



April 30, 2019

Ms. April Tabor
Acting Secretary
Federal Trade Commission
Office of the Secretary, Room H-113 (Annex E)
600 Pennsylvania Ave., NW
Washington, DC 20001

Re: *Nixing the Fix – The Federal Trade Commission’s Workshop on Repair Restrictions*

Dear Acting Secretary Tabor:

The Entertainment Software Association (“ESA”) is pleased to submit these comments in connection with the Federal Trade Commission’s above-referenced workshop. ESA represents the major game console manufacturers and almost all of the major video game publishers in the United States.¹

ESA’s members are leaders in bringing creative and innovative products and services into American homes and have made major contributions to the U.S. economy. In 2018, ESA’s members generated more than \$43 billion in revenue and provided 220,000 jobs across all fifty states.² The makers of the three major game consoles, Microsoft, Nintendo of America, and Sony Interactive Entertainment (“Console Makers”), are members of ESA.

ESA and the Console Makers have a strong interest in ensuring that game console owners have access to affordable, high-quality, safe, and reliable repairs. All three Console Makers offer repair services beyond the warranty period. Keeping consoles in good working order and ensuring product integrity are important to Console Makers, for several reasons:

- (1) Consoles incorporate electronic protections related to security and safety features (e.g., safety shutdown fail-safes for laser power, system temperature limits, and other operational faults);
- (2) Our members want players to enjoy using their products and to associate their brands with positive experiences. Players who have a great experience often stick with a particular brand of console, through multiple generations, and Console Makers work hard to earn that loyalty; and

¹ The ESA is the U.S. trade association serving companies that publish computer and video games for game consoles, handheld devices, personal computers and the Internet. A complete list of ESA’s member companies is available at <http://www.theesa.com/about-esa/members/> (last reviewed April 25, 2019).

² Press Release, Entertainment Software Association, *U.S. Video Game Sales Reach Record-Breaking \$43.4 Billion in 2018* (Jan. 22, 2019), <http://www.theesa.com/article/u-s-video-game-sales-reach-record-breaking-43-4-billion-2018/>.

- (3) Video game consoles are the gateway to a wide range of exciting video games, from competitive racing games to action and adventure. Dozens of publishers develop games for the consoles. Top games can take several years to develop and cost tens of millions or, in some cases, over a \$100 million to produce. Game publishers rely upon the security features of the video game console to help safeguard their copyrighted works, as further explained below.

ESA appreciates this opportunity to share how the Console Makers design their game consoles and implement mechanisms that protect the integrity of the products, the safety of their customers, and valuable intellectual property. Console Makers do this consistent with offering robust warranty and repair services, in compliance with the Magnuson-Moss Warranty Act, that ensure consumers are able to continue using their products safely and reliably, while also protecting the Console Makers' and publishers' intellectual property.

Background on Video Game Consoles and Video Games

Video game consoles are custom designed and optimized for the playback of video games. Console Makers rely upon integrated software, working in tandem with finely tuned hardware, to perform this specialized function and bring to life publishers' thrilling game experiences. The consoles include an operating system and firmware (software embedded into the device's permanent memory). Within that integrated software is a system of digital locks designed to protect both the game console software as well as provide a secure media environment for video game playback.

Software programs, such as video games, are protected under federal copyright law. Section 1201 of the U.S. Copyright Act, also known as the Digital Millennium Copyright Act ("DMCA"), prohibits tampering with the digital locks that copyright owners use to protect this software.³ Video game publishers depend upon the security features of the game consoles to prevent play of unauthorized copies of video games. These security features, known as "technological protection measures" ("TPMs"), are crucial for copyright protection and are allowable under the law. Other electronic safeguards also protect important game console security and safety features, such as features that control safety shutdown fail-safes.

Console Makers' Design Considerations

In designing their consoles, Console Makers balance a variety of considerations, including but not limited to, safety, security, functionality, sustainability, repairability, reliability, aesthetics, weight, and portability. Console Makers primarily design their consoles to appeal to consumers, including a safe and secure game play environment.

