

The Future of Firefox and Thunderbird

Having made it this far, how far can we go? Is Mozilla Jack the giant killer? Can Mozilla manage to upset Microsoft's lock on the browser market? We've found that Netscape on its own was not able to survive. However, perhaps the Mozilla business model is different. Netscape was a product that was initially sold to consumers; Microsoft quickly gave away Internet Explorer to users. It's hard to make money giving away your main product, as Netscape found out.

In this chapter we'll study the Netscape/Mozilla timeline, compare Firefox with Internet Explorer, and compare Thunderbird with Outlook and Outlook Express. We'll also look at what the Web should be, what it started out as, and what the future might hold.

Finally, we'll get a few opinions on the future of Mozilla.

The History of Mozilla

The history of Mozilla is one of the most interesting, and important, stories of the Internet. Here's a timeline of its progress:

March 1993: Marc Andreessen announces Mosaic. Mosaic was written as a joint effort between the University of Illinois and the National Center for Supercomputing Applications (NCSA).

Mid-1994: Mosaic Communications is founded by Jim Clark and Marc Andreessen.

October 1994: Mosaic releases Netscape 0.9, the first beta version of the Mosaic browser. This release of Netscape supports basic HTML 2 elements and has limited HTML 3 functionality.



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November 11, 1994: A lawsuit between the University of Illinois and Mosaic Communications results in Mosaic losing all rights to the name. Andreessen and Clark rename Mosaic to Netscape Communications and remove all references to Mosaic in their product.

Late 1994: Mosaic's website leaves Netscape. It exists today at <http://archive.ncsa.uiuc.edu/SDG/Software/Mosaic/NCSAMosaicHome.html>. The Mosaic browser is still available at <http://www.ncsa.uiuc.edu/SDG/Software/mosaic-w/releaseinfo/mos30.exe>, although it is not a competitive browser by today's standards.

Late 1994: Netscape's website comes into existence. Even though Netscape Communications has ceased to exist as an independent company, its web presence still exists today at <http://www.netscape.com/main2.adp>. Today Netscape's browser is based on Firefox.

Late 1994: Mozilla is now Netscape's mascot and is seen on its products and websites. The original inspiration for Mozilla came from software engineer Jamie Zawinski. (Zawinski now runs a nightclub in San Francisco, called the DNA Lounge.)

April 1995: Netscape Communications releases version 1.1 of its Navigator browser. This release includes support for tables and added proprietary HTML elements and attributes.

July 1995: Netscape's browser version 1.2 is released with the only changes being making the user interface more compatible with Windows 95.

Mid-1995: Netscape achieves more than 80% market penetration with its browser.

August 1995: Microsoft releases Windows 95, its revolutionary version of Windows, and a browser called Internet Explorer. Initially, Internet Explorer is not included with Windows 95 but is distributed freely by Microsoft.

Early 1996: The beginning of the browser wars occurs, in which Microsoft fights to topple the current #1 browser: Netscape. Netscape finds it difficult to compete with a free product.

March 1996: With Netscape Navigator 2.0, Netscape includes many new technologies, such as frames, Java, JavaScript, and plug-ins. JavaScript was created specifically by Netscape to use with its browser.

Spring 1996: Netscape suffers a major blow in the browser wars when AOL is induced to include Internet Explorer with its software.

August 1996: Netscape releases Navigator 3.0. Codenamed Atlas, this version adds more plug-ins, table background colors, underlining support, frame border control, fonts, multicolumn support, spacing for controls, and an applet element.

October 1996: Netscape jumps into the server side of the Web with server products.

December 1996: A Netscape Communicator 4.0 beta becomes available, offering the LAYER element.

1997: The browser wars heat up, with both Microsoft and Netscape working hard to one-up the competition.

February 1997: The second beta of Communicator 4 is released, adding Cascading Style Sheets (CSS) and Java Security Services (JSS).

April 1997: The third beta of Netscape Communicator is released, improving on the CSS support of the second beta.

May 1997: Betas 4 and then 5 of Navigator are released, with the Netcaster technology added.

