



The “unicorn” cave painting from Lascaux. (public domain)

On-line Communication Tools—An Overview

by Chris Bennett



Humankind’s desire to communicate is enduring and persistent. Finding new ways to communicate has been a favorite pastime since we emerged from the primordial soup to become the dominant communicators on Earth. Tools for communicating effectively are changing constantly, but the underlying motivations have changed little. People want to be seen, heard, and—with a little effort—understood.

Beginning with the development of rudimentary language, human communication tools have progressed at a dizzying pace. From early cave paintings at Lascaux, to written language, to the Gutenberg Press in 1436, innovations have allowed information to be shared in greater quantities with ever-larger audiences. In the twentieth century, along came electricity and the ability to reach mass audiences through, first, radio and then television. While not particularly interactive, these mediums served to probe the limits of our desire to communicate. They were, and still



Early cave painting from Lascaux, France illustrates man’s desire to communicate (public domain)

are, a testing ground to find the balance between communication quantity and quality. As electronic technologies advanced, mainframe computers and mass storage became realities, introducing the world of binary communication. Print, television and radio then became known as *traditional media*.

Fast-Forward to the Late 1970s and Early 1980s

The short-lived Apple Lisa introduced the world to the commercial graphical user interface (GUI), capitalizing on previous work by Stanford Research Institute and Xerox PARC. Shortly thereafter, the Apple McIntosh and the IBM personal computer (PC) revolutionized the ability to manipulate information and to develop interactive tools. The success of GUI-based PCs allowed other ongoing communication experiments to become more fully realized.

The first viable TCP/IP (Transmission Control Protocol/Internal Protocol) wide-area network was established in 1983 by the National Science Foundation, and it spurred the growth of other commercial networks that in the early 1990s merged to become the Internet. Could this at last be the ultimate communication tool?

Fast-Fast-Forward to the Internet and Worldwide Web

Today’s Internet is an accelerated macrocosm of accumulated communication wisdom. With the variety of content available on the Internet, this can be viewed as either exciting or scary. The Internet has evolved from a simple research tool to a complex social network. It is the proving ground for today’s communication experiments. In a social network, it is not necessarily what you know, but the relationships (read links) you build that determine success.



The Apple Lisa—The beginnings of the GUI interface and personal computing (public domain)

One measure of the value of a communication tool, within a social network, is its permanence. Some communications tools, such as the printed word, have endured for centuries. Others experience an early death or continually evolve in an attempt to find definition and legitimacy in a complex and competitive world. The Internet provides a very visible stage on which to *prove* the value of a communication tool in a relatively brief time. These tools proliferate



Johann Gutenberg inventor of the printing press as a communication tool (public domain)

ate at a rate that can be alarming. In this *change* environment we have progressed from the Information Age through the Knowledge Economy (1992–2002) into the Intangible Economy.

In the Intangible Economy, four factors of production—knowledge assets (what people know and put into use), collaboration assets (who people interact with to create value), engagement assets (the level of energy and commitment of people), and time quality (how quickly value is created)—are the four key resources from which economic activity and competitive advantage are primarily derived and delivered today (Wikipedia contributors, Information Age).

Since the dot.com bubble burst in 2001, there has been a constant reshuffling of products, pseudo-products, services, and ideas, boggling the mind of even the most hardcore techie. This overwhelming proliferation of products and services (free or otherwise) makes choosing what to use and what to assimilate a challenging task. How does this mountain of techno-choices relate to IAAO members? Let's put it this way, if you don't know what IT is, you will definitely have a hard time using or appreciating IT. The following brief summary of Internet communications tools attempts to make some sense of it all.

Internet Communication Tools

Web 1.0

Previously known simply as the Web, Web 1.0 can be defined as a platform for the delivery of products and services in accordance with the goal of universal access. A key tenet of the early Web was the ability to deliver content in a more or less one-way flow from a Web server to the desktop of an end user. This flow is also known as client-server networking. Content for the Web 1.0 was defined and managed by a relatively few enterprises that were trying to establish their own commercial interests. Many of the limitations of Web 1.0 were the result of still-developing technology. With the advent of broadband technologies and infrastructure, the movement from html to xml, and improvements in Web browsers, access to information on the Web became easier for more people.

