

Before the
U.S. COPYRIGHT OFFICE, LIBRARY OF CONGRESS

**In the matter of Exemption to Prohibition on Circumvention
of Copyright Protection Systems for Access Control Technologies**

Docket No. 2014-07

Petition of Electronic Frontier Foundation and Kendra Albert

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The Electronic Frontier Foundation submits the following petition and respectfully asks the Librarian of Congress to exempt the class of copyrighted works described below from 17 U.S.C. § 1201(a)(1)'s prohibition on the circumvention of access control technologies for 2015-2018.

Proposed Class: Literary works in the form of computer programs, where circumvention is undertaken for the purpose of restoring access to single-player or multiplayer video gaming on consoles, personal computers or personal handheld gaming devices when the developer and its agents have ceased to support such gaming.¹

I. The Commenting Party

The Electronic Frontier Foundation (EFF) is a member-supported, nonprofit public interest organization devoted to maintaining the traditional balance that copyright law strikes between the interests of copyright owners and the interests of the public. Founded in 1990, EFF represents thousands of dues-paying members, including consumers, hobbyists, computer programmers, entrepreneurs, students, teachers, and researchers, who are united in their reliance on a balanced copyright system that ensures adequate protection for copyright owners while facilitating innovation and broad access to information in the digital age.

II. Proposed Class: Videogames Abandoned By The Manufacturer

We propose an exemption for lawfully acquired copies of computer programs, for the purpose of continuing to play videogames that are no longer supported by the developer, and that require

¹ Petitioners expect to further develop the proposed exemption consistent with the principles identified in this petition and the record developed in the course of this proceeding.

communication with a server. For these works, continued play requires eliminating checks to authentication servers for games where the developer or its agent has permanently shut down such servers, or modifying access controls in the software that control access to multiplayer matchmaking servers so that users can switch to third-party servers when the servers authorized by the developer are permanently shut down. This exemption would serve player communities that wish to continue using their purchased games, as well as archivists, historians, and other academic researchers who preserve and study videogames and are currently inhibited by legal uncertainty because of §1201(a)(1).

III. Copyrighted Works Sought to be Accessed: Videogames, After Developer Support Has Ended

The copyrighted works at issue are videogames (audiovisual works distributed as computer programs) that must communicate with a remote computer (a server) in order to enable core functionality, and that are no longer supported by the developer. These games may run on personal computers, game consoles, or handheld gaming devices. By core functionality, we mean single-player or multiplayer play. By no longer supported by the developer, we mean that the developer and its authorized agents have ceased hosting authentication or matchmaking servers. For example, Electronic Arts regularly shuts down servers for games approximately a year and a half to two years after their release.²

Multiplayer servers in the context of this exemption refers to servers that match players together to play competitive or cooperative games, known as matchmaking servers. For example, Civilization 5 and Mario Kart Wii use matchmaking servers to enable multiplayer play. The exemption is not intended to reach “persistent worlds,” in which the game’s audiovisual content is primarily stored on the developer’s server and not in the client. Thus, this exemption would not apply to massive multiplayer online role-playing games such as World of Warcraft or Wildstar.

IV. Technological Protection Measure: Communication with Servers

The technological protection measures that control access to these works come in a variety of different specific formats.

Many games, such as Nintendo’s Mario Kart, use special protocols to communicate between server and client. In order to replicate the communications that the client expects to receive from the servers, gamers must reverse engineer the protocol. Because replicating a server protocol requires applying secret information in order to access game functionality, server protocols may be technical measures that effectively control access to the work.³ Players may also need to make changes to the game software in order to allow connection to new servers.

² EA shutdown its servers in 2010, Michael Thompson, *EA shuts down 25 game servers, including Madden 09*, ARS TECHNICA (Jan. 7, 2010) <http://arstechnica.com/gaming/2010/01/ea-shuts-down-25-game-servers-including-madden-09/>, and again in 2012. Andrew Groen, *EA announces server shutdown for 14 games, citing dwindling player numbers*, ARS TECHNICA (March 19, 2012), <http://arstechnica.com/gaming/news/2012/03/ea-announces-server-shutdown-for-14-games-citing-dwindling-player-numbers.ars>.

