



Telematica
Instituut

Using open standards for portal integration



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Synopsis:

This document contains a state of the art overview on web services, describes two ways to integrate an application in a portal using web services and the architectural requirements for such integration.

Preface

In 2004, the Telematica Instituut started a three-year project named Alter Ego. In this project, the possibilities and limitations of collecting and re-using person-related information (so called user profiles) are investigated. The project focuses on various aspects of user profiles and personalised information and services:

- Technological issues;
- Issues around information security and privacy of personal information;
- Issues around business models for user profiles;
- Issues around access, trust and acceptance of the re-use of personal information.

The Alter Ego project started with mapping the state-of-the-art knowledge on these issues. This report is one of the state-of-the-art reports produced. It focuses on the use of person-related information within the framework of communication between public administration organisations and citizens.

This report describes the state of the art regarding open standards for personal domain portals that integrate information and services from various public administrations. The first part focuses on the architecture of an integrated personal portal and the consequences of the current availability and status of open standards. In the second part of the report the consequences of deepening levels of integration and personalisation are explored via a scenario within the public service context.

The study reported here was conducted by ir. Bas Jansen, from Monito. David van Kuijk (Belastingdienst), Mark van Setten (Telematica Instituut) and Thea van der Geest (University of Twente) have acted as reviewers in the process. We hope that the report contributes to an effective, efficient and user-focused communication and interaction between the Dutch government and its citizens, through an easy, fast and safe personal domain portal.

Bas Jansen
Enschede, April 2005

Summary

It is a general trend that organisations increasingly use web applications for communicating with their customers, letting them perform transactions faster and more easily. All web applications that are offered by an organisation are often grouped into a portal. The Dutch government is also launching more and more web applications for citizens. Most of these applications are limited to one organisation only. Also, existing portals are organisation based. There is no portal covering all governmental web applications.

This study tries to find out what open standards are needed to enable applications that span multiple organisations and what is needed to integrate these applications into a portal. Four different integration complexity levels are identified, ranging from no integration and a simple portal containing links to more complex levels of presentation integration and process integration. These levels are worked out using a scenario.

Since web services proved to be the best open standard for portal and application integration, a thorough analysis of web service specifications, development, standardisation, adoption and implementation status has been conducted. Also, the standards that are relevant for portal integration were identified.

Using the scenario and the identified web service standards, a portal architecture has been worked out for the two more complex integration complexity levels. The scenario has been used to illustrate design choices and when the use of a certain standard is required and when it is optional or recommended.

The integration problems have proven to be larger than just portal integration: not only integrating applications into a portal, but also communications between organisations must be taken into account to ensure re-use of business services and guarantee a certain security level.

The identified web service standards cover all features needed for portal and application integration. However, implementations of the standards may not be ready yet, as was shown by the attempt to implement a proof of concept of a portal architecture using open source software. Commercial software is probably a better choice due to the industry driven nature of web service specification development.