Before the U.S. COPYRIGHT OFFICE LIBRARY OF CONGRESS

Washington, DC 20559

In the Matter of)	
Exemption to Prohibition on)	Docket No. RM 2011-7
Circumvention)	
of Copyright Protection Systems for)	
Access Control Technologies)	
<u> </u>)	

Comments of

CONSUMERS UNION

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TABLE OF CONTENTS

I.	THE COMMENTING PARTY	1
II.	INTRODUCTION & SUMMARY	2
III.	TECHNOLOGICAL PROTECTION MEASURES INVOLVED A. SIM Locks B. SPC Locks C. SOC Locks D. Band Order Locks	6 6 7
	E. Master Subscriber Locks	
IV.	REMOVING A RESTRICTION THAT LIMITS MOBILE DEVICE OPERABILITY TO A LIMITED NUMBER OF NETWORKS CONSTITUTES A NONINFRINGING USE A. The Aspect of Mobile Device Computer Programs that Enables Devices to Connect to Communications Networks May Not Be Protectable under Copyright Law B. The Use of Restrictive Computer Program Licenses to Impede Customer Switching Is Anticompetitive and Constitutes Copyright Misuse C. Owners of Copies of Mobile Device Computer Programs Are Entitled, under Section 117, to Make Modifications in Certain Circumstances D. The Elimination and Insertion of Codes or Digits, or Complete Reflashing of Mobile Device, Does Not Infringe Copyright	8 10 r 13 a
V.	 THE FOUR NONEXCLUSIVE STATUTORY FACTORS	15 l 15 s 16
VI.	OTHER FACTORS FOR CONSIDERATION A. Mobile Device Locks, the "Subsidy" Scheme, and Customer "Lock-In" to Long-Term Contracts Are Interrelated Aspects of Carriers' Profit-Maximizin Strategy	ıg

	B. The Subsidy Scheme Forces Mobile Service Customers to Overpay and
	Unfairly Penalizes Low-Income Consumers
	C. Mobile Device Locks Impair Customers' Ability to Recover the Value of Their
	Subsidy Investments
	D. Mobile Device Locks Harm the Environment
	E. Improved Portability Would Encourage Device Manufacturers to Bring Less
	Expensive and More Innovative Products to the Marketplace
	F. Improved Portability Would Foster Greater Competition Among Carriers in
	Terms of Cost and Quality of Service
3777	-
VII.	THE LIKELY ADVERSE EFFECTS OF THE PROHIBITION ON CIRCUMVENTION IN THE
	ABSENCE OF AN EXEMPTION24
	A. It Could Become Illegal under the DMCA for Mobile Device Owners to Unlock
	Their Own Used Devices24
	B. It Would Continue to Be Arguably Illegal under the DMCA for Mobile Device
	Owners to Unlock Their Own New Devices24
	C. It Would Continue to Be Arguably Illegal Under the DMCA for Owners of
	Mobile Devices Other than Wireless Telephone Handsets to Unlock Their
	Devices
VIII.	CONCLUSION

Pursuant to the Notice of Inquiry of Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies dated Thursday, September 29, 2011,¹ Consumers Union hereby submits its comments and asks that the Librarian of Congress exempt the following class of works from the 17 U.S.C. § 1201(a)(1) prohibition on the circumvention of access control technologies:

Computer programs, in the form of firmware or software, including data used by those programs, that enable mobile devices to connect to a wireless communications network, when circumvention is initiated by the owner of the device to remove a restriction that limits the device's operability to a limited number of networks, or circumvention is initiated to connect to a wireless communications network.

I. THE COMMENTING PARTY

Consumers Union is an independent nonprofit organization whose mission is to work for a fair, just, and safe marketplace for all consumers and to empower consumers to protect themselves. The organization was founded in 1936 when advertising first flooded the mass media. Consumers lacked a reliable source of information they could depend on to help them distinguish hype from fact and good products from bad ones. Since then Consumers Union has filled that vacuum with a broad range of consumer information.²

Consumers Union employs a dedicated staff of lobbyists, grassroots organizers, and outreach specialists who work with the organization's more than 600,000 online activists to change legislation and the marketplace in favor of the consumer interest.

¹ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Notice of Inquiry and Request for Comments, United States Copyright Office Docket No. RM 2011-7, 76 Fed. Reg. 60,398 (Sept. 29, 2011) (to be codified at 37 C.F.R. pt. 201).

² Among Consumers Union's most popular publications are *Consumer Reports*, one of the top-ten-circulation magazines in the country; ConsumerReports.org, which has the most subscribers of any website of its kind; and two newsletters, *Consumer Reports on Health* and *Consumer Reports Money Adviser*, which have combined subscriptions of more than 8 million.

Consumers Union has long advocated national reform on mobile communications issues in both Congress and federal agencies and actively seeks policies that boost competition in the mobile communications market.

II. Introduction & Summary

Mobile service carriers and retailers sell mobile devices to consumers with preinstalled mobile device computer programs that enable the devices to connect to a wireless communications network. Often, these preinstalled programs feature built in constraints that greatly restrict device operability to a limited number of networks—often, to just one network. A variety of preinstalled technological protection measures closely control access to the aspect of the computer programs at issue. As a result, consumers who wish to "unlock" their device—to alter the program so they can use the mobile device on a different network—are unable to do so without circumventing these measures. Altering the program for this purpose constitutes a noninfringing use.

Acknowledging the validity of these briefly summarized arguments, the Copyright Office has twice before recommended, and the Librarian has twice before adopted, an exemption for cell phone unlocking. In the instant proceeding, Consumers Union proposes an unlocking exemption that is broader than the unlocking exemption adopted in 2010 in six ways:

1. The proposed exemption would apply not only to "wireless telephone handsets," but to all "mobile devices." Several years ago, when the Librarian first granted a DMCA exemption for "wireless telephone handsets," "telephone handsets" were indeed the standard in cellular communications. But the relatively basic telephone handsets of several years ago have evolved into a variety of dynamic multipurpose devices—including smartphones, touchscreen devices, tablets, e-readers, and so on. Consumers and companies alike now refer to this category collectively as "mobile devices." The proposed exemption

³ See, e.g., Apple Answers the FCC's Questions, Apple,

http://www.apple.com/hotnews/apple-answers-fcc-questions/ (claiming that the iPhone "has established a new standard for what a mobile device can be—an integrated

would facilitate consumer unlocking of all such devices, not limited merely to "telephone handsets."

