

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

In the Matter of

Protecting and Promoting the Open Internet

GN Docket No. 14-28

**COMMENTS OF THE ENTERTAINMENT SOFTWARE ASSOCIATION  
(CORRECTED VERSION AS OF JULY 22, 2014)**

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**I. INTRODUCTION AND SUMMARY**

Video games are now mainstream entertainment; most Americans play video games. In the U.S. alone the industry generated over \$21 billion in revenue last year, nearly double the revenue earned from U.S./Canada movie box office receipts. Video games differ from other forms of entertainment, however, in one significant respect—they are interactive. The video game industry relies on the Internet not only to deliver software to consumers, but also to provide the high-speed, latency-sensitive interactive experiences that gamers around the country expect and relish. The quality and availability of this large and still rapidly growing media increasingly depends upon the availability and quality of the broadband services offered to consumers. As such, we support clear and enforceable open Internet principles that foster a broadband marketplace free from discriminatory or anti-competitive practices that jeopardize the availability and quality of gamers’ online experiences. The Commission must take into account the needs of the majority of Americans who play video games as it considers open Internet rules. To assist in this effort, the Entertainment Software Association (“ESA”)<sup>1</sup> submits these

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<sup>1</sup> ESA is a trade association for companies that publish computer and video games for video game consoles, personal computers, and the Internet. ESA offers a range of services to interactive entertainment software

comments in response to the Commission’s Open Internet Notice of Proposed Rulemaking (“NPRM”).<sup>2</sup>

## **II. THE VIDEO GAME INDUSTRY CONTRIBUTES BILLIONS OF DOLLARS TO THE U.S. ECONOMY EACH YEAR.**

The video game industry plays a significant—and growing—role in the U.S. economy, creating jobs and generating revenue for communities across the nation. Indeed, the popularity of video games has skyrocketed in recent years. As North Carolina State University Professor Jason Allaire has explained, “[p]eople of all ages play video games. There is no longer a ‘stereotype game player,’ but instead a game player could be your grandparent, your boss, or even your professor.”<sup>3</sup> According to the most recent industry data:

- 59 percent of Americans play video games;
- The average game-playing U.S. household has at least two gamers;
- The average gamer has been playing games for 14 years;
- 48 percent of all game players are women, and women over the age of 18 represent a statistically greater portion of the game playing population (36 percent) than boys age 18 or younger (17 percent); and
- 44 percent of game players state that computer and video games give them the most value for their money compared with several other forms of entertainment.<sup>4</sup>

As a result of the increasing popularity of video games, the U.S. game industry has grown by double digits in recent years, exhibiting exceptional performance in a difficult economy.<sup>5</sup>

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publishers, including a global content protection program, business and consumer research, government relations, and intellectual property protection efforts. ESA also owns and operates the Electronic Entertainment Expo (“E3”), an annual trade fair for those who work in the video game industry. ESA currently has 35 members, which include some of the largest media companies and video game producers in the world.

<sup>2</sup> *Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking, FCC 14-61, 2014 WL 2001752 (2014) (“NPRM”).

<sup>3</sup> See Entm’t Software Ass’n, *Essential Facts About the Computer and Video Game Industry* at 2 (2014), available at [http://www.theesa.com/facts/pdfs/esa\\_ef\\_2014.pdf](http://www.theesa.com/facts/pdfs/esa_ef_2014.pdf) (“Essential Facts”).

<sup>4</sup> *Id.*

<sup>5</sup> *See id.* at 12.

Last year, U.S. consumers spent \$21.53 billion on video game content, hardware, and accessories.<sup>6</sup> In fact, last year's top-selling video game grossed over \$1 billion dollars in its first three days of sales alone, setting a new launch record for all entertainment media.<sup>7</sup>

Computer and video game companies are also responsible for creating over 120,000 direct and indirect jobs in 38 states. Successful video games run the gamut from independent titles developed by small businesses to much larger projects that “involve teams of programmers, designers, project managers, artists, and testers, often working with budgets of millions of dollars.”<sup>8</sup> Indeed, Activision's action/roleplaying game *Destiny*, scheduled for release this fall, has a development and marketing budget of \$500 million.<sup>9</sup>

### III. FAST, RELIABLE INTERNET CONNECTIONS ARE CRITICAL.

Americans increasingly download video games from online marketplaces and access online features of games they play at home or on their mobile devices. But video games differ from other media in one important way: they are interactive. That is, the defining characteristic of video games is their ability to directly incorporate—and react to—input from end users. For this reason, the growth of the video game industry has closely paralleled the growth of the Internet, which greatly enhances these interactions. Today, most video games include features

