eGov-Bus: Advanced eGovernment Information Service Bus

Herbert Leitold, A-SIT

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Project Overview

- Research project funded under the EU 6th Framework Programme, Information Society Technologies
- Project Budget: € 3,368,674,40
- Community Funding: € 2,269,945,00
- 8 Project Partners
  - Companies, Universities, Research Institutions
Project Partners

- Rodan Systems S.A. – Project Co-ordinator - Poland
- Axway – France
- University Paris Dauphine – France
- European Microsoft Innovation Centre – Germany
- Polish-Japanese Institute of Information Technology – Poland
- Ministry of Internal Affairs and Administration – Poland
- Secure Information Technology Centre – Austria
- University of Uppsala – Sweden
Project Objectives

- Overall Goal
- Specific Objectives
- Overall Architecture
eGov-Bus Overall Goal

- To integrate and extend research and standards in the area of process and content management for government and cross-government systems,
- with the capability of creating advanced applications of electronic signature enhancing acceptance of the technology and establishing trusted system validity and non-repudiation,
- relying on web services, process and repository management platforms based on a highly secure, highly available, scalable and distributed architecture providing data access abstraction.
Specific eGov-Bus Objectives

- Create adaptable process management technologies by enabling virtual services to be combined dynamically from the available set of e-Gov functions, personalizing preferences and supporting the rules of the specified life event.

- Exploit and integrate current and ongoing research results in the area of natural language processing to provide user-friendly personalisable interfaces to the eGov-Bus.

- Orchestrate available web services according to the specific life-event requirements, creating a comprehensive workflow process and providing explanation to the end-user.
Specific eGov-Bus Objectives (cntd.)

- Support a virtual repository of data structures required by life-event processes, representing declarative (i.e. rules governing life-events categories) and procedural knowledge.
- Provide these capabilities based on a highly available, distributed and secure architecture that uses existing systems.
Project Architecture

- Using existing eGov Webservices
- Non-intrusive
- Innovative user interface
- Security services
Envisaged User Experience

- Describing a situation via the portal
- Interview to identify life-event and collect the needed information
- Life-event fired
- Existing services either
  - Compliant
  - Access via Relay
  - Wrapped and accessed via Relay

29.10.2007  Herbert.Leitold@a-sit.at
Standards - Modules

- Based on Overall Architecture
- Main Modules / Work Packages
Some standards as of the overall architecture

BPQL, TopicMaps, ebXML Registry Information Model / Registry Services

WS-Security, WS-Addressing, WS-Policy, (WS-Reliable Messaging)

RDF views, SQL

CMS, XMLDDsig, XAdES


SOAP, WSDL, UDDI
Architecture

- Requests issued via front-end system / portal
- Legacy services invoked via Service Integration / Relay
- eGovernment services published in UDDI registry
APG Architecture

- APG: Administrative Process Generator
- J2EE / JSR 168 portlets at client interface layer
- APG service broker as interaction logic layer
- APG life-event generation engine and emulation engine
- Adaptive Administrative Process (AAP) execution engine
Virtual Repository

- Transparent access to heterogeneous data sources
- Semantic Web (RDF) representation of existing sources
Security / eID

- Trust Domains
- Security Modules / Architecture
- eID Transformation
- Signature-Transformation
Security Modules

- **Signature-related**
  - Server signature-creation
  - Signature validation
  - Signature transformation

- **eID-related services**
  - eID validation
  - eID transformation

- **Auxiliary services**
  - Certificate validation
  - Timestamp
  - Encryption
Authentication Module (eID transformation)

- Goal: De-couple eGov-Bus from integration of national eIDs
- Transformation to a standard eGov-Bus - internal representation
  - SAML has been chosen
- eIDs so far integrated
  - Austrian citizen card
  - Belgian BELPIC
  - SSL/TLS certificates
  - Username-Passwords
Signature Transformation

- No commonly accepted eDocument framework
- Just a few electronic eGovernment results
  - e.g. signed electronic certificate of enrolment or certificate of register of convictions in Austria
  - May need to cope with different signature formats
- Idea: to act as a trusted signature validation and "re-signing" service
  - e.g. Input XAdES, result CMS or different XAdES profile
Lessons Learned

- **eGovernment (SOAP)**
  - Webservices are scare
  - a few exist (e.g. Austria)
  - Could not yet define a sufficiently complex cross-border life-event solely based on Webservices
  - Need to wrap Web-forms and simulate

- **No common eID standards yet**
  - CIP ICT PSP Large Scale Pilots

- **Project objectives are still valid**

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Herbert.Leitold@a-sit.at
Thank You for Your Attention!

Contact Herbert.Leitold@a-sit.at
Project-Web http://www.egov-bus.org

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