- 2. The proposed exemption would not be limited to computer programs operating on "used" devices. When, in 2008, the Register recommended that the exemption be limited to include only "used" mobile phones, she did so in part to "prevent bulk resellers from taking advantage of the exemption." However, as explained below, individual consumers may have legitimate reasons for unlocking unactivated mobile devices, and the DMCA should not prohibit this activity. 5
- 3. The proposed exemption would not be limited to programs that enable connections to wireless "telecommunications" networks, but would apply more broadly to programs that enable connections to wireless "communications" networks. As with the above discussion of "wireless telephone handsets" versus "mobile devices," this proposed broadening of the exemption language vis-à-vis the 2010 unlocking exemption reflects the changing times. Before the development of multipurpose mobile devices, cellular handsets were used primarily to make voice calls. Today, however, mobile devices are used for a wide range of other types of communications, including SMS, MMS,

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device with a phone, a full web browser, HTML email, an iPod, and more, all delivered with Apple's revolutionary multi-touch user interface."); *Mobile Device*, Wikipedia, http://en.wikipedia.org/wiki/Mobile_device (user-generated article on "mobile device" states, "A mobile device . . . is a small, hand-held computing device, typically having a display screen with touch input and/or a miniature keyboard and less than 2 pounds Early pocket sized ones were joined in the late 2000s by larger but otherwise similar tablet computers.").

⁴ U.S. Copyright Office, Recommendation of the Register of Copyrights in RM 2008-8, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 169, June 11, 2010, available at http://www.copyright.gov/1201/2010/initialed-registers-recommendation-june-11-2010.pdf [hereinafter 2010 Recommendation].

VoIP, email, chatting, and social network messages. Therefore, Consumers Union proposes an exemption that uses the word "communications" in place of "telecommunications," with the understanding that both telecommunications and information services fall under the umbrella of "communications network."

- 4. The proposed exemption would not be limited to situations in which circumvention is initiated by the "owner of the copy of [the] computer program," but would apply more broadly to situations in which circumvention is initiated by the "owner of the device." In 2010, the Register recommended adding the language pertaining to who owns the copy of the computer program "because the basis for finding that the prohibition on circumvention has adversely affected . . . noninfringing uses was the conclusion that those uses are privileged under Section 117, and because the Section 117 privilege may be exercised only by the owner of the copy of the computer program." As Consumers Union argues below, however, mobile device unlocking by device owners constitutes a noninfringing use in more instances than merely those to which the Section 117 privilege applies. Therefore, this particular limitation should be broadened to cover mobile device owners who do not own the copy of the computer program.
- 5. The proposed exemption would not be limited to circumvention initiated "solely" for the purpose of unlocking. As multiple commenters noted during the 2008 rulemaking, inclusion of the words "sole purpose" in the 2006 exemption had unintended consequences, causing courts and consumers alike to mistakenly interpret the exemption as inapplicable where a circumventor had any financial motive, even a secondary one. In recognition of this problem, the

⁶ 2010 Recommendation, supra note 4, at 167.

⁷ Section IV, infra p. 7.

⁸ As other commenters have noted in the past, these consequences were unintentional because the Librarian recognized that the average consumer who unlocks his or her mobile device does so with some expectation of financial benefit.

Register recommended in 2010 replacing the "sole purpose" language with "solely," "properly shift[ing] the emphasis to the objective of the activity rather than whether the person engaging in the activity is doing so with an expectation of profit." Notwithstanding this change, the continued presence of the word "solely" is likely to deter would-be unlockers who wish to unlock their device with the primary objective of fetching a higher price for it at sale.

6. The proposed exemption would not be limited to circumvention initiated with the specific goal of "connect[ing] to a wireless telecommunications network [when] access to the network is authorized by the operator of the network," but would apply more broadly to situations in which circumvention is initiated merely to remove the interoperability restriction. In the past, the Librarian has granted an unlocking exemption for circumventors whose "objective of the [unlocking] activity" is to use their device on a telecommunications network. But many unlockers have no immediate plans to use their unlocked device, and/or would describe their objective as removing the lock. The proposed exemption therefore extends to a slightly broader range of unlocking consumers' objectives.

If the Librarian does not grant the proposed exemption, consumers are likely to suffer adverse consequences because it could become illegal under the DMCA for consumers to unlock their mobile devices. As a result, consumers will suffer higher device prices, increased electronic waste, higher costs associated with switching service providers, and more widespread consumer lock-in to unfavorable service agreements.

III. TECHNOLOGICAL PROTECTION MEASURES INVOLVED

There is no dispute that mobile device locks constitute technological protection measures that control access to arguably protectable works.¹¹ Mobile devices vary

⁹ 2010 Recommendation, supra note 4, at 166.

¹⁰ 2010 Recommendation, supra note 4, at 166.

¹¹ Exemption to Prohibition on Circumvention of Copyright Protection Systems for

widely with respect to manufacturer, communications standard, and operating system. Various carriers, with the aid of device manufacturers and software engineers, implement several different types of technological measures to control access to computer programs that enable devices to connect to wireless communications networks. Among the measures commonly employed are SIM locks, SPC locks, SOC locks, and band order locks.

A. SIM Locks

A subscriber identity module card ("SIM" card) is a small card that stores information used by a mobile device to identify and authenticate itself on a mobile service network. SIM cards, used in mobile devices operating on networks that use the GSM standard, are typically easily removable and replaceable by device owners. International travelers make particularly heavy use of this feature, often swapping out SIM cards as they move from country to country so they can always have a local phone number and pay local service rates.

Although the SIM card feature provides an inherently simple way for customers to switch carriers without changing devices, many mobile devices are sold with a preinstalled technological measure to prevent the device from recognizing non-native SIM cards. This measure, commonly called a "SIM lock," causes the device to reject any SIM card that would facilitate connectivity to any network other than that of the device's original carrier.

B. SPC Locks

A service provider code ("SPC") is a number generated from the mobile device's electronic serial number, using a service provider's algorithm. Carriers commonly arrange to have mobile device manufacturers preinstall a technological measure on new

Access Control Technologies, 75 Fed. Reg. 43,825, 43,830 (July 27, 2010) (codified at 37 C.F.R. pt. 201.40) [hereinafter 2010 Final Rule] ("The access controls in question are embedded in the mobile phone's firmware or software and prevent the mobile phone owner from gaining access to the settings that connect the mobile phone to a network (e.g., Verizon's) other than the original network (e.g., AT&T's).").

devices that controls access to connectivity firmware. This measure can only be passed through by entering in the correct SPC. This renders mobile devices operating on the CDMA standard—technically capable of operating on any network using that standard—useless to connect to any network other than that of the device's original carrier.

