Chapter 12
How People Really Use the Mobile Web: A Framework for Understanding Motivations, Behaviors, and Contexts

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ABSTRACT

Mobile data services offer a viable and growing alternative means of accessing the World Wide Web and have drawn significant attention from the mobile industry. However, design efforts are hampered by the fact that we do not fully understand people’s motivations, behaviors, and contexts of use when they access the Web on their phones in naturalistic settings. To help address this need, the authors conducted a study to explore the following questions for U.S. mobile phone users: (1) What motivations lead people to access the Web on their mobile phones?; (2) What do they do?; and (3) Where do they do it? We studied active U.S. mobile Web users via questionnaires, semi-structured interviews, and a field diary system that participants used to record their daily Web activities. Based on the findings from Part One of the study, they constructed a taxonomy of behaviors, motivations, and contexts associated with mobile Web usage. In Parts Two and Three, the authors validated the taxonomy as well as compared iPhone versus non-iPhone user behaviors. The authors conclude this report of the three-part study by considering the design implications of their findings and future research directions for further understanding the mobile Web.

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INTRODUCTION

Why, and in what settings, do people access the Web on mobile phones? What Web information do people access and how do they make use of that information? Understanding the answer to these questions is important for understanding how mobile Web services can be made more useful and accessible in people’s daily lives. According to Morgan Stanley (“Mobile Internet Report,” 2009), mobile Internet devices are predicted to reach 10 billion units by the end of 2010. This creates tremendous opportunity for carriers to offset the decline in voice service revenues with new Web-enabled services. The mobile design and development community would benefit from a better understanding of the underlying motivations and patterns of current mobile Web usage to help them target key user needs and desires for future mobile services.

Past research on mobile Web usage has focused mainly on characterizing behaviors, settings, and types of content accessed. This study looks at motivations as well—why people access the Web on their mobile phones. In a review of recent research we found most still focused on adoption factors and information needs and very little on underlying motivations that might predict future use of mobile Web services.

For our study, we defined the mobile Web strictly as access to Web information available through either a carrier’s portal or a Web site accessible via a palm-sized mobile device. Using an augmented diary-study approach, the study first derived (Taylor et al., 2008) and subsequently validated (Taylor, Samuels, & Ramey, 2009) a behavioral, motivational, and contextual framework for understanding mobile Web use.

RESEARCH BACKGROUND

This study builds on and extends earlier research studies that have yielded classifications of Web usage (both stationary and mobile), descriptions of patterns of adoption of mobile services, as well as motivations for mobile technology use. Also, in designing this study, we took into account recent work on methods for studying mobile usage.

Usage Classifications

Several studies (before our research and since) have yielded classification schemes that characterize usage of the Web and/or mobile phones, most with a focus on information needs and behaviors. Heimonen (2009) examined the physical and situational contexts of users’ mobile information needs and the information access practices used to fulfill them to develop a classification of 15 topical mobile information need categories. The largest was trivia (26.5% of entries), followed by work/studies/hobbies (15.6%), and then public transportation (12.2%). The top mobile information needs they identified were consistent with our top behavioral classifications of Fact Checking, Information Gathering, and Action Support. They also discovered correlations between types of information need and the access method.

Church and Smyth (2008) reported a study of mobile information needs that categorized user intent as regarding information, geographical data (local explicit, local implicit, and directions), and management of personal information; the conclusion stresses the importance of the geographical and temporal context of mobile information needs.

In a subsequent diary study of mobile information needs, Church and Smyth (2009) examined the intent behind those needs and how those needs change based on context, focusing on browsing versus search behavior. The study compared users’ needs at home, at work, and on-the-go and found the clearest time and location dependencies among on-the-go users. Nearly half (42%) of the activities pertained to geographical or personal time management information, with local services and travel and commuting ranking highest (>44%). Their findings also suggest that traditional
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