Academy of Sciences
Prof. Dr. Masaru Kitsuregawa, University of Tokyo
Pieter van der Linden, QUAERO
Prof. Dr. Rudi Studer, Research Center for Information Technology (FZI)
Preliminary Program

WORKSHOPS

BUSINESS PERSPECTIVES
Business Models for the Internet of Services
Economics 2.0
Microblogging in the Enterprise

SERVICE INFRASTRUCTURES
Service Platforms
The SeMantic Information Logistics Architecture (SMILA)
Service Innovation

SEMANTIC TECHNOLOGIES
Mobile Services
Ontology Design & Ontology Management
Service Description Languages
Semantic Image Annotation
Knowledge Visualization

APPLICATIONS
Multimedia Search Technologies

Demos & Open Spaces
Demonstrations will be provided by THESEUS project partners and other symposium participants. Open Space sessions will be organized on “Hot Topics” either in advance or during the symposium spontaneously.
Theseus, ancient King of Athens, victory over the cruel Minotaur monster