The Privacy of Private Browsing

Ashley Hedberg*
ashley.hedberg@tufts.edu

Abstract

1   Introduction

1.1   Browser Overview

Currently, the most popular browsers for the Windows and Linux families of operating systems are Mozilla Firefox, Google Chrome, and Microsoft Internet Explorer. (Internet Explorer runs only on the Windows family of operating systems, whereas Firefox and Chrome run on both Windows and Linux.) All three of these browsers have built-in private browsing modes. The features and protections provided by each of these private browsing modes are summarized below.[1][2][3]

	Firefox Private Browsing	Chrome Incognito Mode	Internet Explorer InPrivate Browsng
Browser history	X	X	X
Form data	X		X
Search bar data	X		X
Passwords	X		X
Downloads	X	X	
Cookies	X	X	X
Cached files	X		X
Simulataneous sessions with different privacy settings	X	X	X
Hides activity from ISP			
Hides activity from websites			

This paper also discusses the Tor browser. Unlike Firefox, Chrome, and Internet Explorer, the Tor browser connects users to the internet using the Tor network. This does much more to preserve browsing anonymity than the browsers listed above.

1.2   Known Issues with Private Browsing

Prior research in this area indicates that web browsers, even when used in their respective private browsing modes, can leave artifacts on a user's machine that can reveal their internet activities.

Mentor: Ming Chow, Tufts University

2 To the Community

3 Applications

4 Conclusion

References

[1] Verdi, Michael et al. "Private Browsing." *Mozilla Support*. Mozilla Foundation, 29 Mar. 2013. Web. 10 Dec. 2013. <`http://support.mozilla.org/en-US/kb/private-browsing-browse-web-without-saving-info`>.

[2] "Chrome Browser." *Chrome*. Google, 18 Nov. 2013. Web. 10 Dec. 2013. <`http://www.google.com/intl/en/chrome/browser/features.html#privacy`>.

[3] "InPrivate Browsing." *Microsoft Windows*. Microsoft, 10 Dec. 2013. Web. 10 Dec. 2013. <`http://windows.microsoft.com/en-us/internet-explorer/products/ie-9/features/in-private`>.

[4] "Tor Project: Overview." *Tor*. Tor, 7 Dec. 2013. Web. 10 Dec. 2013. <`http://www.torproject.org/about/overview.html.en`>.