Web 2.0

Web 2.0 covers the current state of affairs on the Internet. It refers to a subtle change in the use of existing tools and the invention of new tools. Tim O'Reilly, one of the two people who coined the term *Web 2.0*, attempts to define it in his much-discussed white paper, "What is Web 2.0—Design Patterns and Business Models for the Next Generation of Software" (2007). He summarizes the core competencies of Web 2.0 as follows:

- services, not packaged software, with cost-effective scalability
- control over unique, hard-to-re-create data sources that get richer as more people use them
- trust in users as codevelopers
- harnessing of collective intelligence
- leveraging of the long tail through customer self-service
- software above the level of a single device
- lightweight user interfaces, development models, and business models

The focus is on interactive on-line communities where any participant can have an active role in developing and posting content. Peer-to-peer communication, leveraging of collective intelligence, and collaborative development of user-generated content are key features of Web 2.0. The open standards movement is an extension of Web 2.0 thinking that allows anyone to expand and add to existing Web tools. Specific tools (discussed later in this article), such as blogs and wikis, help to define the essence of Web 2.0. Word-of-mouth promotion and Web services that collect and combine information in new ways (mashups) are also part of the equation.

The "Father of the Web," Tim Berners-Lee, was recently quoted about Web 2.0:

Web 1.0 was all about connecting people. It was an interactive space, and I think Web 2.0 is of course a piece of jargon, nobody even knows what it means. If Web 2.0 for you is blogs and wikis, then that is people to people. But that was what the Web was supposed to be all along. (<http://web2.socialcomputingmagazine.com/>

all_we_got_was_web_10_when_tim_bernierslee_actually_gave_us_w.htm)

When it comes to communications tools, it's not what you call it, it's how you use it.



Symbol for availability of a syndicated Web feed that was originally introduced as part of the Mozilla Firefox browser.

Web Feeds

Much of today's Web 2.0 functionality depends on the development of something called a *Web syndication feed*. Web syndication feeds are essentially notification tools that let subscribers to a specific site know when it has been updated by sending information about changes to subscribers. The two common formats used to deliver Web syndication feeds are RSS and ATOM. These formats made it possible for blogs, discussion forums, and podcasts to come into their own as specialized communication tools. The widely adopted syndicated feed symbol appears on Web sites that support this technology and allows subscribers to sign up for notification [Wikipedia contributors, Atom (standard)].

E-zines, Blogs and Vlogs

One of the earliest communication tools on the Web was the e-zine, or electronic magazine. According to John Labovitz, publisher of E-zine List, a list of about of about 3,000 E-zine titles,

For those of you not acquainted with the zine world, 'zine' is short for either 'fan-zine' or 'magazine,' depending on your point of view. Zines are generally produced by one person or a small group of people, done often for fun or personal reasons, and tend to be irreverent, bizarre, and/or esoteric. Zines are not 'mainstream' publications—they generally do not contain advertisements (except, sometimes, advertisements for other zines), are not targeted towards a mass audience, and are generally not produced to make a profit.

An 'e-zine' is a zine that is distributed partially or solely on electronic networks like the Internet [www.meer.net/~johnl/e-zine-list/] (accessed June 12, 2007).

Having evolved from print before the Web existed, e-zines are more traditional communication tools that emphasize content over medium. They are not interactive, so they tend to express a singular point of view. One advantage of e-zines is that their content and original intent do not become diluted or lost through the interactive collective process so popular on the Web now. Numerous e-zines still exist on the Web, but they pale in popularity compared to the new kid on the block, blogs.

Merriam-Webster's on-line dictionary [www.m-w.com/dictionary/Blog (accessed June 16, 2007)] defines blog as:

Main Entry: **blog**

Pronunciation: 'blog, 'bläg

Function: noun

Etymology: short for Weblog

: a Web site that contains an on-line personal journal with reflections, comments, and often hyperlinks provided by the writer

- **blog-ger** noun

- **blog-ging** noun

The irreverent Urban Dictionary [www.urbandictionary.com (accessed June 2, 2007)] defines blog as follows:

1. *blog*

n.

Short for weblog.

A meandering, blatantly uninteresting on-line diary that gives the author the illusion that people are interested in their stupid, pathetic life. Consists of such riveting entries as "homework sucks" and "I slept until noon today."

v. intr.

