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Instant Messaging For Corporate Collaboration

by Lowell Rapaport

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In the last couple of years, instant messaging has hit the mainstream. There are currently more than 131 million users of the public instant messaging networks, according to IDC, with America Online leading the way with more than 100 million users of its AOL Instant Messenger. With every copy of the upcoming Microsoft Windows XP release and every AOL subscription now including at least one instant messaging client, usage figures are expected to mushroom in the years ahead.

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Instant messaging lets users communicate with each other via text in real time. As one user types a message on one computer, the same message appears on a recipient's computer at the same time. Instant messaging presents the same advantage over email that email offered over conventional postal mail-namely speed. Communication is faster and dialogs between users can rapidly develop, covering a wide variety of topics and speeding the cycle of questions and responses. A user making an inquiry over an instant messaging network gets an immediate answer. Plus, instant messaging networks provide presence awareness and awareness management - information on who is online and ready to have an instant messaging session. This feedback isn't available with tools such as email or bulletin boards - or even that other real-time collaboration tool, the telephone.

Instant messaging isn't the only real-time collaboration tool available. Also emerging are online conferencing and team collaborative applications. Online conferencing combines instant messaging with presentations, file sharing and conventional voice communication over telephone networks. Team collaborative applications allow digital files such as a spreadsheets or electronic documents to be worked on by several users at once in real time.

While conferencing and collaborative applications have been catching on with businesses, instant messaging has spread almost entirely through adoption by individuals-just as cell phones and handheld computers

Providers of Instant Messaging and Collaborative Software

America Online (www.aol.com). AOL Instant Messenger is the largest instant messaging network with more than 100 million users, according to AOL. Being the largest, AOL Instant Messenger is the network with which most corporate software vendors seek compatibility. AOL licenses access to its instant messaging network to other third party vendors of instant messaging software.

Bantu (www.bantu.com). Bantu's Java and WAP clients bring instant

proliferated among consumers. Unless businesses strictly enforce software standards, many users will have already installed instant messaging clients on their desktops. Over the next few years, the challenge for businesses will be to tame the instant messaging client and make instant messaging part of the business process rather than a maverick technology.

Before businesses can truly take advantage of instant messaging, vendors say they will first have to recognize that there is more to instant messaging than just the public instant messaging networks offered by the likes of AOL, Yahoo and the Microsoft Network (MSN). "Using a public instant messaging network for corporate collaboration is like relying on Hotmail for corporate email," says Lance Shaw, senior product manager for e-Room, a Cambridge, MA-based provider of collaboration software. "It works, but you don't get the full range of benefits of having a proper collaboration architecture." Those benefits include the ability to archive instant messaging sessions and to fully integrate real-time collaboration into business processes.

Some public instant messaging networks are actively courting business users, although not directly. America Online, for example, is "working in partnership with corporate instant messaging providers such as Lotus and Facetime to bring instant messaging to the corporate market," according to Catherine Corre, communications director for Netscape, America Online's software and portal division. However, the responsibility for bringing instant messaging to business users is largely left to third-party vendors.

"We provide value-added services on top of existing instant messaging networks, letting businesses leverage off their strengths," says Glen Vondrick, CEO of Foster City, CA-based Facetime, which produces both public and private instant messaging software.

Business-oriented instant messaging servers provide the more robust internal server architecture needed for use within an enterprise. Both Microsoft and Lotus build instant messaging on top of their already popular collaboration environments and Lotus connects into public instant messaging networks. The only step remaining is to integrate these instant messaging environments into the business process. When that happens, instant messaging will become an essential component for business collaboration.

With instant messaging integrated with enterprise applications, employees can initiate real-time collaboration sessions as part of a company's workflow. Integration can also gives users access to corporate content and data during a collaborative session.

"Real-time collaboration is [typically] integrated into enterprise applications in transaction-oriented environments," says Shaw. "Collaboration in this context is used to solve a specific, short-term problem." When a problem crops up that can't be dealt with within the normal workflow, the system can call for a collaborative session among workers, with business partners or with a customer in order to solve the problem.

One disadvantage of integrating instant messaging with enterprise applications is that it may not be easy. "Real-time collaboration system APIs require a lot of programming to integrate with enterprise systems like SAP," says Shaw. "Since integration at this level tends to be complex and

messaging to a wide variety of platforms and computing networks. Access to public instant messaging networks is made through Bantu's own server that acts as a proxy between Bantu Messenger clients and public instant messaging networks. Bantu's client is specifically designed to be integrated with user interface applications like Web portals and content management clients.

eRoom
(www.eroom.com). eRoom's Digital Workplace combines access to structured data (through integration with enterprise applications) and unstructured information generated via nonreal-time collaboration tools (such as email and bulletin boards) with real-time collaboration (instant messaging, shared applications and white board).