Repairability is one factor, among many, that Console Makers consider when designing their products. Console Makers have no economic interest in making repairs more difficult to perform—for themselves, customers, or other parties. Console Makers do not generate substantial profit from repairs. In fact, some Console Makers subsidize some repairs, in effect performing them at a loss.

³ Final Rule, *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 83 Fed. Reg. 54010 (Oct. 26, 2018), available at <https://www.govinfo.gov/content/pkg/FR-2018-10-26/pdf/2018-23241.pdf> [hereinafter *Exemption Final Rule*].

Some design decisions help lower manufacturing costs. Certain design decisions result in a product that is easier to manufacture, which means less production cost and, ultimately, a lower price for the consumer. For example, the use of more energy efficient chips may reduce the need for heat sinks, fans, or other measures to cool the electronics.

Other design choices may be driven by the need for portability, which requires a slimmer and lighter design that may be harder to repair due to the device's space constraints.

Improved durability is another driver of design. Custom components may enable manufacturers to produce more durable products because the parts have been designed to be more resilient than commonly available components. Similarly, both custom and non-custom parts may be attached in particular ways to enhance that resiliency (e.g., soldered component vs. modular component). Despite these design decisions, consoles generally do not require proprietary tools to open or repair them. In fact, compatible tools, such as tri-wing screwdrivers, are inexpensive and widely available.⁴

Finally, there is a general trend in the video game console industry toward component integration, which reduces certain manufacturing costs. While component integration is one factor in keeping video game consoles affordable to consumers, it may have the unintended effect of making it more challenging to repair a failed component that is integrated with one that is still operable. In addition, Console Makers have at times used adhesives to optimize product design and for safety reasons. For example, adhesives serve an important safety function in preventing access to lithium-ion batteries, which present special safety considerations (both for repair and proper disposal).

Console Makers may impose restrictions against modifying the console system software. These restrictions help prevent hacking that could insert malware onto the system or allow unauthorized copies of video games to be played on the console (video game piracy).

While some of these design choices may have an incidental impact on repairs, their primary objectives are to achieve important and legitimate features and functionalities that are valuable to the user as well as the Console Maker.

Regarding other specific repair practices, which FTC staff raised in its request for data, Console Makers do not use product scans or other diagnostics to determine whether a product has been opened or repaired by another party. They also do not use stickers or labels that warn or imply that third party repair will void a warranty, nor software updates that make products obsolete or unfixable if they have been repaired by unauthorized parties.

Some Repairs May Compromise TPMs and Electronic Safeguards

Some game console repairs may require replacing hardware components or parts of components, and some of these hardware fixes may require the console TPMs to be circumvented (i.e., disabled in whole or in part), exposing the firmware to tampering and putting at risk the secure media ecosystem relied upon by dozens of third party game publishers. In addition, some hardware fixes may

⁴ For example, on Amazon.com, a search for "tri-wing screwdriver" lists hundreds of results. See Amazon.com., https://www.amazon.com/s?k=tri-wing+screwdrivers&crd=2DOHPULE6ZCGQ&sprefix=tri-wing%2Caps%2C112&ref=nb_sb_ss_i_1_8 (last visited Apr. 30, 2019).

require components of the console to be “re-authenticated” to restore the console to a functional state. Because the console cannot readily determine which modifications and repairs are legitimate versus which ones are done with the purpose of bypassing the console’s security features, a console may need to be “re-authenticated” by the console maker in order to restore the console to a functional state, depending upon what sort of hardware modifications have been made.

As a practical matter, the use of TPMs tends to limit the ability to make certain types of repairs to consoles and other products to authorized parties. But TPMs and other design choices reflect a necessary weighing of multiple risks described below.

