

Submission on behalf of Joint Creators and Copyright Owners

Class 11: Computer Programs – Jailbreaking

UNITED STATES COPYRIGHT OFFICE



Long Comment Regarding a Proposed Exemption Under 17 U.S.C. § 1201

[] Check here if multimedia evidence is being provided in connection with this comment

ITEM A. COMMENTER INFORMATION

The Motion Picture Association, Inc. (“MPA”) is a trade association representing some of the world’s largest producers and distributors of motion pictures and other audiovisual entertainment for viewing in theaters, on prerecorded media, over broadcast TV, cable and satellite services, and on the internet. The MPA’s members are: Netflix Studios, LLC, Paramount Pictures Corporation, Sony Pictures Entertainment Inc., Universal City Studios LLC, Walt Disney Studios Motion Pictures, and Warner Bros. Entertainment Inc.

The Alliance for Recorded Music (“ARM”) is a nonprofit coalition comprising the many artists and record labels who together perform, create, and/or distribute nearly all of the sound recordings commercially released in the United States. Members include the American Association of Independent Music (“A2IM”), the Music Artists Coalition (“MAC”), the Recording Industry Association of America, Inc. (“RIAA”), hundreds of recording artists, the major record companies, and more than 600 independently owned U.S. music labels.

The Entertainment Software Association (“ESA”) is the United States trade association serving companies that publish computer and video games for video game consoles, handheld video game devices, personal computers, and the internet. It represents nearly all of the major video game publishers and major video game platform providers in the United States.

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ITEM B. PROPOSED CLASS ADDRESSED

Class 11: Computer Programs – “Jailbreaking”

ITEM C. OVERVIEW

MPA, ARM and ESA (“Joint Creators and Copyright Owners”) did not oppose renewal of the existing exemptions applicable to circumvention for purposes of “jailbreaking” smartphones and portable all-purpose mobile computer devices, smart televisions, and voice assistants. In this rulemaking, Petitioners seek separate, yet overlapping, exemptions for circumventing access controls that protect computer programs and other content, ostensibly for the purpose of

“jailbreaking” devices. The Electronic Frontier Foundation (“EFF”) claims it wants to “clarify” the existing exemption for jailbreaking smart televisions.¹ EFF actually requests that the exemption be *expanded* to cover circumventing access controls on “computer programs on devices that are primarily designed to display software applications on a television, including applications that stream video delivered via the Internet, where such devices are not physically integrated into a television... Paradigmatic examples of these stand-alone streaming devices are the Roku line of products, the Amazon Fire TV Stick, and the Apple TV.”² Software Freedom Conservancy (“SFC”) proposes an exemption “to enable the installation of alternative firmware in routers and other networking devices.”³ We oppose these requested exemptions.

ITEM D. TECHNOLOGICAL PROTECTION MEASURE(S) AND METHOD(S) OF CIRCUMVENTION

It is impossible to address all of the access controls and methods of circumvention covered by the petitions in this class because the petitions seek abstract exemptions covering the circumvention of all access controls protecting software in (i) all devices that display apps on, or transmit audiovisual works to, television screens and (ii) all devices that connect to high-speed wireless networks.⁴

ITEM E. ASSERTED ADVERSE EFFECTS ON NONINFRINGING USES

1. EFF Petition

EFF asserts that “device owners jailbreak their video streaming devices for the same reason that one would jailbreak a fully integrated smart TV with a display: to exercise full control over a powerful and valuable computing device and make it suit their needs.”⁵ EFF points to a handful of specific uses, including uses of devices like Amazon Fire, Apple TV, and Roku, but generally advocates for installation of unauthorized or independent or incompatible applications on all video transmission devices. Accordingly, the proposed class would arguably sweep in all “over-the-top set top boxes” such as cable boxes and satellite service boxes, video game consoles, and disc players that transmit content to TVs.⁶

¹ EFF, [Class 11 Long Comment](#) at 2 (Dec. 14, 2020) (“EFF 2020 Comment”).