C. SOC Locks

A system operator code ("SOC") is a code number associated with a particular carrier. If the firmware on a particular mobile device employs a SOC code, the device will only communicate with the network of the carrier identified by the code. Many mobile devices are sold with a preinstalled technological measure to prevent the SOC code from being changed. A device locked in this way therefore cannot be used to connect to any network other than that of the device's original carrier.

D. Band Order Locks

The Federal Communications Commission allocates a particular band of radio frequencies for mobile communications, then licenses individual service carriers to operate only on certain portions of that band. Most mobile devices are technologically capable of operating across the entire mobile communications band. However, some mobile devices are sold with a preinstalled firmware limitation that restricts operability to a smaller band of frequencies than that on which it is capable of operating. A device locked in this way can therefore not be used to connect to any network other than one that uses the same limited frequency range.

E. Master Subscriber Locks

A master subscriber lock ("MSL") is a technological measure that controls access to firmware, software, and other content on a mobile device. Devices sold for operation on Virgin Mobile are preinstalled with this measure. A device locked in this way cannot be used to connect to any network other than that of the device's original carrier.

IV. REMOVING A RESTRICTION THAT LIMITS MOBILE DEVICE OPERABILITY TO A LIMITED NUMBER OF NETWORKS CONSTITUTES A NONINFRINGING USE

The technological protection measures described above control access to mobile device computer programs that enable connectivity to communications networks. A consumer who wishes to remove a restriction from his or her mobile device that limits the device's operability to a limited number of networks cannot do so without circumventing one or more of these measures and altering the program. Altering mobile device firmware or software to accomplish this objective is a noninfringing use under at least four legal theories. First, the aspect of mobile device computer programs that facilitates communications connectivity may not even be protectable under copyright law. Second, the use of restrictive computer program licenses to impede customer switching constitutes copyright misuse, rendering the computer program copyright unenforceable. Third, to the extent that a mobile device computer program is protectable, the owner of the program is entitled under Section 117 of the Copyright Act to make or authorize the making of another copy or adaptation of the computer program in order to use the device as intended. Fourth, minor alterations of specific codes or variables do not implicate the exclusive rights of a copyright owner.

A. The Aspect of Mobile Device Computer Programs that Enables Devices to Connect to Communications Networks May Not Be Protectable under Copyright Law

If mobile device unlocking involves only unprotectable aspects of device firmware or software, then unlocking the device never constitutes infringement, even when the unlocking party does not own the copy of the program. A court might reasonably find that the aspect of mobile device firmware or software that enables a device to connect to a communications network is not protectable under copyright law, because it is an unprotectable idea.

It is well established that U.S. copyright pertains only to the expression of intellectual concepts, and not to underlying ideas.¹² This distinction at times renders only a portion of an allegedly protected work unprotectable; it need not place the entire work squarely within the category of either protectable expression or unprotectable idea. An otherwise protectable work is unprotectable to the extent it is functional or factual.¹³ Expressive elements that "must necessarily be used as incident to" expression of the underlying ideas are similarly unprotectable.¹⁴ Computer programs present a challenging analysis under the idea/expression dichotomy—they typically include elements of both expression and idea in the same body of work. Therefore, most courts have agreed that within a single program, it is possible for unprotectable features to coexist with protectable features.¹⁵

Connecting a mobile device to a communications network is a "procedure, process, system, [or] method of operation" within the meaning of Section 102(b) of the Copyright Act. Therefore, the feature of mobile device firmware or software that facilitates connectivity of a device to a communications network may be unprotectable under U.S. copyright law.

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¹² 17 U.S.C. § 102(b) ("In no case does copyright protection . . . extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained illustrated, or embodied in such work.").

¹³ Baker v. Selden, 101 U.S. 99, 102-04, (1879).

¹⁴ Baker v. Selden, 101 U.S. 99, 104 (1879).

¹⁵ See, e.g., Computer Assocs. Int'l v. Altai, 982 F.2d 693, 705 (2d Cir. 1992) ("those elements of a computer program that are necessarily incidental to its function are . . . unprotectable."); Sega Enters. v. Accolade, Inc., 977 F.2d 1510, 1525 (9th Cir. 1992) ("Under a test that breaks down a computer program into its component subroutines and subsubroutines and then identifies the idea or core functional element of each . . . many aspects of the program are not protected by copyright."); General Universal Sys. v. Lee, 379 F.3d 131, 142 (5th Cir. 2004) ("To assess a claim of software infringement, we have generally endorsed the 'abstraction-filtration-comparison' test a three-step procedure to assess whether protectable expression has been improperly copied."); R.C. Olmstead, Inc. v. CU Interface, LLC, 606 F.3d 262, 272 (6th Cir. 2010) (software developer failed to "identify those elements of the [allegedly infringing] software that are unique and original, rather than necessary to the function of any credit union software.").

Although a court might find that this feature of mobile device computer programs is not protectable, the technological protection measures in question still fall within the scope of this rulemaking for two reasons. First, the federal courts have not yet spoken on the matter of mobile device lock copyrightability. Second, to unlock a mobile device, a consumer must often circumvent a protection measure that controls access to the entire mobile device operating system and/or other protectable content, such as wallpapers and ringtones.¹⁶

B. The Use of Restrictive Computer Program Licenses to Impede Customer Switching Is Anticompetitive and Constitutes Copyright Misuse

In the last DMCA rulemaking, Virgin Mobile argued that a consumer who uses a mobile device purchased from Virgin on another carrier's network violates his or her Terms of Purchase and Terms of Service. Therefore, argued Virgin, the customer's continued use of any content licensed by Virgin "exceeds the scope of the license and is infringing." This argument, should it be made again by opponents of the proposed class in the instant proceeding, fails to defeat the noninfringing nature of mobile device unlocking. Based on its own description, Virgin Mobile engages in the following scheme: it grants a software or firmware copyright license to the purchaser of a mobile device at the time of sale; it conditions the continued validity of the license on the Terms of Service or Terms of Purchase; it later leverages the copyright license to exert control over which carrier the device owner may subscribe to, stating that the license is revoked (and the device owner in violation of copyright law) the moment the device is connected to a different carrier's network. This behavior is anticompetitive and

¹⁶ Note, however, that there are no actual technological barriers to implementing separate locks for network connectivity and other content. *See* Comment of MetroPCS Communications, Inc. at 16–17 (Dec. 2, 2008), *available at*

http://www.copyright.gov/1201/2008/comments/metro-pcs-communications.pdf [hereinafter MetroPCS 2008 Comment 5B].

