

The Interpersonal Web

Instant messaging has grown so rapidly in popularity and usage that it is shaping the next era in the evolution of the Internet. This Strategic Guide explains how demand for more real-time communication and personalised content is leading to the emergence of the Interpersonal Web.

March 2010

Introduction

In twenty very short years, the Internet has evolved from a little known military network into a knowledge and communication platform used by almost every business and most families in the developed world. The estimated number of global Internet users today exceeds 1.7 billion¹.

In every year that has passed, the Internet has evolved to meet the expectations of users, the needs of businesses and the visions of developers. It has got bigger; it has got faster; and it has got more interactive. But the most exciting web developments are perhaps yet to come.

The Internet is rapidly entering a new era in its development. It will continue to present traditional knowledge-based data, but the focus will shift more towards real-time data and real-time communications.

Industry analysts, developers and leading IT businesses are in agreement that the Internet is rapidly entering a new era in its development. It will continue to present traditional knowledge-based data, but the focus will shift more towards real-time data and real-time communications. Users who have become accustomed to social networking, Twitter and instant messaging are driving demand for immediate, unconstrained and personalised web-based communications. The new 'real-time web' will transform the way in which employees collaborate, come to dominate the way in which businesses communicate with customers and completely redefine social networks.

ProcessOne is a leading provider of instant messaging solutions and a specialist in web communications. We are therefore well placed to comment on this next phase in the evolution of the web. Working with clients around the world, we are already implementing solutions that combine real time communication, presence and collaboration solutions in open, web-based applications. These solutions are typical of the applications that will characterise and shape the Internet of the future - a dynamic and, above all, personalised environment that we call the **Interpersonal Web**.

This Strategic Guide describes the next stage in the ongoing evolution of the Internet and explains the critical role that real-time communications will now inevitably play.

¹ Internet World Stats, Miniwatts Marketing Group. www.internetworldstats.com/stats.htm. Statistics cited from September 30, 2009.

An evolution not a revolution

When the term Web 2.0 came to the forefront in 2003-4, it brought with it a fair amount of controversy. The use of this term suggested to many that the Internet had materially changed, had been upgraded, or was somehow different. In fact that was not the case.

Tim Berners-Lee, founder of the World Wide Web, is himself known to have objected to the term Web 2.0. He is reported to have said that the values associated with Web 2.0 were, in fact, part of his original vision for the Web. Web 2.0 was, therefore, less of a reinvention of the Web and more of an evolution.

The next phase in the development of the Internet will build upon both the success of the original World Wide Web and on the interactions of Web 2.0.

In its essence, Web 2.0 didn't offer anything technically different to the original, early Web, either in design or technology. However, users were starting to exploit the capabilities of the Internet in new ways. Alongside traditional knowledge-based data, web sites were beginning to offer more interactive services and communications forums. Over the course of a few years, blogs, social networks, instant messaging and communications channels such as Twitter, emerged, grew in popularity and became firmly established.

Web 2.0 is also characterised by a new breed of interactive web applications, an increase in online services and the emergence of the Software as a Service (SaaS) proposition. These applications have set new user expectations for the number and variety of ways in which people can make interactions on the Internet.

Now, Web 2.0 is itself evolving, and we stand on the threshold of yet another exciting new era in the history of the Internet. There are many people who want to announce the arrival of Web 3.0, but again, this is no revolution. Instead it is the next phase in a fast-paced evolution - and a phase that will offer a gigantic step forwards. The new Internet will build upon both the success of the original World Wide Web and on the interactions of Web 2.0 to cater for the needs of a whole new generation of 'hyper-connected' users.

Real real-time connections

The continuing evolution of the Internet is not being driven by new technology. Rather, it is being driven by users themselves. A growing proportion of Internet users are what are known as 'hyper-connected'. They use the Internet extensively, not just for research, fact-finding and online shopping, but also to conduct social and business communications and stay up-to-date on news as it happens.