August 1997: Netscape's push-media product, Netcaster, is officially released. Until this time, content was only pulled from the Internet.

June 1997: Netscape releases the final Navigator version—4.0. This version sports improvements over earlier versions in Cascading Style Sheets, some added dynamic fonts, and OBJECT element support.

August 18, 1997: Netscape creates a partnership to allow 100 partners to bundle Navigator (but not the Netscape Communicator Suite) with their products. Navigator 4.0 includes Netcaster, a simple email client, and calendar software.

September 3, 1997: Netcenter, Netscape's new website featuring news, software, and chat groups, is released.

January 1998: Netscape makes its browser free and releases the source code to the public. The Mozilla.org is founded to utilize the open-source project. Netscape's Grommit (Netscape version 5.0) is announced and then dropped in when Gecko (the graphics engine behind Firefox) is chosen as the technology to be used in the future.

February 23, 1998: Mozilla.org fires up its website. This site supports the Mozilla open-source project.

March 31, 1998: Netscape makes the Communicator software, which is Classic Communicator-based, available to the public.

May 18, 1998: Microsoft suffers a blow when U.S. federal courts rule that it has abused its power and has competed unfairly against competitors, including Netscape.

September 28, 1998: A marketing study now says that Internet Explorer is the pre-dominant browser.

October 19, 1998: Netscape releases Communicator 4.5. This version is primarily a bug-fix version and adds no functionality.

October 1998: Mozilla first publishes a timeline for its next browser that will be based on the Gecko graphics engine and will support multiple platforms.

November 1998: Netscape drops version 5.0 and decides to create a new product based on Gecko.

November 1998: AOL buys Netscape, and Netscape becomes a division of AOL. AOL has now gone from including Internet Explorer (in the spring of 1996) with its products to using the Internet Explorer rendering engine in its products, to owning Netscape—a strange turn of events.

1999: Internet users wonder whether with the demise of Netscape signals the end of the browser wars. It would be a few years before everyone realized that this was just the calm before the storm.

November 2000: Netscape's version 6.0 is released. Now Netscape's browser is based on Mozilla, whose browser would be released as Firefox. Many die-hard Netscape fans decide that they would be better off with Internet Explorer, and jump ship. Microsoft pulls ahead in the browser wars, achieving an almost insurmountable lead over all its competitors.

February 2001: Netscape version 6.01 is released but does nothing to attract users.

2001: Netscape no longer orients its website toward the browser and instead becomes almost a clone of MSN. As well, AOL turns off Netscape's servers and moves the site to its servers. Netscape continues to lose its identity in favor of AOL.

August 2001: Netscape releases version 6.1, a major improvement over version 6.0. However, the damage is done, and Netscape continues to lose what little market share it still has.

September 19, 2001: Mozilla relicenses about 6,000 Netscape Public License (NPL) files under an NPL/GPL/LGPL combination.

October 2001: Netscape releases version 6.2 and, once again, manages to have a superior product.

December 2001: Netscape releases version 6.2.1, while many wonder what will be next from Netscape.

March 2002: Netscape releases version 6.2.2 without any major changes from the 6.2.1 version.

April 19, 2002: Mozilla makes RC-1 of Mozilla Suite available on its website, allowing users to download the product.

May 10, 2002: Mozilla 1.0 RC-2 is released.

May 11, 2002: Netscape releases version 6.2.3, again a relatively minor change from previous versions.

May 22, 2002: Eleven days after releasing version 6.2.3, Netscape releases pre-version 7.0.

June 5, 2002: Mozilla Suite 1.0 is released, with a browser, email, and other applications. Later Mozilla will split off the browser as the Firefox product and the email as Thunderbird.

August 25, 2002: Netscape releases Communicator version 4.8.

August 29, 2002: Netscape releases the final version—7.0. Netscape turns off Mozilla's pop-up blocker in this version, however.

December 10, 2002: Netscape releases version 7.01 and turns the pop-up blocker back on.

December 2002: Black Wednesday, on which Netscape lays off virtually all its programmers. This event is viewed by many as the final admission that Netscape cannot compete.