¹⁷ Reply Comments of Virgin Mobile USA, L.P. at 18–19, available at http://www.copyright.gov/1201/2008/responses/virgin-mobile-52.pdf [hereinafter Virgin 2009 Response 51]; see 2010 Recommendation, supra note 4, at 118.

constitutes copyright misuse. The contours of copyright misuse doctrine are still being defined.¹⁸ However, several federal courts have recognized the misuse doctrine as establishing a defense to alleged copyright infringement.

Copyright misuse, rooted in a parallel doctrine developed in the context of patent law,¹⁹ was first extended to copyright by the Fourth Circuit in 1990.²⁰ In the case that gave rise to that landmark adaptation of patent misuse doctrine to copyright, the Fourth Circuit was persuaded by the alleged infringer's misuse defense where Lasercomb, the rightsholder, attempted to use its licensing agreement "to control competition in an area outside the copyright" by restricting licensees from making a competing product.²¹ Stating that "[t]he question is . . . whether the copyright is being used in a manner violative of the public policy embodied in the grant of a copyright,"²² the court held "that Lasercomb should have been barred by the defense of copyright misuse from suing for infringement of its copyright," and reversed the lower court's injunction and award of damages for copyright infringement.²³

After 1990, other circuits courts grappled with the copyright misuse doctrine and several have recognized its validity.²⁴ Although neither the Supreme Court nor the

¹⁸ MDY Indus., LLC v. Blizzard Entm't, Inc., 629 F.3d 928, 941 (9th Cir. 2010).

¹⁹ See Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 494 (1942) ("[T]he public policy which includes inventions within the granted monopoly excludes from it all that is not embraced in the invention.").

²⁰ Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 973 (4th Cir. 1990) ("We are persuaded . . . that a misuse of copyright defense is inherent in the law of copyright just as a misuse of patent defense is inherent in patent law.").

²¹ Lasercomb America, 911 F.2d at 972, 979.

 ²² Lasercomb America, 911 F.2d at 978; see Apple, Inc. v. Psystar Corp., 673 F. Supp. 2d 931, 939 (N.D. Cal. 2009) aff'd sub nom. Apple Inc. v. Psystar Corp., 658 F.3d 1150 (9th Cir. 2011).

²³ Lasercomb America, 911 F.2d at 979.

²⁴ See, e.g., DSC Communs. Corp. v. DGI Techs., 81 F.3d 597, 601 (5th Cir. 1996) ("We concur with the Fourth Circuit's characterization of the copyright misuse defense."); Reed-Union Corp. v. Turtle Wax, 77 F.3d 909, 913 (7th Cir. 1996) ("Misuse of copyright in pursuit of an anticompetitive end may be a defense to a suit for infringement, along the lines of the patent-misuse doctrine in antitrust."); Practice Mgmt. Info. Corp. v. AMA, 121 F.3d 516, 520 (9th Cir. Cal. 1997) ("We have implied in prior decisions that misuse is a

Federal Circuit has explicitly adopted the doctrine of copyright misuse, the Federal Circuit interprets the vast body of case law on the doctrine to "establish that, regardless of the form of intellectual property involved, a party's efforts to use its intellectual property to suppress a competitive product constitutes unacceptable misuse."²⁵

In *Apple, Inc. v. Psystar Corp.*, the Ninth Circuit recently made clear that under its interpretation of the copyright misuse doctrine, a rightsholder's use of software copyright to prohibit installation of the software on its competitor's products does not constitute misuse.²⁶ By contrast, under the instant facts, Virgin uses its software copyright to reach at least one step further down the chain of consumer conduct.²⁷ Moreover, while Apple was concerned about what device its software would be used on, Virgin has expressed concern about what the device on which its software is installed would be used for.

Copyright misuse doctrine provides an equitable defense to infringement; when a rightsholder misuses its copyright, it is barred from enforcing its copyright during the misuse period.²⁸ Because copyright misuse is an equitable defense, some commenters

defense to copyright infringement. We now adopt that rule.") (internal citations omitted); Video Pipeline, Inc. v. Buena Vista Home Entm't, Inc., 342 F.3d 191, 206 (3d Cir. 2003) ("[W]hile we extend the patent misuse doctrine to copyright, and recognize that it might operate beyond its traditional anti-competition context, we hold it inapplicable here.") (internal citations omitted).

²⁵ Princo Corp. v. ITC, 616 F.3d 1318, 1348 (Fed. Cir. 2010).

²⁶ Apple, Inc. v. Psystar Corp., 673 F. Supp. 2d at 940 (N.D. Cal. 2009) aff d sub nom. Apple Inc. v. Psystar Corp., 658 F.3d 1150 ("Apple has not prohibited purchasers of Mac OS X from using competitor's products. Rather, Apple has simply prohibited purchasers from using Mac OS X on competitor's products. The Ninth Circuit has likewise distinguished Lasercomb . . . on this ground.") (citing Triad Systems Corp. v. Southeastern Express Co., 64 F.3d 1330, 1337 (9th Cir. 1995), overruled on other grounds by Gonzales v. Texaco Inc., 344 Fed.Appx. 304, 306 (9th Cir.2009)) (internal citation omitted).

²⁷ In *Psystar*, (1. Apple) used its (2. software license) to prevent use of the software on (3. an unauthorized competitor's product). Here, (1. Virgin) uses its (2. software license) to prevent (3. the authorized mobile device) from connecting to (4. an unauthorized service network).

²⁸ See, e.g., Lasercomb America, 911 F.2d at 979 ("Lasercomb should have been barred by the defense of copyright misuse from suing for infringement of its copyright."); Vernor

may argue that even if copyright misuse renders a particular firmware or software license unenforceable, this doctrine does not go so far as to make unauthorized uses of the copyrighted work noninfringing. However, for the purpose of determining classes of works exempt from the DMCA prohibition on circumvention, Consumers Union urges the Register to treat unauthorized use of the subject of copyright misuse the same as noninfringing use. To do otherwise would leave a giant loophole for copyright misusers, ultimately allowing them to enforce through the DMCA an anticompetitive scheme that otherwise could not be enforced under copyright law.²⁹ Such an absurd result is obviously inconsistent with legislators' intent that the rulemaking process serve as a "fail-safe" to protect against harmful uses of technological protection measures.

