

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010

Entertainment Software Association Petition for Class Waiver of Sections 716 and 717 of the Communications Act and Part 14 of the Commission's Rules Requiring Access to Advanced Communications Services (ACS) and Equipment by People with Disabilities

CG Docket No. 10-213

**PETITION OF THE ENTERTAINMENT SOFTWARE
ASSOCIATION FOR EXTENSION OF WAIVER**

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October 27, 2017

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INTRODUCTION AND SUMMARY

On three separate occasions, including an order issued less than a year ago, the Consumer and Governmental Affairs Bureau (“Bureau”) has determined that (1) video game software is eligible for a waiver of the Federal Communications Commission’s Part 14 advanced communications services (“ACS”) rules and (2) good cause existed to waive these rules.¹ These waivers have enabled the video game industry to release innovative games that are increasingly accessible—even as it continues to experiment with ACS accessibility solutions for video game software, which presents unique accessibility challenges compared with software designed for the primary purpose of ACS.²

Entertainment Software Association (“ESA”)³ members have made meaningful progress on ACS accessibility solutions since the Bureau issued its last order, but significant challenges remain. Accordingly, pursuant to 47 U.S.C. § 617(h)(1) and 47 C.F.R. §§ 1.3 and 14.5, and consistent with the Bureau’s determination that ESA could “come back to the Commission at a later time to request another extension of the waiver,”⁴ *ESA respectfully requests that the Bureau issue one **final** extension of the current ACS waiver for video game software for a twelve-month period, through December 31, 2018.*

¹ See generally *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010 et al.*, Order, 31 FCC Rcd. 13,464 (CGB 2016) (“2016 Waiver Order”); *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010 et al.*, Order, 30 FCC Rcd. 10,016 (CGB 2015) (“2015 Waiver Order”); *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010 et al.*, Order, 27 FCC Rcd. 12,970 (CGB 2012) (“2012 Waiver Order”).

² 2016 Waiver Order ¶¶ 25-26.

³ The ESA is the U.S. association exclusively dedicated to serving the business and public affairs needs of companies that publish computer and video games for video game consoles, handheld devices, personal computers, and the internet.

⁴ 2016 Waiver Order ¶ 28.

This modest extension of the current waiver would serve the public interest. ESA’s members strongly believe that all of their customers—including those with disabilities—should be able to enjoy the rich and engaging entertainment offered by video games. As set forth in ESA’s recent Mid-Year Status Report in this proceeding⁵ and explained further below, the video game industry has made real and demonstrable progress on accessibility over the past year. Extending the waiver will allow the industry to continue to experiment with accessibility solutions for ACS features in video game software, while at the same time incorporating non-primary ACS features in games.

In addition, although the accessibility approaches identified by ESA are still nascent—and the video game industry is characterized by rapid technological change—ESA anticipates that a twelve-month waiver extension will provide sufficient experience with these approaches so that challenges that remain at the end of the extension would then be handled within the achievability framework contemplated by the Communications and Video Accessibility Act.⁶

I. VIDEO GAME SOFTWARE CONTINUES TO BE ELIGIBLE FOR WAIVER.

The ACS rules contemplate that the Commission may waive ACS obligations for services and equipment that, while capable of accessing ACS, are designed primarily for purposes other than using ACS.⁷ In evaluating the “primary purpose” of the equipment or services, the Commission considers, on a case-by-case basis, whether the manufacturer designed the offering primarily to be used for ACS by the general public or for another primary reason, and whether

⁵ See generally Mid-Year Status Report of the Entertainment Software Association, CG Docket No. 10-213 (filed June 30, 2017) (“2017 Mid-Year Report”).

⁶ See 47 U.S.C. § 617(a)-(b); 47 C.F.R. § 14.20.

⁷ See 47 C.F.R. § 14.5(a)(1)(i)-(ii).

the manufacturer or provider marketed the equipment or service primarily for its ACS functions.⁸ The Commission may also consider the extent to which ACS supports another feature, purpose, or task, as well as the impact that removal of the ACS feature would have on the “primary purpose” of the equipment or service.⁹ Finally, for class waivers, the Commission also considers whether the services or equipment “share common defining characteristics.”¹⁰

As the Bureau ruled just last year, video game software meets the Part 14 waiver eligibility requirements because (1) it “is defined with sufficient specificity and shares enough common defining characteristics to be granted a class waiver” and (2) “video game software is capable of accessing ACS, but is nonetheless designed primarily for purposes other than the use of ACS.”¹¹ This is still the case today.

First, as ESA has explained, numerous parties treat video game software designed for game play as a clearly defined class of products separate from other forms of software, internet services, and entertainment media.¹² The Bureau has agreed with this assessment, finding that “video game software [which] include[s] playable games on any hardware or online platform, including game applications that are built into operating system software” constitutes a sufficiently separate category of devices to warrant a class waiver.¹³ ESA proposes that the

⁸ See *id.* § 14.5(a)(2)(i)-(ii); see also *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010 et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Red. 14,557, ¶ 186 (2011) (“ACS Report and Order”).

⁹ See *ACS Report and Order* ¶ 186.

¹⁰ 47 C.F.R. § 14.5(b).

¹¹ *2016 Waiver Order* ¶¶ 20-21.

¹² Petition for Extension of Waiver of the Entertainment Software Association at 3, CG Docket No. 10-213 (filed Oct. 18, 2016) (“2016 Waiver Request”).

¹³ *2015 Waiver Order* ¶ 16.

Bureau continue to use this same definition when assessing ESA’s waiver extension request, just as it has for previous petitions.

Video game software also continues to be designed primarily for the purpose of game play, and not ACS. As the Bureau explained last December, ACS plays “only a peripheral role in video game software,” and that “the role of ACS as a complement to game play [is] no more significant” than it was when the Commission first granted a Part 14 class waiver for video game software.¹⁴ The importance of ACS features to the overall game experience likewise has not changed over the past ten months.

The Part 14 waiver rules contemplate that, when evaluating petitions, the Commission will examine “[w]hether and how the advanced communications functions or features [for the equipment at issue] are advertised, announced, or marketed.”¹⁵ Thus, “[a]mong the factors used to determine whether ACS is a primary or co-primary use in gaming is the extent to which the ACS functionality is advertised, announced, or marketed to consumers as a reason for purchasing, installing, downloading, or accessing the equipment or service.”¹⁶ Again, as the Bureau recognized last December, the “numerous examples of current marketing materials” for video games provided by ESA have “demonstrate[d] that video game software marketing . . . emphasizes game playing, not ACS.”¹⁷

As illustrated by the materials described below, in Exhibit A, and in the Mid-Year Report, the industry’s current marketing activities for video game genres—including action

¹⁴ *2016 Waiver Order* ¶¶ 10 (quoting Petition of the Entertainment Software Association for Partial Extension of Waiver, CG Docket No. 10-213, at 1, 4 (filed May 22, 2015)), ¶ 15.