The current exemption covers: “Computer programs that enable smart televisions 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 smart television.” 37 C.F.R. § 201.40 (7) (2018). In the 2015 cycle, the Joint Creators and Copyright Owners opposed this exemption based on, *inter alia*, substantial evidence of piracy (of both apps and other works through illicit apps) on jailbroken devices. *See generally* Joint Creators and Copyright Owners, [Class 20 Opposition](#) (Mar. 27, 2015). We also opposed the current exemption for voice assistants in 2018, based on similar evidence. Joint Creators and Copyright Owners, [Class 6 Opposition](#), at 11-13 (Feb. 12, 2018) (“Joint Creators 2018 Class 6 Opposition”). We incorporate the prior evidence here by reference.

² EFF 2020 Comment at 2.

³ SFC, [Class 11 Long Comment](#) at 2 (Dec. 14, 2020) (“SFC 2020 Comment”).

⁴ *See* EFF 2020 Comment at 3-5; SFC 2020 Comment at 3-4.

⁵ EFF 2020 Comment at 3.

⁶ EFF even mentions circumventing controls on video game controllers, which appears to be far afield from the proposed class for devices that stream content. EFF 2020 Comment at 3.

(i) Video Game Consoles

To the extent the proposed exemption covers circumventing access controls on video game consoles, it should be denied for all of the reasons similar proposals have been denied in the past and for all of the reasons articulated in our comments in opposition to the pending *Proposed Class 12: Computer Programs – Repair*, which are hereby incorporated by reference. Put simply, jailbreaking consoles is an infringing use that facilitates piracy of copyrighted works, including video games, motion pictures and sound recordings. Yet, no new evidence is proffered to counter this real harm.⁷ And circumventing access controls on consoles undermines the technological protection measures securing video games and other content accessible via the devices, just as it did three years ago (and in cycles prior to that).⁸ Finally, Petitioners provided no information concerning consoles. And, new information should not be allowed for the first time on reply.⁹

(ii) Other Devices

The reasoning underpinning the denial of exemptions related to video game consoles also applies to other devices that transmit content to televisions. Access controls on these devices are designed to prevent unauthorized access to copyrighted works and subscription services, piracy of signals, and the copying of works. Once circumvented, even for the ostensible purpose of first installing a lawful application, nothing prevents a user from later installing infringing applications or applications that enable infringement on these devices. This is especially true of television service set-top boxes and Blu-ray disc players, which prevent unauthorized access to television and other content while enabling legal on-demand programming options and access to lawful applications. If the Register were to recommend the proposed exemption, these devices should be excluded because they are not discussed in the comments and, again, no new evidence should be allowed on reply.¹⁰

⁷ See [SECTION 1201 RULEMAKING: SEVENTH TRIENNIAL PROCEEDING TO DETERMINE EXEMPTIONS TO THE PROHIBITION ON CIRCUMVENTION, RECOMMENDATION OF THE ACTING REGISTER OF COPYRIGHTS](#) 219 (2018) (“2018 Rec.”) (“to recommend an exemption, there must be a record that shows distinct, verifiable, and measurable adverse effects, or that such effects are likely to occur”).

⁸ See *id.* at 205 (“Opponents have provided compelling, uncontradicted evidence that circumvention of access controls to permit interoperability of video game consoles—regardless of purpose—has the effect of diminishing the value of, and impairing the market for, the affected code, because the compromised code can no longer serve as a secure platform for the development and distribution of legitimate content.”). See also [SECTION 1201 RULEMAKING: FIFTH TRIENNIAL PROCEEDING TO DETERMINE EXEMPTIONS TO THE PROHIBITION ON CIRCUMVENTION, RECOMMENDATION OF THE REGISTER OF COPYRIGHTS](#) 49 (2012) (“2012 Rec.”) (“[D]ue to the particular characteristics of the video game marketplace, the circumvention of access controls protecting a console computer program so that it can be copied and modified for the purpose of enabling unauthorized applications has the effect of decreasing the market for, and value of, that program, as it can no longer serve to facilitate a secure gaming platform. Further, by enabling the ability to obtain and play pirated games and other unauthorized content, the dismantling of console access controls undermines the value of legitimate copyrighted works in the marketplace, many of which require a substantial investment of creative and financial resources to create.”).

