Mobile Portals

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INTRODUCTION

The diffusion of mobile services is one of important technological phenomena of the twenty-first century (Dholakia & Dholakia, 2003). According to the International Telecommunication Union,[1] the number of mobile service users had exceeded 1.5 billion individual subscribers by early 2005. This represents around one-quarter of the world's population. The introduction of .mobi, a new top-level domain,[2] is expected to further facilitate the usage of mobile services. Because of their high penetration rates, mobile services have received cross-disciplinary academic attention (e.g., Ruhi & Turel, 2005; Serenko & Bontis, 2004; Turel, Serenko & Bontis, 2007; Turel, 2006; Turel & Serenko, 2006; Turel & Yuan, 2006; Turel et al., 2006). While the body of knowledge on mobile services in general is growing (Krogstie, Lyytinen, Opdahl, Pernici, Siau, & Smolander, 2004), there seems to be a gap in our understanding of a basic, yet important service that mobile service providers offer, namely mobile portals (m-portals).

M-portals are wireless Web pages that help wireless users in their interactions with mobile content and services (based on the definition by Clarke & Flaherty, 2003). These are a worthy topic for investigation since, in many cases, they represent the main gate to the mobile Internet and to wireless value-added services (Serenko & Bontis, 2004). Particularly, users of premium wireless services typically employ m-portals to discover and navigate to wireless content such as news briefs, stock quotes, mobile games, and so forth. Given this, m-portals have a strong value proposition (i.e., a unique value-added that an entity offers stakeholders through its operations) for both users and service providers. These value dimensions, which drive the implementation and the use of m-portals, are explored in the subsequent sections.

Despite that a number of publications solely devoted to the topic of m-portals already exist, there are very few works that not only present the concept of mobile portals, but also portray their characteristics and discuss some of the issues associated with their deployment by service providers and employment by individual users. The value proposition of mobile portals was rarely explored in depth, and some motivational factors for developing and using mobile portals still remain unclear. To fill this gap, this article explores value proposition of mobile portals from both a wireless service provider and an individual user perspective. Based on this discussion, two conceptual frameworks are suggested.

The rest of this article is structured as follows. First, the key value drivers of m-portals from a wireless service provider's viewpoint are portrayed. Second, a framework that depicts the unique attributes of mobile portals and their impact on the value users derive from these services is offered. This framework is then utilized for discussing some of the challenges mobile portal developers and service providers currently face. These obstacles need to be overcome in order for service providers and users to realize the true value of mobile portals.

WHAT ARE MOBILE PORTALS?

As defined earlier, m-portals are wireless Web pages especially designed to ease the navigation and interaction of users with mobile content and services. They are either based on existing Internet resources adjusted to the format of mobile networks or developed from scratch for wireless networks exclusively. Occasionally, m-portals are formed by aggregating several applications together, for example, e-mail, calendars, instant messaging, and content from different information providers in order to combine as much functionality as possible. Usually, mobile portals offer basic information on news, shopping, entertainment, sports, yellow pages, and maps. M-portals can provide access to specific niche content such as health care publications information (Fontelo, Nahin, Liu, Kim, & Ackerman, 2005), public services (Philarou & Lai, 2005), travel services (Koivumäki, 2002), and so forth, or offer general access to the mobile Internet (Jonason & Eliasson, 2001).

Although the field of research pertaining to mobile portals is relatively new, a number of studies have recently investigated the concept of mobile portals from both the technical and system adoption perspectives. From the technical standpoint, scholars have investigated various aspects required for service delivery including the development of the infrastructure required for m-portal services, hypertext languages for wireless content, personalization principles, and device optimization. For example, a context-aware

mobile portal was developed (Mandato, Kovacs, Hohl, & Amir-Alikhani, 2002). It automatically adapts to user needs based on explicit preferences and implicit information derived from the content viewed by individuals and is achieved through the incorporation of leading-edge technologies and principles. This allows users to receive customized portal services in real-time at no cost. The usage of mobile agents was also offered as a solution to develop a personalization mechanism that considers both user and device profiles (Samaras & Panayiotou, 2002). From the technology adoption perspective, most scholars are concerned with the acceptance of wireless portals by individuals and organizations. For instance, a conceptual model of m-portal adoption was offered (Serenko & Bontis, 2004) and the role of marketing in the promotion of wireless portals was studied (Blechar, Constantiou, & Damsgaard, 2005).