¹⁵ 47 C.F.R. § 14.5(a)(2)(ii).

¹⁶ *2012 Waiver Order* ¶ 35.

¹⁷ *2016 Waiver Order* ¶ 21.

games, sports games, role-playing games, and strategy games—continue to focus on game play.¹⁸

Action games. *Destiny 2* is a first-person action game developed by Bungie Inc. and published by Activision last month. *Destiny 2* takes place in a science-fiction universe in which “[h]umanity’s last safe city has fallen to an overwhelming invasion force” that players must fight to reclaim.¹⁹ Players choose to play as a character in one of three classes (hunter, titan, or warlock). Although *Destiny 2* supports chat functionality, the website and box art for this game do not mention this feature.²⁰ Rather, the *Destiny 2* marketing materials include depictions of characters and in-game destinations, and the website content focuses on game modes, character classes, armor, and abilities, as well as accolades that the game has received.²¹

This summer, Nintendo released *Splatoon 2*, an action game for the Nintendo Switch console. In *Splatoon 2*, players control “Inklings,” which are characters that use colored ink to claim turf and complete other objectives.²² *Splatoon 2* includes a setting that allows a player to “lock” various ink color combinations to create game play modes that can be more accessible to gamers with limited or no color perception. The website for *Splatoon 2* features high resolution pictures of Inklings as well as descriptions of game play objectives and other game features.²³ The website also describes game modes and various game play tips, including the use of voice

¹⁸ See Exhibit A; 2017 Mid-Year Report at 3-6; 2017 Mid-Year Report Exhibit A.

¹⁹ DESTINY THE GAME, *The Story of Destiny 2*, <https://www.destinythegame.com/story> (last visited Oct. 26, 2017).

²⁰ See Exhibits A-5–A-6; DESTINY THE GAME, *Game*, <https://www.destinythegame.com/game> (last visited Oct. 26, 2017).

²¹ DESTINY THE GAME, *Destiny 2*, <https://www.destinythegame.com/> (last visited Oct. 26, 2017).

²² See generally NINTENDO, *Splatoon 2*, splatoon2.nintendo.com (last visited Oct. 26, 2017).

²³ See *id.*

chat with the smart device app when the gamer is playing online.²⁴ However, this text appears in the “game modes” section of the website approximately two-thirds of the way down the page in the same font size as the other marketing text, and on a page that provides additional information about the smart device app that is presented if the user clicks on a “learn more” link.²⁵

Sports Games. *Pro Evolution Soccer 2018* is a highly-rated soccer game published by Konami in September. The marketing materials for *Pro Evolution Soccer 2018* highlight game play features such as ball control, “enhanced visual reality” provided by collecting real-world data from stadiums and players, and online play.²⁶ Although the game supports voice chat, this functionality is not mentioned at all in the “Features,” “Spec List,” or other prominent sections of the *Pro Evolution Soccer 2018* website.²⁷ Rather, there is only a reference to it on the “FAQ & Inquiry” section of the website in the middle of a list of 17 questions.²⁸

Role-Playing games. *Mass Effect: Andromeda* is the latest title in the acclaimed *Mass Effect* series of science fiction action role-playing games developed by BioWare and published by Electronic Arts.²⁹ The marketing materials for *Mass Effect: Andromeda* invite users to “[e]mbark on a mission beyond the borders of our known universe,” and “[n]avigate the uncharted reaches of the Andromeda Galaxy to unravel its mysteries, discover vivid alien

²⁴ See NINTENDO, *Splatoon 2, Game Modes*, splatoon.nintendo.com/game-modes (last visited Oct. 26, 2017); Nintendo, *Splatoon 2, Splatnet2*, splatoon.nintendo.com/splatnet2/ (last visited Oct. 26, 2017).

²⁵ See *id.*

²⁶ KONAMI, *New Feature*, https://www.konami.com/wepes/2018/us/en-us/page/new_feature (last visited Oct. 26, 2017); Exhibit A-8.

²⁷ *Id.*; KONAMI, *Spec List*, <https://www.konami.com/wepes/2018/us/en-us/page/product> (last visited Oct. 26, 2017); KONAMI, *Product Information*, https://www.konami.com/wepes/2018/us/en-us/page/group_product (last visited Oct. 26, 2017).

²⁸ KONAMI, *FAQ & Inquiry*, <https://www.konami.com/wepes/2018/faq/2018/us/en-us/ps4/category?category=spec> (last visited Oct. 26, 2017).

²⁹ ELECTRONIC ARTS, *Mass Effect: Andromeda*, <https://www.masseffect.com> (last visited Oct. 26, 2017); Mid-Year Report Exhibits A-1–A-5.

worlds, and lead the charge to find humanity a new home among the stars.”³⁰ The game features a single player mode as well as a cooperative mode in which the user can play the game with between 2-4 other players.³¹ Toward the end of the multiplayer section of the *Mass Effect: Andromeda* website there is text noting that players should “[p]lay as a team. Stick together, support each other, and communicate.”³² However, the marketing materials do not specifically mention the game’s support for voice chat.³³

Final Fantasy XIV: Stormblood, released in June, is an expansion to Square Enix’s popular massively multiplayer online roleplaying game. The website for *Final Fantasy XIV: Stormblood* includes descriptions of game lore, depictions of game maps, and summaries of new adventures characters can undertake.³⁴ Although the marketing materials for *Final Fantasy XIV: Stormblood* list several of the game’s features, they do not discuss the game’s support for text chat.³⁵

Strategy games. *Halo Wars 2* is a real-time strategy game developed by 343 Industries/Creative Assembly and published by Microsoft Studios.³⁶ *Halo Wars 2* takes place in

³⁰ ELECTRONIC ARTS, *Mass Effect: Andromeda, About*, <https://www.masseffect.com/about> (last visited Oct. 26, 2017).

³¹ See ELECTRONIC ARTS, *Mass Effect: Andromeda, Gameplay*, <https://www.masseffect.com/gameplay> (last visited Oct. 26, 2017); Mid-Year Report Exhibits A-1–A-2 and A-4–A-5 (box art indicating number of simultaneous players).

