Chapter 3.3
Mobile Portal Technologies and Business Models

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INTRODUCTION

Mobile portals have become a common entry point to the mobile Internet, and take a number of forms. They may be service provider portals, such as Vodafone's Live! portal (Vodafone, 2006), offering access to both in-house and brokered external services. Alternatively, they may be public pure play sites that provide some kind of managed access to resources using a yellow-pages approach. Good examples of this kind of mobile portal are WordDial (WordDial, 2006) and graBBit (Grabbit, 2006), though they have very different approaches to the way that they provide targeted access to resources, with WordDial using a keyword approach and graBBit modeled on more traditional search engines. As well as mobile and pure play operators, mobile portals are also provided by device manufacturers (e.g., Palm (Palm, 2006)), software companies (e.g., MSN (Microsoft, 2006)) existing Web portal providers (e.g., Yahoo (Yahoo, 2006)), mass media companies (e.g., AOL (AOL, 2006)) and transaction providers (m-commerce sites).

MOBILE PORTAL ADVANTAGES

The advantages that mobile portals have over standard Web portals are in ubiquity, convenience, localization, and personalization. Ubiquity means that the portal can be accessed anywhere, regardless of location. With ever widening coverage by mobile network providers, mobile portals have an increasingly ubiquitous presence. Availability at all times, via mobile devices, provides for convenience, with the ability for users to access portals at the point of need, for example to get up to date information on flight times or traffic conditions. Wireless connectivity is integrated into the mobile phone, whereas alternative ways of connecting to the Internet while traveling, such as accessing

wireless or fixed networks, or using publicly available computers, can be difficult and/or expensive to access in many locations. Localization is a specific strength of mobile portals, since they can use location awareness to provide services that are targeted to the user's current locality (e.g., local weather). Location awareness can be supported by a number of technologies, including triangulation from a mobile phone network or the satellite based global positioning system (GPS). Finally, personalization is a key component of mobile portals for two reasons. First, the difficulty of navigation and the small screen size of mobile devices means that it is important to target Web-based material as much as possible. Second, such targeting is easier for subscription type services that are common with mobile phone contracts, where the carrier is likely to be able to gather considerable information about users and construct accurate profiles of their activities and requirements. All of these characteristics are important features in the potential for mobile commerce, which relies on giving the best value-for-time service. Portals that are easily customizable, technically flexible, and contain relevant content are those that are most likely to be successful tools for mobile commerce (Clarke, Flaherty, & Madison, 2003).

MOBILE PORTAL TECHNOLOGIES

The technology of mobile portals is evolving as mobile devices become more sophisticated. Early portals were based on the wireless access protocol (WAP) version 1.0, using the Wireless Markup Language (WML) with very limited user interface features and severe limits on the type of content that could be accessed. In many cases, content was based on a transformation from HyperText Markup Language (HTML) pages, designed for standard Web browsers, into WML pages. These conversions, performed by WAP gateways that linked the mobile device network to the wider Internet, were slow and the content was not optimized for mobile users. Current WAP-based portals take advantage of the improvements in WAP technology that were introduced with version 2.0 (e.g., WAP push and end-to-end security) and more powerful handsets to provide richer interaction and media types. In addition, content is more likely to be tailored especially for mobile devices rather than being converted from HTML, developed either directly in WML or in XHTML-MP (eXtensible HyperText Markup Language – Mobile Profile) which is the evolutionary pathway from WML and is now the recommended markup language for mobile Internet domains (Cremin & Rabin, 2006).

Portals that were developed in the context of second generation (2G) mobile phone networks suffered from slow connection speeds, limiting the range of contents that could be provided. Portals running over third generation (3G) networks benefit from much faster data transfer speeds, so they can deliver rich multimedia content, such as TV and movie feeds and MP3 downloads. However, despite the market dominance of entertainment content, with the huge popularity of ring tones and screen savers, mobile portal services are not limited to entertainment alone. Some portals also host location based services, for example the provision of MapPoint access via the Vodafone portal in certain territories, and portal-hosted M-Payment services are increasingly popular.

DESIGN ASPECTS OF MOBILE PORTALS

Mobile portals have had to be designed to provide the easiest access to services within the usual constraints of mobile devices, such as limited screen space, varying navigation button layouts on phones from different manufacturers, and lack of a consistent programming platform. Unlike portals designed for the desktop that are usually based around table-like structures containing separate portlets, mobile portals are structured