

Development of a Collaborative Knowledge Portal: A Goal-Oriented Approach

MOHD SHARIFUDDIN AHMAD, MOHD ZALIMAN MOHD YUSOFF and AZHANA AHMAD
College of Information Technology, Universiti Tenaga Nasional,
Km 7, Jalan Kajang-Puchong, 43009 Kajang, Selangor, MALAYSIA
{sharif, zaliman, azhana}@uniten.edu.my

Abstract - We propose a collaborative knowledge portal, evolving from the concept of goals, objectives and extended to include the lower level notions of roles and tasks. The goals and objectives stimulate the formation of workspaces for the execution of roles, tasks and the application of knowledge. Role actors communicate and consult with each other to draw out an acceptable and agreeable collaborative work processes in order to achieve the objectives. The outcome of such collaborative processes manifests what we called as the *Functional Knowledge*, which bears a significant relationship to the objectives. The subsequent implicit alignment of this functional knowledge further manifests the *Corporate Knowledge*, which corresponds to the enterprise goals.

Keywords: Portal, Knowledge Management, Workflow, Collaborative Interactions.

1 Introduction

The World Wide Web provides numerous sources of information on every aspect of our lives. Due to this immense volume of information, users are concerned with the problems of finding precise information when using general-purpose search engines such as AltaVista or Google. Consequently, many of the research relating to the Web have been focused on developing new search algorithms, site design and site management primarily using artificial intelligence techniques [6, 9, 10]. Although some of these algorithms have been implemented, the results are still far from satisfactory

While the efforts of developing such algorithms are continuing, Web application developers are finding new ways of circumventing the problems of search. One innovative approach is to make all the information needed by a user available in one single gateway. This approach is now dubbed as the *portal* approach. A portal, or Enterprise Information Portal, has been defined as applications that enable companies to unlock internally and externally stored information, and provide users with a single gateway to personalized information needed to make informed business decisions [4]. Our contention underlying the portal concept is that, if all information

can be provided from a single point of access to perform domain-specific tasks, then there is less likelihood of performing extensive search in organizational databases and the Web.

2 A Goal-Oriented Approach to a Collaborative Knowledge Portal

Review of the literature on portals reveals a number of portal classifications. The most common ones are Enterprise Information Portals, Enterprise Collaborative Portals, Enterprise Knowledge Portals, and Community Portals [4, 5]. We argue that distinguishing Information, Collaborative, and Knowledge Portals into different classes seems somewhat ludicrous. All three aspects of the portals are intertwined within the fabric of complex organizational processes. For example, in any collaborative activities, there are exchanges and transactions involving information and knowledge. In practice, there is no point in distinguishing the different classes of portal when what one needs are data, information, knowledge, and tools.

We suggest another concept of a portal architecture by proposing an abstract view of an enterprise. In this architecture, we primarily consider the concepts of goals and objectives, and extend it to include the lower level notions of roles and tasks. Enterprise goals and objectives stimulate the formation of workspaces in which role actors work cooperatively to apply their knowledge while executing their roles and performing their assigned tasks. Hence, we shall call this architecture as the *Collaborative Knowledge Portal* architecture. The following sections summarize some rudimentary concepts on the portal architecture.

2.1 Goals and Objectives

In this context, we submit that a *goal* refers to a statement of desired outcomes or states, which are more superior to the present states. An achievement or a vision of an enterprise formally describes a goal but it does not specify how to achieve the desired outcomes. An *objective*, on the other hand, is a complete statement of performance, which describes clearly what needs to be