January 23, 2003: Netscape releases Netscape 7.01, without an AOL tie-in.

February 18, 2003: Netscape releases Netscape version 7.02 with minor bug and security fixes.

May 2003: Netscape announces plans to release Netscape version 7.1 in July or August 2003.

May 29, 2003: As the final settlement of the lawsuit between Netscape and Microsoft, Microsoft pays AOL \$750 million. In turn, AOL gets a free license for Internet Explorer until 2010.

June 30, 2003: Mozilla releases Mozilla Suite version 1.4. This version offers the capability to block pop-up ads in the browser and a junk (spam) mail filtering system in the email client.

July 15, 2003: AOL provides \$2 million to create The Mozilla Foundation. As well, Mitch Kapor, who founded Lotus Software, becomes the chairman of the board of directors.

July 2003: Netscape is gone. Virtually all Netscape employees are laid off; AOL even scrapes the Netscape logo from the building. This hurts Mozilla because Netscape was paying many of its programmers.

January 2004: AOL's absorption of Netscape is now complete.

January 2004: AOL decides to no longer sell Netscape CDs and print media.

February 17, 2004: Mozilla Europe is formed.

March 2004: In a surprise move, it seems that AOL will release another version of Netscape! No one saw that coming....

June 17, 2004: Mozilla releases version 1.7, offering better performance.

June 18, 2004: AOL says that the new Netscape 7 will offer the standard features and will be Mozilla based.

August 18, 2004: Mozilla Japan is established.

August 17, 2004: AOL releases Netscape version 7.2, a major bomb because it contains a major security flaw.

September 14, 2004: Mozilla provides an incentive for users to find and report bugs in its products.

September 30, 2004: AOL Netscape's server products are sold to Red Hat. Red Hat plans to release the software as open source and to include it with its version of Linux. All that remains of Netscape is the browser and the website.

November 9, 2004: Mozilla releases Firefox version 1.0. This prompts the feeling that the Web will never be the same—Internet Explorer now has real competition.

December 6, 2004: AOL celebrates Netscape's 10th birthday.

December 7, 2004: Mozilla releases the Thunderbird 1.0 email client, a direct competitor to Outlook Express.

December 10, 2004: AOL turns off the lights; no one is home at <http://devedge.netscape.com>, the source for both HTML and JavaScript programming used by many developers.

February 17, 2005: Netscape gets ready to release version 8.0, a product that will offer some powerful security features.

March 4, 2005: Mozilla forms its Chinese organization.

April 29, 2005: Mozilla records that Firefox downloads have reached 50 million. Thought the browser wars were over? Think again.

May 8, 2005: Mozilla begins its Community Awards program to acknowledge the work by the many contributors to the project.

May 31, 2005: Mozilla releases Alpha 1 of Firefox 1.1 (codenamed Deer Park).

July 12, 2005: Mozilla releases Alpha 2 of Firefox 1.1. The July 2005 date for beta release slides by with little notice.

July 20, 2005: Mozilla estimates 75 million copies of Firefox are now in use.

July 20, 2005: Mozilla changes the next release from Firefox 1.1 to Firefox 1.5. This is a name change, with some additional functionality.

September 8, 2005: Mozilla releases Firefox 1.5 Beta 1, and the long wait to see what the next release of Firefox will bring is over. Beta 1 is considered to be feature complete, with only bug fixes officially being considered.

September 9, 2005: Mozilla releases Thunderbird 1.5 Beta 1 and keeps the two products in synchronization. The plan is that Thunderbird and Firefox will share both versions and release dates in the future.

This timeline takes us through late September 2005, the date this was written. The next part of this section will be a look at the future.

In the Future

What does the future hold? For one thing, it is clearly evident that Firefox and Thunderbird are becoming mainline products. More and more users are embracing these products, and functionality continues to grow.

One thing that I feel is good is that there's no going back. AOL bought up Netscape, and eventually Netscape was reduced to a browser based on Mozilla (and Firefox) and a website. It existed in no other fashion for some time, before being resurrected as a browser site, an ISP, and a content provider.