Facetime
(www.facetime.com). Facetime develops instant messaging proxy servers that provide additional services on top of existing instant messaging networks. The services include message routing, broadcasting and conferencing. Facetime Instant Message Director lets

expensive, the trend for integrating real-time collaboration software into enterprise systems is reserved for mission-critical applications like supply chain management, where any exception to the normal workflow can cost millions if it is not dealt with quickly and efficiently."

Integrating with front-end interfaces, such as Web portals, is generally easier and less expensive than integrating into back-end applications. In the front-end approach, instant messaging tools are presented to users like any other online service. Sessions are initiated by users rather than by the workflow, and collaboration becomes project-oriented rather than event driven. Integrating collaboration into a common-user interface encourages users to take advantage of the technology because it's in front of them alongside other applications and services they use on a regular basis.

Most vendors seem to agree that integration of instant messaging with portals is a good idea. "The goal of portal initiatives is to create a virtual community," says Chris Childers, senior technical evangelist with Citrix, the Ft. Lauderdale, FL-based portal and application server software company. "Integrating instant messaging helps to turn the portal into a virtual workplace where users can interact." Childers adds that integration offers the advantage of capturing and archiving instant messaging activity in the virtual workplace.

Another integration advocate is Larry Schlang, CEO and president of instant messaging provider Bantu of Washington, DC. "The market for instant messaging is in integrating it into other applications such as portals or supply chain management," says Schlang. "Educated customers are asking for real-time collaboration to be part of their systems."

At least one vendor doesn't agree that the portal is the right place to present instant messaging services for collaboration purposes. "Real-time collaboration needs a thicker client than what can be offered within a portal window," says Nils Gilman, product marketing manager at San Francisco-based Plumtree. "Portals are better suited to nonreal-time collaboration functions like bulletin boards and file sharing. A portal can act as a gateway to real-time collaboration, but the collaboration software is better run as a separate application."

Some makers of instant messaging software have played it safe by developing a wide variety of clients that can run inside portals or as stand-alone applications. For example, Foster City, CA-based Facetime offers an instant messaging client that runs as a stand-alone application or as a Java applet. Facetime also supports the use of public instant messaging network clients with their instant messaging server.

The integration of instant messaging into enterprise applications and Web portals is part of a trend toward "contextual collaboration," according Robert Mahowald, senior research analyst with the Framingham, MA-based IDC. "Collaboration is evolving from stand-alone collaboration applications and environments to collaboration integrated with the systems used to conduct business," he says. In other words, collaboration software such as instant messaging will become a component of other business applications rather than stand-alone software.

Contextual collaboration offers a number of advantages, says Mahowald. "There is a cost in productivity whenever users switch back and forth

instant messages be switched just like a PBX. This switching ability lets a firm have a generic instant message address. Inquiries to that address can then be directed to specific users or departments such as customer service. The reverse is also possible, one instant messaging user can broadcast to multiple instant messaging accounts at the same time. Facetime Instant Message Director can be used with the clients supplied by the public instant messaging networks or it can use its own Java client.

Flypaper
(www.flypaper.com). Flypaper's TeamSpace is a collaboration-oriented Web content management system. It combines collaborative features such as conferencing and instant messaging with content management features such as a document repository.

ICQ (www.ICQ.com). Acquired in June 1998 by America Online, ICQ was the first public instant messaging network. The system's protocol has been published. This has led to a large assortment of alternative clients for all platforms, including Java and Linux.

between business applications and collaboration applications," he explains. "One part of the cost is time as computers switch applications. Another part of the cost is spent as users psychologically shift their attention from regular applications to collaborative applications." Accordingly, employers will look to integrate collaboration with regular business systems to minimize these costs.

Even without tight integration, businesses stand to save time and money when their workers use instant messaging to collaborate rather than meeting face to face or over telephone lines. Instant messaging consolidates communications with the computer network, taking advantage of features such as storage and retrieval. And Mahowald points out that instant messaging can also take place over cell phone users and PDAs accessing the Internet, leveraging the investment businesses have made in these devices.

