Chapter IX

A Flexible Evaluation Framework for Web Portals Based on Multi-Criteria Analysis

Demetrios Sampson
University of Piraeus, Greece and
Informatics and Telematics Institute of the Centre for Research and Technology Hellas (ITI-CERTH), Greece

Nikos Manouselis
University of Piraeus, Greece and
Informatics and Telematics Institute of the Centre for Research and Technology Hellas (ITI-CERTH), Greece

Abstract

In this chapter, the issue of subjective evaluation of Web portals for assessing user satisfaction is addressed. We present an evaluation framework for addressing the multiple dimensions of Web portals that can affect users’ satisfaction. The objective of this framework is to specify a set of total satisfaction indicators that allows monitoring of the user-perceived quality level of a Web portal and comparing the results from different evaluation groups. Initially, we study the multiple dimensions related with four main satisfaction factors: Web portal content, Web portal design, Web portal personalization, and Web portal community.
support. Then, we propose a multiple criteria model that synthesizes assessment upon the multiple satisfaction dimensions into a set of monitorable quality metrics. We present how the multi-criteria model is engaged throughout the framework stages to support subjective evaluation of Web portals. Finally, we demonstrate the application of the proposed framework in the context of the summative evaluation of the Greek Go-Digital e-business awareness and training portal for very small and medium enterprises (vSMEs).

**Introduction**

Evaluation of Web portals is an important issue in Web engineering, taking into consideration the Internet explosion and the exponential growth of Web sites and online information sources. Web portals present nowadays a significant variety of features, complexity of structure, and plurality of offered services. As in the case of all information systems, evaluation is an aspect of their development and operation that can contribute to maximizing the exploitation of invested resources (Adelman, 1991). Additionally, evaluation can also significantly contribute to the development of Web portals that serve the user needs and meet the user expectations to the maximum possible extent.

In general, a Web portal offers a variety of services in a continuing development. It is desired to adopt evaluation methods and instruments that will allow the combination of different means of assessment and provide results exploitable in several ways. For example, an interesting perspective of evaluation is identifying and adopting evaluation methods that go beyond the separate assessment of different operational aspects of Web portals and that provide synthesized results to the key decision makers—being either those financially supporting the service or those involved in the design, development, operation, and/or exploitation of the service. Moreover, we can also identify the aspect of assessing the satisfaction of users belonging in different evaluation groups. The above issues call for subjective evaluation methods and tools that can supplement the rest of the evaluation activities (Adelman, 1991; Ivory, Sinha, & Hearst, 2001; Levi & Conrad, 1996), synthesize assessment results, and facilitate the improvement of the offered services.

The main objective of this chapter is to study the issues introduced above by adopting a quality-oriented approach in Web portal evaluation. Such an
Related Content

Using the Building Blocks: Evolution of a Portal Suite
[www.irma-international.org/article/using-building-blocks/46164/](http://www.irma-international.org/article/using-building-blocks/46164/)

A Local Community Web Portal and Small Businesses
[www.irma-international.org/chapter/local-community-web-portal-small/17929/](http://www.irma-international.org/chapter/local-community-web-portal-small/17929/)

An Academic Management Portal
[www.irma-international.org/chapter/academic-management-portal/17836/](http://www.irma-international.org/chapter/academic-management-portal/17836/)

Supporting Knowledge Management and Collaboration in Research Communities Using Automatically Created Research Portals
[www.irma-international.org/article/supporting-knowledge-management-collaboration-research/78544/](http://www.irma-international.org/article/supporting-knowledge-management-collaboration-research/78544/)

Servlets
Jana Polgar, Robert Mark Braum and Tony Polgar (2006). *Building and Managing Enterprise-Wide Portals* (pp. 82-93).
[www.irma-international.org/chapter/servlets/5967/](http://www.irma-international.org/chapter/servlets/5967/)