³² ELECTRONIC ARTS, *Mass Effect: Andromeda, News*, <https://www.masseffect.com/news/multiplayer> (last visited Oct. 26, 2017).

³³ See ELECTRONIC ARTS, *Mass Effect: Andromeda*, <https://www.masseffect.com> (last visited Oct. 26, 2017); Mid-Year Report Exhibits A-1–A-5.

³⁴ See SQUARE ENIX, *Final Fantasy XIV: Stormblood, Lore*, <https://na.finalfantasyxiv.com/stormblood/story/> (last visited Oct. 26, 2017); SQUARE ENIX, *Final Fantasy XIV: Stormblood, Gameplay*, <https://na.finalfantasyxiv.com/stormblood/contents/> (last visited Oct. 26, 2017); Exhibit A-4.

³⁵ See SQUARE ENIX, *Final Fantasy XIV: Stormblood, Systems*, <https://na.finalfantasyxiv.com/stormblood/system/> (last visited Oct. 26, 2017); Exhibit A-1–A-4.

³⁶ MICROSOFT, *Halo Wars 2*, <https://www.halowaypoint.com/en-us/games/halo-wars-2> (last visited Oct. 26, 2017); Mid-Year Report Exhibit A-11.

the in-game universe of the *Halo* franchise, and enables gamers to construct bases and take command of Halo units from a birds-eye view of the battlefield.³⁷ The marketing materials for *Halo Wars 2* highlight features including an “[a]ll-new, [a]ction-packed [s]tory,” a new “instant command” function that “[c]ombin[es] tactical combat with card-based strategy,” and the ability to “[p]lay with or against your friends and the Xbox Live community in up to 3v3 matches.”³⁸ Microsoft’s accessibility website for Xbox notes that a game chat transcription functionality piloted by Microsoft is now available in *Halo Wars 2*,³⁹ but the marketing materials for the game itself do not mention the game’s communication features.⁴⁰

II. THE VIDEO GAME INDUSTRY HAS MADE PROGRESS ON ACCESSIBILITY.

In the *2016 Waiver Order*, the Bureau determined that “achieving accessibility of ACS in the video game software context poses significant challenges.”⁴¹ Nevertheless, as ESA recently explained in its Mid-Year Report, the industry has been using the waiver period “to continue innovating, experimenting, and exploring” accessibility solutions—both for ACS and core game play activities.⁴² In addition, the industry has engaged with members of the disability community during the waiver period, and will continue to do so.

³⁷ *See id.*

³⁸ MICROSOFT, *Halo Wars 2*, <https://www.microsoft.com/en-us/store/p/halo-wars-2/c21tdxkrnmhz#> (last visited Oct. 26, 2017).

³⁹ MICROSOFT, *Xbox Support, Use Game Chat Transcription on Xbox One*, <http://support.xbox.com/en-US/xbox-one/ease-of-access/use-game-chat-transcription> (last visited Oct. 26, 2017) (“Game Chat Transcription on Xbox One”).

⁴⁰ *See* Mid-Year Report Exhibits A-10–A-12.

⁴¹ *2016 Waiver Order* ¶ 25.

⁴² 2017 Mid-Year Report at 8 (quoting *2016 Waiver Order* ¶ 26).

A. Applying Assistive Technologies to Video Game Software ACS Continues to Present Substantial Technical Challenges.

In granting the current waiver, the *2016 Waiver Order* recognized that there were two sets of significant challenges associated with making ACS accessible in the video game context.⁴³ This continues to be the case today.⁴⁴ First, the Order agreed with ESA’s assessment that there are “differences between the display technologies used by video games and the displays used for other technologies to which accessibility features . . . have been added.”⁴⁵ As set forth in the Mid-Year Report, the fundamental reason for these differences is that video games, unlike most other forms of computer software—such as word processors, email clients, web browsers, and spreadsheets—continue to involve the creation and execution of highly specialized code.⁴⁶ Games require this code because they require computers to perform tasks beyond accepting inputs and displaying information in a standardized, linear fashion. For example, game play involves the successful (and simultaneous) integration of numerous specialized functions, such as physics, animation, graphics (often displayed at highly demanding resolutions and framerates), audio, object collision detection and response, artificial intelligence, and customized networking protocols.⁴⁷ In other words, “game programming . . . requires [the developer] to work with parts of the computer that most programmers never have to deal with.”⁴⁸

⁴³ *2016 Waiver Order* ¶ 25.

⁴⁴ 2017 Mid-Year Report at 8-11.

⁴⁵ *Id.*

⁴⁶ Mid-Year Report at 9 (citing 2016 Waiver Request at 18).

⁴⁷ Mid-Year Report at 9 (citing STACK EXCHANGE INC., *How is Game Development Different from Other Software Development?* (2017), <https://gamedev.stackexchange.com/questions/9074/how-is-game-development-different-from-other-software-development>).

⁴⁸ *Id.*

Games also often account for user input in unique ways.⁴⁹ Many games use specialized controllers that are not used for programs whose primary purpose is to provide ACS or to perform common computing tasks. And games that do use standard peripherals often process the inputs from those peripherals to perform highly specialized tasks—such as when the user manipulates a mouse to look around a rendered world from a first-person perspective or directs virtual armies on the field—rather than to control a standard pointer to click a button or select a drop-down menu item. As accessibility expert Mike Paciello observed last year, many games effectively run in a self-contained environment that is conceptually similar to an operating system within the host hardware’s operating system.⁵⁰

Most assistive technologies, by contrast, are intended to work with standardized inputs and controls.⁵¹ This is why the accessibility programming guidelines for major operating systems provided to developers specifically recommend the use of standardized user interface (“UI”) elements which, as noted, are unlikely to be present in PC games, console-based games, or other games which may be designed to operate across multiple platforms.⁵² Indeed, because

⁴⁹ *See id.*

⁵⁰ 2016 Waiver Request at 18 (citing Declaration of Mike Paciello ¶ 7, attached as Exhibit B to 2016 Waiver Request).

⁵¹ Mid-Year Report at 10 (citing Petition of the Entertainment Software Association for Partial Extension of Waiver at Exhibit B, Declaration of Mike Paciello ¶ 5(c), CG Docket No. 10-213 (filed May 22, 2015)).

