



Push Technology Survival Guide

by Kandy Arnold and Craig Newmark

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World Wide Web content publishers are getting “pushy.” No longer satisfied with simply allowing users to graze the pastoral landscape of the Web and pull desired information from their sites, now publishers are broadcasting their messages and software updates by a set of methods known collectively as push technology.

In its most elementary implementation, push technology is like e-mail. In some HTML-enabled e-mail programs, such as Netscape Mail, you can attach multimedia files. E-mail delivery can be by subscription, like [craigs-list](http://www.cnewmark.com) at <http://www.cnewmark.com>, or unwanted messages, such as the messages delivered pushed through the America Online pipeline by Cyber Promotions.

What most of us think about when we hear the buzzwords “push technology,” however, follows the television-industry communications model of broadcasting. Two types of push information delivery exist: narrowcasting, in which information is filtered through personalized category selections, yielding the much vaunted “personalized newspaper” such as My Yahoo, the San Jose Mercury News’s Newshound service, or Personal NewsPage; and browser-based push technology, such as Netscape’s newly released Communicator, with its NetCaster client push software, and Microsoft Internet Explorer 4.0’s Webcaster, scheduled for a summer 1997 release.

Netscape and Microsoft

You can create a Netcaster channel by converting a standard Web site, following Web Review columnist Wes Thomas's instructions at <http://www.webreview.com>. The Netcaster channel provides scheduled, automatic content updates and delivers them to your desktop for offline viewing. Thomas also suggests spicing up the static content you get from a standard Web site with Java, Javascript, and Dynamic HTML. (Note: "Dynamic HTML" has multiple meanings, depending on the vendor.)

Netscape's form of Dynamic HTML, first available in Communicator public-release 3, is composed of blocks of text, graphics, and applets, or "layers," that can be moved around to achieve magazine-style layouts. For in-depth information on both companies' definition of Dynamic HTML, check out <http://www.netscape.com/newsref/pr/newsrelease410.html> and <http://www.microsoft.com/intdev/aplatfrm/dynhtml.ZIP>. Using JavaScript 1.2, you can add interactivity to your Netcaster channel. And because Netscape includes Marimba's Castanet client-side tuner in Communicator, Netscape users will be able to view high-volume Castanet channels.

Microsoft Internet Explorer, initially at least, relies on what the company calls "subscriptions." Channels are promised in a later version of Microsoft's browser. For more information, see Microsoft's take on push technology at <http://www.microsoft.com/ie/default.asp> or read Trish Gorman's "Netscape to Enable 'Push' Technology in Next Browser Release" at <http://www.netscapeworld.com/nw-04-netcaster2.html>.

In yet another us-against-them scenario, the Redmond, Washington, software giant and Netscape Communications Corp. of Mountain View, California, are squaring off to see who will dominate the browser-based push-technology market. Netscape leads in that it already has released a push-capable version of its browser and the lion's share of the browser market, but Microsoft says it will release its fully push-capable version of Internet Explorer sometime this summer and version 3.01 for the Macintosh includes a feature that alerts users when updates have been made to their favorite Web sites.

The Issues

The question of which browser will gain the largest market share is not strictly a matter of numbers, but an impressive installed user base will help ensure that ubiquitous quality needed to make channel development profitable.

Other factors are the kind of content that users want; the media types and availability of players needed to playback the content; scalability, or a browser's compatibility with multiple computer platforms, and secure transactions.

In implementing push technology, the user's browser should include the players, or plug-ins, required to play back a wide variety of dynamic media types, including audio, animation, and video, which all come in several formats. A solution to this is for the channel to deliver content along with the playback software.

Scalability to some refers to hardware dimensions, but the word has taken on a new meaning. In regard to push technology, the term refers to the number of simultaneous users who can be accommodated by either a server or a group of networked machines without degradation of the content quality. In Castanet, Marimba tackles the scalability problem by using "repeaters," or intermediary transmitters, to distribute the workload.

Normally Web-site transmissions can include cookies, software that sets up housekeeping on the user's desktop uninvited, as well as intellectual property and transactions. It's important that the delivery mechanism, or channel, provide safe passage for sensitive information.

The line of demarcation between the two companies' strategies for evolving push technology centers on Microsoft's proposed Channel Definition Format standard, or CDF. To date, more than 30 companies, including PointCast and America Online, have pledged their support for the standard, but Netscape is not among them.

Briefly stated, the CDF standard "is an open specification that permits a Web publisher to offer frequently updated collections of information, or channels, from any web server for automatic delivery to compatible receiver programs on PCs or other information appliances."

(For full text, see <http://www.microsoft.com/standards/cdf.htm>)



Netscape, on the other hand, is implementing a similar system of its own creation, Channel Profile Object, or CPFO, which incorporates Java, JavaScript, and HTTP. Netscape is also using Marimba's CastaNet transmitter-tuner metaphor to deliver high-volume channels to its subscribers. The Marimba advantage lies in CastaNet's automatic-updating feature. For users, automatic updating means the user doesn't need to schedule channel updates; content revisions and applications are delivered at prescheduled intervals. Castanet's auto-updating gives software publishers the advantage of adding features or fixing bugs incrementally, one by one, rather than fixing several bugs in one big revision.

Apple, in its forthcoming release of the Macintosh OS 8.0, is including Marimba's Castanet and the Mac Runtime for Java virtual machine, enabling developers to use the Mac to more easily create and deliver push technology. And, finally, more push products are being created for the Macintosh by companies such as BackWeb Technologies, Intermind, and Marimba. (See *Net Professional*, June/July 1997, pp. 14-15, 16)

Conclusions

Push technology is evolving quickly and there are many players with software and solutions. For example, the Mac Channel has created NewsFire, proprietary information delivery software to broadcast Macintosh-related news and information across the Internet for free. You can download the software at <http://www.macchannel.com/HTMLFiles/download.html>.

The push market promises to be huge. For example, last December, in an article for Crain Communications, Richard Karpinski, reported that PointCast alone accounted for 18 percent of all Internet traffic (http://www.netb2b.com/cgi-bin/cgi_article/weekly/97/05/11/article.1). However, the dollar volume the market will reach has not yet been predicted.

At this writing, however, if the site-specific information at <http://www.browser-watch.com> is an accurate indication, the Netscape browser leads the field with an overwhelming majority of users, the ability to deliver content to a wide variety of platforms, including Macintosh, Unix, and Windows through its support of Java. Microsoft, on the other hand, is quickly leveling the field with new push features being introduced in Internet Explorer 4.0, strategic partnerships with Web broadcasters such as America Online and PointCast, and a respectable support for its proposed Channel Definition Format.

Resources

BackWeb Technologies
2077 Gateway Place, Suite 500
San Jose, CA 95110
(408) 437-0200
<http://www.backweb.com>

Intermind Corp.
217 Pine Street
Seattle, WA 98101
(800) 625-6150
(206) 812-8408
<http://www.intermind.com>

MacChannel
(512) 795-3535
<http://www.macchannel.com>

Marimba Inc.
445 Sherman Avenue
Palo Alto, CA 94306
(415) 328-5282
<http://www.marimba.com>

Microsoft Corp.
<http://www.microsoft.com>

Net Professional
(415) 957-1911
<http://www.netprolive.com>

Netscape Communications Corp.
501 E. Middlefield Road
Mountain View, CA 94043
(415) 254-1900
<http://home.netscape.com>

Netscape World
<http://www.netscapeworld.com>

PointCast
2475 Augustine Drive, Suite 101
Santa Clara, CA 95054
(408) 777-2364
<http://www.pointcast.com>