C. Owners of Copies of Mobile Device Computer Programs Are Entitled, under Section 117, to Make Modifications in Certain Circumstances

As the Register recognized in 2010, for mobile device users who own the copies of the computer programs on those phones, "the making of modifications in the computer program in order to enable the mobile phone to operate on another network would be a noninfringing act under Section 117."³⁰

v. Autodesk, Inc., 621 F.3d 1102, 1115 (9th Cir. 2010) ("Copyright misuse is an equitable defense to copyright infringement which precludes the copyright holder's enforcement of its copyright during the misuse period.");

²⁹ An anticompetitive rightsholder could distribute the copyrighted work to consumers under a highly restrictive license that would constitute copyright misuse, control access to the work with a technological protection measure, then sue uncooperative consumers only under the DMCA, never under copyright law. This way, the copyright misuse defense could never be raised. Courts appear reluctant to apply the misuse defense to DMCA claims; at least one court has expressed outright unwillingness to do so. *See* 321 *Studios v. MGM Studios, Inc.*, 307 F. Supp. 2d 1085, 1107 (N.D. 2004) (In response to party raising possible misuse defense for DMCA claim, court stated, "Fair use and misuse are defenses only to copyright infringement claims, which are not at issue in this motion."). ³⁰ 2010 Final Rule, *supra* note 11, at 43,831.

D. The Elimination and Insertion of Codes or Digits, or Complete Reflashing of a Mobile Device, Does Not Infringe Copyright

As one commenter observed in the past and as the Register recognized, "[r]e-flashing a handset does not change the underlying mobile phone software, but rather it merely changes underlying variables accessed by the program, variables intended by the software designer to be changed."³¹ Unlocking achieved by eliminating or inserting codes or digits, or by completely reflashing a mobile device, therefore constitutes a noninfringing use.

V. THE FOUR NONEXCLUSIVE STATUTORY FACTORS

17 U.S.C. § 1201(a)(1)(C) directs the Copyright Office to consider the following factors when considering an exemption:

- (i) the availability for use of copyrighted works;
- (ii) the availability for use of works for nonprofit, archival, preservation, and educational purposes;
- (iii) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research;
- (iv) the effect of circumvention of technological measures on the market for or value of copyrighted works; and
- (v) such other factors as the Librarian considers appropriate.

A balancing of these factors weighs strongly in favor of the proposed exemption. In addition, adverse effects are more likely than not to occur if the proposed exemption is not adopted.

14

³¹ MetroPCS 2008 Comment 5B, *supra* note 16, at 8; *see also* 2010 Final Rule, *supra* note 11, at 43,831 ("When specific codes or digits are altered to identify the new network to which the phone will connect, those minor alterations of data also do not implicate any of the exclusive rights of copyright owners.").

A. The Availability for Use of Copyrighted Works³²

This factor weighs in favor of the proposed exemption. Although unlocked mobile devices are widely sold, the benefits of an unlocked device are not available to the vast majority of current device owners. Right now it is very difficult for consumers to bring devices with them when they switch carriers for numerous reasons, including the anti-trafficking provision of the DMCA, the failure of policymakers to investigate and take action to end the mobile device subsidy scheme and eliminate Early Termination Fees, restrictive End User License Agreements associated with mobile devices, imperfect interoperability among different service networks, and the active discouragement of mobile device unlocking by carriers. The pursuit of a pro-consumer DMCA exemption for mobile device unlocking is just one battle in this ongoing war.

B. The Availability for Use of Works for Nonprofit, Archival, Preservation, and Educational Purposes³³

This factor weighs heavily in favor of the proposed exemption, because modern mobile devices play a central role in education. A 2003 article in the *Computers & Education*, observing the "many virtues of web-based educational software," asserted that "it would be extremely useful to have such facilities in handheld devices . . . so that users could use the software on a device that they can carry anywhere they go." A 2007 article noted that learning on mobile devices "can complement and add value to the existing learning models." As of December 1, 2011, there are 1,463 Android apps available in the "Education" category of Amazon's Appstore for Android. While the educational value of mobile applications categorized as "educational" has yet to be

³² 17 U.S.C. § 1201(a)(1)(C)(i).

³³ 17 U.S.C. § 1201(a)(1)(C)(ii).

³⁴ Maria Virvou & Eythimios Alepis, *Mobile Educational Features in Authoring Tools for Personalised Tutoring*, 44 Computers & Educ. 53, 53–54 (2003).

³⁵ Luvai F. Motiwalla, *Mobile Learning: A Framework and Evaluation*, 48 Computers & Educ. 581, 582–83 (2007).

established,³⁶ it is clear that consumers are demanding this type of product, and that mobile education is a field rich with innovation.

When the House Commerce Committee issued its report on the Digital Millennium Copyright Act, it explained the exemption rulemaking as a "fail-safe" mechanism to protect the public in the event "that marketplace realities may someday . . . result[] in less access, rather than more, to copyrighted materials that are important to education, scholarship, and other socially vital endeavors."³⁷ This concern gave rise to the statutory factor set forth in Section 1201(a)(1)(C)(ii). Given the growing importance of web-based teaching and innovative mobile applications for children and adults alike, inexpensive mobile devices and service are critically necessary for education.

Moreover, the proliferation of multipurpose mobile devices may even be helping to close the "digital divide." For example, African-Americans and Hispanic Americans are more likely to own a mobile device than their white counterparts, more likely to use most non-voice mobile data applications, and more likely to access the Internet only via cell phone.³⁸

C. The Impact that the Prohibition on the Circumvention of Technological Measures Applied to Copyrighted Works Has on Criticism, Comment, News Reporting, Teaching, Scholarship, or Research³⁹

This factor is neutral with respect to the proposed exemption.

³⁶ See Letter from Mary Koelbel Engle, Associate Director of the Federal Trade Commission, to Angela Campbell and Susan Linn Regarding Baby Einstein (Dec. 5, 2007), available at http://commercialfreechildhood.org/actions/lettertoccfc.pdf (noting that "advertisers must have adequate substantiation for educational and/or cognitive development claims that they make for their products").

³⁷ Report of the House Committee on Commerce on the Digital Millennium Copyright Act of 1998, H.R. Rep. No. 105-551, pt. 2, at 36 (1998); *see 2010 Recommendation, supra* note 4, at 8.

³⁸ Aaron Smith, Pew Internet & American Life Project, *Mobile Access* 2010 at 3, 15, 11 (2010), *available at*

http://www.pewinternet.org/~/media//Files/Reports/2010/PIP_Mobile_Access_201 0.pdf.

³⁹ 17 U.S.C. § 1201(a)(1)(C)(iii).

