



Comparative Analysis of Organizational Instant Messaging Trends and Standards



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Overview

Instant Messaging

Instant Messaging was first developed as a means to allow computer users to communicate in real time over the same computer network in the early 1970's according to an article published on Wikipedia. Although it was first developed to be used in Bulletin Board Systems (BBS) or on private networks and educational institutions; it was not long after the birth of the public Internet that four Israeli men Yair Goldfinger, Arik Vardi, Sefi Vigiser, and Amnon Amir applied the concept of real-time communication to this new medium. The program that they developed was called ICQ and it earned them 2 United States patents. Because Internet access was very expensive in Israel, The men moved to California where they started their company called Mirabilis. Inside of eighteen months they had over ten million downloads and thus had given birth to what we now know as Instant Messaging.

IM Hits the Main Stream

According to JabCast Inc., the ten million users were not the only people who had heard of this new technology that was taking the Internet by storm, the computer and Internet giants of the time had also taken notice. After turning down an offer from Microsoft for their new technology, Mirabilis made a lucrative deal with America Online and sold the technology for three hundred and thirty million dollars. Soon after the sale, America Online Reported over one hundred million downloads and boasted over a million new downloads a week. AOL ICQ had been embraced by the masses. With an eye on expansion into the corporate market it was time to find a standard.

Finding A Standard

Limitations and Standards

After the initial success of AOL ICQ it was not long before other companies started to release their versions of an online messaging program. Because Mirabilis and therefore America Online had patented the technology, it was up to each individual company/developer to develop their own protocol for their instant Messaging System. This led to interoperability problems between programs and competing brands. Microsoft, Yahoo, and other companies hit the market with their own versions and started to gain market share as their number of downloads increased. This posed a problem for consumers of these products who wanted to communicate with one another across networks and ultimately across brands. A user of AOL ICQ was unable to communicate with users of Microsoft Messenger, Yahoo, or other competitive products and visa versa. This led to a decision by the Internet Engineering Task Force (IETF) to form a group in the late 1990's that would address the protocol disparities between the different messaging systems and work toward developing a standard.

Instant Messaging Protocols

Of the many protocols available -- Trillian, Zango Messenger, Gaim, Fire, Proteus, Miranda IM, Adium, Everybuddy, Ayttn, Kopete, Centericq, BitlBee, and others the simplest solution seemed to be to standardize the server rather than the client. This would allow all IM clients across all platforms and brands to communicate with one another regardless of their native protocol. This would be the approach taken by JabCast, Inc. and LLC from New York. JabCast developed Jabber XMPP software that could be installed on IM servers throughout the world and provide one unifying solution that would allow cross-platform integration of the many different IM protocols available to the public. This solution did not however unify the Enterprise IM market.

Of all of the protocols available for the enterprise, there were two main candidates for the standard according to a paper by David B. Yoffie. The two competing standards were Extensible Messaging and Presence Protocol and Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions, or XMPP and SIMPLE XMPP for short.

Although both protocols were relatively easy to implement, each had its drawbacks. XMPP developed by JabCast was able to provide all of the standard features that the Instant Messaging crowd had come to expect including "buddy lists" and other standard features. However, it was unable at the time to make possible some of the features that companies like Microsoft wanted to institute such as the ability to utilize video and whiteboard technologies. And although SIMPLE XMPP was able to deliver some of these more advanced features, it was unable to provide for some of the more standard features that the Instant Messaging users relied on such as "Buddy Lists".

This forced corporations to take sides among the available technologies. Microsoft and IBM both settled on the SIMPLE XMPP because of the promise of advanced features and the ability to integrate them into some of their current offerings like Internet Explorer and Outlook Express. While Microsoft and IBM supported the SIMPLE XMPP protocol which had not yet been endorsed by the IETF, companies like Hewlett Packard, Sony, Hitachi, and Intel's Wireless Group backed the IETF supported Jabber XMPP for use in its devices and cell phones to provide cross-platform interoperability.

Home Vs. Enterprise

Functionality

Home and personal Instant Messaging solutions require little more than to carry out their intended task of allowing end-users the ability to communicate with one another and provide the technology for the standard features expected by them. However, when companies such as Microsoft, AOL, Yahoo, and others started eyeing the corporate market they had to address issues that were of little priority for the personal user. Issues such as the standards for a corporate server, security, encryption, access levels, and user and group rules all now shared center stage.

Home IM Software

The following Information is provided by Wikipedia.com. It is not a comprehensive list of all IM products on the market but it does contain the major brands and their compatibility with different operating systems, protocol support, and supported features. It should also be noted that the products listed below are the personal or “home” versions of the software.