The act of posting to a weblog.

Irreverence aside, blogs are increasingly popular. Basically, they are personalized, on-line, primarily text-based, journals about personal interests. Blogs invite comments from others interested in the topic. Moreover, they track backwards, showing a chronology of article postings and reader comments. Vlogs (video blogs) are similar to blogs except they deliver primarily video and audio messages.

A key to the development of blogs and vlogs is the Web feed, which lets subscrib-

ers know about new postings to a blog. Blogs facilitate communication between individuals who have elected to participate in a specific area of interest. This differs from traditional forms of communication from groups or individuals that want to send a controlled message.

Corporations have been known to use blogs as a way to solicit feedback about company products in an informal setting. This raises speculation about who controls the blogger and also whether comments posted to a blog are "spindoctored" to encourage a desired result under the guise of an open forum.

Jaron Lanier, who coined the term *virtual reality* and wrote the essay "Digital Maoism: The Hazards of the New On-line Collectivism" (*Edge* 2006), talks about anonymity as an important counterculture concept that has merged with popular culture with the arrival of Web 2.0. He states that blogs and similar anonymous communication tools follow a course of communication that tends to escalate and become partisan as it progresses. In other words, the anonymous nature of the medium allows the expression of opinions without the risk of penalties inherent in more traditional communication models. The question of accountability for one's statements then comes into play.

Lanier talks about control as an element of on-line communications. The more control that is exercised over on-line information, the more likely it is that it will be viewed as credible. Frequently, that control happens in the background, but it also increases the cost to deliver on-line information.

Lanier further states that oversight has a price—the cost to maintain information as well as the freedom to post information without restriction. Less formal communication channels [like blogs] encourage creative thought and experimentation with ideas but lack credibility when compared to controlled sources of information (Lanier 2007).

Thus, the dilemma of blogs: they are an inexpensive, powerful tool to quickly develop collective thought and consensus within a blogging community, but seldom can they withstand the tests of academic

rigor that more traditional communications tools subject themselves to.

Webinars, Webcasts, and Podcasts

Webopedia (www.webopedia.com/TERM/W/Webinar.html) defines webinar as:

Webinar, also written as "webinar."

Short for Web-based seminar, a presentation, lecture, workshop or seminar that is transmitted over the Web.

A key feature of a Webinar is its interactive elements—the ability to give, receive and discuss information. Contrast with Webcast, in which the data transmission is one way and does not allow interaction between the presenter and the audience.

Webcasts and webinars are categorized as traditional communication tools because they lack collective thought processes and tend to send a mostly static, preformed message.

A similar on-line communication tool that depends on Web syndication feeds is the podcast. The podcast is a subscriber-based tool for delivering prerecorded information, usually in the form of audio, video, or both to a PC or media device, such as an iPod. iTunes is an example of aggregator software that allows subscribers to receive notifications and downloads from the syndicated feed source. Because they contain prerecorded information, podcasts also can be considered to fall into the category of traditional communication tools but with an enhanced delivery mechanism (Wikipedia contributors accessed June 18, 2007).

Viral Marketing

Sound scary? Don't worry, viral marketing is simply an on-line communication strategy (otherwise known as word-of-mouth marketing.). This low-budget marketing approach takes advantage of free posting sites, such as YouTube, to attract mass interest. By posting low-budget, amusing, and sometimes bizarre and kooky videos and messages, viral marketers can attract attention and provoke comments and conversation about their products and services.

An interesting example of viral marketing is the "Will it Blend?" series of videos by BlendTec (willitblend.com),

which started out on YouTube as a way to attract attention to BlendTec's high-end but obscure blender product. BlendTec blends unusual things on video in order to demonstrate the power and versatility of its product. "Will it Blend? iPod" and "Will it Blend? Marbles" are interesting demonstrations of viral marketing at its finest. BlendTec has had a marked increase in sales since it began the series. Remember, you heard it here first!

Viral marketers communicate, not by pushing information to their target audience, but by pulling interested parties into the experience once they hear about it. As a result, this form of communication can be perceived as less aggressive and more subtle than traditional communication tools, although the posted message can be anything but subtle.