⁹ See [Exemptions To Permit Circumvention of Access Controls on Copyrighted Works: Notice of Proposed Rulemaking](#), 85 Fed. Reg. 65293, 65302 (Oct. 15, 2020) (“NPRM”) (“Proponents of exemptions should present their complete affirmative case for an exemption during the initial round of public comment, including all legal and evidentiary support for the proposal.”).

¹⁰ *Id.*

Our concerns are not hypothetical. MPA members – through the Alliance for Creativity and Entertainment (“ACE”) – have filed multiple lawsuits against distributors of infringing devices and applications designed for Kodi and other platforms.¹¹ For instance, in *Universal City Studios Prods. LLLP v. TickBox TV LLC*, the court issued a preliminary injunction against the manufacturer of a device that allows users to perform many of the functions of a computer or tablet on their television set or other monitor, including browsing the internet and streaming media content through applications.¹² The preliminary injunction prevented the manufacturer from allowing users to download Kodi themes and add-ons that provided access to infringing content. In *Netflix Studios, LLC et al. v. Dragon Media Inc.*, the court granted in part a preliminary injunction against the manufacturer of a device with software installed to enable users to stream infringing motion pictures and television shows.¹³ The defendants ultimately agreed to cease all operations.¹⁴ In November 2020, ACE obtained a permanent injunction against Crystal Clear Media, a company that offered unauthorized “IPTV” packages by subscription.¹⁵ DISH Network has also sued distributors of applications that enabled unauthorized access to television content via streaming devices.¹⁶

The United States Trade Representative (“USTR”) has even recognized the harm caused by such platforms in its annual review of Notorious Markets for Counterfeiting and Piracy. In 2018, USTR focused on illicit streaming devices (“ISDs”) and determined that:

Global sales and use of ISDs are growing and pose a direct threat to content creators, sports leagues, and live performances, as well as legitimate streaming, on-demand, and over-the-top media service providers. ISD piracy is the combination of media boxes, set-top boxes, or other devices with piracy applications (apps) that allow users to stream, download, or otherwise access unauthorized content from the Internet. ISDs may be ‘fully loaded’ at the point of sale with an open-source media player, apps, and add-ons configured to access unlicensed content via cyberlockers and streaming websites. *Alternatively, the devices may be combined with add-ons after purchase to achieve the same objective. Such add-ons are sold or provided through online markets for accessing infringing content with streaming devices....* Some ISDs have the look and feel of legitimate services, but pirated content is unlawful regardless of whether it is ultimately streamed to a computer, a television set, or a phone. *The*

¹¹ For more information please visit <https://www.alliance4creativity.com/>.

¹² No. CV 17-7496-MWF (ASX), 2018 WL 1568698 (C.D. Cal. Jan. 30, 2018).

¹³ No. 2:18-cv-00230-MWF (ASX), 2018 WL7891027 (C.D. Cal., Dec. 21, 2018).

¹⁴ See Judgment And Permanent Injunction Against Defendants Dragon Media Inc., *Netflix Studios, LLC et al. v. Dragon Media Inc.*, 2:18-Cv-00230-Mwf (ASX) (C.D. Cal. Jan. 29, 2019).

¹⁵ See Alliance for Creativity, [ACE Secures Permanent Injunction Against Crystal Clear Media](#) (Nov. 17, 2020).

