Secure Process-oriented Integrative Service Infrastructure for Networked Enterprises

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What is SPIKE?

- SPIKE stands for *Secure Process-oriented Integrative Service Infrastructure for Networked Enterprises.*

- The purpose of the project is to develop a software service platform for the easy and fast start-up of virtual business alliances.

- Using SPIKE, enterprises will gain business opportunities with previously inaccessible customers and partnering organisations.
Objectives of the project

- Outsourcing parts of the value chain to business partners
- Short-term and project based alliances
- Simplify collaboration through dynamically created and pre-defined business processes
- Special focus on security and trust.

→ Achieve interoperability and integration between organisations of all sizes and all kinds of services
Main results

- User requirements: interviews, interested parties
- State-of-the-art analysis: reusable technologies/components
- Architecture: semantic SOA with special focus on security
- Implementation of SSO and IdM in networked enterprises, “security services” started
- Ideas on semantic markup of services
Expected results at the end of the project

- **Semantic workflow engine**: handling customized processes, workflows and distributed processes
- **Portal server extension**: semantic context capturing and communication
- **Semantic service bus**: registering, discovering and contracting services; message routing and processing
- **Security infrastructure**: IdM, workflow and service access control, auditing functionality

- Prototype of an OpenSource SPIKE platform
- Methodological guidelines
Consortium

- 8 partners from 5 different EU countries
- 3 academic institutions
  - Technical University of Kosice (TUK)
  - University of Malaga (UMA)
  - University of Regensburg (UR)
- 5 industrial partners
  - addIT Dienstleistungen GmbH & Co KG (AIT)
  - Citec Information Oy Ab (CIT)
  - Infineon Technolgies IT-Services GmbH (INF)
  - Intersoft a.s. IS (IS)
  - IT Inkubator Ostbayern GmbH (ITI)
Questions?

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- http://www.spike-project.eu
SPIKE Context

Electronic service requester
Electronic service user
External service
External data source

SPIKE

Administrator
Activity executor

Service process designer
Service provider
Service requester
Service user
General Overview

SPIKE Servie Bus (SSB)

SPIKE System Core (SSC)

SPIKE Portal Instance (SPI)

SPIKE Administration, Monitoring & Reporting (SAMR)
Technical Building Blocks

- Service-oriented architecture
- Enterprise service bus
- Semantic technologies
- Business process management
- Portals, inter-portlet-communication and context
- Security Infrastructure for networked enterprises
- Identity management
IV. Expected results at the end of the project 2/2

- **Information flow control**: service message and user context filtering according to specified policies
- **Repositories** for processes and ontologies
- Portal-based **interfaces and tools** for user-friendly administration of alliances, ad-hoc workflow modeling and process handling
- **Semantic transformation** of service messages including user **context** information
Backend Architecture

Diagram showing the backend architecture with various managers and their interactions.