⁵² *See, e.g.*, MICROSOFT, *Microsoft Active Accessibility, Getting Started*, [https://msdn.microsoft.com/en-us/library/windows/desktop/dd318094\(v=vs.85\).aspx](https://msdn.microsoft.com/en-us/library/windows/desktop/dd318094(v=vs.85).aspx) (last visited Oct. 26, 2017) (“Active Accessibility relies on Windows technology and can be used in conjunction only with Windows-based controls . . .”); APPLE INC., *Making Your iOS App Accessible* (Feb. 16, 2012), https://developer.apple.com/library/content/documentation/UserExperience/Conceptual/iPhoneAccessibility/Making_Application_Accessible/Making_Application_Accessible.html (observing that, while “standard UIKit controls and views are automatically accessible,” “custom views that display information or with which users need to interact” are not); GOOGLE INC., *Android Developers, API Guides, Accessibility Developer Checklist*, <https://developer.android.com/guide/topics/ui/accessibility/checklist.html> (last visited Oct. 26, 2017) (advising developers to “[u]se Android’s built-in user interface controls whenever possible, as these components provide accessibility support by default”).

video game “engines do not output any native UI elements” to the operating system, the operating system will perceive a “game rendered by an engine [as] pretty much a single UI component containing a bunch of pixels.”⁵³ This is a primary reason why existing assistive technologies—as well as the assumptions on which those technologies are built—are rarely useful for video game accessibility.

The *2016 Waiver Order* also recognized that “speech-to-text and other emergent assistive technologies have limited use in video games given the current state of the technology” and the characteristics of in-game speech.⁵⁴ In other words, ACS challenges exist not only because of technologies unique to video games, but because of how players use these technologies.

For example, and as noted in ESA’s Mid-Year Report, game play increases speech disfluency, *i.e.*, breaks, interruptions, unclear pronunciation, unexpected changes in topics/subject matter, and other irregularities in speech.⁵⁵ This is because people playing video games are reacting to actions in the game (which often occur rapidly and unpredictably), and engage in emotional speech such as yelling and speaking faster than normal.⁵⁶ Second, gamers often use game-specific terms or slang.⁵⁷ Third, typical environmental game play conditions include varying acoustic headset quality and distance from microphones, music and other non-

⁵³ Ian Hamilton, *The Rapidly Changing Landscape of Accessibility for Blind Gamers*, GAMASUTRA BLOGS (May 15, 2017), http://www.gamasutra.com/blogs/IanHamilton/20170515/298020/The_rapidly_changing_landscape_of_accessibility_for_blind_gamers.php.

⁵⁴ *2016 Waiver Order* ¶ 25.

⁵⁵ See Mid-Year Report at 11; 2016 Waiver Request at 20 (citing Daniel Palacios-Alonso et al., *Spontaneous emotional speech recordings through a cooperative online video game*, CENTRO DE TECNOLOGÍA BIOMÉDICA (2015), http://www.ceur-ws.org/Vol-1394/paper_12.pdf); Reply Comments of the Entertainment Software Association at 5-6, CG Docket No. 10-213 (filed Dec. 14, 2016) (“2016 ESA Reply Comments”).

⁵⁶ See *id.*

⁵⁷ *2016 Waiver Request* at 20.

speech audio in the background, and talking while eating.⁵⁸ Fourth, game chat often takes place when there are multiple people present, speaking over one another.⁵⁹ Each of these factors alters speech in ways that make it harder to recognize, thereby affecting transcription accuracy. Finally, there is an inherent lag time for transcribing audio, which tends to have a greater impact in the game context than in non-game conversations.⁶⁰

B. The Industry Has Made Progress on Accessibility.

Notwithstanding challenges, the industry is making progress towards developing accessibility solutions. For example, earlier this year, Microsoft provided an update to the Xbox software development kit for the Xbox One console to enable game developers to pilot real-time text transcription of audio game chat using speech recognition to transcribe voice to text, and to offer gamers the option of having text that they type read aloud as a synthesized voice into audio game chat.⁶¹

In March 2017, Microsoft began offering this functionality in *Halo Wars 2*, a new real-time strategy game available for Xbox One and Windows 10 PCs.⁶² Although an early review

⁵⁸ *Id.*

⁵⁹ *Id.* at 20-21 (citing Peder A. Olsen & Steven J. Rennie, *Multi-talker Speech Separation and Recognition*, IBM RESEARCH, http://researcher.watson.ibm.com/researcher/view_group.php?id=2819 (last visited Oct. 26, 2017)).

⁶⁰ *Id.* at 21 (citing Matthew W.G. Dye, et al., *Increasing Speed of Processing with Action Video Games* at 1, NIH, CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE (Dec. 2009), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2871325/>). In addition, end-to-end internet service may introduce lag.

⁶¹ Rachel Kaser, *Microsoft Brings Text-to-Speech (and Vice Versa) to PC and Xbox One*, THE NEXT WEB (Mar. 16, 2017), <https://thenextweb.com/gaming/2017/03/16/microsoft-brings-text-speech-vice-versa-pc-xbox-one/>.

⁶² See Evelyn Thomas, *Game Chat Transcription Feature Available Today in Halo Wars 2 for Xbox One and Windows 10 PCs*, MICROSOFT ACCESSIBILITY BLOG (Mar. 15, 2017), <https://blogs.msdn.microsoft.com/accessibility/2017/03/15/game-chat-transcription-feature-available-today-in-halo-wars-2-for-xbox-one-and-windows-10-pcs/>.

observed that the functionality is not perfect⁶³—unsurprising given the inherent challenges in applying speech-to-text and other emergent accessibility technologies to gaming environments—gamers have expressed enthusiasm for the potential of this new feature, characterizing it as “quite cool,”⁶⁴ and an “innovat[ive] new idea[.]”⁶⁵ Now that this development kit is available, game developers on Microsoft platforms have the ability to evaluate it and decide whether the feature would be effective in their games.⁶⁶

Microsoft has also released additional accessibility updates to its Xbox One console since the start of the waiver period. These include a new “Copilot” feature that allows gamers to link two controllers to perform the functions of a single controller, enabling a number of new options for individuals who require unique configurations to manipulate controls, such as hand-and-chin, hand-and-foot, etc.⁶⁷ A subsequent console update included enhancements to the Narrator screen reader and Magnifier,⁶⁸ as well as adding custom rumble settings on standard controllers.⁶⁹

A different console manufacturer is exploring solutions for player-to-player communications that can leverage accessibility resources on other platforms. As another approach to in-game chat, on July 21 Nintendo released a free mobile application that includes a

⁶³ See, e.g., Matt Brown, *How to use the new Game Chat Transcription for Xbox One and Windows 10*, WINDOWS CENTRAL (Apr. 20, 2017), <https://www.windowscentral.com/how-use-game-chat-transcription-xbox-one-and-windows-10>.