The growth in demand for real-time communication is also being driven by the move away from purely desktop applications to web-based applications and 'apps' that can be used from an increasing array of small portable devices. Now, users can access the Internet on the train, up a mountain or even on a sailing boat. And they want to use this newly found freedom to stay in touch with friends and colleagues and receive up-to-the-minute news about celebrities and world events.

Twitter has become symbolic of this intense appetite for real-time communications. However, Twitter is actually missing two key properties that are pivotal to the next phase of the Internet's evolution and the emergence of the real-time web.

Firstly, Twitter is not real real-time. When someone posts a 'tweet', his or her followers have to 'check' for new messages in order to pick it up. If users check often, it is fast, but it is not real-time in the true definition of the term. What is more, Twitter users are limited to 200 actions in an hour. Every time that a user checks for messages, he can consume eight or more actions. Therefore, the more you use Twitter, the more you limit your ability to send and receive quickly.

Secondly, users have to have a Twitter account to subscribe to receive news. It is not possible to establish communication with users that do not have a Twitter account, because the tweets themselves are not addressable and have no routing mechanism.

The Internet of the future will necessarily address both of these issues. Real-time communications will become platform independent, so that users can receive information from ten networks at the same time, without having to be logged into ten different sites. And, of course, all messages will be truly instant.

Khris Loux, Eric Blantz and Chris Saad from PBworks (www.pbworks.com) have coined the term 'Synaptic Web' to try to describe the significance of real-time communications to the future of the Internet. They argue that, just as scientists believe that it is the connections between neurons in the brain that are the root of intelligence, the connections between users and objects are the power of the Internet. They write: "The Synaptic Web is about the evolution of the Internet from document delivery platform, to a platform for communication ("2.0") and now towards something much more profound: a dynamic web of adaptive organic and implicit connections whereby real-time information flows give structure and meaning to previously unconnected sets of data."²

Real-time communications will become platform independent and all messages will be truly instant.

This is an insightful and clever definition. However, it doesn't take into account another very important attribute of the future Internet: personalisation.

² <http://synapticweb.pbworks.com>

Personalised content

While users want to be able to access information in real-time, they will have little tolerance for information and communications that have no relevance to them. Instead, they will want to be able to view the status of their selected circle of contacts, receive information that reflects their actual interests and stay informed about events that will impact their own lives. Real-time communications will therefore need to be coupled with content that is highly tailored, or 'personalised'.

Real-time communications need to be coupled with content that is highly tailored, or 'personalised'.

Leading analyst firm Gartner terms this 'Context-Aware Computing'. The organisation has recently published a number of reports that define context as "a form of extreme personalisation"³ and explain that businesses must use online personalisation to tailor their real-time communications and more precisely market their services and products to consumers.⁴

Consultants Nick Jones and William Clark from Gartner Group write: "Contextual systems will be designed to deliver highly personalised information, suggestions, advertising and services to individuals. They will achieve this by exploiting real-time information about identity, location, interests, needs and habits. Advanced systems will exploit communities and social-networking principles, such as identifying potential interests based on the behaviour of similar individuals."⁵

The Internet is evolving to deliver this personalisation in a number of different ways. For example, it will become possible for individuals to 'pull' content from a variety of different web sites and 'content sources' to one place. Therefore, individuals will be able to easily access all the tweets, blogs, social contact presence alerts, instant messages, news feeds and static content that they want, from one place.

³ Gartner. *Context-Aware Computing: A Logical Model for Context Providers*, 27 August 2009

⁴ Gartner. *Context-Aware Computing: The Future Is Now*, 14 October 2009

⁵ Gartner. *Context-Aware Computing: A Logical Model for Context Providers*, 27 August 2009

The Interpersonal Web

Clearly, the next era of the Internet will be typified by two trends: the prevalence of real-time connections (the ‘Synaptic Web’) and the importance of personalisation (‘Context-Aware Computing’). But what is this next era called?