¹⁶ See [Complaint](#), *DISH Network v. Does*, No. 4:17-cv-01618 (S.D. Tex., May 30, 2017); [Amended Complaint](#), *DISH Network v. Durrani*, No. 4:17-cv-01618 (S.D. Tex., Sep. 25, 2017). After a default judgment, a final judgment and permanent injunction were issued against the defendant. See Final Judgment and Permanent Injunction, *DISH Network v. Does*, No. 4:17-cv-01618 (S.D. Tex., Oct. 24, 2018). See also, Matt Brian, [A piracy lawsuit is tearing Kodi’s add-on community apart](#), ENDGAGET.COM (Jun. 7, 2017).

*ISD piracy ecosystem, including unlawful device sellers and unlicensed video providers and video hosts, stands to bring in revenue of an estimated \$840 million a year in North America alone, at a cost to the entertainment industry of roughly \$4-5 billion a year.*¹⁷

USTR has continued to highlight the problem of ISDs and pirate IPTV apps in more recent reports.¹⁸

The MPA has estimated that “ISDs, specifically, represent a considerable and growing threat to the film and television community, with one study estimating that six percent of North American households have a device with Kodi software configured to access pirated content.”¹⁹ Yet, petitioner EFF has championed the distribution and use of these infringing devices, which makes this petition appear to be a disguised effort to legitimize them.²⁰ As we have explained in previous cycles, the repeated adoption of jailbreaking exemptions is already facilitating infringement.²¹ Allowing the circumvention of a new category of devices that is specifically designed to stream copyrighted content to televisions would undermine the legitimate marketplace, confuse consumers as to which applications provide authorized access (a summary of which we provide in an Appendix hereto), and harm copyright owners, as well as the artists, craftspeople, and the millions of livelihoods supported by healthy creative industries.²² This proceeding was not intended to, and should not be, a forum for enabling infringement.

Compared to these threats, the purported noninfringing uses that EFF identifies are underwhelming in import. These uses include: (1) adding a web browser to a streaming device (which is especially unnecessary where a smart TV already has one); (2) installing a different home screen, screen saver or operating system;²³ (3) using controllers that already work with other devices; (4) installing a broadcast TV tuner; and (5) enabling remote control of devices

¹⁷ U.S. TRADE REPRESENTATIVE, [2017 OUT-OF-CYCLE REVIEW OF NOTORIOUS MARKETS](#) 8-9 (2018) (emphasis added).

¹⁸ See, e.g., U.S. TRADE REPRESENTATIVE, [2020 REVIEW OF NOTORIOUS MARKETS FOR COUNTERFEITING AND PIRACY](#) 11, 19, 20, 22 (2021); U.S. TRADE REPRESENTATIVE, [2019 REVIEW OF NOTORIOUS MARKETS FOR COUNTERFEITING AND PIRACY](#) 10 (2020) (“Illicit IPTV apps that run on set-top boxes can stream unlicensed sports, movies, and TV shows to a user’s television...”).

¹⁹ [Statement from MPAA Chairman and CEO Charles Rivkin on the 2017 USTR Notorious Markets Report](#) (Jan. 12, 2018).

²⁰ See, e.g., Jeremy Malcolm and Mitch Stoltz, [The War on General-Purpose Computing Turns on the Streaming Media Box Community](#) (Sep. 29, 2017).

²¹ As mentioned above, the Joint Creators and Copyright Owners submitted in 2018 substantial evidence of piracy resulting from jailbreaking in connection with the proposal for circumventing access controls on voice assistants. Similar evidence was submitted in 2015 to oppose the smart TV exemption. See note 1, *supra*.

²² The core copyright industries employed 5.7 million U.S. workers in 2019, accounting for 3.79% of the entire U.S. workforce, and 4.46% of total private employment in the United States. The core copyright industries include books, newspapers and periodicals, motion pictures, recorded music, radio and television broadcasting, and software in all formats, including video games. See ECONOMISTS, INC., [COPYRIGHT INDUSTRIES IN THE U.S. ECONOMY: THE 2020 REPORT](#) 4 (2020).