⁶⁴ Phil Spencer (@XboxP3), TWITTER (Mar. 15, 2017), <https://twitter.com/XboxP3/status/842252888579563520> (showing various gamers’ responses to his tweet about the functionality).

⁶⁵ *Id.*

⁶⁶ See 2016 ESA Reply Comments at 7.

⁶⁷ MICROSOFT, *Xbox Support, Xbox One Operating System Versions and System Updates* (2017), <http://support.xbox.com/en-GB/xbox-one/console/system-update-operating-system> (“Xbox One System Updates”); Scott Henson, *First Wave of New Xbox Update Features Ship to Select Xbox Insiders Today*, MICROSOFT XBOX WIRE (Jan. 23, 2017), <http://news.xbox.com/2017/01/23/xbox-creators-update-preview/> (“Xbox Update Preview”).

⁶⁸ Xbox One System Updates.

⁶⁹ Xbox Update Preview.

feature to support player-to-player communications for the *Splatoon 2* game through a smart device.⁷⁰ This feature provides a “matchmaking” function for Nintendo Switch multiplayer games that allows players to invite other players from their Nintendo Switch or social media friend list to participate in matches.⁷¹ For *Splatoon 2*, for example, once players have been joined into a game on the console, the app provides near real-time voice chat functionality.⁷² Because the feature uses a smart device application for player-to-player communications, it can take advantage of a number of built-in accessibility resources provided natively on these platforms, where appropriate for the game context.⁷³

Nevertheless, providing accessibility for in-game multi-party chat functionality remains challenging.⁷⁴ Accordingly, as with technologies offered using a single platform, it may not be achievable for the ACS functions of the service to meet each of the performance objectives set forth in the ACS rules. The two-device approach for Nintendo presented numerous technical and design challenges. But Nintendo’s approach provides a creative example of how companies are using the current waiver period for “innovating, experimenting, and exploring ACS accessibility solutions,” just as the Commission envisioned when it granted ESA’s current waiver request less than a year ago.⁷⁵

⁷⁰ NINTENDO, *Nintendo Switch Online* (2017), <http://www.nintendo.com/switch/online-service/>.

⁷¹ Online play and in-game chat through the app require users to subscribe to the Nintendo Switch Online service, which will transition to a paid service in 2018. *See id.*

⁷² *See* MY NINTENDO NEWS, *Nintendo Talks Splatoon 2 Online Voice Chat* (May 27, 2017), <https://mynintendonews.com/2017/05/27/nintendo-talks-splatoon-2-online-voice-chat/>.

⁷³ *See, e.g.*, GOOGLE INC., *Android Developers, API Guides, Accessibility*, <https://developer.android.com/guide/topics/ui/accessibility/index.html> (last visited Oct. 26, 2017); APPLE INC., *Apple Developer, Accessibility on iOS*, <https://developer.apple.com/accessibility/ios/> (last visited Oct. 26, 2017).

⁷⁴ *See supra* Section II.A.

⁷⁵ *See 2016 Waiver Order* ¶ 26.

Another example is game developer Mojang, which has recently added a text-to-speech accessibility feature for its extremely popular world construction game *Minecraft*.⁷⁶ This functionality, added in version 1.12 in June, “toggles a text-to-speech engine that automatically reads player chat messages,” and also provides an option to read system messages in addition to player chat content.⁷⁷

Finally, as the *2016 Waiver Order* recognized, “improvements in accessibility have been made with respect to . . . game playing function[s].”⁷⁸ ESA members have continued these efforts during the waiver period. For example, *MLB: The Show*, a Major League Baseball game published by Sony Interactive Entertainment LLC (“SIE”), has previously been recognized for its game play accessibility options including “visual accessibility, not requiring sound to play, and letting gamers choose which positions they’re in control of.”⁷⁹ According to AbleGamers, the most recent version of the franchise, *MLB: The Show 2017*, “continues to deliver accessible excellence.”⁸⁰ In addition to “the usual accessibility options [users] will expect from *The Show*,” the most recent version offers additional configuration modes for gamers with limited mobility, as well as features that provide “players the opportunity to control their favorite players and franchise without the need of any timing or accuracy demands.”⁸¹

⁷⁶ GAMEPEDIA, *Minecraft 1.12, 17w13a* (Oct. 1, 2017), <https://minecraft.gamepedia.com/17w13a>.

⁷⁷ GAMEPEDIA, *Minecraft 1.12* (Oct. 1, 2017), <http://minecraft.gamepedia.com/1.12>.

⁷⁸ *2016 Waiver Order* ¶ 24.

⁷⁹ Mat Paget, *Rocket League, MLB: The Show Named Most Accessible Games of 2015*, GAMESPOT (Jan. 21, 2016), <https://www.gamespot.com/articles/rocket-league-mlb-the-show-named-most-accessible-g/1100-6434050/>.

⁸⁰ Joseph Giampapa, *MLB The Show 17 Continues to Deliver Accessible Excellence*, ABLEGAMERS (Apr. 24, 2017), <http://www.ablegamers.org/mlb-the-show-17-continues-to-deliver-accessible-excellence/>.

⁸¹ *Id.*

“Accessibility is a big theme” in *Destiny 2*, a first-person action game recently published by Activision, as well.⁸² As AbleGamers explains, “the options menu [is] filled with great accessibility” settings, including subtitle options, multiple colorblind modes, key remapping, and “controller (and mouse) sensitivity.”⁸³ In addition, AbleGamers notes that the game presents “visual cues for every audible one.”⁸⁴

Injustice 2, a fighting game published by Warner Brothers Interactive Entertainment and released in May 2017, recently received praise from the accessibility group Disabled Accessibility for Gaming Entertainment Rating System (“D.A.G.E.R. System”) for its features that assist players with physical limitations. In addition to fully remappable controls, the game permits customization of characters so that “players with fine motor disabilities will be able to tailor the experience around their physical limitations.”⁸⁵

D.A.G.E.R. System also recently praised *Resident Evil 7*, developed and published by Capcom, for its customizable controls, which allow players to “invert the trigger buttons . . . and the control stick buttons” and “swap” the left and right control sticks (a feature that the game reviewer notes is the “sole reason” he was able to play the game). D.A.G.E.R. System notes that *Resident Evil 7* also includes an aim assist option that provides for an “easier combat experience,” “a variety of accessibility options” for colorblind players, and “reliable subtitles,”

⁸² Brett Molina, *Talking Tech, E3 2017: These Were My 10 Favorite Games*, USA TODAY (June 15, 2017), <https://www.usatoday.com/story/tech/talkingtech/2017/06/15/e-3-2017-these-were-my-10-favorite-games/399127001/>.

