

E-Service Quality Management

Lorena BĂȚĂGAN
Economic Informatics Department,
Academy of Economic Studies, Bucharest, Romania
lorena.batagan@ie.ase.ro

Abstract: *In our society is a great interest in collaborative portals uses because the portal promises to be the user-elected point of entry that will provide all constituents with a single, personalized Web interface with all information and application resources in a secure, consistent, and customizable way. The portal also promises to be the means by which multiple devices and access methods can be used to provide access to new forms of information and new types of activities—providing convenient access to all appropriate information resources in an integrated manner anytime, anywhere.*

Keywords: *E-services, Quality Management, Quality Management Framework, Quality Standards.*

1. Collaborative systems

Collaborative systems are an important area of knowledge society research and many human activities are involved in this field. Science has great impact on the development of different types of systems of cooperation in various fields [15]. It is very important to do the testing process, every system of cooperation to ensure the best functionality and to remove any bugs or possible error.

Collaborative systems should perform better than other systems. This is achieved by:

- Shorter waiting in line to settle and resolve a specific problem;
- Increase the volume of transactions on mobile, internet banking and other alternative communication channels, where the banking system;
- Reducing fluctuations in employment, in order to increase collaborative system stability;
- Increasing adaptability of workers to the work environment, to increase collaborative system efficiency and reliability.

Collaborative systems are developed based on a set of specifications that defined the stage of analysis, with the aim of setting targets for development.

After the scope, collaborative systems are classified as: functional collaborative systems, micropayment systems, collaborative planning systems, labeling systems, collaborative systems collaborative writing and collaborative health care systems.

Functional collaborative systems include bank collaborative systems interconnecting also all activities that occur in the economy, providing necessary information and the coordination of production and finance management of information. A banking system is designed to automate a larger set of operations banking and to provide strategic information, tactical and operational decision-making required.

The main feature of a banking system, modern information is the connectivity between stakeholders in the banking business. From this perspective, information systems development involves successive or direct implementation of the following types of information systems [16]:

- Banking information without connectivity, characterized by the existence of independent computers that run specific applications for specific departments such as accounting, credit department etc;
- Banking of local connectivity information, like systems based on local networks of computers;
- Banking information global connectivity, which are systems based on large area network that connects local networks of banking.

All the information from a bank is collaborative systems, because it is necessary cooperation, communication and coordination of software applications to achieve a common goal.

Micropayment systems collaborative type guarantee interoperability, but allows, at the same time, their customers and suppliers choose their preferred system of collaborative pay. High quality service offered by banks has developed collaborative type of micropayment systems. Banks offer Internet banking solutions and other software for achieving development of electronic payments.

Collaborative planning systems represent the most appropriate way to address some scheduling problems. Collaborative planning requires certain capabilities that often are not found in traditional planning systems. Most importantly, this approach should be developed in stages so that enable people to develop plans focusing on a small part of planning, exploring options and planned to take some decision before considering the rest of the problem. [14]

Collaborative systems based on the tags offers a new means of organizing and sharing of resources. A labeling system lets users tag award any documents available on the web.

Collaborative writing systems are major benefits to reduce the time of completion for a particular task, reduce errors, get some different viewpoints and obtain a precise text. For collaborative writing of a document is a specific strategy: users can write independently or jointly to the document, as their work will be reviewed by another group of members.

Collaborative care systems are those in which modern communication technologies allow doctors worldwide to work in the same patient. In surgery, each person in the group of doctors has a role. A training scenario can be imagined as follows: the instructor and trainee are in different locations, but both work in the same virtual space, space that contains the 3D anatomical models. Each person interacts with each other through virtual space using a simulator that describes the physical and logical behavior of virtual objects on stage. The interaction is based on voice, gestures, actions surgical demonstration and step by step tutorials.

2. Collaborative portal

In today's business environment, improvement of collaborative portal is a priority problem for all the organizations. A common trend in new society is the distribution of large quantities of data through a single interface. This is exemplified in web accessible portals, which grant users access to multiple information sources through a single web page. The basic problem to organizations is too much information, but the collaborative portal solution resolves this problem. Portals are becoming the preferred way of providing centralized access to dynamic content from multiple, disparate sources. Today, organizations need a portal solution that they can deploy easily for fast, tangible results, without sacrificing their ability to migrate to larger-scale systems as their needs grow. Portal solution provides a consistent way to select, evaluate, prioritize and plan the right information.

Simply stated, a portal is a single interface that provides convenient access to everything a user needs to get the task done, regardless of where it exists. Whether to search

for and buy a book, access an account balance and make a transfer, or update your personal information, the portal brings everything together in one virtual place. [7]

The fundamental characteristics of a portal:

- Information aggregation;
- Targeted and personalized information;
- Accessibility;
- Single sign-on.

Similar to a workstation desktop, a portal displays a variety of information and services in a single, consistent, user-friendly interface. Sometimes referred to as a Web top, a portal can be the major starting point or anchor site that users visit when they connect to the Web. Though unlike a traditional desktop, a Web-based portal is accessible via a wide range of Web-enabled client devices.

