



## Browser Wars: Will Firefox Burn Explorer?

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Battling browsers are back. Just as in the 1990s, when Microsoft's Internet Explorer (IE) and Netscape's Navigator fought each other for supremacy, today Mozilla's Firefox browser is trying to gain traction over IE. This latest skirmish, however, goes beyond just browsing the web. Microsoft's security problems have left an opening for upstarts like Firefox and could lead to other products taking market share from the software giant, say experts at Wharton.



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As far as browsers go, customers are disgruntled with Microsoft. The non-profit Mozilla Foundation, formed in July 2003 with funding from America Online's Netscape unit to promote open source web software, cites 25 million downloads of its Firefox browser in the last 100 days. Web measurement company WebSideStory reports that Firefox had a U.S. market share of 5.69% as of Feb. 18 compared to Internet Explorer's 89.85%. While it's far too early to call Microsoft's browser an also-ran, Internet Explorer had a market share of 95.48% in June 2004, says WebSideStory. Globally, the trend toward Firefox is the same. On Feb. 28, Amsterdam-based web analytics company Onestat.com put Firefox's market share at 8.45% globally, up 1% from November 2004.

"The Internet Explorer is a terrible browser and it has security problems," says Wharton legal studies professor [Dan Hunter](#). "Firefox is just a better browser, but I would argue that its market share gains have come because spyware and other hacks plague Explorer."

Deirdre Woods, associate dean and chief information officer at Wharton, points to an increasing tendency among users to look at alternatives. "People, especially in the open source community, want another winner [besides] Microsoft." Wharton legal studies professor [Kevin Werbach](#) says, "the lesson here is that open source can create a slick consumer-friendly product. Firefox is definitely more than just a blip. It has some staying power."

Microsoft finds itself in this predicament, according to many observers, because IE doesn't offer browsing of multiple web sites in one window, remains a target for hackers, and is slower rendering web pages compared to Firefox. "While Microsoft has dawdled on browser innovation, Firefox has surged ahead to fill functionality gaps," says research firm Gartner in a March 2 research note. Werbach suggests that the main reason people are looking at Firefox is that Microsoft "essentially reached a dominant market share and shut down development. Meanwhile, it became an inviting target for hackers. That left a nice opening for an alternative product."

Yet Wharton marketing professor [Peter Fader](#), for one, is skeptical of Firefox's success. To him, the big question is whether Firefox can maintain its market share when Microsoft updates Internet Explorer this summer. "Mozilla has passed some threshold, but it's not clear whether Firefox users are early adopters who are just delighted to have an alternative," he says, adding that "IE will get better. It's the usual dance. Microsoft will steal Mozilla's ideas and become competitive."

Indeed, at software firm RSA Security's annual conference February 15, 2005, Microsoft chairman Bill Gates reported that the company is having a "dialogue" with software developers about the new version of

Internet Explorer, dubbed IE7, which he said will add "a new level of security." Some of the advances include fixes on such abuses as phishing (using spam to direct consumers to a fake site designed to get information like credit card numbers, bank accounts and so forth) and malware (short for malicious software, such as viruses).

## Overcoming the High Geek Factor

While the browser war garners headlines, the Firefox phenomenon needs to be viewed through the prism of the two key issues that threaten Microsoft. The first is open source technology, which is essentially collaborative, free software. The second is security -- the main reason Firefox looks appealing in the first place.

To understand the importance of Firefox's recent gains, the upstart browser needs to be put in the context of open source technology such as Linux, which is gaining market share in the corporate world, says Hunter. Firefox, he notes, is giving mainstream users their first exposure to open source technology. Just the fact that web surfers are eyeballing alternatives to Microsoft's monopoly could open the door to more experimentation. In other words, if users are pleased with Firefox, they might try other open source products, says Hunter.

Free, community-built programs are not new. Sun Microsystems has offered StarOffice, a competitor to Microsoft Office, for several years. On the database side, MySQL is free, as is Apache -- an open source web server designed in 1995 that is behind many web sites. And Linux, the biggest open source success of them all, has been trumpeted since the late 1990s by IBM, Red Hat and other companies planning to usurp Microsoft's software monopoly. Mozilla also has another possible Microsoft killer in Thunderbird, an email and messaging system designed to compete with Outlook. Hunter, however, says Thunderbird hasn't gained much traction. That's why Firefox is important. "Previous open source products had a high geek factor: You had to be a geek to run them," he says. "Firefox is the first time consumers really chose an open source product."

