FUNCTIONAL SPECIFICATIONS FOR A KNOWLEDGE PORTAL & ROLE OF LIBRARIES

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Abstract

Recent technological advances have led to the emergence of portals as sophisticated applications, designed to give users simple, quick, secure access to relevant organizational data and external information through links to useful pages. Portals offer benefits to higher education, organizations and institutions as they serve a coordinated access to multiple services and information sources and let users personalize how they view and work that information. This paper outlines the various functional requirements, including content and knowledge strategy for developing a portal for institutions of higher learning and the role of libraries in the portal environment.

Keywords : Knowledge Portal, Library Portal, Functional Requirements, Content Management, Portal Taxonomy, Role of Libraries.

1. Introduction

Knowledge management has recently emerged as an interdisciplinary model of dealing with all aspects of knowledge, including knowledge creation, organization, sharing, and dissemination and promoting learning and research. Knowledge management is "the process by which an enterprise consciously and comprehensively gathers, organizes, shares and analyses its knowledge to forth its aims" [1]. Knowledge management is important because it has the potential to revolutionize teaching and learning. In knowledge society portal is one of the tool that enable transformation of learning. Portals have the potential to turn the web from an institution-centric repository of information and applications to a dynamic user-centric collection of information thus imparting a wider knowledge base to the user communities. "Instead of a single homepage that proclaims identically to all who wish how grand the institution is; portals will give nearly every user a customized, personalized, unique web page" [2]

Institutions of learning are now more focussed to the electronic access to information for various integrated learning and research purpose. The students, faculty etc. are willing to use the various resources available to them in electronic form through a single click of button. In fact the information seeking habits of users have changed. Academic Institutions can provide their users with one-stop, personalized, intuitive point of access to resources as well as Internet based and online databases. Portals are thus a transformational resource. " Universities recognizes that portals may be the way to engage stockholder and client groups empower them with access to branded campus information resources and communication tools and retain their loyalties for potential students or alumni. It is a community building tool" [3]

With the advent of technology developments libraries are expanding its access to information resources, for the users by connecting to the Internet and the World Wide Web for enhancing accessibility and usability of knowledge items. Today users expect value-added services, easy to use interface and want tailored information, suited to their needs. LITA (Library and Information Technology Association, a division of the American Library Association) top ten trends 1999 identified trend 1 as "library users are web users, a growing group, expect customization, interactivity and customer support". Therefore dynamic technologies are required to create real-time access to information.

2.   Portal

A web portal is a web site that provides an entry point to the Internet, and offers value-added services such as directories, searching, information news, and links to related web sites. Such portals have a significant role in structuring the way in which users, members and potential groups of people access the Internet. It can also be viewed as a virtual reference library directing web surfers to desired destination. The term was initially used to describe mega-sites such as yahoo, Excite, MSN, Netscape, AOL etc. as they were used as a starting or central point for web surfing.

Portals have been around for several years, but there is still a considerable amount of confusion surrounding this technology and its potential, therefore definition for a portal are varying. It is defined as " a hub from which users can access locate all the web content they commonly need" [4]. Another definition terms it as "an entry point to a world of resources, designed to save the user time, to unite him or her with relevant resources, and to encourage maximum use of acquired resources. It may be customized to personal or role interests"[5]. According to Computing Dictionary it is " a web site that aims to be an entry point to the worldwide web, typically offering search engine and/or links to useful pages, and possibly news or other services. These services are usually provided for free in the hope that users will make the site their default homepage or at least visit it often"[6]. It is also defined as "services targeted at very specific communities, for e.g. a community interested in cancer research" [7]

In simple words a portal is a web site or a web service which incorporates information from commercial sources, academic publishers, libraries, specialized databases, as well as current news, research etc. They can include multimedia, directories, web pages, full-text databases, metadata and bibliographic records, cross searching across the resources. They are targeted to specific user communities. Moreover they can be customized according to the role and need of the user. They can be personalized like creating a profile for news updates or current awareness service. It offers various links, news, e-mails, address book, search box, discussion groups, chats, forums, schedules, calendar and so on.

Library Information portal is defined as " a package of services and tools to facilitate the discovery, retrieval and management of information from various resources in an integrated fashion, and in doing so, takes into account the individual and personalized needs of faculty and students doing research and creating knowledge [8]. Library portal fulfill the information needs of library users through convenient, customized web-based access to quality collected resources which have currency, relevancy, and authority. They are designed to enhance the use and value of electronic resources and perform the function of resource description, searching of multiple resources through linkages and personalized services.