Operating System Support	<u>Windows</u>	<u>Mac OS X</u>	<u>Linux</u>	<u>BSD</u>	<u>Unix</u>	
AIM	Yes	Yes	Yes	Yes	Yes	
aMSN	Yes	Yes	Yes	Yes	Yes	
Google Talk	Yes (2000/XP/2003 only)	No	No	No	No	
ICQ	Yes	Yes	No	No	No	
mICQ	Yes 2	Yes	Yes	Yes	Yes	
Microsoft Messenger for Mac	No	Yes	No	No	No	
MSN	Yes	No	No	No	No	
Skype	Yes	Yes	Yes	No	Yes	
Trillian	Yes	No	No	No	No	
Trillian Pro	Yes	No	No	No	No	
Yahoo! Messenger	Yes	Yes	Yes	No	No	
Protocol Compatibility	<u>AIM</u>	<u>ICQ</u>	<u>MSN Messenger</u>	<u>Yahoo!</u>	<u>Jabber</u>	<u>Skype</u>
aMSN	No	No	Yes	No	No	No
gaim	Yes	Yes	Yes	Yes	Yes	No
Google Talk	No	No	No	No	Yes	No
ICQ	No	Yes	No	No	No	No
IM2	Yes	Yes	Yes	Yes	No	No
mICQ	No	Yes	No	No	No	No
Microsoft Messenger for Mac	No	No	Yes	No	No	No
MSN	No	No	Yes	No	No	No
Skype	No	No	No	No	No	Yes
Trillian	Yes	Yes	Yes	Yes	No	No
Trillian Pro	Yes	Yes	Yes	Yes	Yes	Partial 4
Yahoo Instant Messenger	No	No	No	Yes	No	No

<u>Client Features</u>	<u>Toolkit</u>	<u>Encryption</u>	<u>File transfer</u>	<u>Graphical smileys</u>	<u>Built-in games</u>
AIM	W32	No	Yes	Yes	Partial
aMSN	Tcl/Tk	?	Yes	Yes	No
gaim	GTK2	No 8	Partial	Yes	No
Google Talk					
	W32	No	No	No	No
ICQ	W32	No	Yes	Yes	Yes
mICQ	line based	Yes	Yes	No	No
Microsoft Messenger for Mac					
	Carbon	No	Yes	Yes	No
MSN	W32	No	Yes	Yes	Yes
Skype					
	Qt/KDE,W32	Yes (Skype-to-Skype)	Yes	Yes	No
Trillian Basic 3.0					
	W32	Yes	Yes	Yes	No
Trillian Pro 3.0					
	W32	Yes	Yes	Yes	Yes
Yahoo Instant Messenger					
	W32;Cocoa;Gtk	Yes	Yes	Yes	Yes

Enterprise IM Software and Functionality

Shortly after the personal Instant Messaging programs started gaining popularity throughout the nation and around the world, several of the large well known brands started work creating enterprise versions of their software. Companies such as Microsoft, America Online, Yahoo, and others determined that the Instant Messaging could readily adapt to business needs.

All of the major companies would face the same challenges in the enterprise market that they experienced in the personal IM market. The protocol debate entered its second phase. Earlier Microsoft and IBM supported the SIMPLE XMPP protocol while the others supported the Jabber XMPP protocol. However, because of the flexibility and security required by business and the necessity to remain productive, the Microsoft/IBM decision paid off more so that that of the followers of the Jabber XMPP protocol.

Microsoft found many ways to integrate the most common IM functionality as well as some of the more advanced features such as file sharing, video, and white-boarding into its expanding suite of MS Office products such as Outlook, Net Meeting, and Internet Explorer. As Microsoft began successfully expanding its IM offering into the enterprise through integration into its existing offerings, other companies according to a CNET.com article by *Matt Hines in June of 2004 titled "AOL QUILTS THE ENTERPRISE IM GAME"* such as Yahoo and AOL called it quits in 2004 with their announcement that they were pulling out of the enterprise IM segment of the market. The reason noted by the two major players was there inability to market their product to the enterprise due to the bad reputation of the IM concept in the corporate world.

Corporate IM “The Bad Rap”

Instant messaging has many features that can be used in corporate environment. However, the standard IM system has made it almost impossible for the implementation of an enterprise stand alone messaging system in the corporate environment to become a reality. Unfortunately, the software is too closely married to the personal versions in the perception of most IT professionals. IM systems bring to mind hours of lost productivity, unauthorized release of corporate information, virus and security implications, and legal implications of what might be said to whom. Although most of the enterprise versions, even those implemented by AOL, and Yahoo contained encryption, user management, and a host of other security features; The stigma associated with the personal editions of this software was too much to overcome.

Microsoft on the other hand already having a firm grip on the enterprise market, found it easier to introduce their messaging tools as add-ons to their current wears.

To Instant Message or not to Instant Message

Overall the decision for a corporation to use Instant Messaging to conduct business has to be made on a case by case basis. Although it is true that instant communication between vendors, business partners, departments, and others is definitely appealing; the security, and the perception of lack of security will surely be taken into consideration when making the decision. Personally, I believe that the risks outweigh the benefits when it comes to enterprise Instant Messaging systems. The loss of productivity, exposure to virus and other security threats, and the misuse and inability to control text base data from leaving and organization make enterprise Instant Messaging too much of a liability for consideration at this point in time.

The Future of Instant Messaging

Instant Messaging in the enterprise will undoubtedly expand in the future. The question is what will it look like? I expect that corporate Instant Messaging will not resemble the personal IM systems that consumers and corporations are familiar with today, but will become more and more integrated into current office productivity and business applications. They will not be instituted as stand-alone communications solutions but will inevitably end up in bigger applications as features or add-ons.

Case 1: Instant Messaging

Case 2: The Long Battle for an Instant Messaging Standard

<http://www.hbsp.com/relay.jhtml?name=cp&c=c94396>

http://www.jabcast.com/tech_talk/JabCast_TTalk_WhoIM.html

http://en.wikipedia.org/wiki/Comparison_of_instant_messengers

http://news.com.com/AOL+quits+enterprise+IM+game/2100-1012_3-5242473.html

