Chapter 2.30
Design of Government Information for Access by Wireless Mobile Technology

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INTRODUCTION

As the world becomes mobile, the ability to access information on demand will give individuals a competitive advantage and make them more productive on the job and in their daily lives (Satyanarayanan, 1996). In the past, government information was presented by government employees who verbally communicated with citizens in order to meet their information needs. As print technology improved, government information was, and still is in many countries, communicated to citizens using paper as the medium of delivery. Because of the cost of printing and mailing printed documents and the difficulty of updating information in a timely manner, governments are moving to electronic delivery of information using the Web. Currently, governments provide digital service to their citizens using the Web for access by desktop or notebook computers; however, citizens of many countries are using mobile devices such as cell phones, tablet PCs, personal digital

assistants, Web pads, and palmtop computers to access information from a variety of sources in order to conduct their everyday business and to communicate with each other. Also, wearable mobile devices are being used by some workers for remote computing and information access in order to allow multitasking on the job. It is predicted that there will be more mobile devices than desktop computers in the world in the near future (Schneiderman, 2002). The creation of digital government will allow the delivery of government information and services online through the Internet or other digital means using computing and mobile devices (LaVigne, 2002). Also, there will be more government-to-citizen and government-to-business interactions. Digital government will allow citizens, businesses, and the government to use electronic devices in order to communicate, to disseminate and gather information, to facilitate payments, and to carry out permitting in an online environment (Wyld, 2004). Digital government will allow citizens

to access information anytime and anywhere using mobile and computing devices (Seifert & Relyea, 2004).

BACKGROUND

According to O'Grady and O'Hare (2004), mobile computing will become the major computer usage model of the future. This will be possible since the digital divide is decreasing due to wireless access, increasing use of mobile devices, decreasing cost of Internet connections and computer technology, and transparent access of computer systems. Governments need to take advantage of technology-literate citizens and design and make available information for citizens to access government information digitally from anywhere and at anytime. This is important, since citizens expect the same level of service that is being given by businesses that are providing services and information anywhere and anytime (Dawes, Bloniarz, Connelly, Kelly, & Pardo, 1999). Users need just-in-time information for the job and in the community. The use of wireless mobile devices will facilitate access of government information from anywhere and at anytime. Also, computing is becoming ubiquitous, where citizens will work from anywhere and access government information from many networks using wireless mobile devices (Huber, 2004; Perry, O'Hara, Sellen, Brown, & Harper, 2001).

Before the use of mobile devices to access government information and design of information for mobile access are discussed, it is important to examine the information processing required when citizens access digital government information. Citizens acquire government information at many levels. At the lowest level, citizens may want to be aware of what is happening in government, so they will read the information in order to be informed. For example, some citizens may want to know the changes made to tax regulations. At the next level, citizens and businesses may want to access government to apply the information to complete everyday tasks. For example, some occupations require that businesses and citizens follow approved safety procedures when completing tasks. This requires comprehension and application of the information. At the highest level, citizens and businesses may want to critically analyze, synthesize, and evaluate government information for research purposes. To achieve this, citizens will have to access government information from many sources through ubiquitous computing using mobile devices.

USE OF MOBILE DEVICES TO ACCESS DIGITAL GOVERNMENT INFORMATION

There are many benefits to the use of mobile devices to access digital government information. According to a recent report by the European Commission (2004), digital government can provide better quality public service, reduce waiting time for information and service, lower administrative costs for businesses, and allow higher productivity for the public. Using mobile devices will allow citizens to access government information from anywhere and at anytime. With the use of wireless mobile technology, users do not have to be connected physically to networks in order to access information, and the mobile devices are small enough to be portable, which allows users to take the devices to any location to send and retrieve information. For example, a worker in the field who requires specific government regulations while completing a task can use a mobile device to access the information just in time. If government regulations in a field change, the government can update the digital information to allow individuals and businesses to access the current information immediately. In addition, a worker in the field can use a mobile device to contact a government employee remotely and to request specific information for immediate use.

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