The same word-of-mouth approach can be used in other media, but viral marketing has found a very comfortable home on the Web because of its ability to reach very large numbers of people without the expense of traditional push-marketing channels. This use of the Internet to sell many products with a lower overhead has been dubbed *long-tail marketing*. It signifies a trend, enabled by the Web, of providing increased product choices to an increasingly targeted audience.

An important aspect of viral marketing is getting the message posted where it will attract the most attention. Sites that have been labeled as viral marketing hot spots are usually directed at the entire world and initially rely on a few outrageous and trendy messages to attract attention. Once there, visitors tend to search for more messages that will intrigue and tantalize them.

Viral messages do not have to reside on trendy Web sites to get noticed. Messages that cater to a more targeted audience can appear anywhere that audience is likely to read them. A message targeted to assessors, for instance, is not likely to inspire a large audience. Better to post it on sites assessors have been known to frequent, such as the IAAO Web site. This pull-marketing technique allows interested parties to congregate where the message is being offered in a fun and interesting way.

Ease of sharing is an important part of

a viral message. The simpler it is to link or forward the message to a colleague the better it tends to work.

Wikis and Discussion Forums

Wiki wiki is Hawaiian for "quick." Ward Cunningham, father of the WikiWiki concept and co-author of *The Wiki Way: Quick Collaboration on the Web* (Leuf and Cunningham 2001), describes wikis as:

The simplest on-line database that could possibly work.

Wiki is a piece of server software that allows users to freely create and edit Web page content using any Web browser. Wiki supports hyperlinks and has a simple text syntax for creating new pages and cross-links between internal pages on the fly.

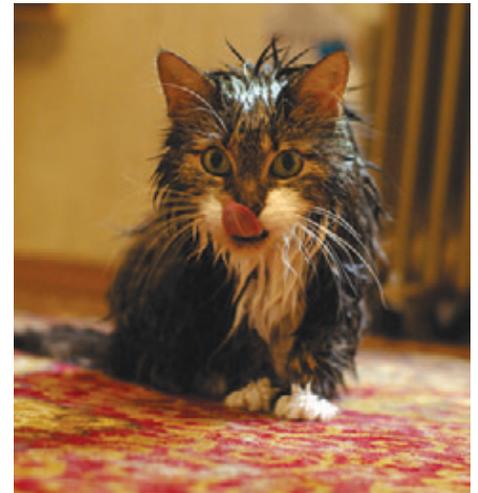
Wiki is unusual among group communication mechanisms in that it allows the organization of contributions to be edited in addition to the content itself.

Like many simple concepts, "open editing" has some profound and subtle effects on Wiki usage. Allowing everyday users to create and edit any page in a Web site is exciting in that it encourages democratic use of the Web and promotes content composition by nontechnical users [www.wiki.org/wiki.cgi?WhatIsWiki (June 14, 2007)].

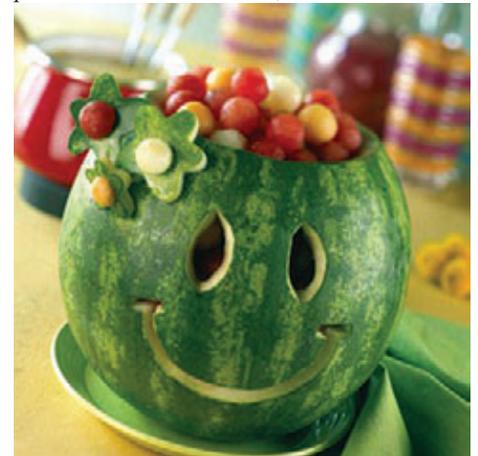
A wiki is an on-line repository for developing, organizing, and storing collective knowledge. Wikis are maintained in accordance with the philosophy of the open-source movement, which encourages volunteers to contribute to assembling knowledge that might otherwise be cost-ineffective to develop. Wikis differ from blogs and traditional Web pages in that they allow editing of content by end users.