³ See *MDY Indus., LLC v. Blizzard Entm’t, Inc.*, 629 F.3d 928, 955 (9th Cir. 2010) (Game server protocol that required client software to report on the contents of the computer’s memory was an

In addition, many games “phone home” to a central server to check for the presence of an activation key. After the server goes offline, the ability to play the game at all is lost.

V. Noninfringing Uses: Modifying a Game to Enable Continued Play, Preservation, Research, or Study

The computer programs described above are used for continued play, study, and to preserve them in a usable state for future generations. Modifying game software may involve the creation of a derivative work, in the form of a new version of the game that will play without a server authentication check or one that connects to new matchmaking servers. It may also involve the making of intermediate copies while reverse-engineering authentication mechanisms or server communication protocols. These copies and modifications are made in order to access the functionality of lawfully acquired software.⁴ The four statutory factors of 17 U.S.C. § 107 support a finding of fair use.

Under the first factor, the purpose and character of the use is to enable lawful copies of game software to run and to interoperate with copies used by other players. Interoperability is a favored purpose under copyright law.⁵ Moreover, modifying a lawful, personal copy is noncommercial, which further supports fair use under the first factor.⁶

When evaluating the second factor, the nature of the work, courts look to whether the work is expressive or functional.⁷ Video games, like all computer programs, contain “many logical, structural, and visual display elements that are dictated by the function to be performed, by considerations of efficiency, or by external factors such as compatibility requirements and industry demands.”⁸ The fair use doctrine enables the manipulation and copying of software code in order to gain access to the ideas and functions embedded within it that are not protected by copyright, including server communication protocols.⁹ Moreover, the portions of the software that must be modified – the portions that interact with an authentication or matchmaking server – are entirely functional.

The third statutory factor is the “amount and substantiality of the portion used,” i.e., that the “quantity and value of the materials used are reasonable in relation to the purpose of the copying.”¹⁰ The exact amount of the work copied depends upon the type of circumvention required. However, in all cases, the amount copied is the minimum needed in order to allow the game to be playable. The portion of a game that must be modified to enable play after server

effective technical measure); *Davidson & Associates v. Jung*, 422 F.3d 630, 640 (8th Cir. 2005).

⁴ *Sega Enterprises, Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1528 (9th Cir. 1992), *Sony Computer Entertainment v. Connectix Corp.*, 203 F.3d 596, 608 (9th Cir. 2000).

⁵ *Sega*, 977 F.2d 1510 (9th Cir. 1992); *Sony* 203 F. 3d at 608; *see also Kelly v. Arriba Soft Corp.*, 336 F. 3d 811 (9th Cir. 2003), *Perfect 10, Inc. v. Amazon, Inc.*, 508 F.3d 1146 (9th Cir. 2007); *Authors Guild, Inc. v. HathiTrust*, 755 F.3d 87 (2d Cir. 2014); *Fox News Network, LLC v. TVEyes, Inc.*, No. 13 CIV. 5315 AKH, 2014 WL 4444043 (S.D.N.Y. Sept. 9, 2014).

⁶ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 584 (1994).

⁷ *Sega*, 977 F.2d at 1524.

⁸ *Id.* at 1524.

⁹ *See Sony*, 203 F.3d at 602.

¹⁰ *Campbell*, 510 U.S. at 586-87.

shutdown is a very small portion of the overall software. Thus, the third factor supports a finding of fair use.

The fourth factor, the effect of the use on the market for the work, takes into account the direct harms caused by a particular use on the market or the value of the work.¹¹ This factor also favors a finding of fair use. Circumventing server authentication or running new multiplayer servers does not harm the market for an abandoned game and may in fact increase its value to forward-looking consumers who value the long-term playability of a game. In many cases, developers abandon a game when sales have already declined to the point where operating a server is no longer economical. Any harm to the market for a work vanishes when the work is no longer sold.