3.   Application and Administrative Architecture of a portal

There can be various types of application architecture for a portal. The architecture depends on the type of the portal to be developed. The key application structure of the portal can be divided into the broad areas or modules as displayed in the diagram below.
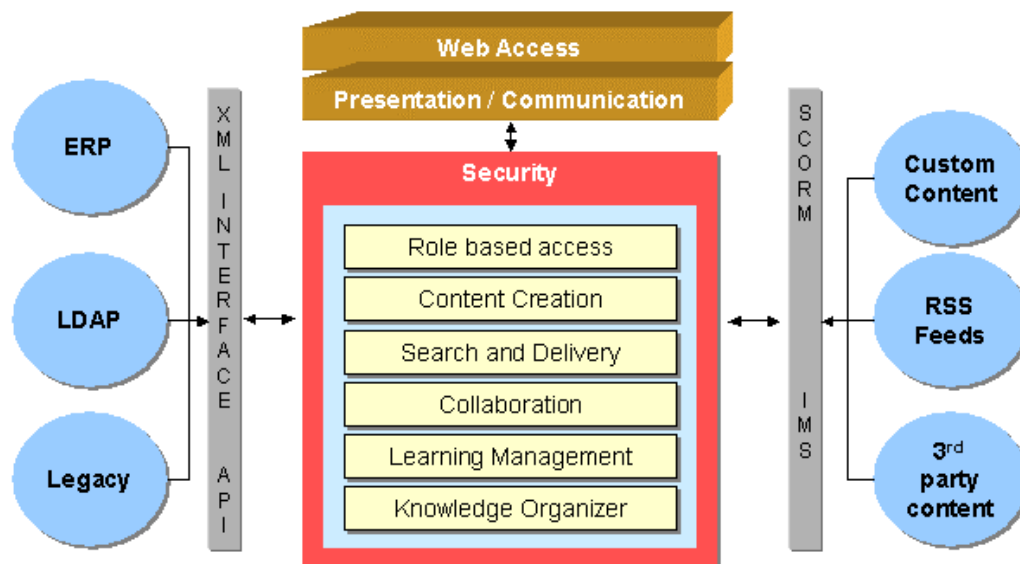
The knowledge organizer content module of the portal includes the content management, taxonomy management, metadata for knowledge items, workflow for content management, etc. Learning management module interacts with the user management, knowledge base etc for facilitating learning. An intuitive user interface for control access and navigation is an effective feature for the portal. Some information may be privileged at the organization or institution, therefore there are safeguards regarding information at multiple levels. Content providers aggregate content on the site. News, latest topics, top stories, press releases etc. any type of data and information needed to communicate with the users can be represented.

To execute the services of the portal efficiently and effectively the administrative setup and their roles are as follows:

- Knowledge Manager for operating the knowledge and content strategy keeping in views the user requirements.

- Content Providers or Content Librarians having the responsibility for information gathering, identifying sources, refining and modifying knowledge.

- Technology Administrator for setting IT infrastructure, interface management and support the Knowledge management team in all technology and application issues.

- Database Administrator for the overall system control, maintaining the database infrastructure and supporting the Knowledge Management team on all technology issues.

- Web Developer for managing the interface of the portal to ensure usability standards through handling any web-based program and portal related issues.

4. Attributes and Objectives for a Knowledge Portal

Any knowledge portal development for the Institutes of higher learning will be based on visionary objectives of the institution. The needs of the user communities are the foremost criteria for the portal to achieve the objectives and the vision set forth. There are various types of users of the portal, like students, employees of an organization, faculty of universities etc., and their requirements are to be met as expected by them. Key objectives can be as:

- Make access to a comprehensive knowledge and information repository required to dispense the major and minor functions of a particular user community in the organizations, Academic institutions etc.

- Creating a stronger user community based on the concept of knowledge sharing. It can be accomplished by sharing and building knowledge pools around the common interest of the communities for whom the portal is designed.

- Seeking support in accessing best practices and experiences that can be shared to a further extent by the users and faculty in various organizations and institutions, colleges, universities etc.

- Provision of a single point to disseminate information and knowledge that will ultimately lead to a better environment of e learning.

- Providing access to comprehensive and up-to-date information.

- Providing access to peers who have experience in a subject or knowledge spheres.

- Providing avenues for generation of knowledge by allowing online networking around specific knowledge spheres.

- Allowing for push and pull of knowledge and information to users.

- Allowing a single application to bring together and make available vast amounts of organizational data and external information that is continuously updated and maintained within the portal environment.

- Attracting and retaining users, which account for most of the portal's features through personalization and customization.

5. Contents Strategy

Knowledge is acquired through involvement with content. Therefore content management is an essential element of the portal technology. It involves the creation of contents and sourcing the contents for the knowledge portal. To execute the portal services in an efficient and effective manner the content providers, knowledge managers and the content management team performs the activities depicted in the chart and enumerated in the following section.