Mozilla, because of its nonprofit basis and the various open-source license agreements, will not be a buy-out target for any large corporation. This protects Mozilla from the same fate that befell Netscape.

On the other hand, even nonprofit organizations need some form of income. If income cannot be generated by selling a product, the organization is dependent on the largesse of the user community—both individual and corporate.

Many corporations are sponsoring Mozilla employees by assigning their employees to work on Mozilla projects. Other corporations are providing various forms of support, especially financial support.

Firefox 1.5 (Deer Park)

We all are awaiting the final release of Firefox 1.5: the version of Firefox previously codenamed Deer Park. This version is not a major revolutionary change to Firefox, but instead is a relatively minor release fixing bugs and smoothing out rough areas in the user interface.

Firefox 1.5 is a surprisingly stable and usable product. The way that Mozilla works, development is an iterative process, a formula that converges to be a better product.

For users, Firefox 1.5 adds these features:

- A sanitize privacy feature to remove history, cookies, cache, form information, and any other personal data.
- Tab icons for images will be a thumbnail of the actual image.
- Anonymous FTP logins that fail will generate a prompt for a user ID and password.
- The new @-moz-document rule allows users to include site-specific content in style sheets.
- Broken websites can now be reported with a simple wizard.
- Linux and Mac will allow changes that are made in Preferences to be applied immediately.
- Downloaded files can be located using names or extensions.
- The Cookie Manager now has a search capability that allows searching by host, domain, and cookie name.
- Users can store their caches on a local drive even when their profiles are on a network share.
- Support for the Full Keyboard Access system setting for Mac OS X users.
- More file types can be dropped on the Dock icon for opening in Firefox in Mac OS X.
- Fixed menus for windows without special menus and with no windows open in Mac OS X.
- The middle mouse button functions properly in Mac OS X.
- The keyboard shortcuts \mathcal{H} -Return and \mathcal{H} -Shift-Return now function as expected on Mac OS X.
- The keyboard shortcuts for Back, Forward, Stop, and Help are supported now on Mac OS X.
- Elements having a negative tabIndex attribute can now have focus.
- HTML-4's <object> elements can now be submitted as part of a form.
- CSS2's quotes property is fully supported.
- CSS3 selectors allow selecting an element that has no other elements as siblings in the DOM.
- The overflow-x and y properties will now be supported.
- More named mouse cursors have been added.

- Cursors can be any Gecko-supported image type except SVG, animated GIF, and ANI cursors, which are not yet supported.
- CSS outlines are supported; these are similar to borders but have no effect on page layout.
- CSS outlines now support rounded (radiused) corners.
- CSS counters are now fully supported
- The JavaScript array object has been added.
- `Document.open` (“text/plain”) now works as text and not as HTML.
- XML Events, a W3C specification, offers the capability to integrate declarative event handlers and listeners.
- Canceling a key-down event cancels key-up and/or key press as specified in DOM.
- Dynamic HTML (DHTML) authors can add role and state semantics to their custom elements.
- Scaled Vector Graphics, a W3C specification, is now partially supported; excluded are filters, declarative animation, and SVG-defined fonts.
- A bitmapped drawing surface can now be used to add graphics to DHTML.
- Firefox will support the HTTP/1.1 408 response code (request timeout).
- Uniform resource identifiers (URIs) will be sent in 8-bit Unicode Transformation Format (UTF8-8).
- Extensions have access to referrer information for pages stored in the browser’s history.
- API support for prioritizing HTTP connections to specific servers is included.
- Extensions can now register style sheet URIs.
- Proxy configuration is possible without affecting the user’s preferences.
- XUL overlays following document display are now allowed.
- ECMAScript for XML (E4X) is now supported.
- Windows and Linux users can have XUL windows with transparent backgrounds.
- User-agent strings can be modified without losing other user-agent string changes.
- Simple plain-text chrome registration manifests are now supported.
- Extensions can now be outside the profile and application extensions folders.
- Extensions can be installed by dropping the extension’s XPI file into either the user’s profiles or the application’s extensions directories.

