Enabling Information Sharing Across Government Agencies

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ABSTRACT

Recently, there has been increased interest in information sharing among government agencies with a view toward improving security, reducing costs, and offering better quality service to users of government services. Previous work has focused largely on the sharing of structured information among heterogeneous data sources, whereas government agencies need to share data with varying degrees of structure ranging from free text documents to relational data. In this work, we complement earlier work by proposing a comprehensive methodology called IAIS (Inter Agency Information Sharing). It uses XML to facilitate the definition of information that needs to be shared, the storage of such information, the access to this information, and finally, the maintenance of shared information. We describe potential conflicts that can occur at the information definition stage across agencies. We also compare IAIS with two alternate methodologies to share information among agencies and analyze the pros and cons of each.
INTRODUCTION

The emergence of the Internet and its applications has fundamentally altered the environment in which government agencies conduct their missions and deliver services. Recently, there has been considerable interest in exploring how emerging technologies can be used to promote information sharing among different governmental agencies. Such information sharing is desirable for several reasons. First, increased levels of security can be achieved if different government agencies share information. These effects can be felt in areas as diverse as global counter-terrorism (Goodman, 2001), homeland security (Rights, 1984), and the war on drugs (Forsythe, 1990). Several recent articles, (e.g., Dizard, 2002), strongly endorse the view that the sharing of intelligence information among different law enforcement agencies will enhance their ability to fulfill their required functions. Second, there has been a growing need to streamline interagency communication from a financial savings perspective. For example, Minahan (1995) shows how the lack of information sharing between different government organizations considerably hampered the establishment of an import-export database that would have streamlined the flow of goods into and out of the United States and potentially saved billions of dollars. As pointed out in Stampiglia (1997), data sharing between health care agencies can also result in significant cost savings. Third, interagency information sharing results in offering fewer contact points for end users of public services, thereby leading to more efficiencies in the delivery of these services to the end users. For example, allowing agencies to share geographic information systems (GIS) information improves the quality of customer service afforded to end users of these services (Hinton, 2001). Other common examples of activities that can benefit from information sharing include the application for licenses for business expansion and the ability of aid workers to provide services, such as home-delivered meals and in-home care.

The benefits of information sharing have to be weighed against concerns about potential privacy violations, which preclude the establishment of a single database that can be accessed by multiple agencies. This has been pointed out in several areas, such as health care (Gelman, 1999), electronic voting (Hunter, 2002), and public life in general in the post-September 11, 2001 world (Raul, 2002). Given the trade-offs between information sharing and privacy, it is well accepted that multiple players need to be involved when determining what information should be shared. These players may include (a) privacy advocacy groups, such as the Privacy Rights Clearinghouse (http://www.privacyrights.org); (b) government agencies involved with producing, sharing, or using the shared information, such as law enforcement agencies; and (c) legislative and executive bodies that formulate and execute legislation for information sharing in different instances.
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