²³ EFF admits that some devices such as Amazon Fire TV allow “side loading” of independent applications. EFF 2020 Comment at 5.

from other devices. The lack of such functionalities in devices protected by TPMs is a mere inconvenience. EFF concedes that they want to hack because they “want full control” over devices and because some users “enjoy it and are passionate about contributing to a community that has such a rich history of drastically changing the ecosystem.”²⁴ Additionally, the identified uses can be accomplished through devices without access controls to prevent app installations that are readily available in the marketplace. The Register has established that “mere inconveniences,” including the inconvenience of obtaining alternative access, are not cognizable “adverse effects” under Section 1201.²⁵

In the majority of instances, modification of software in devices is likely infringing.²⁶ Petitioners do not seek to exercise any rights under Section 117, but instead seek to create derivative works of software resident on devices purportedly justified by citing old cases that only apply where intermediate copying is conducted to create entirely new works of authorship that do not include any of the underlying code that was reverse engineered.²⁷ Accordingly, even if jailbreaking can somehow be separated from other modifications, such distinct modifications should not be covered by an exemption.

For all of these reasons, the Register should not recommend the adoption of the exemption requested by EFF.

2. SFC Petition

According to the Petitioner,

The purpose of the proposed exemption is to enable owners of wireless routers and other networking devices to improve the reliability, functionality, and security of their devices by installing alternative operating system software. Wireless routers can be found in nearly every home or business with an internet connection and they provide a critical link between end-user computing devices and the

²⁴ EFF 2020 Comment at 3 and 13. To the extent privacy protection is at issue, circumvention may be covered by the existing statutory exception in Section 1201(i).

²⁵ See 2018 Rec. at 16 (“[T]o prove the existence of adverse effects, it is necessary to demonstrate distinct, verifiable and measurable impacts occurring in the marketplace, as exemptions should not be based upon de minimis impacts. Thus, mere inconveniences or individual cases do not satisfy the rulemaking standard.”); *id.* at 126 (“[T]he mere inconvenience of obtaining alternative access is generally not an adverse effect.”).

²⁶ See 2018 Rec. at 211 (“[F]ollowing two policy studies where the Copyright Office concluded respectively that section 117 is fact-dependent and that there was no consensus regarding the meaning of lawful modification, the Acting Register declines to extrapolate from briefly sketched statements to conclude more definitively as to whether the class of modifications sought in this exemption are likely noninfringing.”).

²⁷ See generally *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992); *Sony Computer Entm’t Inc. v. Connectix Corp.*, 203 F.3d 596, 599, 609 (9th Cir. 2000). See also 2018 Rec. at 208 (“[I]t is not clear that the two cases cited by proponents go so far as to support the broader range of activities envisioned by the proposal [so] the Acting Register does not conclude that modification of a function of a device as a general category is likely to be noninfringing.”).

internet at large. Every wireless router is a general purpose computer with an embedded operating system.²⁸

Although the Joint Creators and Copyright Owners do not object to repairing wireless routers to enable connections to internet networks, the proposal is vague and unbounded by practical limitations.

First, SFC's proposal raises the same concerns expressed above regarding the facilitation of infringement.

Second, exemptions for installing alternative operating systems on devices when other devices are already capable of running such operating systems repeatedly have been denied.²⁹ Accordingly, the fact that a wireless router may be capable of being transformed into a general computing device does not justify an exemption. Similarly, if SFC is correct that installing an Open Wrt operating system completely replaces a router's stock firmware such that none of the manufacturer's code continues to be used, they still have not justified an exemption.

Third, modifying routers for purposes other than correcting malfunctions is not clearly noninfringing if the manufacturer's code is used/adapted. As discussed above and in the Joint Creators and Copyright Owners' comments on *Proposed Class 12: Computer Programs – Repair*, which are incorporated by reference, modification of computer programs is often infringing. Like EFF, SFC does not seek to exercise any rights under Section 117,³⁰ and relies on the same inapposite cases discussed above.³¹

Fourth, to the extent security or privacy concerns are at issue, the statutory exceptions in Sections 1201(g), 1201(i) and 1201(j), alongside the existing security research exemption, should provide sufficient cover to inspect/alter routers.