ProcessOne has watched the evolution of the Internet very closely and participated actively in the debates and discussions that have surrounded it. We have initiated conversations with businesses, published blogs, held events and exchanged views with industry analysts and IT technicians alike. After a great deal of thought, we have proposed a name for the next era of the Internet that, we feel, defines it accurately.

That name is the Interpersonal Web.

Dictionaries define interpersonal as: *“of or relating to the interactions between individuals”* and *“existing or occurring between persons”*. The term does therefore describe well how people will interact both with each other and the web in the future. The word interpersonal also supports the message that communications will exist between people, all people - not between limited numbers of contacts in closed, registration-only social or business networks. At the same time, the word web suggests, not a single service, but a network of services that are all interconnected (open).

Most importantly, the name Interpersonal Web also conveys the message that the Internet will be ‘personal’ - or personalised to be more specific.

The Interpersonal Web is, therefore, a term that is more understandable for users than ‘Synaptic Web’ and takes into account the idea of Context-Aware or personalised content. It marks a shift from instant messaging to something broader that is web-based, real-time and personal.

Whether the name 'Interpersonal Web' sticks or whether in time it becomes replaced by another more widely accepted term, isn't really important. What matters is that the Internet is evolving quickly. Businesses that are currently satisfied in their use of the Internet will have to re-think their strategies to take into account the growing importance of real-time communications and personalisation. They will need to recognise the challenges and advantages presented by the new era of the Interpersonal Web - and be prepared to act upon them.

Businesses that are currently satisfied in their use of the Internet will have to re-think their strategies to take into account the growing importance of real-time communications and personalisation.

The benefits of the Interpersonal Web

The Interpersonal Web will have an impact on how all businesses use the Internet to communicate with customers and prospective customers. It will also change the way that their employees work.

KEY BENEFITS INCLUDE:

Enabling better employee collaboration

The Interpersonal Web will allow better communication between users, by providing additional information on the locations (geologs) of colleagues, their status and what they are working on. When a call comes into head office, receptionists will know whether to pass it to a worker's desk, mobile, home number or voicemail, based on his location and status (in a meeting, not be disturbed etc.) Real-time communication will not be limited to sending instant messages and chatting, but will allow employees to better share information.

Supporting customers at the point of sale

Online chatting is already used quite extensively to provide prospects with advice at the point of sale. However, businesses will be able to use real-time communications to provide extra, customised information that might help customers to make a buying decision. As well as presenting a product page, for example, businesses could present comments from other customers posted in real-time. Businesses could also consolidate content from other related web sites or include a feature to allow customers and potential customers to chat with each other from a product page. They can then share information about the product and assist each other.

KEY BENEFITS:

Enable better employee collaboration to improve productivity

Support customers at the point of sale to increase sales

Foster greater brand loyalty and reduce churn

Maximise return on existing investments

Fostering greater brand loyalty

Businesses will be able to keep open a channel of communication between the company and its users that will be much more intimate and immediate than email. This will help to strengthen brand loyalty and encourage people to make further purchases.

Maximising the return on existing investments

Most organisations have already made large investments in their web sites and in other enterprise applications such as SAP systems and Customer Relationship Management applications. Rather than starting again from scratch, these organisations can easily add real-time communications to these existing systems without having to alter the software configuration in any way. They can therefore easily extend and update their enterprise capabilities, while maximising the return that they gain from their existing investments in technology.

These, certainly, are not the only potential benefits of the Interpersonal Web. As the Internet continues in its evolution, more opportunities will emerge.

The next steps for the Interpersonal Web

The Interpersonal Web of the future is starting to become evident in the instant messaging applications of today.

As a leading provider of web communications, ProcessOne is already working with a number of forward-looking organisations to enhance their web sites with real-time communications and personalisation - features that typify the emergence of the Interpersonal Web.

For example, ProcessOne has developed document management applications that allow users to track changes made by their colleagues. Next to each change, an embedded chat icon is inserted that enables users to easily and immediately initiate a conversation with that colleague to discuss the changes made. This is just one example of a way in which the embedded use of real-time communications into web-based applications can improve collaboration and thereby increase employee productivity.

