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A Swarm of Little Notes

Is instant messaging creating a work style that's breezily efficient [EM] or one that's more oppressive?

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Steven Kamer's buddy list on Yahoo! Messenger represents much of his personal and professional universe: a gallery of user IDs networked to his life. When he gets to work every morning at Totality, a Web-services company based in San Francisco, the first thing he does is fire up his laptop and log on to this virtual world. His fiancée is often waiting there, and so are his colleagues, who communicate mostly by instant messaging as they work to keep websites running smoothly for clients such as American Airlines and [BestBuy.com](#).

On a typical afternoon, Kamer, 30, participates in half a dozen simultaneous IM conversations through a cascade of pop-up windows on his computer screen. One colleague might be trying to fix a hardware problem at a client's data center on the East Coast, while another is logging on to the client's system from a Denver hotel suite. Instant messaging lets the team collaborate efficiently without playing telephone tag or having their e-mail messages cross in the ether. "IM is the most convenient way to consult co-workers and solve a problem quickly," Kamer says. "I find it indispensable."

Instant messaging is best known as the technology that gave millions of teenagers a new way of chatting about whether Heather likes Tommy, but today it's being rapidly adopted by business — with major implications for workplace culture. Just as e-mail has changed the pace and rhythm of office life, IM is ushering in a working style that can be breezier and more efficient — or distracting and oppressively demanding.

Though IM users and technology consultants are divided over the technology's net value, there's little doubt that it's spreading through office suites faster than a hot piece of gossip — while creating a lucrative market for business-messaging applications. According to the research firm IDC, more than 65 million business users worldwide rely on business and consumer IM products, up from 16.5 million in 1998. IDC, based in Framingham, Mass., forecasts that more than 207 million employees will be logged on to IM by 2006. Corporate use of wireless IM, through pdas and other mobile devices, is also growing rapidly; IDC expects 24 million workers to be using it by 2005. Many companies, fearful of security breaches on consumer-oriented IM systems like those of AOL Time Warner (parent company of Time magazine), Microsoft and Yahoo, are setting up proprietary systems with help from IM infrastructure vendors such as FaceTime, Communicator and IMLogic.

IM offers companies real-time communication at low cost. An instant message sent to a co-worker halfway around the world costs far less than an international phone call, and

compared with e-mail, IM is less expensive to maintain. Getting an IM is in some ways less intrusive than dropping everything to answer a phone call. And those who telecommute or travel frequently find that IM often helps them feel better connected with their offices.

More big retailers and service businesses are incorporating IM into their e-commerce operations. Alaska Airlines allows customers to use IM to get quick answers to questions such as "Can I get bonus miles for this flight?" Lands' End (acquired by Sears in June) lets shoppers on its website use IM to get immediate answers from customer-service reps, instead of holding on the phone or waiting for a reply to an e-mail. Lands' End says customers who use IM are 70% more likely to buy than those who browse the website without using IM or who call an 800 number with questions. And customer questions on IM can be tracked to help the company improve its products and services. Says Bill Blass, a Lands' End senior vice president, "It's like having a huge focus group." According to Forrester Research, based in Cambridge, Mass., the number of online shoppers who prefer to use IM for customer service jumped to 9% in 2001, up from 3% in 1999.

Where IM generates complaints is not in e-commerce but in ordinary offices. Some workers and managers find it hard to research and write reports and do other tasks when instant messages are constantly popping up on their computer screen. And the temptation to chat with friends during work hours can also sap productivity. At some workplaces, important decisions are made on the fly via IM, so employees who fear being left out stay glued to their screens, often neglecting other work such as visits to customers. Some managers even use IM to convene impromptu conferences outside of normal office hours, presenting workers with the unhappy choice of logging on after dinner or getting cut out of the loop.

The Blueshirt Group, a boutique investor-relations firm in San Francisco, makes extensive use of IM. But Erica Abrams, 37, a partner in the firm, has opted out. After trying IM for about a year, she removed it from her PC. "It bothered me too much," she says. She found the constant ping of messages intrusive and ultimately overwhelming. "Why bother?" she asked. "My clients are satisfied with my service already. I'm not sure I need to be more responsive than that. Isn't e-mail fast enough?"

David Autor, a labor economist at the Massachusetts Institute of Technology, says there is little hard evidence that IM makes offices more efficient. "My strong suspicion is that there are no further productivity gains to immediate communication that haven't already been realized by e-mail," he says. At the same time, he adds, IM provides an even greater temptation than e-mail does to "set aside real work" and engage in office gossip or chitchat with friends. Instant messaging, he says, offers "a vast potential for time waste."

Business professionals who have to juggle e-mail, cell phones, landlines, pagers, faxes and now instant messaging are in danger of becoming "multitasking junkies," says Tom Austin, a vice president at Gartner, a technology consultancy based in Stamford, Conn. He believes IM social chatting is less of a threat to productivity than is the splintering of focus that the technology encourages. While bouncing from one conversation to another, Austin says, distracted workers are more likely to miss key points and make mistakes. He likens the risk to eating and talking on a cell phone while driving. "It can create an accident," he says. "You're not fully engaged."

Most analysts studying IM in the workplace predict that it will rapidly evolve into a mature medium like phone and e-mail, posing no special threat to worker attention. Today's concerns about instant messaging, experts say, are not unlike those that were

voiced about e-mail when it was introduced in offices.

