

All About Instant Messaging

In the early 1990s, people began to spend more and more time on the Internet. Creative software developers designed chat-room software and set up chat rooms on Web servers. In a chat room, a group of people can type in messages that are seen by everyone in the “room.” Instant messages are basically a chat room for just two people.

Instant messaging really exploded on the Internet scene in November 1996. That’s when Mirabilis introduced ICQ, a free instant-messaging utility that anyone could use. ICQ, short-hand for “I seek you,” uses a software application, called a client, that resides on your computer. The client communicates with an ICQ server whenever you are online and the client is running.

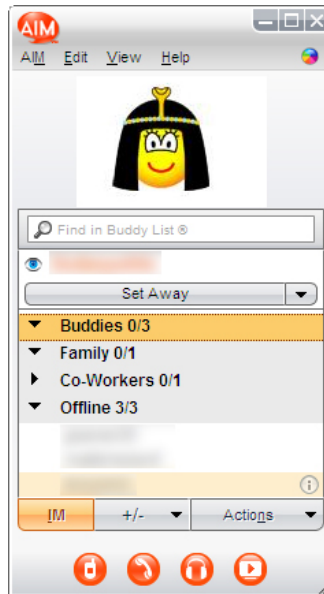
In 1997, AOL, considered the pioneer of the online community, gave its users the ability to talk in real time with each other through chat rooms and instant messages. In June 1998, AOL acquired Mirabilis and ICQ.

The ICQ model is the basis for most instant-messaging utilities on the market today. In the next section we’ll examine how these services work.

Using Instant Messaging

Look at the steps below to understand exactly what happens with an instant-messaging service.

1. You go to the download page and get a copy of the free software client for your computer.
2. You install the software and open the client.
3. The client tries to connect to the server. It uses a proprietary protocol for communication.
4. Once the client is connected to the server, you can enter your name and password to log in to the server. If this is your first time on, you can sign up for an account and immediately begin using it. When the server verifies your name and password, you are logged in.



5. The client sends the server the connection information (IP Address and number of the port assigned to the client) of the computer you are using. It also provides the user with the names of everyone in your contacts list.

6. The server creates a temporary file that has the connection information for you and the list of your contacts. It then checks to see if any of the users in your contact list are currently logged in.

7. If the server finds any of your contacts logged in, it sends a message back to the client on your computer with the connection information for that user. The server also sends your connection information to the people in your contact list that are signed on.

8. When your client gets the connection information for a person in your contact list, it changes the status of that person to “online.” You click on the name of a person in your contact list who is online, and a window opens that you can enter text into. You enter a message and click “send” or hit return to communicate with that person.

9. Because your client has the IP address and port number for the computer of the person that you sent the message to, your message is sent directly to the client on that person’s computer. In other words, the server is not involved at this point. All communication is directly between the two clients.

10. The other person gets your instant message and responds. The window that each of you sees on your respective computers expands to include a scrolling dialog of the conversation. Each person’s instant messages appears in this window on both computers.

11. When the conversation is complete, you close the message window. Eventually, you go offline and exit. When this happens, your client sends a message to the server to terminate the session. The server sends a message to the client of each person on your contact list who is currently online to indicate that you have logged off. Finally, the server deletes the temporary file that contained the connection information for your client. In the clients of your contacts that are online, your name moves to the offline status section.

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Instant Messaging Providers

Not long after AOL bought ICQ, AOL Instant Messenger (AIM) became the IM leader. In the past few years, though, a number of services have cut into AIM's audience. Windows Live Messenger (formerly MSN Messenger) and Yahoo! Messenger, in particular, have become widely

used around the globe. Google recently introduced its IM system, Google Talk. Proprietary multiprotocol applications like Trillian and Pidgin, which allow users to IM on several services at once, are also rapidly gaining in popularity. According to a 2006 study by comScore, which measures Internet usage, about half of the online population uses IM.