D. The Effect of Circumvention of Technological Measures on the Market for or Value of Copyrighted Works⁴⁰

This factor weighs in favor of the proposed exemption, because the proposed exemption will have little impact on the market for or value of mobile device computer programs. The programs that facilitate communications connectivity are typically developed by device manufacturers, then purchased or licensed by carriers. Regardless of whether or not consumers circumvent device locks, carriers will continue to market new devices to consumers, and will continue to pay manufacturers for the rights to accompanying firmware and software. Circumvention of device locks will not significantly affect the market for these programs.

VI. OTHER FACTORS FOR CONSIDERATION

In addition to the four statutory factors addressed above, Section 1201(a)(C) directs the Librarian in this rulemaking to examine "such other factors as the Librarian considers appropriate." Consumers Union urges the Register and Librarian to take into consideration the substantial ways in which the mobile device subsidy scheme—of which mobile device locks are a part—harms consumers. Consumers Union also urges the Register to consider how improved mobile device portability benefits consumers. Finally, Consumers Union urges the Librarian to consider the impropriety of mobile service carriers attempting to use the limited exclusive rights granted them under copyright law promote an anticompetitive marketing scheme.

A. Mobile Device Locks, the "Subsidy" Scheme, and Customer "Lock-In" to Long-Term Contracts Are Interrelated Aspects of Carriers' Profit-Maximizing Strategy

Many mobile service carriers in the United States sell devices at discounted upfront prices to customers who agree to sign long-term service contracts. Using "discount" or "subsidy" offers to lure customers into contracts is part of carriers'

⁴⁰ 17 U.S.C. § 1201(a)(1)(C)(iv).

⁴¹ 12 U.S.C. § 1201(a)(C)(v).

broader strategy to facilitate "lock-in" – the erection of high barriers for customers who want to switch providers.

Carriers enforce customer lock-in by charging customers hefty fees for early service contract termination and by locking mobile devices so that customers cannot easily take those devices to a different network. Carriers then charge locked in customers an above-cost price for service, ensuring the carriers will recoup the value of the initial device discount. Carriers refer to upfront device discounts as "subsidies," but because they end up making back the value of these upfront discounts, it would be more accurate to describe them as a form of consumer credit.

The detrimental effects of customer lock-in are clear. According to a 2005 survey by U.S. PIRG, "[n]early half (47%) of all cell phone customers would switch or consider switching cell phone service carriers to get a lower rate and better service if they didn't have to pay an average penalty of \$170 to cancel their service contract." Law and economics scholars Oren Bar-Gill and Jessica Stone conclude that by hampering efficient switching, mobile customer lock-in "may slow down the beneficial effects of

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⁴² See Thomas J. Tauke, Executive Vice President, Verizon, Testimony at FCC Early Termination Hearing (June 12, 2008), available at

http://www.fcc.gov/realaudio/presentations/2008/061208/tauke.pdf ("Term contracts allow the consumer to take advantage of bundled services at competitive prices and the latest devices they choose in exchange for a commitment to keep the service for usually one or two years. In return, service providers have some measure of assurance over a fixed period of time that they may recover their investment, including equipment subsidies, costs of acquiring and retaining customers, and anticipated revenue for providing wireless services.").

⁴³ "A grant, usu. made by the government, to any enterprise whose promotion is considered to be in the public interest." *Black's Law Dictionary* (9th Ed. 2009).

⁴⁴ "Credit extended to an individual to facilitate the purchase of consumer goods and services." *Black's Law Dictionary* (9th Ed. 2009).

⁴⁵ Survey Shows Nearly Half of Cell Phone Users Would Switch or Consider Switching Carriers If They Didn't Have to Pay Contract Termination Penalties, U.S. PIRG (Aug. 11, 2005), http://www.uspirg.org/newsroom/financial/financial-privacy--security-news/survey-shows-nearly-half-of-cell-phone-users-would-switch-or-consider-switching-carriers-if-they-didnt-have-to-pay-contract-termination-penalties; Oren Bar-Gill & Rebecca Stone, Mobile Misperceptions, 23 Harv. J.L. Tech. 1, 55 (2009).

consumers learning [about the unfavorable aspects of their service contracts] and prolong the costs of consumer mistakes."⁴⁶ Lock-in may also "deter new carriers from entering the market" by making it very difficult even for competitors offering lower service rates to attract customers away from their current carrier.⁴⁷ This is directly harmful to market competition.

Consumers oppose having their phones locked as part of the lock-in scheme. This year, *Consumer Reports*® found that 59% of mobile device users with long-term contracts would like to take their existing devices with them, and that 96% feel that they should at least be able to do this.⁴⁸ 88% of contract holders say that their mobile device should work on any carrier's service network.⁴⁹

B. The Subsidy Scheme Forces Mobile Service Customers to Overpay and Unfairly Penalizes Low-Income Consumers

Because the cost of the subsidy scheme is tacked on to carriers' service fees, all customers help pay for the scheme, including customers who use secondhand devices and customers who hold on to their devices long enough to pay off any upfront subsidy. In other words, even once the subsidy has been paid and the carrier has been reimbursed, mobile service customers do not see a reduction in their service bill. Thus, effectively, customers who never purchase a new device are forced to help subsidize the cost of other customers' brand new mobile device. The subsidy scheme is thus disproportionately burdensome to the customers who are less inclined to purchase brand new devices.

Carriers have defended the subsidy scheme in the past by arguing that most consumers demand so-called "subsidized" new devices.⁵⁰ But to the extent that the

⁴⁶ Bar-Gill & Stone, *supra* note 45, at 55.

⁴⁷ *Id*.

⁴⁸ Consumers Union, *Cell Phone Handset Interoperability Poll* at 9, 10 (Apr. 12, 2011) [hereinafter *Interoperability Poll*].

⁴⁹ *Interoperability Poll, supra* note 48, at 11.