⁸³ Amy Kneepkens, *Ablegamers Attends Destiny 2 Premier Event*, ABLEGAMERS (June 7, 2017) <http://www.ablegamers.org/destiny2premier/>.

⁸⁴ *Id.* In ESA’s various interactions with Telecommunications for the Deaf and Hard of Hearing, Inc. (“TDI”) and students at Gallaudet University over the past year, we learned that there is a strong desire for games to include visual notification of important sound effects and background noises. This feature helps address that concern.

⁸⁵ Josh Straub, *Disability Game Review: Injustice 2*, D.A.G.E.R. SYSTEM (May 24, 2017), <http://dagersistem.com/all-review-list/disability-game-review-injustice-2/>.

as well as “an icon that can be switched on in order to let deaf players know of background noises.”⁸⁶

During development of *Uncharted: The Lost Legacy*, SIE and its studio Naughty Dog worked closely with D.A.G.E.R. System’s Josh Straub, who is a prominent accessibility consultant, to improve the level of available accessibility features. In addition, SIE and Naughty Dog spoke with the AbleGamers Foundation and hosted a focus test session specifically focused on getting players with disabilities to provide feedback on proposed accessibility features. As a result of these efforts, *Uncharted: The Lost Legacy* includes a range of accessibility enhancements in the categories of visual, audio, and fine motor control.

For example, for vision, *Uncharted: The Lost Legacy* includes text size adjustments, high contrast screen icons and indicators, and user interface color selections intended to work across multiple types of color vision deficiency. SIE and Naughty Dog also included subtitles for character dialog, including listing character names next to each line of dialog to make clear which character(s) were speaking during multiple character interactions. Finally, *Uncharted: The Lost Legacy* includes a comprehensive set of options to accommodate fine motor control challenges, including substantial flexibility for button and control remapping, auto aim, and button toggling and pressing. Fine motor control accessibility options also include camera assist, which enables the game to facilitate players’ ability to look and move in the in-game environment.

Mario Kart 8 Deluxe for the Nintendo Switch includes two new features—Smart Steering and Auto Accelerate—that support accessibility by facilitating game play by individuals with

⁸⁶ Michael Matlock, *Disability Game Review: Resident Evil 7*, D.A.G.E.R. SYSTEM (Mar. 31, 2017), <http://dagerysystem.com/all-review-list/disability-game-review-resident-evil-7/>.

limited manual dexterity.⁸⁷ These features help drivers effectively navigate race tracks by providing automatic steering assistance to help avoid walls and stay on course, and by eliminating the need to separately control the vehicle acceleration function.⁸⁸

Finally, the PC versions of Ubisoft's *Ghost Recon: Wildlands*, a tactical action game, and *For Honor*, a fighting game, similarly include remappable controls.⁸⁹ In addition, *Ghost Recon: Wildlands* offers gamers adjustable audio settings.⁹⁰

C. The Video Game Industry Has Engaged with the Disability Community and Will Continue to Do So.

In the *2016 Waiver Order*, the Bureau recognized that ESA members have engaged with the disability community, both online and elsewhere, in order to help assess and address video game accessibility challenges.⁹¹ Video game developers and publishers have also engaged in outreach and consultation in the current waiver period, and are committed to continuing to do so.

As set forth in ESA's Mid-Year Report, ESA and its members have worked with individuals with disabilities and disability advocacy organizations in many ways.⁹² For example, ESA sponsored an accessibility-related challenge for Global Game Jam 2017.⁹³ The challenge

⁸⁷ See MY POTATO GAMES, *Mario Kart 8 Deluxe is More Accessible to Everyone* (Apr. 30, 2017), <https://mypotatogames.com/mario-kart-8-deluxe-accessible-everyone/>.

⁸⁸ Ethan Gach, *Little Girl Finally Gets to Play Mario Kart 8 Thanks to Smart Steering*, KOTAKU (Apr. 30, 2017), <http://kotaku.com/little-girl-finally-gets-to-play-mario-kart-8-thanks-to-1794783080>.

⁸⁹ See NickInUHD, *Ghost Recon Wildlands Beta PC Controls & Settings*, YOUTUBE (Feb. 3 2017), <https://www.youtube.com/watch?v=9apE-fZrF5Q> (for remappable controls on PC for *Ghost Recon: Wildlands*) (“Ghost Recon Wildlands PC Remappable Controls”); Mike Suskie, *For Honor Review*, GAMECRITICS (Feb. 23, 2017), <https://gamecritics.com/mike-suskie/for-honor-review/> (for remappable controls on PC for *For Honor*).

⁹⁰ These audio settings enable the gamer to modify the relative volume of voice, music, special effects, microphone volume, and squad volume, which may help those who are hard of hearing to amplify certain game elements. See *Ghost Recon Wildlands PC Remappable Controls*.

⁹¹ See 2016 Waiver Order ¶ 25.

⁹² See 2017 Mid-Year Report at 17-18.

⁹³ See generally GLOBAL GAME JAM, <http://globalgamejam.org> (last visited Oct. 26, 2017).

asked developers to create a “multiplayer game that requires communication between players, without relying on text or voice.”⁹⁴ Over 120 development teams joined ESA’s challenge, and several teams developed concepts, code, prototypes, and/or complete games using alternative communication strategies.⁹⁵

In addition, ESA and some of its members co-sponsored an accessibility event hosted by the International Game Developers Association in conjunction with the 2017 Game Developers Conference (“GDC”).⁹⁶ The day-long event featured discussions on a range of accessibility topics, and brought together industry representatives, accessibility advocates, and the developer community.⁹⁷ The agenda included presentations from individuals with disabilities as well as ESA members on a number of aspects of inclusive game design, such as best practices for subtitles, the role of audio in game accessibility, experiences of blind gamers, and gaming with limited manual dexterity.⁹⁸

Shortly after the GDC event, ESA met with representatives from Telecommunications for the Deaf and Hard of Hearing Inc. (“TDI”), the director of Gallaudet’s Technology Access Program, and a Gallaudet student who is an avid gamer to discuss inclusive design for gamers who are deaf and hard of hearing.⁹⁹ This meeting included discussions related to accessible chat,

⁹⁴ GLOBAL GAME JAM, *And the GGJ17 Diversifiers Are...*, <http://globalgamejam.org/news/and-ggj17-diversifiers-are> (last visited Oct. 26, 2017).