In addition, says Woods, Microsoft still has a big advantage over Firefox. For instance, most web sites are designed for Internet Explorer. Will companies begin designing sites for both Firefox and IE? Then there's Microsoft's domination in software where it can easily bundle its browser with other programs. "I'm not saying it's impossible for Firefox, but it [has a long way to go] to catch up," she says.

Research firm Gartner, while noting Firefox's market share gains, also suggests that the jury is out on its ability to succeed. "Although Firefox is popular and the subject of hype, its success is not assured and its impact could be limited by a Microsoft resurgence," write Gartner analysts Whit Andrews and Ray Valdes. "Improvements in the IE browser connected to operating system innovation or independent of it would erode the narrow Firefox foothold."

## Security Woes Open Doors

Whether Mozilla's browser has staying power remains to be seen, but one thing is clear: The success of Firefox illustrates customer concerns about Microsoft's ability to secure its software. Microsoft releases patches every month for corporate users to plug security holes. Meanwhile, it had to update its Windows XP operating system due to shoddy security, and its Internet Explorer has frequently been the target of spyware, programs that surreptitiously monitor users' actions and can steal important information. "Firefox didn't become popular because people hate Microsoft," says Hunter. "It became popular because of security issues with IE."

According to Fader, security will always be an issue for Microsoft. "I don't think Microsoft is ignoring the issue or not throwing enough resources at it. But Microsoft has a big bullseye on its back and it's a real sport to break through its products." Hunter agrees. Although Microsoft has made strides with better security through its "Trustworthy Computing" initiative, the company is caught in a bind. Its two

approaches include 1) fixing existing problems with more software, and 2) revamping its code so it is secure from the start. The second approach is tricky, says Hunter. "Microsoft has a terrible code base that has to be patched constantly. And reengineering that code is high risk." Indeed, that reengineering has led to delays in releasing Microsoft's next operating system, codenamed "Longhorn."

Regarding the first approach, Microsoft has acquired three security software companies and is building in defenses to protect its products. On February 8, 2005, the company acquired Sybari Software, which provides antivirus software. The company also bought security software firms GeCAD and Giant Software. Gates says Microsoft will bundle defenses with its Windows platform, offer anti-spyware software for free and release anti-virus software for consumers by the end of the year.

Microsoft's software is an easy target due to its monopoly on the market, says Woods. "It's not so much that Microsoft is insecure as much as that its software is used more frequently and is easier to target," she notes, adding that Microsoft has made progress on patch management and other security improvements. Werbach agrees. "In recent years, Microsoft has treated security as a priority," he says, "but the big question is whether that's going to be enough."

Indeed, challenges for Microsoft remain. On the same day Microsoft announced the Sybari purchase, it also released 12 software patches for Windows, Office and Internet Explorer to fix 16 vulnerabilities.

"Over the long term, Microsoft needs to strengthen Windows more rather than to try to shield it," says Charles DiBona, an analyst at brokerage firm Sanford C. Bernstein & Co. "Even longer term, Microsoft needs to change the game. Rather than throwing up a barrier to protect the computer, perhaps the operating system could be imbued with something akin to an immune system so that it could fight off threats, both known and unknown."

## **The Power of Inertia**

Given the security concerns of browser users, it is possible that Firefox could keep growing. Yet WebSideStory CEO Jeff Lunsford reports that usage of Firefox has slowed slightly since a big surge in November. "This is probably to be expected as we move beyond the early adopter segment," says Lunsford in an analysis accompanying WebSideStory's market share statistics. "Back in December 2004, it seemed Firefox was a lock to reach 10% by mid-2005, ahead of the reported year end goal of the Mozilla Foundation. Given the latest growth rates, the year end target still appears attainable, but a mid-year achievement is unlikely unless we see increased marketing activity from the Mozilla Foundation."

According to Fader, increased marketing of Firefox is unlikely. After all, Mozilla doesn't have the marketing budget to do a sustained campaign. Meanwhile, Microsoft has one asset that is almost unbeatable: Inertia. Microsoft's browser is packaged when you buy a PC. Other software such as Outlook and Office is included. Are people going to go out of their way to download a Firefox browser or some open source alternative to Microsoft products? "Sure you could argue that some of Microsoft's products are bloated and suboptimal, but they do get the job done reasonably well," says Fader.

The real test for Firefox and other open source alternatives will be how they gain share when Microsoft users are no longer annoyed by security. And what happens when Firefox itself becomes a target for hackers? Says Fader: "It's really a question of whether Firefox has just attracted dissatisfied Microsoft users or has gained a foothold so it can offer real competition."

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