For all of these reasons, the Register should not recommend the adoption of an exemption for jailbreaking wireless routers and other networking devices.

3. Conclusion

Although we urge the Register not to recommend the exemptions proposed by EFF and SFC, if she were to do so, such exemptions should *at least* include limitations similar to the existing exemption for voice assistants, *i.e.*, “Computer programs that enable voice assistant devices to

²⁸ SFC 2020 Comment at 2.

²⁹ See, e.g., [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](#) at 220 (2008) (“2008 Rec.”) (“As the Register noted in her recommendation in the 2006 rulemaking, in previous rulemakings, exemptions have been denied ... because although a user might have been prevented from engaging in a noninfringing use of a work using a particular device, the user could engage in the same noninfringing use of the work using a different device.”) (internal quotations omitted).

³⁰ It appears consumers do not own router software and that the petition does not seek to allow for restoration of routers to initial functionality.

³¹ See note 25, *supra*.

execute lawfully obtained software applications, where circumvention is accomplished for the *sole purpose* of enabling interoperability of such applications with computer programs on the device, or to permit removal of software from the device, *and is not accomplished for the purpose of gaining unauthorized access to other copyrighted works.*³² Although these limitations would not undo the likely harm that would result from granting any of the proposed exemptions, they would at least put a check on the permitted uses.³³

ITEM F: DOCUMENTARY EVIDENCE

We have included hyperlinks to webpages/documents within the body of this document. We also attach an Appendix. We are not submitting any other documentary evidence.

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³² 37 C.F.R. § 201.40 (7) (2018) (emphasis added).

³³ See 2018 Rec. at 181 (“The Acting Register agrees that concerns over the potential use of jailbroken devices as platforms for unauthorized content are legitimate, and therefore she believes it appropriate to address.”).

Appendix

The digital ecosystem for enjoying motion pictures continues to evolve to the benefit of copyright owners, their licensees and consumers. MPA's members, and other producers and distributors of quality motion pictures, continue to seize opportunities to reach viewers with content they want to watch, in the formats they desire, for prices that are reasonable, and via devices on which audiences prefer to watch movies and TV shows. Copyright owners are embracing digital technologies to expand the reach of creative works and to make them available to audiences more broadly than ever before.

(a) *Digital Copies Available With Disc Purchases*

DVDs, Blu-ray discs, and Ultra HD discs are often sold in “combination packs” that include a “digital code” the consumer can use to access a downloadable digital copy of the motion picture through a variety of channels. For example, each MPA member that distributes titles on discs generally provides an avenue for redeeming digital codes through its website or through the *Movies Anywhere* website and app (discussed further below). For years, discs have been sold with digital codes, or with actual digital copies included on discs in the package at the time of purchase. These offerings are usually sold at a higher price than offerings that include only a disc with no access to a separate digital copy.

(b) *Disc-To-Digital Through Vudu*

If a consumer owns a disc that did not offer access to a digital copy, that consumer may be able to obtain a digital copy through the [Vudu](#) mobile application by scanning the disc's barcode. This [Disc-to-Digital](#) program enables a consumer who owns a DVD to obtain access to a standard-definition digital copy for \$2.00 or a high-definition digital copy for \$5.00. If the consumer owns a Blu-ray disc or Ultra HD disc, the consumer can obtain access to a high-definition digital copy for \$2.00.

(c) *Digital Retailers and Movies Anywhere*

Numerous digital retailers offer consumers the opportunity to obtain downloads of digital copies of movies and TV shows produced, distributed or owned by MPA members and other copyright owners. New releases are frequently available for \$19.99 in HD quality. Older titles are frequently available in HD quality for as little as \$9.99.