Despite the differences in research directions, all academics agree that having mobile portals available is not sufficient to ensure the commercial success of this novel technology. As such, m-portals should present strong value proposition for both end users and service providers. The following section discuses the value proposition of mobile portals in detail.

THE VALUE PROPOSITION OF MOBILE PORTALS

M-portals offer various value propositions for both wireless service providers and users. These value dimensions are essential for driving the development, deployment, acceptance and usage of mobile portals by various stakeholders. Value perceptions are a key driver of consumer behavior in terms of services and products in general (Zeithaml, 1988), and with regards to mobile value-added services in particular (Turel & Serenko, 2006; Turel, Serenko, & Bontis, 2007). Service providers are also motivated by value when implementing and offering services (Afuah & Tucci, 2001; Porter, 1980, 1985). To better understand the value of these services for the two key stakeholders, namely, wireless service providers and users, the following two subsections outline some of the key value drivers of m-portals.

Value for Wireless Service Providers

From the wireless service provider perspective, m-portals are important since they enable providers to create a "walled garden" of services,[3] direct users to their controlled premium content, and maximize their revenues. The voice communications market has become extremely competitive in most developed countries (Paltridge, 2000). This results in price wars and a steady decline in the average voice-communications based revenue per user (ARPU) (Hatton, 2003; Swain et al., 2003). To stay competitive, wireless service providers have begun offering value-added services (VAS), such as mobile gaming, music downloads, and so forth (Barabee, 2003). Typically, these premium wireless services are facilitated through branded m-portals of the service providers. This makes it easy to access these premium services since they are readily accessible from the first screen of a portable device. In contrast, it is relatively difficult to access external Web sites (i.e., outside of the "walled garden") since it requires more tedious navigation, especially when a 10-button keypad is used for data entry.

M-portals enable service providers to increase their revenues from value-added services due to three unique service characteristics. *First*, m-portals make it easier to navigate to the desired wireless content because the portal groups its content in a meaningful way (e.g., games, news, finance, etc.). That is, users do not have to search for specific content using the QUERTY keypad. Instead, they can use hierarchical tree menus to navigate through the content by using only the OK button. For example, to reach a specific stock quote, users may choose finance, then select latest stock quotes, browse through the list of stocks and finally click on the preferred one. It should be noted that although usability is considered one of the growth drivers for wireless devices adoption (Guy, 2003), mobile services are still relatively difficult to use and fail to fit various important tasks (Buchanan, Farrant, Marsden, & Pazzani, 2001; Perry & Ballou, 1997). Thus, to help people partially overcome the usability and accessibility barriers of the wireless Internet, service providers offer m-portals.

Second, m-portals enable service providers to direct users to the premium content for which the service providers have revenue sharing. Mobile service providers may not only charge users for pure connectivity services or traffic (per minute in circuit switched second generation networks such as GSM or CDMA, or per kilobyte in packet switched networks such as GPRS or UMTS), but also profit from the actual content. For instance, people may access the premium content of a wireless service provider, such as ringtones and icons, and pay a premium fee. This fee is typically shared between the content aggregator or provider, and the wireless carrier. Therefore, the carrier may gain revenue from two sources: connectivity/traffic fees and premium content charges. The wireless carriers' share of the content revenue is flexible and may range from 9% to 80% (ARC Group, 2001; MacDonald, 2003).

Third, m-portals enable content quality control. That is, wireless service providers can ensure that the content presented on their portal is appropriate (e.g., no offensive content) and meets their service standards and portfolio of handsets. This is important since unlike the regular Internet, which is mostly free of charge, users of mobile services may pay connectivity, transmission, and premium content fees. In addition, interoperability issues may affect service quality.