BOOK REVIEW

M-Commerce: Technologies, Services, and Business Models

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M-Commerce: Technologies, Services, and Business Models
by Norman Sadeh
John Wiley & Sons
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The use of e-collaboration technologies in the workplace has been experiencing tremendous growth in the last five years, and this is no surprise. One of the reasons for that growth is that many of the modern e-collaboration technologies allow workers to interact with one another at the most convenient time for them, and from geographically distributed locations. Another reason is that some e-collaboration technologies allow workers to become significantly more mobile than before. These latter types of e-collaboration technologies can be referred to as mobile e-collaboration technologies.

While certainly not a panacea, mobile e-collaboration technologies hold tremendous potential for individuals and organizations, particularly if used in the right situations and to support the appropriate business processes. A sales representative for a windshield manufacturer, for example, can consult Web-based product information on his cell phone while discussing a new car design with an engineer on the shop floor of one of its customers’ factories. An attorney representing a defendant in a product liability lawsuit can access relevant technical information on the Web using her PDA, during a particularly damaging cross-examination of one of her witnesses, just in time to reverse the potential damage. And the list goes on, with many possibilities that were not even thought of a few years ago.

Many of the early technologies that set the stage for today’s work-related e-collaboration applications have “taken off” because of their personal use appeal to a large market of technology-savvy users, particularly in the U.S. Moreover, those technologies have been chiefly based on the infrastructure provided by the Internet and the Web. A few noteworthy examples are e-mail, instant messaging, and desktop videoconferencing. Mobile e-collabo-
ration technologies seem to have been following the same path, but with a twist — the country spearheading their adoption is not the U.S.; it is Japan, where a mobile Internet service called “i-Mode” generates $10 billion in revenue for its provider, NTT DoCoMo, Japan’s largest mobile carrier (Fulford, 2004). The service allows users to access a range of Internet-based services — such as e-mail, transaction services (e.g., ticket reservations, online banking), news, and entertainment services — for a fraction of the price paid by “static” Internet users in the U.S.

One book is arguably required reading for those intrigued by the potential of mobile e-collaboration technologies, as well as those thinking about implementing those technologies in the workplace, or looking for related research opportunities. The book is *M-Commerce: Technologies, Services, and Business Models*, by Norman Sadeh, a professor of Computer Science at Carnegie Mellon University, and former chief scientist of a key European initiative on new approaches for the use of the Internet to improve businesses and stimulate trade.

The term “commerce” on the cover of a book generally implies a discussion focused on trade-related issues. For example, the term “e-commerce” generally refers to issues related to trade over the Internet. In this sense, the title of Sadeh’s book is a bit misleading, since the book goes well beyond the discussion of mobile “commerce” issues. Perhaps a better word would have been “m-business,” in view of the fact that the book addresses a number of issues that will be of interest to readers involved in the implementation and management of mobile e-collaboration technologies in organizations — for example, how to manage the relationship with customers using Internet-enabled mobile technologies.

The book is organized into eight chapters, which are in turn grouped into three main parts. Part 1 includes Chapters 1 and 2, which are devoted to the discussion of introductory topics related to mobile technologies and the use of those technologies by organizations to implement a variety of business models. Part 1 also includes some historical tidbits that provide a good basis on which readers can understand the evolution of mobile technologies and services, such as a discussion about the evolution of NTT DoCoMo’s i-Mode mobile portal service.

Part 2 houses Chapters 3, 4, and 5. Chapter 3 discusses a topic that is likely to be at the core of the adoption and future development of mobile e-collaboration technologies, namely the move from the relatively slow second-generation (2G) mobile technologies and services, to the faster and more reliable third-generation (3G) ones. Chapter 4 is devoted to the discussion of mobile communication standards, including the increasingly important Wireless Application Protocol (WAP), and their incorporation to mobile Internet applications. Chapter 5 is dedicated to the review and discussion of security issues in the context of Internet-based mobile services.