[Movies Anywhere](#) (previously known as “*Disney Movies Anywhere*”) continues to provide consumers with the ability, via its “Key Chest” technology, to link their accounts with participating digital retailers in order to bring eligible movies from those accounts into one synched collection and to make them available across all of their connected retailer accounts. In October 2017, *Movies Anywhere* launched its service with titles from Disney, Marvel and Lucasfilm, and almost every other MPA member. Eligible titles obtained through the redemption of digital codes included with Ultra HD, Blu-ray, and DVD discs, as well as through purchase from participating digital retailers are accessible through *Movies Anywhere*. The number of participating retailers has expanded significantly since the 2018 rulemaking proceeding and now includes [Amazon Prime Video](#), [Google Play](#), [YouTube](#), [iTunes](#), [Apple TV+](#),

[Fandango Now](#), [Microsoft Movies](#), [Vudu](#), [Verizon](#), [Xfinity On Demand](#), and [DIRECTV Movies](#).¹ Any eligible title obtained from a connected account with one of those retailers also becomes available via connected accounts with the other participating retailers' platforms (*i.e.*, once you connect multiple retailer accounts to *Movies Anywhere*, you can view movies purchased from, for example, *Vudu*, within your *Amazon*, *Google Play* and *iTunes* accounts). Consumers have used *Movies Anywhere* to store more than 280 million movies in user collections.

Movies Anywhere users may download movies from *Movies Anywhere* to as many as eight permitted devices for viewing via *Movies Anywhere* at any given time. These downloads are in addition to downloads that may be permitted by the participating retailers through linked accounts (*e.g.*, for viewing via iTunes). The number of times a user may download a single movie through a *Movies Anywhere* account to devices associated with the account is unlimited. A user may download movies to a maximum of sixteen different devices within a rolling twelve-month period. Given the large number of devices that may be used to access content using *Movies Anywhere* and linked accounts with participating digital retailers, a user's movie library becomes accessible to her entire family. Through *Movies Anywhere*, viewers can start streaming a movie on one device and finish it on another; two viewers can watch the same title on different devices at one time; and up to four viewers can stream different content on different devices at the same time.

Viewers can also use the [co-viewing](#) feature to invite up to nine other viewers to join a synched viewing of a movie that the viewers have in their libraries. Finally, *Movies Anywhere* now offers a feature called [Screen Pass](#), which allows eligible users to send up to three *Screen Passes* per month to another user to view a movie in their collection for a limited time with no additional cost. By combining the *Screen Pass* and co-viewing features, the number of viewers eligible to join a synched viewing increases to include users who do not have a title in their personal collection.

(d) *Digital Rental*

Digital retailers, including those mentioned above, and others, make motion pictures available for temporary digital rental at low prices. Once rented, the movies may be streamed directly from these services or downloaded temporarily to devices to enable mobile viewing. Some services, like [Amazon Prime Video](#), give the user up to 30 days to begin watching the movie after the rental price is paid. New release titles are often made available for \$5.99, even in high definition quality. Older titles are available for as little as \$2.99. [Vudu](#) offers free, ad-supported viewing options for some titles. These services supplement the availability of on-demand rentals from cable and satellite television providers.

(e) *Online Streaming Services and Over-The-Top Services*

Consumers continue to embrace streaming services that existed in 2018 – like [Hulu](#) (currently owned by MPA member Disney and MPA member Universal's parent company,

¹ In July 2019, the Ultraviolet digital rights locker service discontinued its operations. Many of the studios and digital retailers in Ultraviolet are currently participating in *Movies Anywhere*. Many Ultraviolet users have transferred their movie collections to *Movies Anywhere*.