A portal distinguishes from a web site through:

- A single point of access to all resources associated with the portal domain;
- Personalized user experience;
- Access to hundreds of data types and repositories, both aggregated and categorized;
- Collaboration and user integration capabilities;
- Integration with applications and workflow systems.

To better understand the portal is to divide portals into groups based on the purpose of the portal. Next paragraph will describe same types of portals based by different functions for different audiences, and illustrates how portal sites have evolved during the history of the web.

The first portals, known as first-generation portals, were focused on providing static Web content, Web documents, and live feeds. Examples of first generation portals are Yahoo, Lycos, and Excite. In the corporate environment they had a similar objective—providing a single interface to corporate information distributed throughout the enterprise. These typically contained information such as company news, employee contact information, company policy documents, and other key Web links.

The second-generation portals focused on specific information and applications. They incorporated the notion of providing services along with the first-generation idea of providing content. Another key feature of second generation portals is collaboration. Collaboration portals provide the ability for teams to work in a virtual office. They provide content management services (the mining and organization of related information) along with collaborative services that allow users to chat, e-mail, share calendars, and define user communities. Collaborative portals are typically internal corporate portal installations.

The third-generation portals are intended to address full-function e-business. A significant addition to this generation is the integration of application servers. This means they provide a single point of integration for content and applications as well as collaborative services. They also provide access from multiple types of devices to address the diverse user communities in need of services. They offer the richest set of content and application choice through a single user interface to a diverse community, including browsers and pervasive devices. They also provide automated personalization via rules engines. The key to their further evolution is their open framework for common services.

The information portal is as important to the Web application architecture as the browser is to the client interface (Figure 1):

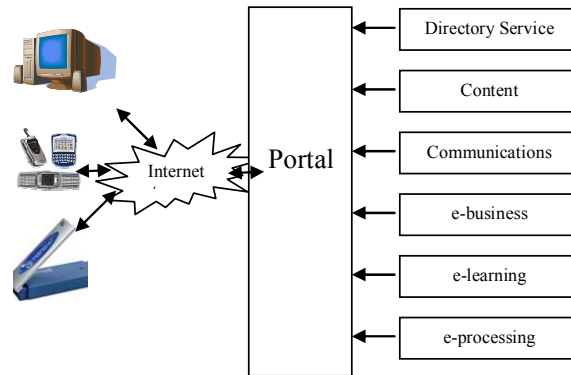


Fig. 1. Portal opportunity

The portals are increase the efficiency and productivity of employer while reducing the cost of managing large organizations. Through the portal:

- Making easier to find information that is relevant to the task the user is working to complete;
- When required, making it easier for employees to find a person, who are specialists in the type of knowledge being sought, making it easy for them to locate contact information and if necessary, make direct contact by telephone, instant messaging or e-mail.

The catalysts for developing portals are as varied as portals themselves.[8] Among other reasons, portals have been developed to:

- Provide better access to information;
- Remove barriers to applications;
- Create order from the chaos of data in an organization;
- Promote reuse of information;
- Reduce training time;
- Planning;
- Reduce cost;
- Improve information access for decision-making;
- Cultivate better relationships with customers;
- Reduce overhead costs such as benefits administration;
- Collaborative solution;
- Speed turnaround for processing such as expense reimbursement;
- Allow searches of large volumes of heterogeneous data (documents, pages, database, messages, multimedia);
- Simplify telecommuting.

3. Technology and software solutions for the information portal development

Today we find many technologies and software solutions which help us to do a performance portal in a short time but the cost is more expensive than we do alone this.

Some of the technologies and software solutions we can use are:

- BEA WebLogic;
- IBM WebSphere Portal Server;
- Microsoft SharePoint Portal Server;
- Asp.Net Portals – DotNetNuke;
- UltraApps Portal.

The BEA WebLogic Portal simplifies development of Web portal applications, enables personalization, supports the creation of business processes, and allows for easy access to information. BEA WebLogic Portal is built on the market leading J2EE-based application server, BEA WebLogic Server. WebLogic Portal provides an enterprise portal solution that includes a flexible portal framework, extensible portal service, portal and web service development tools, and portal administration tools. This combination of features combined with a highly scalable architecture provides a flexible solution for quickly implementing a portal solution. Also, because of its standards-based and open design, WebLogic Portal provides the developer increased flexibility to deliver the optimal solution as your application and portal needs in change with your business requirements.

WebSphere Portal Server [10] provides an open, flexible, and scalable infrastructure for creating and deploying many categories of portals that are accessible from a wide variety of desktop and mobile devices. Depending on the nature and sensitivity of the information, some portals may require a greater degree of security, including specialized forms of authentication and access control. Depending on the size of the user base, some portals may require very high availability and scalability. Consumer portals generally allow users to enroll themselves and to manage their own accounts. Conversely, enterprise portals often require integration with existing user databases or enrollment systems. WebSphere Portal Server offers a framework with the depth and flexibility to meet all these needs.