Implementing Instant Messaging

Companies considering instant messaging should evaluate their needs. Should collaboration be driven by the business workflow? This is an important consideration if a break in the business process can exact high costs if not dealt with in a timely manner. In these cases, instant messaging servers have to be integrated with enterprise applications on the back end. Note that instant messaging can be integrated on the front end and the back end at the same time, maximizing users' opportunities to collaborate on projects and iron out problems. Either way, instant messaging should be linked to content management systems to allow archiving and retrieval of collaborative sessions. This method suggests that instant messaging be deployed internally, behind the firewall.

While businesses may not want to rely on public networks for internal needs, public networks can provide a layer of compatibility between different collaboration architectures, offering a way to communicate with suppliers and customers. Supply chain management and customer relationship management are ideal applications for instant messaging that call for an extended enterprise. The value of a communications network is proportional to the total number of users who subscribe to that network. The value of a corporate instant messaging network increases if it's compatible with one or more of the public instant messaging networks.

Internal instant messaging servers should include a proxy server that allows workers to access the public instant messaging networks. Proxy servers route instant messaging queries to appropriate addresses, just as if they were phone calls routed to the correct party by a private branch exchange (PBX). By adding the ability to archive sessions between company representatives and their customers, instant messaging can be used in customer service and financial services applications in which the law requires that all communications be logged and recorded.

Companies may choose to outsource collaboration services. Companies including eRoom and Bantu also provide collaboration services and instant messaging as application service providers (ASPs) (see "Providers of Instant Messaging and Collaboration Software," page 54). By using an ASP, companies can integrate full-featured collaboration services, including archiving and retrieval of collaborative sessions, without committing to a

Lotus (www.lotus.com). Lotus' Sametime is the chief competitor to Microsoft Netmeeting. Sametime works with Lotus Notes servers to provide instant messaging along with video conferencing, voice communication, white board and application sharing. Sametime clients can also interoperate with AOL's Instant Messenger network.

Microsoft (www.microsoft.com). Microsoft's Messenger Service is the chief rival to AOL Instant Messenger and Microsoft's Conference Server is a competitor to Lotus' Sametime. Businesses using Microsoft Exchange can set up an independent internal instant messaging network using the Conference Server and one of two clients used by Microsoft's Messenger Service. One Messenger Service client supports instant messaging and IP telephony while Microsoft Netmeeting combines instant messaging with a group of features including an electronic white board, application sharing and video conferencing.

Yahoo (www.yahoo.com). Yahoo's instant

full product purchase. Such ASP services can be used in lieu of setting up an instant messaging system or as an evaluation before making a purchase.

messenger service is tied in with the company's portal business.

Johns Hopkins Gets the Message

With help from students and faculty alike, instant messaging has flourished at Johns Hopkins School of Public Health. In June 2001, this Baltimore, MD-based unit of Johns Hopkins University established a portal to provide a communications conduit for faculty and students. Integrating instant messaging technology seemed only natural, and the university selected vendor Bantu of Washington, DC.

Compatibility was an important factor in Bantu's selection, says Ross McKenzie, Johns Hopkins' director of information systems. "Bantu's client is written in Java, making it compatible with any computer or Web browser," says McKenzie. "The Java client downloads at run time, eliminating any install requirements, and it's also compatible with other instant messaging networks." McKenzie explains that he wanted the school's instant messaging network to be compatible with AOL Instant Messenger, MSN Messenger, Yahoo Messenger and ICQ instant messaging networks because many students use these networks to communicate with friends and family outside the school. Compatibility with the public networks helped to ensure students would use the school's instant messaging client.

Instant messaging quickly became one of the most popular aspects of the School of Public Health's portal. "Users are able to save, email, archive and print the Bantu conversations," says McKenzie. Professors can hold classes on the instant messaging network and students can socialize and conduct study sessions. "On our 'to do' list is the ability for the portal to automatically bring up content related to a subject being discussed in an instant messaging session. We're also looking into adding a white-board application to run alongside the Bantu instant messaging client." Electronic white boards are collaborative applications that let users simultaneously draw and type messages on a single shared image.

The school has implemented Bantu's technology through its ASP offering priced at $2 to $50 per user, based on contract terms and user volume. "[The ASP] let us provide and evaluate instant messaging before making a major investment in server software," McKenzie says. In the ASP model, the link to the instant messaging network connects to a server run by Bantu, which also supplies the archiving services and proxy server that connects the Bantu clients to public instant messaging networks like AOL Instant Messenger, MSN Messenger and Yahoo Messenger. "We have between 4,000 and 4,500 users at a cost of $2 per user per year."