

Using IM to Improve E-Collaboration in Organizations

Xin Luo

Virginia State University, USA

Qinyu Liao

University of Texas at Brownsville and Texas Southmost College, USA

INTRODUCTION

Broadly defined as electronic technologies that enable collaboration among individuals engaged in a common task (Kock, 2005b), electronic collaboration (e-collaboration) is now viewed as a new strategic weapon for organizations to fundamentally improve the traditional business relationships and quality of business processes. Since the emergence of innovative information technologies including e-mail, teleconferencing, videoconferencing, and most recently, instant messaging (IM), the importance of e-collaboration has risen as organizations have made the shift from personal computing to interpersonal or collaborative computing that may more effectively and efficiently leverage their business resources for decision-making. Prior literature suggests that the utilization of e-collaboration technologies can avail organizations of facilitating business-to-business interactions and thereby more quickly and easily solving business problems that are in need of integrative operations and smooth information distribution and sharing amid different inter and intra organizational constituents (Johnson & Whang, 2002; Kock, 1999, 2005b; Kock & Hantula, 2005).

As globalization continues to increase organizational connectivity for expanded organizational life, managers have increasingly recognized the strategic value of IM, which can be leveraged to significantly improve e-collaboration among various organizational constituents beyond restricted geographical boundaries. In the past decade, the advent and wide implementation of Internet-based technologies has made it more flexible and less costly for organizations to establish intra and inter business relationships.

IM, which has become ubiquitous among teenagers and recreational users (Grinter & Palen, 2002), is being widely adopted by businesses and implemented

in the workplace (Herbsleb, Atkins, Boyer, Handel, & Finholt, 2002; Isaacs, Walendowski, Whittaker, Schiano, & Kamm, 2002; Vos, Hofst, & Poot, 2004). Due to its nature of interactions and outeractions (Nardi, Whittaker, & Bradner, 2000), IM presents a revolution in enterprise communication. This near-synchronous computer-based interactive communication media not only supports informal communication in the workplace where e-mail, phone, and fax are already widely utilized, but also facilitates some of the processes that make information communication possible (Nardi, Whittaker, & Bradner, 2000). In previous research, Rennecker and Godwin (2003), Avrahami and Hudson (2004), Marshak (2004), and IMlogic (2004) have identified such key features of IM as: presence awareness, immediate closed loop communication, multi-party collaboration, anytime, anywhere access, opportunistic interaction, broadcasting of information or questions, negotiation of availability for interaction, within-medium polychromic communication, "pop-up" recipient notification, silent interactivity, and ephemeral transcripts. These unique characteristics make IM "a powerful new tool for business communication" (DeSouza, 2004) by means of revamping employee productivity and efficiency in workplace. As a result, the use of IM has significantly risen. A report from Pew Internet & American Life (2004) reveals that more than four in ten online Americans instant message and, on a typical day, 29% of these send instant messages and one in five IM users send instant messages at work.

While few researches have related IM to business communications and e-collaboration in general, this article attempts to introduce the background and technological innovativeness of IM in organizations, discusses the utilization of IM in organizations for e-collaboration purpose, and provides the future trend of IM development and research in the area of e-collaboration.

BACKGROUND

As “the newest and most popular incarnation of near-synchronous text chat technologies” (Nardi, Whittaker, & Bradner, 2000), IM service can trace its roots back to 1996 when Mirabilis created ICQ (I Seek You) to meet the mushrooming need of a growing Internet community who “was connected but not interconnected.” The first Internet-based chat application rapidly ushered in a new category in the virtual world. The public IM arena has flourished with a variety of client chat tools, including MSN Messenger, Yahoo! Messenger, and AOL Instant Messenger (AIM), and so on. Being keenly concerned with time-sensitivity and speed in communications, getting the right information to the right people at the right time, and to be able to make the right decisions, business managers have discovered the strategic value of IM, which aids in interacting with remote individuals, such as employees, suppliers, supporters, contractors, and customers, in a nearly instantaneous fashion. Simply put, the strategic value of IM is able to accelerate decision processes and significantly decrease traditional communication cost because of its real-time nature. The strategic value of IM is the primary force driving companies to leverage IM in workplace in an effort to establish competitive advantage.

IM is now viewed as an enterprise-wide business requirement and thus being adopted by organizations (Marshak, 2004). As such, with the organizational push (Osterman, 2003), employees are zealously embracing this new technology to communicate with each other and with customers and vendors for better productivity and quicker responsiveness. According to IDC’s report, approximately 60-70% of all enterprises regard productivity improvements, collaboration, and best practices as the primary business drivers to adopt IM across their employees. Millions of individuals are using IM for business negotiations, real-time reminders, medical emergencies, or any time e-mail isn’t fast enough. IBM vice president John Patrick reports that IM has become a mission-critical operation and that IBM employees send over 1 million instant messages each day internally. In fact, Jupiter Media Metrix estimates there was a 34% increase in “at-work users” during 2001. Additionally, IDC reports that the number of IM users will increase by a factor of ten by 2005 (Richardson, 2002).

Industry sources agree that this worldwide community is increasing exponentially, and expansion into

wireless access will also expand the user base. Although predictions of IM penetration in workplace vary, all indicators suggest that IM adoption will continue to grow pervasively toward ubiquity in organizations. For instance, IDC estimates that business users will account for nearly half of the 506 million users expected online by 2006 (IMlogic, 2004); Osterman Research Inc. further argues that virtually all enterprises will employ IM and e-mail will incorporate with IM by 2007 (Osterman, 2003).

In an IM environment, a user can type a message and see its text at the bottom of the screen while viewing the exchange of messages with others across the upper majority of the screen. IM systems allow for multiple IM messages to be written and sent simultaneously. According to Park and Sierra (2005), general IM networks are brokered peer-to-peer (P2P) classes. Typically, two or more centralized servers are implemented in the IM service’s infrastructure to handle the IM session including authentication, presence tracking, and message routing functions (see Figure 1). As such, server A first authenticates to IM service’s Session Management component, which then sends server A’s buddies notification of her online presence. Thus, server A receives notification of her buddies’ presence. When server A decides to initiate a conversation with a buddy, the Session Management component redirects the message to the Message Routing component, which routes the message to the appropriate recipient, server B in this example. Even if server A and server B are on the same local area network, all messages between them are still routed through the centralized IM message routing component on the public Internet.

TECHNOLOGICAL INNOVATIVENESS

Advances in computer-mediated communication (CMC) have made such media as e-mail and IM common modes of communication for users in the workplace. The popularity of IM use in workplace stems from its technological innovativeness. To some extent, IM is similar to e-mail in terms of text-based communication and to the telephone in terms of interactivity and intrusiveness. Unlike e-mail, IM adds a richer set of features such as real time communication, presence detection, and graphic emotional icons (Chen, Yen, & Huang, 2004), therefore closely resembling face-to-face spoken conversations in which exchanges are

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