Instant messaging and other real-time forms of communication can be integrated into any web-based application without the need to modify or redevelop that application or user interface in any way. Using proven technology and standard protocols, organisations can therefore quickly and easily enhance whatever applications lie at the core of their business.

However, while the first signs of the Interpersonal Web are around already, this is just the beginning. Before the Interpersonal Web can realise its full potential, the following developments will need to occur:

From desktop application to web application

In the past, the main providers of messaging systems - such as IBM (Lotus Notes) and Microsoft (Outlook) - have been focused on desktop applications. These vendors are now having to develop new business models and look at ways to move communications to the Web.

ProcessOne is already working with a number of forward-looking organisations to enhance their web sites with real time communications and personalisation.

From application to user

In the new era, there will be no boundaries. People registered with Gmail will be able to receive tweets and people registered with Twitter will be able to broadcast their presence to people logged into MSN. The next stage in the development of the web, therefore, has to include the development of unique identifiers for users. These identifiers will be XMPP accounts that look like an email address and enable the user to be reached no matter which network he or she originally registered with.

From near real-time to real real-time

Necessarily, the focus of web-based interactions will switch from 'pulling' to 'pushing'. Rather than users going to a web site to access ('pull') a tweet or to download information, the information will be 'pushed' out (using the unique identifier above) to them wherever they are. Users will register for information that they are interested in (RSS feeds, tweets, blogs, new posts on web sites etc) and will be notified immediately - in real-time - as soon as there is something new.

From PC to mobile device

Currently if organisations send emails, they may only reach their customers when they are at their desks. If they send SMS messages, they will only receive them on their mobile phones. With the advent of single addressing, organisations will be able to send personalised communications that will reach their intended recipients no matter where they are and what device they are using.

From one web-based application to multiple web-based services

The Interpersonal Web will also need to evolve to provide a new way to federate web services. If users are interested in events coming from many different sources, they will need a way to bring these together. This could be a customised, private web landing page, or more likely a notification bar that sits discretely at the bottom, top or side of any application that users have open on any device. This in many respects is the missing element on the way to the Interpersonal Web.

From specific social networks to a common social media

The concept of the social network is very strong today. Increasingly, however, users will not want to be limited to one social networking site - whether it is Facebook, YouTube or LinkedIn. In the Interpersonal Web, users will be able to build their own more flexible social networks that unite contacts from any site. Social networking providers will no longer compete to attract and 'own' their users, but will instead compete by trying to offer the best customer service and features, so that users will want to use them as their preferred entry point. ProcessOne's instant messaging solutions already offer this kind of network independence, by allowing users to send and receive instant messages to and from users of many different popular instant messaging networks.

Conclusion

ProcessOne works with businesses worldwide to deliver improvements in employee collaboration, sales and customer service, through the use of instant messaging and other forms of real-time communication. We have the technology already to extend these systems and implement innovative solutions that will, in time, come to typify the Interpersonal Web.

The good point is that this is an evolution not a revolution. Organisations - including social network operators - will not have to throw out what they have already got to exploit more real-time and personalised communications. We build our solutions in a non-intrusive way on existing web-based applications, by integrating real-time solutions into the browser. The browser thus relies on two major protocols: not only HTTP but XMPP as well.

Unlike most new product launches in the IT industry, the arrival of the Interpersonal Web will not be announced by a press release, a media event and a fanfare of attention. Rather, the Interpersonal Web will quietly come into being at the encouragement of those visionary organisations that are first to embrace it. Much of the technology - and all of the expertise - to deliver it exists already.

We can all look forward to a future, where web-based communications are unconstrained, personalised and truly real-time.

Businesses and social network operators won't have to throw out what they have already got to exploit more real time and personalised communications.



ProcessOne
58, Boulevard de Strasbourg
75010 Paris France

Tel: +33 963 282 049
Fax: +33 142 012 547
Email: info@process-one.net