VI. Adverse Effects of the Prohibition on Circumvention

Absent an exception, circumventing technological measures to access and provide servers for online games creates legal uncertainty. The possibility of circumvention liability has had significant chilling effects on two different, yet overlapping communities: gamers, who wish to play games that they lawfully own, and archivists, game preservationists and scholars.

The threat of liability inhibits the archiving and preservation community, in both its formal and informal guises. The inability to play older games (because the necessary servers have been shut down) inhibits scholarship and research as well – it is much more difficult for game scholars to access older works due to a lack of playable archival copies, and archivists have less incentive to preserve games that are unplayable or only partially playable. Jerome McDonough, a professor who specializes in digital preservation, put it simply. “Digital media are inherently fragile and the ability to migrate games to new hardware/media is critical to any preservation activity we might take, whether through migration or emulation. [The] DMCA’s technological protection measure language takes the difficult case of software preservation and transforms it into a fundamentally impossible case.”¹² In the case of multiplayer games, it can be impossible for scholars to replicate the experience of playing the game, since player communities often die when servers are deactivated.

An exemption for academic and preservation use alone will not eliminate the adverse impacts of Section 1201(a)(1). Game preservation projects rely on players and amateur collectors to do a significant amount of the legwork involved in saving modern releases.

¹¹ *Id.*, *Perfect 10*, 508 F.3d at 1167; *Sony*, 203 F.3d at 605-06.

¹² Email from Jerome McDonough, Associate Professor, Graduate School of Library and Information Science, University of Illinois, to Kendra Albert (July 30, 2014) (on file with petitioner).

Additionally, gamers want to be able to continue to play games they have lawfully purchased. While player communities have set up alternative servers for abandoned games, notably for the Nintendo Wii and DS,¹³ many such efforts are inhibited by the threat of circumvention liability,¹⁴ and by some game companies' legal efforts to restrict reverse engineering.¹⁵

The likelihood of substantial adverse impact on gamers continues to increase because of the dynamics of the game industry. Beginning in the late 2000s, a number of games have been released where even single-player play required online access. Assassin's Creed 2 (2009) became notorious for requiring a connection to a server run by the developer, and losing player progress if the connection was dropped. In addition, authentication server failures can also cause unexpected behavior, so that even games that are designed to have offline modes can in fact be unplayable if server communication is lost. Even Steam,¹⁶ usually a reliable platform for gameplay, has had serious offline mode failures. These changes mean an even stronger link between server shutdowns and loss of playability and functionality.

Already, authentication servers for some products using the always-online single player model have shut down, suggesting an uncertain future for these games. Another troubling trend for the preservation and continued playability of games is the move to digital sales mediated by third parties, like Steam, PlayStation Network (PSN) or Xbox Live. In 2013, 53% of game sales were digital – up from 41% in 2012. Although digital sales have numerous advantages, and many consumers find them preferable to buying physical media, they introduce additional failure points into the games. Developers may run their own authentication servers, but games may also be required to “check in” with the platform the game was purchased from. This creates another set of servers that must continue to function for games to be playable.

As games deactivate and servers shut down, the ability to modify authentication controls and start new servers is vital to preserving player communities. Communities can disperse quickly once gameplay becomes impossible. Removing the barriers of the anti-circumvention provision will allow players to continue to explore and play games they already own, and help preservationists remove authentication mechanisms in order to format shift games so that future gamers may enjoy and learn from them.

¹³ Wiimfi Server, Wii-Homebrew.com, <http://forum.wii-homebrew.com/board42-kreativitaet/mkw-server-project-english/51254-wiimmfi-server/?s=0283a78bfc75248bbd43a69adb6d41b70e6919e>; DWC Network Server Emulator, GitHub https://github.com/polaris-/dwc_network_server_emulator.

¹⁴ See, e.g., *Jung*, 422 F.3d at 640.

¹⁵ See Dan Reisinger, *PS3 Jailbreak Prompts Restraining Order from Sony*, CNET (Jan. 12, 2011), http://news.cnet.com/8301-13506_3-20028248-17.html?part=rss&subj=news&tag=2547-1_3-0-20.

¹⁶ *Welcome to Steam*, STEAM. <http://store.steampowered.com/>.