

Before the
U.S. COPYRIGHT OFFICE
LIBRARY OF COMMERCE

**In the matter of exemption to prohibition on circumvention
of copyright protection systems for access control technologies**

Docket No. RM 2011-07

Comments of the Mozilla Corporation

Pursuant to the Notice of Inquiry of Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies¹ (“NOI”), Mozilla Corporation (“**Mozilla**”) submits the following comments in support of the comments submitted by the Electronic Frontier Foundation and the Software Freedom Law Center and respectfully asks that the Librarian of Congress exempt the following classes of works from 17 U.S.C. §1201(a)(1)'s prohibition on the circumvention of access control technology for the period of 2012-2015:

- (1) Proposed Class No. 4, consisting of computer programs that enable the installation and execution of lawfully obtained software on personal computing devices, where circumvention is performed by or at the request of the devices owner; and
- (2) Proposed Class No. 5, consisting of computer programs that enable wireless telephone handsets (“smartphones”) and electronic tablets (“tablets”) to execute lawfully obtained software applications, where circumvention is accomplished for the sole purpose of enabling interoperability of such applications with computer programs on the handset or tablet.

1. The Commenting Party

Mozilla is public interest organization dedicated to ensuring that the Internet is a public resource that remains open and accessible to all. Since 1998, Mozilla has worked together with tens of thousands of volunteers around the world to ensure that the Internet is developed in a way that benefits everyone. To achieve this goal, Mozilla coordinates these members and volunteers to create open source software products such as the Mozilla Firefox web browser (“Firefox”).

Firefox 1.0 was released in 2004, and it became an instant success. Firefox was downloaded over 100 million times in its first year. New versions of Firefox have been regularly released since then, and by the end of 2011, Firefox had captured over 25% of the worldwide browser market share.² The popularity of Firefox has brought choice in browsers back to users. It has accelerated innovation and improved the Internet for everyone.

¹ 76 Fed. Reg. 60398 (Sept. 29, 2011).

² Jason Gilbert, “Chrome vs. Firefox: Google Browser Passes Mozilla In Market Share For First Time,” The Huffington Post (December 1, 2011), http://www.huffingtonpost.com/2011/12/01/chrome-vs-firefox-google-mozilla_n_1123168.html.

Since the Librarian's 2010 exemptions, Mozilla has developed new versions of Firefox that operate on smartphones and tablets running on the Android operating system. Independent developers can create add-ons for these versions of Firefox that enable users to add capabilities and customize their browsing experience. As more and more users rely on portable computing devices as their primary means of online access, Mozilla is committed to ensuring choice, innovation, and openness on the Internet, regardless of the type of device used to connect.

Mozilla's technology and products belong to everyone. Not only are Mozilla's products freely available, but Mozilla's entire code base is also a shared public resource. Mozilla's source code is available to anyone under the Mozilla Public License. Consequently, many other developers use Mozilla technology for their own products, both free and commercial.

2. "Jailbreaking" and "Rooting" Smartphones and Tablets

Mozilla supports the Electronic Frontier Foundation's ("EFF") comment in support of exempting computer programs that enable smartphones and tablets to execute lawfully obtained software applications, where circumvention is accomplished for the sole purpose of enabling interoperability from 17 U.S.C. §1201(a)(1)'s prohibition on the circumvention of access control technology, because it will: (a) permit smartphone and tablet users to install software of their choice; (b) permit continued innovation and development of software for these devices; and (c) promote open access to the Internet.

A. Promoting Choice in Installing Software on Cellular Phone Handsets

Some smartphone and tablet manufacturers have used technical measures to prohibit users who purchase their devices from loading certain legitimately obtained software programs onto them. These companies instead require users to purchase their software from their preferred providers to run on the devices. By controlling the software that can be installed on these smartphones and tablets, these companies can limit and control the type of programs and functionality that is available to users of their devices.

They also effectively prohibit users from developing their own software and installing it on the devices. If the software made available by the manufacturer does not meet a user's needs, the user is technically prohibited from developing their own program and installing it on the device unless the individual becomes an approved provider and offers their program through the manufacturer's store.