⁵⁰ Digital Millennium Copyright Act Rulemaking Hearing, Testimony of Bruce Joseph, CTIA, The Wireless Alliance, at 122–23 ("Just go to bestbuy.com. The consumer gets to

subsidy scheme is in fact popular, it owes a portion of its popularity to its tendency to deceive consumers by taking advantage of consumers' predictable biases. As Bar-Gill and Stone explain, consumers discount the long-term cost of immediately attractive "subsidy" offers.⁵¹

Moreover, carriers have insufficient evidence that their customers prefer the subsidy scheme, because by spreading the cost of the scheme across all customers' service fees, carriers deny their customers the opportunity to opt-out. The result is undeniably unjust. As *New York Times* columnist David Pogue points out, the subsidy scheme is only fair to consumers "up until the day you finish reimbursing your carrier for your phone. . . . If your monthly fee includes payment for the phone itself, how come that monthly bill doesn't suddenly drop in the month when you've finished paying off that handset?"⁵² Nor, as the Federal Communications Commission observes, do customers who bring an unlocked device to a postpaid service plan—including those doing so because they cannot afford a new device—typically receive "a lower-priced service plan that would reflect the fact that the provider does not have to recoup the cost of the subsidy."⁵³ If service customers will be forced to pay for the subsidy scheme regardless of whether or not they take advantage of it, it is no wonder that most will decide to take advantage of it.

Some carriers that offer contract-free service plans argue that they subsidize mobile devices specifically to assist economically disadvantaged consumers. These carriers argue that because many of their customers are individuals with low income or poor credit, their customers cannot afford full-price devices. However, as discussed above, the increased service charges that finance the subsidy scheme unfairly penalize

choose. Do they want the carrier to pay for the phone or help pay for the phone or not? And the market has clearly shown a preference. Consumers prefer cheaper subsidized phones.").

⁵¹ Bar-Gill & Stone, *supra* note 45, at 52.

⁵² David Pogue, *The Irksome Cell Phone Industry*, N.Y. Times, July 22, 2009, at B1.

⁵³ Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Fifteenth Report, 26 FCC Rcd 9664, 9857 (2011).

customers using secondhand devices, arguably some of the most economically disadvantaged. Carriers could instead assist economically disadvantaged customers by abandoning the subsidy scheme, lowering their service rates, allowing customers to reuse old devices, and encouraging the development of a robust secondhand market for used devices.

C. Mobile Device Locks Impair Customers' Ability to Recover the Value of Their Subsidy Investments

Because carriers typically require all their customers to help finance device subsidies via elevated service charges, long-term customers who choose not to get new devices as often as they qualify for discounts do not get everything they pay for. Recognizing this unfairness, some customers who do not wish to purchase a new device every time they are eligible to do so use their periodic discount eligibility to purchase a new device anyway, then unlock it and sell it.⁵⁴ As one forum participant explains, "to get the best bang for buck, it makes sense to get a new phone every [two] years and sell it or keep it (and sell your old phone) since you are paying for service anyways."⁵⁵ "The reality is that you pay for it either way," advises another participant, "so you might as well get the phone."⁵⁶ It is impossible to determine how many consumers engage in this type of behavior, but the high number of unlocked "new" mobile devices available on eBay suggests that the total is not insubstantial, and that individual resellers contribute to increased competition in the mobile device marketplace.

⁵⁴ See Forum Discussion of Unlocking and Reselling New Mobile Devices, Sharky Forums, http://www.sharkyforums.com/showthread.php?t=323786 (forum participant says, "i renew every 2 years and get the best phone i can get for free and ebay it for ~\$200... my personal phone, i just buy off contract for the full amount (\$400+) whenever i feel i want an upgrade. by selling the new subsidized phone AND selling my current phone, i get a free high end phone upgrade every 2 years").
⁵⁵ Id.

⁵⁶ *Id.*

D. Mobile Device Locks Harm the Environment

Due to widespread mobile device locks, customers who decide to switch carriers—even on a contract-free plan, after expiration of a contract, or after paying an early termination fee—cannot easily take their devices along with them. This renders used devices worthless in the minds of many owners. Consequently, most used devices end up in landfills. According to the Environmental Protection Agency, as of February 2009 only 10 percent of unwanted cell phones were recycled each year.⁵⁷ Requiring consumers who switch carriers to dump their used devices in the trash is extraordinarily wasteful.

In an online fact sheet for consumers, the EPA explains some of the reasons mobile devices should be recycled:

Cell phones are made from precious metals, copper, and plastics—all of which require energy to mine and manufacture. Recycling these materials not only conserves resources, but prevents air and water pollution and greenhouse gas emissions. In fact, if all of the 100 million cell phones ready for end of life management in the U.S. are recycled, we could save enough energy to power more than 18,500 U.S. households with electricity for one year.⁵⁸

Mobile devices also release hazardous materials into the soil and water. According to the California Department of Toxic Substances Control, cell phones are considered hazardous waste because they may contain antimony, arsenic, beryllium, cadmium, copper, lead, nickel, and zinc.⁵⁹

⁵⁷ EPA, Fact Sheet: Recycle Your Cell Phone: It's An Easy Call (Feb. 2009), http://www.epa.gov/osw/partnerships/plugin/cellphone/cell-fs.htm. ⁵⁸ Id.

⁵⁹ Cal. Dep't of Toxic Substances Control, *Universal Waste*, http://www.dtsc.ca.gov/hazardouswaste/universalwaste/index.cfm.

E. Improved Portability Would Encourage Device Manufacturers to Bring Less Expensive and More Innovative Products to the Marketplace

If consumers could more easily bring their mobile devices with them from one network to another, the incentives for device manufacturers to produce inexpensive and more innovative products would improve for at least two reasons. First, some consumers might prefer to keep their used devices unless the price of a new device were sufficiently low. Second, some consumers might prefer to purchase devices advertised as easily portable from one network to another.

If more consumers had the practical option of unlocking and reusing or selling their used device, competition among device manufacturers would increase with respect to price. To compete with the low cost to consumers of keeping their devices or purchasing inexpensive used devices, manufacturers of new devices would have greater incentives to come up with ways to drop prices.

Moreover, if more consumers opted to keep an older device or purchase a used device from a robust secondhand device market, fewer consumers would be locked in to long-term contracts with service providers. This would lower the barriers to switching carriers overall. As the ease of carrier switching increased, mobile customers would be more likely to demand devices capable of operating on multiple network types and standards. Device manufacturers' incentives to innovate interoperability technologies would therefore improve.

F. Improved Portability Would Foster Greater Competition Among Carriers in Terms of Cost and Quality of Service

The incentives for mobile device carriers to provide higher quality service at a lower cost would also improve as reuse of mobile devices became more widespread. As more consumers opted not to take advantage of "subsidy" deals, fewer consumers would be locked in to long-term contracts with service providers, and carrier switching would become easier. Consumers would become more likely to switch carriers on short notice due to dissatisfaction with the cost or quality of service. Carriers' incentives to improve service quality and lower prices would therefore increase.