⁹⁵ See 2017 Mid-Year Report at 18.

⁹⁶ GACONF, *Sponsors*, <http://www.gaconf.com/sponsors/> (last visited Oct. 26, 2017).

⁹⁷ 2017 Mid-Year Report at 18.

⁹⁸ GACONF, *Schedule* (Feb. 27, 2017), <http://www.gaconf.com/schedule/>.

⁹⁹ 2017 Mid-Year Report at 18.

subtitles, and the role of audio in games, as well as deaf gamers' experiences related to online interactions with other players.¹⁰⁰

ESA conducted additional outreach as part of the 2017 Electronic Entertainment Expo ("E3") in Los Angeles.¹⁰¹ A representative from TDI and a student from Gallaudet University attended E3, as ESA's guests, and met with ESA staff and representatives from various game publishers and platform providers.¹⁰² ESA and several of its members learned more about their game play experiences, the challenges they face, and ideas for improved accessibility from the various activities planned during the day. In addition, an informal meeting with other deaf gamers attending E3 provided further opportunities to connect and share experiences.¹⁰³ Finally, ESA and SIE were co-sponsors for TDI's 22nd Biennial Conference on July 27-29,¹⁰⁴ and ESA staff attended this event.

Looking for yet other ideas on increasing accessibility, and to demonstrate their new approaches, ESA members have also engaged directly with the disability community during the waiver period. For example, SIE hosted an accessibility event and meetings on May 18, 2017 to commemorate Global Accessibility Awareness Day.¹⁰⁵ The event featured opening remarks by Shawn Layden, the CEO of Sony Interactive Entertainment America and Chairman, World Wide Studios, as well as discussions with blind gamer Brandon Cole (@superblindman on Twitter),

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ TDI, *2017 TDI Biennial Conference*, <https://tdiforaccess.org/2017-conference/> (last visited Oct. 26, 2017).

¹⁰⁵ *See, e.g.*, Karen Auby (@karenauby), TWITTER (May 18, 2017), <https://twitter.com/karenauby/status/865269611570151424>; *id.*, <https://twitter.com/karenauby/status/865268751645659137>; *id.*, <https://twitter.com/karenauby/status/865263687141019648> (tweets from Karen Auby, PlayStation Director of Corporate Communications).

Josh Straub of D.A.G.E.R. System, and Mark Barlet, the founder of AbleGamers.¹⁰⁶ Other senior Sony executives attended as well. The event featured demos to simulate playing games with different disabilities (vision, mobility, etc.), with and without accessibility features turned on.¹⁰⁷ Another demo showcased the PlayStation 4's accessible communication functions.¹⁰⁸ Over 100 people attended the various presentations and meetings, in which guests provided SIE with insights and suggestions for improving accessibility features.¹⁰⁹ SIE also met separately with TDI the following month during E3.

On May 4, Microsoft hosted its 7th annual Ability Summit, a day-long event to foster disability inclusion and accessibility.¹¹⁰ This summit was attended by Microsoft employees and external guests, who shared their experiences as people with disabilities and accessibility ambassadors, and included a session on Xbox accessibility features. On June 27, Microsoft also hosted a separate event bringing together members from the video game and disability community such as Ian Hamilton (a game accessibility expert and consultant), Sightless Combat (an expert gamer who is blind), and Josh Straub (D.A.G.E.R. System), together with Microsoft game and platform developers, designers, and producers, on providing more inclusive experiences for gamers.¹¹¹

On June 23, Ubisoft, a member of ESA and a French game publisher that has released numerous popular titles including *Assassin's Creed* and *Tom Clancy's The Division*, met with

¹⁰⁶ 2017 Mid-Year Report at 19.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ Jenny Lay-Flurrie, *Empowering a More Accessible and Inclusive World*, MICROSOFT BLOG (May 18, 2017), <https://blogs.microsoft.com/on-the-issues/2017/05/18/empowering-more-accessible-inclusive-world/>.

¹¹¹ 2017 Mid-Year Report at 19-20.

CapGame, a French association dedicated to working on accessibility of video games, to discuss ideas for improved accessibility.¹¹² This meeting took place in connection with an event organized by AFM Téléthon, the French Muscular Dystrophy association.¹¹³

This spring, Blizzard Entertainment launched an inaugural online gaming event known as “Overwatch Uprising” for its *Overwatch* first person action game.¹¹⁴ Overwatch Uprising is the first Overwatch event to feature subtitle support, which included subtitling of AI character dialog. Blizzard anticipates rolling out subtitle support for other aspects of the *Overwatch* experience in the near future. In addition, AbleGamers Chief Operating Officer Steven Spohn recently cited accessibility updates to Blizzard’s massively multiplayer online game World of Warcraft as an “example[] of accessibility design that developers should study.”¹¹⁵ Spohn highlighted World of Warcraft “as a shining example not only of great accessibility across the board but also of effectively retrofitting accessibility features post-release” in response to feedback from the disability community.¹¹⁶ Although World of Warcraft was already accessible “to many different gamers with different disabilities,” Blizzard subsequently has “added more and more options from console commands to UI improvements.”¹¹⁷ “As far as games that have

¹¹² *Id.* at 20.

¹¹³ *Id.*

¹¹⁴ PLAYER.ONE, ‘Overwatch’ Team ‘Passionate’ About Adding Subtitle Support, Kaplan Promises (Apr. 25, 2017), <http://www.player.one/overwatch-team-passionate-about-adding-subtitle-support-kaplan-promises-594672>.

¹¹⁵ Rich Moss, *7 Examples of Accessibility Design that Developers Should Study*, GAMASUTRA (June 14, 2017), https://www.gamasutra.com/view/news/299850/7_examples_of_accessibility_design_that_developers_should_study.php.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

listened to the most accessibility advice from AbleGamers,” Spohn explained, “the [World of Warcraft] team has been one of the best.”¹¹⁸

As the *2016 Waiver Order* recognized, individual ESA members have previously engaged with the disability community online.¹¹⁹ These engagements continued during the current waiver period. For example, Ubisoft sought online feedback from members of the disability community in an online survey that addressed, among other things, potential uses of text-to-speech technologies for in-game communication.¹²⁰ Other members continue to use social media and online forums to solicit feedback and suggestions on how to make consumers’ game play experiences more accessible.¹²¹

Finally, Ubisoft hosted the annual Game UX Summit, an industry event sponsored in part by ESA members Epic Games and SIE that focuses on game design and user experience, earlier this month.¹²² This year’s Summit featured multiple presentations on accessibility topics, including “Inclusive Impact - What Accessibility Features are Best for Your Game?”, “Removing Barriers: How UX Can Spearhead Your Accessibility Push,” and “Rethinking Naturalism: Designing the Future of Inclusivity in Games.”¹²³ In addition, Game UX Summit

¹¹⁸ *Id.*

¹¹⁹ *2016 Waiver Order* ¶ 25.