In order to install legitimate software distributed outside the carrier or phone vendor's application store, users who purchase these devices are required to decrypt and modify their phones, commonly referred to as "jailbreaking" (for devices running on iOS, Apple's mobile operating system) or "rooting" (for devices running on the Android operating system). This creates a chilling effect on users and on innovation. Users do not have the choice of using open source and other legitimately obtained software programs or software they develop on their smartphones and tablets, because they are concerned that doing so will violate the law. Extending this exemption and expanding it to include tablets will enable users to choose the type of software they want to install on devices they purchase.

B. Promoting Innovation and Development of Applications for Smartphones and Tablets

The technical measures that prevent users from installing applications of their choice also inhibit developers from creating those applications and enabling them to perform competitively. Many smartphone manufacturers block “root access” on the handsets they produce, including many running on the Android operating system. Developers, however, need root access to read, write, modify, and execute system files that allow them to build innovative capabilities into applications, to diagnose problems that arise during development, and to fix those problems so that applications are reliable, efficient, and fully functional. Without root access, independent developers simply could not compete with products built on behalf of device manufacturers and access providers.

At Mozilla, regression testing is essential for the open source development behind Firefox, which uses source code developed by numerous individuals working around the globe. Regression testing allows Mozilla to check code segments automatically to ensure that they do not impede the functioning of the existing code base. Without regression testing, Mozilla’s ability to conduct open source development at such a vast scale would be seriously undermined. At present, regression testing of code for Android devices requires root access.

Since many Android device manufacturers implement default settings that block root access, it is necessary to acquire the requisite system permissions through processes that are lawful because of the Librarian’s 2010 exemptions. Generally, a system vulnerability must be identified and used to gain root access in a process commonly referred to as “rooting.” Without these exemptions, Mozilla could not develop robust, innovative, and competitive applications for many smartphones and tablets. As a result, Mozilla’s development efforts would suffer, along with innovation, user choice, and openness on the Internet.

C. Promoting Open Access to the Internet

Smartphones and tablets are complex and sophisticated devices; in terms of functionality and sheer computing power, they differ little from personal desktop and laptop computers. As smartphones and tablets adopt characteristics and capabilities once associated exclusively with personal computers, they operate increasingly as platforms and gateways to both voice and data networks. Researchers estimate that, even before the proposed exemptions would expire in 2015, more users will be accessing the Internet through mobile devices than desktop computers.³ Although tablets and smartphones let users perform other functions, they are indisputably essential tools for providing web access.

Internet web browsers are now commonplace on smartphones and tablets. As on desktop and laptop computers, browsers effectively provide users with a doorway to the Internet. Consumers should be entitled to use any software program they choose to access the Internet on a mobile

³ Mary Meeker, “Internet Trends,” Morgan Stanley, April 12, 2010, http://www.morganstanley.com/institutional/techresearch/pdfs/Internet_Trends_041210.pdf.

computing device that they purchased, just as they can on their desktop and laptop computers. An open web cannot exist if users cannot choose how they access the web.

Because of the exemptions granted by the Librarian in 2010, users of wireless telephone handsets can lawfully exercise choice over the software they run on devices they purchase. Even if some devices are tethered by default to particular software chosen by the hardware vendor, the 2010 exemptions allow them to change those settings. Those exemptions need to be extended until 2015 and expanded to include tablets. Otherwise, users will be severely limited in how they can access and use the Internet.

Without these exemptions, consumers' experience of the Internet - an open and public resource - will be artificially constrained and unnecessarily defined by the hardware vendor because users will be required to use that particular software in order to access and use the Internet. Developers will not be able to create applications with new capabilities and users will not be able to benefit from the fruits of their creative endeavors. Chaining users to choices made by hardware vendors unnecessarily threatens the innovation that users have come to expect from the Internet.

Extending and expanding these exemptions would increase the ways in which users can legitimately use their devices and encourage open access to the Internet - a public and shared resource. It would also permit users to upload certain legitimately available software to their telephone handsets, which would in turn encourage innovation, because the global Internet community would have an incentive to further develop both open source and proprietary software for their devices. Permitting this exception will encourage innovation in both corporations and open source communities that will benefit all Internet users.

3. Conclusion

For the reasons set forth above, the Librarian should determine that the non-infringing use described herein is, and is likely to be, adversely affected by the prohibitions of 17 U.S.C. §1201(a)(1), and therefore approve the proposed exemption for the period of 2012 - 2015.

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