- Extension can be deleted by simply deleting its folder from the extensions directory.
- Extensions can be installed using a Windows Registry key.
- Preferences now have an apply capability (like a Windows dialog box's Apply button) that applies the preference immediately.
- New command-line flags can be added by extensions.
- The Extensible Tag Framework (XTF) permits new namespaces using XPCOM components.
- Access to the Windows Registry is now available from within Firefox.

As this list shows, many new capabilities have been added to the Firefox 1.5 release, with many improvements being made to parts of Firefox that control how content is rendered.

Following Firefox 1.5 will be Firefox 2.0, a version that has been codenamed Ocho.

Firefox 2.0 (The Ocho)

The current product plan for Firefox 2.0 is to include these as main topics to change. There is nothing to suggest that more items will not be added; in fact, new items will certainly be added. Additionally, none of the following items are guaranteed to be done in the final version. Version 2.0 is well off in the future, possibly coming in 24–36 months.

Items that might be changed or added in Firefox 2.0 include

- Password Manager
- Configurable key bindings
- Tabbed browsing
- Extension Manager
- Software update
- Download Manager
- Unified XP install download backend
- Search service
- Info window
- Options dialog box reorganization
- Accessibility
- Customizable toolbars
- Bookmarks

- Places
- Miscellany (Mac OS X)
- Form controls (Mac OS X)
- Default browser/mail/shell (Mac OS X)
- Migrators (Mac OS X)
- Window modality (Mac OS X)
- D&D images (Mac OS X)
- Sheets (Mac OS X)
- Performance (Mac OS X)

One important thing to keep in mind is that you (yes, you) can suggest items to be included in future releases. An excellent way to influence the future of Firefox is to create an extension that offers the functionality you think is missing from Firefox. If the extension becomes popular, there is a good chance that Mozilla will choose to include it in future releases. Of course, if your extension isn't popular, you will know that even though you feel it is a good idea, not everyone else agrees with you!

Try that with other software makers and see what happens....

Firefox Versus Internet Explorer

Comparing Firefox to Internet Explorer reveals that Firefox is clearly the technology leader in some areas. Microsoft only recently realized that tabs in browsers were a technology users wanted.

Several areas deserve attention. Many Firefox users feel that Firefox's security is much better than Internet Explorer's. Is this true, is Firefox better at security?

Elliott Back says that there have been 44 security advisories for IE in 20 months (an average of 2.2 per month), while there were 14 security advisories for Firefox in 6 months (an average of 2.3 per month.) See <http://elliottback.com/wp/archives/2004/10/04/>.

Back clearly implies that both browsers have an identical security track record. But going to Secunia's website (<http://secunia.com/>) gives us this information:

Firefox has had 21 security advisories in the period between 2003 and 2005. On the other hand, Internet Explorer has had 67 advisories between 2003 and 2005.

If you take an unbiased look at Secunia's data, comparing both products for the same period (2003–2005), you see that the facts are somewhat different: Internet Explorer has had three times as many security advisories as Firefox over an identical period of time. As Mark Twain said, "There are three kinds of lies: lies, damned lies, and statistics."

An excellent discussion of the relative security of Firefox, Mozilla, and Internet Explorer can be found at http://mozilla.gunnars.net/mozfaq_general.html#mozilla_security_bugs.

Many websites compare the speeds of Firefox and Internet Explorer. (Most also compare other browsers, as well.) One site for speed comparisons is <http://www.howtocreate.co.uk/browserSpeed.html>. Keep in mind that several factors can affect speed and that these speed tests are not absolutely the last word.

CNET reviewed features between Internet Explorer and Firefox (<http://www.cnet.com.au/software/internet/0,39029531,40002501,00.htm>). This comparison was done in late 2004, so it does not necessarily reflect the very latest changes in either product. CNET's comparison is summarized in Table 19.1.