First, infringement of video game software costs the industry substantial lost revenue. A broad mandate opening up the firmware to access by unauthorized parties for the purpose of effecting certain hardware repairs could provide an opportunity for bad actors to thwart TPMs, to the detriment not only of Console Makers but to the dozens of game publishers who depend upon that secure media ecosystem. Indeed, it is this very concern that prompted the Librarian of Congress to expressly exempt game consoles from a proposed temporary DMCA exemption on “right to repair.” In its 2018 rulemaking, the Librarian of Congress, through the U.S. Copyright Office, recently considered many of these same issues and decided not to grant an exemption that would have permitted unauthorized access to digital copies of copyrighted works such as video games under a “right to repair.”⁵ The Copyright Office recommended, and the Librarian adopted, rules that permit consumers to circumvent TPMs on software programs that control the functioning of motorized land vehicles, smartphones, and home appliances/home systems for repair purposes. These decisions were based upon arguments made in the record by proponents that the maintenance of such products is likely to be a non-infringing use. Notably, however, the Librarian and the Register found that there was insufficient evidence in the record to support an exemption that would allow the unauthorized repair of video game consoles. Moreover, the Register cited concerns flagged by the video game industry that permitting such an exemption with respect to game consoles could expose game software to mass infringement.

Second, in addition to facilitating video game piracy, allowing modifications to consoles’ firmware could compromise the security for the device and harm consumers, Console Makers, and game publishers in other important ways. For example, certain modifications to consoles’ firmware could impact safety and compliance factors built into the system that control safety shutdown fail-safes for laser power, system temperature limits, and other operational faults.

Third, apart from TPMs, other electronic security safeguards help protect against hacking, which poses a risk both to consumers’ game play experience and any personal data that may be stored locally. Accordingly, permitting repair by unauthorized parties may create risks that bad actors could exploit.

Fourth, power supplies made by third parties may not meet the same safety and/or technical specifications of the manufacturer, and as a result, could function improperly or dangerously.

⁵ See *Exemption Final Rule*, *supra* note 3, at 54021. That ruling pertains to 17 U.S.C. § 1201 (part of the DMCA), which prohibits hacking of TPMs employed by, or on behalf of, copyright owners to prevent unauthorized access to digital copies of copyrighted works. To ensure that the law does not prevent legitimate uses, Section 1201 directs the Librarian of Congress, upon the recommendation of the Copyright Office, to evaluate and, as appropriate, adopt limited, temporary exemptions from the general prohibition against hacking of TPMs. The Librarian makes these determinations following an extensive rulemaking proceeding administered by the Copyright Office every three years.

Conclusion

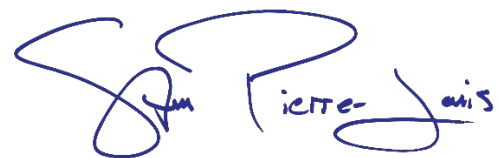
A vibrant and competitive video game marketplace requires Console Makers to design products that are responsive to consumer needs and interests. These considerations involve not just repairability but extend to safety, durability, portability, functionality, and security. In light of these dynamics, video game console hardware and software design and safety features do not serve as mechanisms to harm consumers or businesses in secondary repair markets, but rather serve to protect and promote the important consumer and business benefits described above.

As the Commission begins framing the issues for the upcoming workshop, ESA respectfully requests that the FTC staff examine evidence on the full range of effects of product designs and practices, rather than looking solely at the impact on repairs in isolation. For example, the staff should weigh the following:

- Whether design choices lower the cost of manufacturing the product, or improve its quality, including durability, portability, or other metrics important to customers;
- How much harm to consumers would result if the compliance and safety systems described above were not protected through mechanisms like electronic safeguards and other design choices;
- The role electronic safeguards provide to both consumers and Console Makers in protecting against the theft of personal data and other threats to user privacy;
- The important balance that robust, cost-effective protection of game publishers' copyrighted content provides in ensuring that consumers have access to a broad range of game experiences; and
- The additional costs publishers would incur fighting mass infringement if TPMs were compromised.

ESA looks forward to a productive discussion and analysis of the effects of repair practices and related product design features, including the substantial benefits they can provide both to consumers and the game industry.

Sincerely,



Stanley Pierre-Louis
Acting President and CEO
Entertainment Software Association