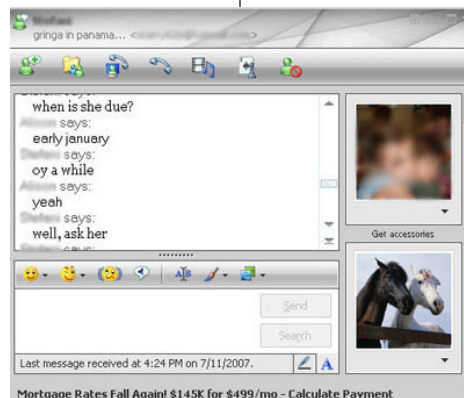
The major IM utilities use a proprietary protocol that is not understood by other instant-messaging services, so users of one service are usually blocked from contacting members of another. A key reason for AIM's initial popularity is that it allowed AOL subscribers to communicate with nonmembers. One of the provisions of the AOL-Time Warner merger in 2001 was that AOL would allow access to the AOL community and AIM protocol, but since then other instant-messaging utilities have provided more accessibility. Microsoft and Yahoo! joined forces in 2006 to allow their users to communicate with each other on one service.

It is important to note that instant messaging is not considered a secure way to communicate. Messages and connection information are maintained on servers controlled by the provider of your IM utility. Most utilities do provide a certain level of encryption but they are not so secure that you should send any confidential information through the system. There have been reported cases of IM user logs being captured and used by nefarious sorts, and hackers have been known to instant-message virus-infected files. VOIP is thought to be more vulnerable to infiltration than text-based instant-messaging.

New Instant Messaging Innovations

IM capabilities have greatly expanded in recent years. Most services offer File-Sharing and AOL, Yahoo!, Google and MSN have integrated IM service with e-mail service, so us-

ers can receive e-mail notifications while instant messaging. Many providers also allow users to IM and file-share from their cell phones and mobile devices, allowing access to their services any place, any time. A Google Talk user can archive IM conversations and also drag files and folders directly onto the chat window, with photos showing up instantly in their friend's chat window. Windows Live Messenger allows instant-messaging between X-Box 360 gamers. Personalization capabilities have exploded, with IMers able to customize personal icons, screen interfaces and greetings.



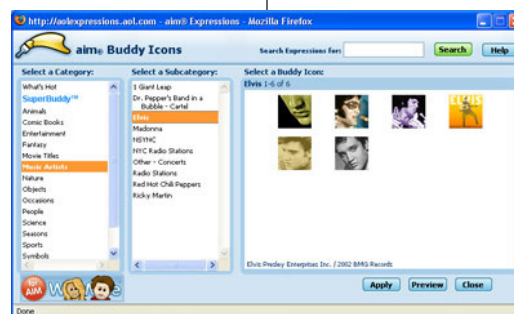
Most IM programs, including Windows Live Messenger and Google Talk, allow users to talk just as you would over a telephone, and some offer video-chat capabilities.

Several free utilities combine various services. Trillian provides a centralized location for AIM, ICQ, Windows Live, Yahoo! Messenger and IRC contacts. All contacts are shown in the same window, with different-colored circles representing each service. Trillian's "metacontact" feature displays one entry in the contact list for people with multiple IM memberships,

and it's the only multiservice client that offers video-chat capabilities (although you'll have to shell out \$25 for a Pro membership).

Users of Pidgin can IM, transfer files and share photos with contacts in AIM, ICQ, IRC, Google Talk, Windows Live Messenger and Yahoo! Messenger. Its "Buddy

Pounce" feature sends notifications when selected contacts change their online status or send IMs. Universal IM providers Meebo and eBuddy are Web-based, meaning they don't require a software download. eBuddy also offers a version of its service for cell phones. Friends IMing on Qnext, which works with all the major IM providers, can listen to each other's music files without having to download them.



The future of instant messaging is very bright. All of the utilities described in this article continue to be updated by their owners, and IM providers continue to collaborate on allowing more interface between users of their services. Business users can now have virtual conferences and collaborate on projects very easily. If you have not tried IM, you're missing out on a whole new world of communication.