TABLE 19.1 CNET'S SUMMARY OF BROWSER FUNCTIONALITY

Feature/Browser	Internet Explorer 6 (Included with Windows XP SP2)	Firefox 1.0
CNET's rating	7.0	8.0 (Firefox earned their Editors' Choice award)
Pop-up blocking	Yes	Yes
Selective pop-up blocking	Yes	Yes
RSS reader (Active Bookmarks)	No	Yes
Tabbed browsing	No*	Yes
Number of third-party plug-ins	Many	Some
Uses ActiveX technology	Yes	No
User interface skins (themes)	No	Yes
Operating system supported	Windows XP SP2 and later only	All versions of Windows, Mac OS X, and several Linux distributions

Microsoft recently (mid-2005) released a version of Internet Explorer that has limited support for tabbed browsing, clearly in response to Firefox's tabbed browsing capabilities. Internet Explorer 6's tabbed browsing is part of the MSN toolbar. Microsoft has stated that Internet Explorer version 7 will fully support tabbed browsing.

Thunderbird, Outlook, and Outlook Express

I'm sure many will disagree with me, but I think that Outlook Express is better than Outlook. But, I also believe that Thunderbird is better than both by a country mile.

Outlook lacks some vital functions that only Thunderbird offers.

For a comparison chart, visit <http://pcworld.com/howto/article/o,aid,119983,pg,5,oo.asp> or <http://beust.com/outlook-thunderbird.html>.

Table 19.2 shows part of MozillaZine's comparison of Thunderbird, Outlook, and Outlook Express. (The entire table as published includes other email clients; see http://kb.mozillazine.org/Intro:_Comparison.)

TABLE 19.2 MOZILLAZINE'S SUMMARY OF EMAIL CLIENT FUNCTIONALITY

Feature/Email Client	Thunderbird (http://www.mozilla.org/products/thunderbird/)	Outlook Express (http://microsoft.com/windows/oe/)	Outlook (http://microsoft.com/outlook/)
Platforms supported	Windows, Mac OS X, and Linux	Windows	Windows
Cost	Free	Free (bundled with Windows XP)	\$90 (street price)
Open source	Yes	No	No
Ability to block spam	Bayesian spam filter	Needs third-party program	Predefined and manual filters only
Extensions	Yes (http://extensionroom.mozdev.org/)	No	Yes (supported, few exist)
Themes (skins)	Some (the number is growing)	No	No

Thunderbird also supports RSS feeds, blogs, and NNTP newsgroups. Outlook Express also supports NNTP newsgroups.

Value-wise, it is easy to see how Thunderbird is considered the frontrunner. Running second is Outlook Express, which offers NNTP support and is available to Windows users. Outlook (the full version) does not support NNTP but does have a basic calendar, scheduling, and other functionalities.

To be fair, Outlook offers a powerful built-in calendar function. As well, Outlook—when coupled with Microsoft Exchange Server—adds even more functionality.

The Internet As the Internet Should Be

How should the Web be? Few of us remember the Internet before the Web became virtually synonymous with the Internet. Few remember what Gopher was (imagine a text-only web without hyperlinks); few have used Telnet to access an Internet server; and most of us don't see FTP because it's hidden as part of our browsers.

We've come a long way from an Internet and web that was safe, clean, and good to today's Internet where one must be always vigilant, on his guard, and wary of attackers who seek to take and exploit.

We've gone from a truly noncommercial Internet to an Internet that is almost entirely commercially driven. That's not to say it's bad—just that things have changed.

Browsing the Internet is relatively safe, when using the right browser. In Microsoft's drive to add functionality to Internet Explorer, it added ActiveX technology. When this was done, Microsoft had no idea that that same technology would later become a tool to attack and exploit Internet users. Virtually all Firefox users see Firefox's lack of ActiveX as a benefit and not a loss.

We are inundated with spam offering low-cost mortgages, cheap drugs, pornography, and myriad deals all sounding too good to be true. Robert Heinlein said, "There ain't no such thing as a free lunch." And he was right—you can't get something for nothing.

Hmmm, Firefox is free. So is Thunderbird. Are we getting something for nothing? Was Heinlein wrong? No, to have Thunderbird, Firefox, and the growing amount of free software, we do pay. We contribute either our time (especially if we are programmers) or money. If you can't give them some time, now's the time to pay the piper: Please donate to the Mozilla Foundation and Mozilla.org.