Part of Microsoft's portal offering - in fact, the only Microsoft product with "portal" in its name, SharePoint Portal Server - has grown from the grassroots level of the Office product development team. SharePoint web parts were based on ActiveX and required Internet Explorer. Microsoft .NET [12] integrate multiple server technologies and components to create a powerful portal solution. For several years, Microsoft has marched forward on the long journey from a desktop software company to a provider of enterprise solutions. Despite its dominance of desktop operating system and office productivity software, the company has had an uphill struggle to gain respect and market share in the enterprise software market. Microsoft has played the underdog to Oracle in the database market, the upstart to BEA in the enterprise application integration (EAI) market, and second fiddle to Sun and Unix in e-commerce and web servers. Only with the advent of .NET and the generation of server products that began after Windows 2000 Server has Microsoft boasted a comprehensive enterprise platform and serious competition for IBM, Oracle, Sun, and other market leaders.

DotNetNuke uses the term portal to describe a separation between each web site one instance of the application may contain. Webster defines a web application portal as "a web site considered as an entry point to other websites, often by being or providing access to a search engine." This can be true of DotNetNuke, but it is really more than just a doorway to other applications or search engines. It can, in essence, perform these functions as well as a host of others associated with displaying information to your users.

In our days a portal acts as an online community management system. UltraApps Portal [10] combines several online applications into one easy to use package. Now we can build an Online Community or an Intranet system using it. The portal comes with several e-content modules, such as Event List, Links, Classifieds, News and Discussions, which is a great way to get started. UltraApps Portal (PHP) is a free Web-based Portal with source code in PHP. Modules include: Events, Links, Classifieds, Discussions and News. Other features include: Search, Event registrations, PayPal payments, Moderated forums, and Newsletters. There are also ASP and ColdFusion versions available.

The UltraApps Portal can be installed in any Windows environment as long as we have a web server, either locally or externally hosted. The only requirement is that we web server or we hosting company's server supports ASP. And if we are planning to email

newsletters, CDONts (Collaboration Data Objects for Windows NT Server) component need to be installed as well.

5. Conclusions

Today is a great interest in the development of information collaborative portals because the portal promises to be the user-elected point of entry that will provide all constituents with a single, personalized Web interface with all information and application resources in a secure, consistent, and customizable way.

A collaborative portal can offers information about competitors and customers, analyzing, summarizing and comparing, then interpreting it, provides the means to measure performance in the market place. So is very important to find a technology which help to do a good collaborative portal.

References

- [1] H. Block, R. Castle and D. Hritz, *Creating Web Portals with BEA WebLogic*, Apress, 2003.
- [2] C. Bodea and V. Bodea, *Software e-Projects - New Job Opportunities for the Project Management Professionals*, Bucharest, 2004.
- [3] M. Galic, C. Pedersen and O. Trabert, *Portal Application Design and Development Guidelines*, 2003.
- [4] E. Jaonson, "Working Together when Being Apart," *Department of Computer and Systems Sciences*, Royal Institute of Technology, Stockholm University, 2004.
- [5] K. Kangas, *Business Strategies for Information Technology Management*, Idea Group Publishing, 2003, 275 pg.
- [6] T. Kounadis, "How To Pick the Best Portal," *E-business Advisor Magazine*, April 2000.
- [7] B. Morris, "Portals: Business on the Network Edge," *eAI Journal*, February 2001.
- [8] J. J. Townsend, D. Riz and D. Schaffer, *Building Portals, Intranets, and Corporate Web Sites Using Microsoft Servers*, Addison Wesley, 2004.
- [9] M. E. Whitman and A. B. Woszczyński, *The Handbook of Information Systems Research*, Idea Group Publishing, 2004, 349 pg.
- [10] IBM, *Architecting Portal Solutions*, December 2003, Available at: <http://www.ibm.com>
- [11] ULTRAAPPS Portal, Available at: <http://www.ultraapps.com>
- [12] <http://www.microsoft.com/office/sharepoint/prodinfo/default.aspx>

- [13] P. Pocatilu and C. Ciurea, "Collaborative Systems Testing," *Journal of Applied Quantitative Methods*, Vol. 4, Issue 3, September 30, 2009, pp. 394-405.
- [14] O. Sapena, E. Onaindia, A. Garrido and M. Arangu, "A distributed CSP approach for collaborative planning systems," *Engineering Applications of Artificial Intelligence*, Vol. 21, Issue 5, 2008, pp. 698-709.
- [15] J. Choi, J. Rosen, S. Maini, M. Pierce and G. Fox, "Collective Collaborative Tagging System," *IEEE Grid Computing Environments Workshop, GCE '08*, November 12-16, 2008.
- [16] V. Chang, "Integrated use of Web Technologies to deliver a secure collaborative web portal," *School of Electronics and Computer Science*, University of Southampton, United Kingdom, IEEE, 2005.

Author



Lorena BĂTĂGAN has graduated the Faculty of Cybernetics, Statistics and Economic Informatics in 2002. She has become teaching assistant in 2002. She has been university lecturer since 2009. She is university lecturer at faculty of Cybernetics, Statistics and Economic Informatics from Academy of Economic Studies. She holds a PhD degree in Economic Cybernetics and Statistics in 2007. She is the author and co-author of 4 books and over 50 articles in journals and proceedings of national and international conferences, symposiums.