Wikipedia.com is the most recognizable example of an editable wiki site, but thousands of other wiki sites are out there. Jimmy Wales, founder of Wikipedia, now hosts Wikia (www.wikia.com/wiki/Wikia), a collection of 1,500 separate wikis that are almost entirely maintained by user contributions. WikiHow (www.wikihow.com) is striving to become the world's largest how-to manual. With 27 categories and 20,650 articles written in the database, the site seems well on its way. Want to know how to bathe

a cat? Go to <http://www.wikihow.com/Bathe-a-Cat-Without-Being-Scatched>. Want to know how to carve a smile on a watermelon? Go to <http://www.wikihow.com/Carve-a-Smile-on-a-Watermelon>.



Wet cat. (photo by Ilya Boyandin, originally posted on www.Flickr.com)



http://www.wikihow.com/images/1/12/Smile_782.jpg

A benefit of wikis over traditional tools is that the information is personalized and "of the moment." Information that does not last long enough to make it into traditional media can have its moment in on-line communication tools. This can be viewed as the testing ground for pop culture—a form of techno-evolution. If an idea, trend, or term survives the collective natural selection process, it might edge its way into more traditional and enduring forms of media.

This does not mean that wikis exclude enduring and substantive information. A great deal of information can be found on a wiki. In fact, wikis can contain any

topic that the participants agree to. Wikis can be the starting point to gain easily accessible knowledge before seeking additional corroborating information from traditional sources.

A weak point of wikis is the possibility that someone could post incorrect information or biased information. The collective nature of the knowledge-building process eventually tends to filter out incorrect and skewed information given sufficient time and exposure.

Discussion forums are similar to Wikis in that they allow interactive communication on a focused topic; however, they generally do not allow editing of other individuals' comments. There is still the opportunity to develop collective knowledge, but there remains an intact record of how that collective knowledge was assembled. Some discussion forums have Web syndication feeds that allow subscribers to be notified when updates occur. AssessorNET is the IAAO on-line discussion forum. Discussion forums are sometimes generically referred to as listservs or electronic mailing lists. Listserv is a registered trademark of L-Soft international, Inc.

E-newsletters and Broadcast E-mail

E-newsletters have evolved from traditional media such as print newsletters based on their ability to use the Web to provide timely messages without having to go through the full print production cycle. IAAO has several e-newsletters that cater to small targeted groups. To deliver the same message to these smaller groups using traditional print would not be cost effective.

E-mail has evolved from spoken communication, by phone and in person, primarily because of its ability to hold information until it is convenient to read. It allows a more or less interactive conversation over extended distances and times. E-mail is no longer a new communication tool. Broadcast e-mail messages, whether solicited or not, have become a pervasive presence on the Web. This issue is beyond the scope of this article, except to note that there is value in sending the right message to the right audience as long as it is information that the recipients want.

At a recent Web seminar, "Key Elements for Creating Dynamic E-Newslet-

ters," (ASAE June 2007) IAAO Marketing Manager Leann Ritter took some notes on what makes an effective e-communication. She noted that

- In the past two years, messages have doubled.
- Deleting is used as a method of coping.
- Some browsers do not receive images, so the sender doesn't always know what recipients are seeing.
- Filtering prevents many messages from getting through.
- The proliferation of PDAs means that messages might be viewed on a 3-in. x 3-in. screen.
- People don't tend to save and reread electronic content as much as print content. Electronic communications tend to be sent to the workplace where there is less time for reading them.
- Readers make quick decisions about relevance of electronic communication based on text headlines and the opening message.

Clearly there is more competition on the Web for readers' attention, and the proliferation of messages makes it difficult for the end user to interpret what is useful and worthwhile.

Summary

Other communication tools that are available on the Web have not been covered in this article, and more will certainly evolve. There is a vast proliferation of communication choices available to Web users. Being aware of available choices helps Web users determine what kinds of communication they seek and what they are willing to accept from others. In any case, it is likely that a forum exists for the kinds of communication that an individual prefers.

IAAO literature frequently mentions *networking* as a primary benefit of belonging to the organization. The communication tools that members choose will have an impact on the IAAO culture of communication. The IAAO social network is a powerful tool that stands to benefit from judicious use of Web communication tools. Finding the right mix between in-person communication, traditional

communication tools, and the Web communication tools described in this article can be a fun and challenging task.

The new IAAO networking tool AssessorNET is a good example of an on-line communication tool that is constantly evolving and being shaped by its users. Participating and contributing to the collective process that is AssessorNET will make it a much more powerful tool in meeting the specific needs of IAAO members.

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