¹²⁰ AUDIOGAMES.NET, *Forum, Ubisoft Accessibility Survey* (Mar. 2017), <http://forum.audiogames.net/viewtopic.php?id=21365>.

¹²¹ *See, e.g.*, Karen Stevens (@ea_accessible), TWITTER, https://twitter.com/ea_accessible?lang=en; MICROSOFT, *Ease of Access* (2016), <https://xbox.uservoice.com/forums/335163-ease-of-access>.

¹²² UBISOFT, *Game UX Summit '17* (“Game UX Summit 2017”), <http://toronto.ubisoft.com/gameuxsummit/> (last visited Oct. 26, 2017). This event took place on October 4-6, 2017.

¹²³ UBISOFT, *Game UX Summit '17 Program*, <http://toronto.ubisoft.com/wp-content/uploads/2017/10/UXsummit-schedule-flyer-UPDATED.pdf> (last visited Oct. 26, 2017).

included a panel discussion on inclusivity and accessibility in games that featured Steve Saylor, podcaster and host of the YouTube series “Blind Gamer.”¹²⁴

ESA and its members will continue to engage with the disability community. For example, later this fall, ESA staff is meeting with AbleGamers at the Center for Inclusive Play, a new facility in Charles Town, West Virginia underwritten in part by digital accessibility firm Level Access.¹²⁵ In addition, Ubisoft is holding an internal accessibility UX event in late October featuring game accessibility consultant Ian Hamilton. Next month, Ubisoft will have a follow-up meeting with CapGame along with GameLover, another game accessibility organization, at Paris Games Week.

III. THE COMMISSION SHOULD EXTEND THE CURRENT WAIVER FOR VIDEO GAME SOFTWARE.

As with all waiver requests, the Commission must evaluate whether extending the ACS rule waiver for video game software would serve the public interest.¹²⁶ A final, limited extension for video game software meets this test.

In the *2016 Waiver Order*, the Bureau determined that it was “both reasonable and in the public interest to grant ESA’s request to extend the waiver of the Commission’s ACS accessibility rules” through December 31, 2017 because the Bureau expected that doing so would (1) “enable video game platform providers and video game publishers to continue innovating, experimenting, and exploring ACS accessibility solutions,” (2) “permit the industry

¹²⁴ UBISOFT, *Game UX Summit '17, Speakers*, <http://toronto.ubisoft.com/gameuxsummit> (last visited Oct. 26, 2017).

¹²⁵ MARKETWIRED, *New AbleGamers Center for Inclusive Play Dramatically Expands Charity’s Ability to Support Nation’s 33 Million Gamers with Disabilities* (Apr. 26, 2017), <http://www.marketwired.com/press-release/new-ablegamers-center-inclusive-play-dramatically-expands-charity-s-ability-support-nations-2212094.htm>.

¹²⁶ See *ACS Report and Order* ¶ 188.

to continue releasing innovative games and allow video games that have ACS to compete with other video game products,” and (3) “work to find solutions to incorporate accessible design into its gaming software.”¹²⁷ These same reasons justify a modest extension of the current waiver for video game software.

First, as explained above, the unique characteristics of video game software create correspondingly unique challenges in developing accessibility solutions. Because existing accessibility approaches widely used in other contexts are not readily transferrable, an additional twelve months to continue to explore accessibility solutions will provide time for game publishers to evaluate adoption of newly available options, such as those described herein. Extending the existing waiver period will allow ESA member companies to continue to innovate and experiment by reducing regulatory uncertainty while development continues.

In addition, as with the previous waiver grants the Commission found to be in the public interest, the waiver will permit industry to continue to release innovative games that include ACS features, and therefore would otherwise be subject to the Part 14 rules.¹²⁸ The industry is hard at work on numerous games with ACS components that are currently, or will soon be, in development. Extension of the waiver will enable member companies to bring these titles—many of which leverage recent industry progress on accessibility in other contexts—to market.

Third, extending the waiver period will continue to encourage industry to pursue further experimentation with other accessibility features as it explores ACS solutions. In particular, doing so will permit ESA members to continue to focus on features incorporating feedback from

¹²⁷ *2016 Waiver Order* ¶ 26.

¹²⁸ *Id.*; *2012 Waiver Order* ¶ 36.

recent outreach to the disability community members who are gamers, as well as continuing to solicit additional feedback going forward.

To be sure, much of the feedback the industry has received to date is with respect to improvements that will help eliminate accessibility barriers to game play.¹²⁹ However, ESA's recent experiences indicate that enabling the industry to continue to work in parallel on game play accessibility could have a beneficial impact on ACS solution development as well. The current trajectory of voluntary uptake of accessibility for game play is fostering increasing understanding of both accessibility barriers and accessibility solutions in the highly specialized environment of video game software, and lessons learned there may improve ACS accessibility.

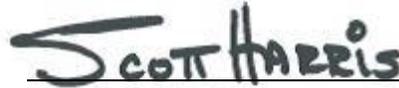
CONCLUSION

The considerations that merited the grant of ESA's waiver request for video game software last year remain present today. Accordingly, a final extension of the current waiver for an additional twelve months will continue to serve the public interest. By granting the requested relief, the Bureau will enable the industry to continue to offer non-primary ACS functionality in video game software while focusing on the best ways to explore features that can meet the

¹²⁹ When industry members have specifically sought feedback on ACS accessibility in games, respondents who are gamers themselves have explained that potential ACS solutions which degrade the core gaming experience are undesirable. This is consistent with academic findings that gamers with disabilities do not prefer accessibility approaches which result in "accessible games that, by and large, are lower quality than their inaccessible 'mainstream' counterparts," for the fundamental reason that "[d]isabled gamers . . . want to play the same games as everyone else." Eitan M. Glinert, *The Human Controller: Usability and Accessibility in Video Game Interfaces* at 11, MASS. INST. OF TECH., https://gasig.files.wordpress.com/2011/10/the_human_controller.pdf.

unique challenges of advanced communications accessibility in video game environments.

Respectfully submitted,

A handwritten signature in black ink that reads "SCOTT HARRIS". The signature is written in a stylized, cursive font with a horizontal line underneath it.

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October 27, 2017

Exhibit A