Chapters 6, 7, and 8 make up Part 3 of the book, which attempts to bring together key topics covered in Parts 1 and 2, with an eye toward mobile e-collaboration and commerce applications. Chap-
Chapter 6 incorporates a discussion on mobile commerce portals and mobile e-collaboration applications in the context of value chain management applications, such as enterprise resource planning (ERP) and customer relationship management (CRM). Chapter 7 covers two very important topics, namely personalization and contextualization in the context of Internet-enabled mobile services delivery. Finally, Chapter 8 discusses lessons learned from early mobile commerce and e-collaboration implementations, pointing out future opportunities and challenges. This chapter is followed by approximately 20 pages with definitions of key terms (in the form of a reasonably comprehensive glossary) and references to relevant publications.

Two of the main strengths of this book are its organization and reader-friendly writing style. The book flows logically from beginning to end, and its detailed table of contents allows the reader to easily jump back and forth through the text. This comes in handy as the book progresses from a discussion of the building blocks of Internet-based mobile services, to the use of those building blocks in the implementation of mobile technology-driven business models, a point at which many readers will probably want to go back and re-read the earlier discussions on those building blocks.

The author’s goal of reaching a broad audience in his discussion of introductory topics is as obvious as his concern with not overwhelming the reader with overly complex issues. For example, when discussing the content of Chapter 5, which is dedicated to mobile security, the author states that: “…there will not be a single mathematical equation in the text.”

While the book covers a number of important technology-related issues and their business application, it somehow glosses over two dimensions that are likely to be very important to readers interested in mobile e-collaboration applications. The first dimension is what I would call the “social dimension.” For example, it was shown more than 10 years ago in empirical studies of (non-mobile) e-collaboration technologies, notably by Marshall Scott Poole and Gerardine DeSanctis (see, e.g., DeSanctis & Poole, 1994), that e-collaboration technology features are often used in ways that are better aligned with the social culture surrounding the technology’s users than with what the technology’s designers had in mind. This is likely to become the case with many Internet-based mobile services and e-collaboration technology applications (Sarker & Wells, 2003).

The second dimension that is glossed over in the book is what I would call the “biological dimension.” Or, if I wanted to be a bit facetious, the “ape that uses e-mail” dimension. In short, we human beings are not really designed to interact with each other electronically, at least as far as Darwin’s perspective is concerned (DeRosa, Hantula, Kock, & D’Arcy, 2004; Kock, 2004). We are most likely designed, and that includes our brain, to interact through the medium that we used during over 99% of our evolutionary history — the face-to-face medium, with the use of voice intonations, body language, and facial expressions. Mobile technologies are notoriously difficult to use for text-
based communication, often because of their small keyboards, which calls for a slightly more pessimistic view regarding the success of certain mobile e-collaboration technologies than the book implies. The bottom line is that text-intensive mobile Internet devices are great for accessing information (e.g., weather, stocks, entertainment), but very difficult to use when what one wants to do is to provide information or actively interact with another human being.

Nevertheless, the book’s strengths far outweigh its weaknesses. The book is a great contribution to the presently very scant literature on mobile e-collaboration technologies. As an introductory book on technology-related issues, it is likely to remain an almost obligatory reference for those interested in mobile Internet applications for several years to come. While a second edition would probably be advisable at some point in the near future, the book as it is now discusses a number of topics that are likely to be as relevant five years from now as they are today (this review is being written approximately two years after the book’s original publication). Hopefully, this book will also serve as a catalyst for other publishing initiatives in the area of mobile e-collaboration, particularly initiatives aimed at offering complementary discussions on social and human-computer interaction aspects, and related behavioral issues.

REFERENCES


is editor-in-chief of the International Journal of e-Collaboration, associate editor of the Journal of Systems and Information Technology, and associate editor for information systems of the journal IEEE Transactions on Professional Communication. His research interests include action research, ethical and legal issues in technology research and management, e-collaboration, and business process improvement.