Chapter VII

The Next Generation of Internet Portals

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ABSTRACT

Today’s portals bring together existing technologies in useful, innovative ways, but they don’t scratch the surface of what is possible. The constant build-up of information and resources on the World Wide Web demands a smarter more advanced portal technology that offers dynamic, personalized, customized, and intelligent services. This chapter discusses next-generation portals and the requirement that they come to know their users and understand their individual interests and preferences. It describes a new generation of portals that have a level of autonomy, making informed, logical decisions and performing useful tasks on behalf of their members. The chapter highlights the role of artificial intelligence in framing the next generation of portal technology and in developing their capabilities for learning about their users.

INTRODUCTION

Today, portal technology is in its infancy. We have just begun to understand and appreciate the dynamic nature of portals and to recognize the need for intelligent user interfaces. The constant build-up of information and resources on the World
Wide Web demands a smarter, more advanced portal technology that offers dynamic, personalized, customized and intelligent services. Next-generation portals must really know their members and understand their individual interests and preferences. Furthermore, we need the next generation of portals to have some level of autonomy, making informed, logical decisions and performing useful tasks on behalf of their members. We need to consider the use of artificial intelligence in framing the next generation of portal technology. And finally, we would like future portals to have learning capabilities. The more a member uses the portal, the better the portal should know the member and the member’s preferences.

The next generation portal will be able to offer personalized professional services similar to those provided by an experienced administrative assistant or a secretary. For instance, a good administrative assistant knows the kinds of internal and external news that the executive likes to see, and can sort and prioritize that information for the executive’s attention e-mail. High priority items might include a new committee being formed that the boss should know about, important social events that he should attend, e-mail messages that he needs to act upon immediately, an important phone message from the vice president, a budget proposal due next month or a call for help from one of his employees who is in trouble and needs his attention.

A human secretary is able to offer these services to the boss because he or she has an extensive knowledge of what the boss likes to know and wants to do. Through repeated interactions with—and feedback from—the boss, the secretary becomes more expert at this. This massive amount of information about the business needs and personal preferences of the boss assists the secretary in acting as an expert agent, filtering the kinds and amount of information the executive needs to perform at optimal efficiency. A trusted secretary also has a certain amount of autonomy to make decisions and perform tasks. For example, the boss may not want to meet anyone on Mondays except in cases with a certain degree of urgency. In filtering the boss’s calls, the secretary acts as an intelligent filter and a decision maker on the behalf of the boss.

**INTELLIGENT AGENTS**

Now let’s consider offering some of these services using a series of computer programs within a campus portal environment. For instance, the portal may employ a series of programs called “intelligent agents” to act as a digital secretary. The digital secretary is similar to the human secretary and can offer certain personalized services to its owner. The first time a member signs on to the portal, he or she can access the digital secretary to configure it and other agents by selecting from a menu of personal preferences. For instance, the digital secretary might be configured to...
The MP3 Player as a Mobile Digital Music Collection Portal
www.igi-global.com/chapter/mp3-player-mobile-digital-music/17941?camid=4v1a