In the meantime, these concerns represent an opportunity for companies that are developing IM systems geared to business users. In contrast to the consumer-oriented instant-messaging systems operated by AOL, Yahoo and Microsoft, IM systems for the workplace are being designed to cut down on the technology's intrusiveness and link it to phone, fax, e-mail and videoconferencing.

Most users of one consumer IM system can't send messages to users of another — say, from AOL to Yahoo, or Microsoft to AOL. Third-party software, available from vendors such as Cerulean Studios and Imici, can make the connection. But some customized systems for the workplace can do the same trick while providing greater security.

And make no mistake: security is the most important reason that demand is growing for customized IM and group-chat tools. Unlike corporate e-mail systems, which typically use networks and servers controlled by the client company, instant messages on the consumer-oriented IM systems move across public networks and through servers controlled by AOL, Microsoft and Yahoo — an arrangement in which sensitive business information is considered more vulnerable to eavesdropping by hackers. Says John Tang, an engineer at Sun Microsystems: "Companies don't feel comfortable sending messages out through their firewalls to a server that somebody else has control over." Besides, says Jennifer Belissent, senior product manager for Sun ONE Instant Messaging, a software package that includes IM, "there is the risk of exposing your networks to viruses and spam."

The market for integrated messaging software like IBM's Lotus Notes and Microsoft's Exchange, which include a bundle of collaboration tools from IM to group folders and calendar sharing, is \$2.6 billion a year, according to research firm the Radicati Group, based in Palo Alto, Calif. That market is expected to grow to \$4.4 billion by 2005. Software vendors are also selling pieces of these collaboration packages as stand-alone products, which IDC's Robert Mahowald says will further expand the market for corporate IM and related applications. "If I am a small company," Mahowald explains, "I can buy only the tools I need instead of the whole box."

Many of the latest IM systems provide "presence detection," which allows users to tell whether their colleagues are on a conference call, have their cell phone switched on, are traveling and working on their palmtop, or have an opening on their schedule at a certain time. Sun ONE's IM software has a polling feature that can help sales reps get quick feedback from a team of managers on whether to offer a discount to a client.

Glen Vondrick, CEO of FaceTime, a fast-growing provider of IM software applications, says, "There is no other real-time, text-based communication tool where multiple conversations can occur simultaneously." That's one of IM's big advantages over e-mail, but a bigger advantage, Vondrick says, is IM's presence information. Far from encouraging workers to goof off, he believes, IM makes it more difficult, because everyone in a working group knows who is and is not logged on, and everyone is expected to be responsive to work needs. With e-mail, the sender usually doesn't know whether the recipient is online. (Some, of course, consider that an advantage of e-mail.)

Jim Herbsleb, a computer-science professor at Carnegie Mellon University, says employees want IM to be more adaptable to individual privacy preferences. Formerly with Bell Labs Research in Naperville, Ill., Herbsleb and his colleagues there designed a prototype IM system that lets users control how much presence information they want to share, and with whom.

Within an office, the most common use of IM is to set up face-to-face meetings without hovering outside someone's door. But having a message pop up on your computer screen in the middle of an important activity is not pleasant either, says Sun's John Tang, who is working to make instant messaging a more courteous technology. One feature of an IM system developed by Tang and his colleagues, called Awarenex, is a contact preview — a small message box that rolls down from the top of the screen whenever the user receives an IM. "It tells you that someone's trying to IM you and shows the first line of the message," Tang says. "You can decide whether to have the conversation or not."

Awarenex also allows users to end conversations more gracefully. "When you are talking to someone face to face and they start putting their pencil away or closing their notebook," says Tang, "you know that you should start the closure process." The equivalent of that kind of body language on Awarenex is a message saying the user waves goodbye, followed by a countdown of dots diminishing in size. "That gives a signal that the person wants to end the conversation," Tang says, "but it leaves a window for you to ask one last question or make one final remark."

Feeling connected with colleagues is especially valuable for those who do a lot of traveling or work at home, says Ellen Isaacs, a free-lance user-interface designer formerly with AT&T Labs. Isaacs was part of a team at AT&T that developed Hubbub, a wireless IM system for PCs and Palm devices. It lets each user pick a little tune or distinct sound ID that is heard by everybody on his buddy list whenever he is online. "The sound ends up fading into the background," Isaacs says. "So you hear people's tunes coming and going just as you would hear co-workers walk by your office." It's not just a fun feature, she says; the tunes often trigger useful impromptu interactions. "It's like hearing colleagues chatting in the hallway and going, 'Oh, I needed to talk to so-and-so about something.'"

Isaacs believes that concerns about social time wasting on IM are overblown. She studied several thousand workplace IMs logged over 16 months and found that only 6% of the messages were exclusively personal.

At the same time, researcher Herbsleb believes the benefits of IM in business are understated. He conducted a study at Bell Labs comparing the speed of work in software-development projects, some of which used workers at different sites and some of which had all the work done at a single site. The same kind of task, Herbsleb found, took nearly 2 1/2 times as long when it was distributed among workers at different locations. The workers in the study, who were based in Germany, India and the United Kingdom, reported that they experienced frequent delays when they had to communicate with colleagues working in another office. They did not use instant messaging.

Or maybe they did. I'm not sure. I just called Herbsleb to check. I've left a voice mail on his cell phone. Hope he responds soon.

It's been three hours, and Herbsleb hasn't returned my call. Is he saving his daytime minutes? I should check my notes again.

Aha! Found it. No, the workers did not use instant messaging. As you can tell, I didn't either.

With reporting by Laura A. Locke/San Francisco