VII. THE LIKELY ADVERSE EFFECTS OF THE PROHIBITION ON CIRCUMVENTION IN THE ABSENCE OF AN EXEMPTION

If the Copyright Office does not grant the proposed exemption, mobile device users are likely to suffer adverse effects.

A. It Could Become Illegal under the DMCA for Mobile Device Owners to Unlock Their Own Used Devices

If the Librarian does not grant the proposed exemption, then upon expiration of the current unlocking exemption it will become illegal under the DMCA for mobile device owners to unlock their own used devices. Consumers already engage in this behavior in huge numbers. Putting an end to unlocking activity will lead to higher device prices for consumers, increased electronic waste, higher costs associated with switching service providers, and more widespread mobile customer lock-in.

B. It Would Continue to Be Arguably Illegal under the DMCA for Mobile Device Owners to Unlock Their Own New Devices

In estimable number of wireless service customers who decide not to replace their own device when they are eligible to do so currently use their discount eligibility to purchase subsidized new devices, unlock them, and sell them in the open market at retail value for cash profits, with the intent of recovering the value they invest in the subsidy scheme. The current iteration of the DMCA prohibits this activity.

⁶⁰ See, e.g., Seth Weintraub, T-Mobile USA: We're Now Carrying Over a Million Unlocked Phones, 9to5mac.com, June 22, 2011, http://9to5mac.com/2011/06/22/t-mobile-usa-were-now-carrying-over-a-million-unlocked-iphones/ (reporting that over one million unlocked iPhones were on the T-Mobile network, some of which had been unlocked by their owners); Christopher Breen, What to Do with that Old iPhone, MacWorld, June 23, 2010, http://www.macworld.com/article/152237/2010/06/old_iphone.html (suggesting giving away, selling, or unlocking old iPhones); How Do I Unlock this Old Cingular Phone to Use Abroad?, Ask MetaFilter, July 29, 2011, http://ask.metafilter.com/192102/How-do-I-unlock-this-old-Cingular-phone-to-use-abroad (forum participant asking others for advice on unlocking an old mobile device so it can be used abroad).

Because unlocking a new mobile device may currently violate the DMCA, individual consumers nationwide are exposed to civil liability for up to \$2,500 per violation.⁶¹ Even worse, some consumers who unlock new phones to sell them may actually be committing crimes, opening themselves up to a criminal fine of up to \$500,000 and imprisonment of up to five years.⁶²

In 2010, the Register intentionally limited the applicability of the unlocking exemption to "used" telephone handsets in acknowledgement of some carriers' concern regarding "'bulk resellers' who purchase new mobile phone handsets at subsidized prices and, without actually using them on the networks of the carriers who market those handsets, resell them for a profit."⁶³ It is not clear, however, why carriers claim they need the DMCA to combat cell phone trafficking. In recent suits brought against bulk resellers, carriers have prevailed on several types of claims in addition to DMCA claims.⁶⁴

The intuitive justice of reducing the obstacles for mobile service customers who resell new devices to recover their investments in the subsidy scheme far outweigh any marginal benefit of enabling carriers to sue bulk resellers under as many legal theories as possible.

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^{61 17} U.S.C. § 1203(c)(3).

^{62 17} U.S.C. § 1204(a)(1).

^{63 2010} Final Rule, *supra* note 11, at 43,831–43,832.

⁶⁴ See, e.g., TracFone Wireless, Inc. v. Bequator Corp., 2011 U.S. Dist. LEXIS 42314 (S.D. Fla. 2011) (finding bulk reseller liable for trademark infringement, breach of contract, DMCA violations, civil conspiracy, tortious interference, and unjust enrichment); *T-Mobile USA, Inc. v. Ataricom, Inc.*, 2009 U.S. Dist. LEXIS 97370 (N.D. Tex. 2009) (finding bulk reseller liable for breach of contract, trademark dilution, trademark infringement, contributory trademark infringement, false advertising, unfair competition, tortious interference with business relationships and prospective advantage, tortious interference with contract, harm to goodwill and business reputation, civil conspiracy, and unjust enrichment). A website operated by TracFone Wireless lists a number of final judgments and permanent injunctions entered by federal courts against mobile handset traffickers. *Court Cases*, Stop Cell Phone Trafficking, http://www.stopcellphonetrafficking.com/court-cases/ (last visited November 27,

C. It Would Continue to Be Arguably Illegal Under the DMCA for Owners of Mobile Devices Other than Wireless Telephone Handsets to Unlock Their Devices

If the Librarian does not grant the proposed exemption, it will continue to be arguably illegal for consumers to unlock mobile devices that are not telephone handsets, including mobile tablets. Given the recent explosion of tablet devices, it is highly likely that tablets locked to specific carriers will appear in the marketplace in the next three years. Without a DMCA exemption broad enough to cover tablets, consumers will face the same problems in the tablet arena—service lock-in bundled with device purchase—that they have faced for years with cellular phones. Given the high cost of new tablets, locks that hamper the development of a secondhand market for used tablets will greatly slow the rate at which tablets are adopted by low-income consumers.

VIII. CONCLUSION

Mobile devices play a central role in their owners' lives. *Consumer Reports*® found earlier this year that 82% of consumers own a cell phone. As of last year, 38% of adult mobile device owners used their devices to access the Internet, and device owners used their devices for an average of 3.8 non-voice data applications. As devices have developed to handle multiple functions, the average cost of these devices is on the rise. Consumers today spend hundreds of dollars on devices that are more than just telephones—functioning also as combined music players, personal digital assistants, personal computers, game consoles, and Internet browsers.

Given the ever-growing importance of multipurpose mobile devices in consumers' lives, it is critical that companies and regulators adopt policies that enhance competition among device manufacturers and service carriers. Such policies are needed to ensure that all consumers have access to affordable, high quality devices and services.

⁶⁵ Interoperability Poll, supra note 48, at 4.

⁶⁶ Smith, *supra* note 38, at 4, 16.

Mobile device "subsidies" and mobile device locks facilitate consumer lock-in to mobile service carriers. Together, the subsidy scheme, mobile device locks, and customer lock-in in general are harmful to consumers. Mobile device unlocking empowers consumers to combat the harmful effects of these practices.

The DMCA should not make it a crime for individual consumers to circumvent technological protection measures controlling access to computer programs on their mobile devices, when circumvention is initiated to remove artificial limitations on operability. This is a noninfringing use that benefits the public and is consistent with copyright's goal of promoting progress.

For the foregoing reasons, Consumers Union asks the Librarian of Congress to adopt the proposed broad exemption for mobile device unlocking.

Respectfully submitted

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