Comcast), [Netflix](#) (which is also now an MPA member), [Crackle](#), and *Amazon Prime Video*, among many others, for viewing of both movies and TV shows on mobile devices, computers, smart televisions, and (increasingly during the last three years) cable boxes. In addition, MPA members have launched multiple new streaming services in recent years. [Disney+](#), [HBO Max](#), and [Peacock](#) all offer subscription access to long-time favorites and original programming/movies. HBO Max is currently even making Warner Bros. movies available for streaming for a 31-day period at the same time the films premiere in theaters. For sports programming, [ESPN+](#) is available directly to consumers for \$5.99 per month providing access to exclusive live events, original studio shows, and acclaimed series that are not on the ESPN networks, as well as on-demand access to an extensive archive of ESPN content. [Paramount+](#), which will offer movies from Paramount as well as television shows from other Viacom properties such as *CBS*, *BET* and *Comedy Central*, is scheduled to launch in March 2021.² And streaming services offered by non-MPA members are also proliferating, including [Apple TV+](#), [Discovery+](#), and many others. Streaming services offer consumers access to numerous titles for low monthly fees. For instance, basic access to *Hulu* is currently available for \$5.99 per month (or \$1.99 for college students) or \$59.99 for a year; *Disney+* is available for \$6.99 per month, or \$69.99 for a year; basic *Netflix* access is available for \$8.99 per month; and *Amazon Prime Video* is free to Amazon Prime members. Streaming services are also frequently included in cable television provider bundles. Many titles available on streaming services may also be downloaded for offline viewing while the user remains a subscriber.

Several of these services have also increasingly offered add-on subscription access to additional sources of programming. For example, *Hulu* provides subscription access to *HBO Max*, *Cinemax*, *Showtime* and *Starz*, news networks, broadcast networks and sports programming including on ESPN. This includes *Hulu*'s [Live TV](#) option where consumers can view more than 65 live and on-demand TV channels on Roku, Android devices, iOS devices, Xbox One, Nintendo Switch, Playstation, Apple TV and Chromecast. These types of services allow for the use of multiple devices by a single account, which enables access throughout a household by multiple family members simultaneously.

(f) *Cable, Satellite, IPTV and Fiber-Optic Subscriptions*

Subscription television providers like [Comcast Xfinity](#), [Cox](#), [Spectrum](#), [AT&T TV](#), [Verizon Fios](#), [DISH Network](#), [DIRECTV](#), and [Sling TV](#) continue to offer large numbers of channels for real-time, in-home viewing. In addition, their on-demand and remote access options continue to grow rapidly and to enable access for subscribers to watch live programming. A subscriber to *Comcast Xfinity*, for example, can, on a laptop or mobile device, sign into an account, and watch all of the content stored on an in-home DVR associated with that account. The consumer can also order on-demand movies and TV shows on mobile devices, for limited-time rental or for long-term access. They may also watch linear and on-demand programming from various channels via computers or through apps on mobile devices, smart televisions or other connected devices simply by authenticating their cable or satellite subscription. For example, the same *Comcast Xfinity* subscriber can access the [Disney Now](#) app for free on their mobile device, AppleTV, Roku or other device to watch the live, linear stream of the *Disney*

² Brett Molina, [Streaming service Paramount+, featuring content from CBS, Viacom, to launch March 4](#), USA TODAY (Jan. 19, 2021).

Channel, Disney Junior and Disney XD, as well as to obtain on-demand access to a library of popular shows, shorts, and other content. These “TV Everywhere” services have revolutionized the way consumers enjoy their television and on-demand programming.

(g) *TV Shows and Movies Accessible Directly From Networks and Apps*

Networks continue to make more and more programming available for viewing directly to consumers, including back catalogues of programming and even live viewing of linear content, through websites and mobile applications, often for free (usually in exchange for watching advertising). For example, abc.com and the [ABC mobile app](#) allow free, ad-supported access to recent episodes of popular TV shows and full seasons of many “throwback” favorites. New episodes stream on-demand the day after they air for authenticated subscribers of cable and satellite provider partners. In addition, consumers have increasingly greater options for viewing movies and TV shows on ad-supported free video-on-demand (“AdVOD”) streaming platforms, such as *YouTube*, [IMDb TV](#) and [Tubi](#). These AdVOD platforms allow viewers to stream a variety of content via multiple devices without having to pay a fee to access such content.