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<sup>6</sup> *Id.* at 13. To put this number in perspective, revenues from the U.S. game industry were larger than those from motion picture box office in the U.S. / Canada (\$10.9 billion) and Netflix (\$4.3 billion) combined. Motion Picture Ass'n of Am., Inc., *Theatrical Market Statistics 2013* at 9 (2013), available at [http://www.mpa.org/wp-content/uploads/2014/03/MPAA-Theatrical-Market-Statistics-2013\\_032514-v2.pdf](http://www.mpa.org/wp-content/uploads/2014/03/MPAA-Theatrical-Market-Statistics-2013_032514-v2.pdf); Netflix, Inc., Annual Report (Form 10-K), at 16 (Feb 3, 2014), available at <http://ir.netflix.com/secfiling.cfm?filingID=1065280-14-6&CIK=1065280>.

<sup>7</sup> See Erik Kain, 'Grand Theft Auto V' Crosses \$1B In Sales, Biggest Entertainment Launch In History, FORBES (Sep. 20, 2013, 1:22 PM), <http://www.forbes.com/sites/erikkain/2013/09/20/grand-theft-auto-v-crosses-1b-in-sales-biggest-entertainment-launch-in-history/>.

<sup>8</sup> Int'l Ctr. for the History of Elec. Games, *Concentric Circles: A Lens for Exploring the History of Electronic Games* at 4 (2014), available at [http://www.icheg.org/sites/www.icheg.org/files/uploads/ConcentricCircles\\_032514.pdf](http://www.icheg.org/sites/www.icheg.org/files/uploads/ConcentricCircles_032514.pdf).

<sup>9</sup> Andrew Webster, *Activision is spending \$500 million to make 'Destiny' the next 'Halo'*, THE VERGE (May 6, 2014, 11:51 AM), <http://www.theverge.com/2014/5/6/5687160/destiny-will-cost-500-million>.

that depend on fast, reliable broadband connections. Game publishers use the Internet to deliver their games (as well as add-on content) to game consoles, PCs and mobile devices. They also use the Internet to enable multi-player gaming and communication amongst gamers.

**A. Broadband Internet Connectivity Enhances Game Distribution.**

Last year, sales of games in digital formats surpassed physical sales.<sup>10</sup> Indeed, virtually all gaming platforms—from consoles, to personal computers, to mobile devices—now feature online marketplaces from which end users can download game content using their broadband connection.

The ability to distribute games via broadband provides several important benefits. First, online marketplaces significantly decrease distribution costs and enable access to a greater variety of content. Because shelf space in an online marketplace is virtually unlimited, and because distributors do not need to provide physical media or packaging, the industry has been able to take “more interesting risks” by offering new genres of games that would not be feasible under a physical distribution model.<sup>11</sup>

Second, broadband distribution enables companies to update games to add features and make other improvements. For example, video game companies can refresh player rosters in a sports game to provide up-to-date statistics, extend the storyline in role-playing games with expansion packs that provide new realms to explore, upgrade software to permit the game to run more efficiently, add new features to the game or console system, or load security updates. Moreover, online distribution models enable users to customize their gaming experience by

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<sup>10</sup> See *Essential Facts* at 13.

<sup>11</sup> See John Walker, *RPS Exclusive: Gabe Newell Interview*, ROCK, PAPER, SHOTGUN (Nov. 11, 2007, 3:40 PM), <http://www.rockpapershotgun.com/2007/11/21/rps-exclusive-gabe-newell-interview/>.

altering their character's appearance, or personalizing a loft apartment in a virtual world, among other things.

Third, broadband distribution enables the consumer to obtain video game content directly and immediately without the need to travel to a store or wait for a package delivery. Indeed, many games now allow users to start playing after downloading only a portion of the game.<sup>12</sup> Importantly, however, because video games typically feature rich and immersive graphics, video, and audio content, the sizes of some digital files can be large. For example, video games that are classified as “AAA” titles—a term for games with the highest development budgets and levels of promotion—can run from 9 to 35 GB, which a consumer simply cannot download with a pokey, unreliable Internet connection.<sup>13</sup> Thus, to enjoy the benefits of broadband distribution described above, consumers need an Internet connection with adequate bandwidth to support large file downloads in a timely manner.

#### **B. Broadband Internet Connectivity Enables Real-Time Game Play.**

Broadband connections also enhance the gaming experience by enabling real-time game play among users in various physical locations. Indeed, virtually every video game genre now includes numerous games that feature real-time game play with other players and/or interaction with the gaming environment over broadband networks. For example:

- Role-playing games enable the user to take on the identity of a character and navigate through an online world. Indeed, massively multiplayer online games (“MMOs”) enable large numbers of players to interact with one another simultaneously within the same game.

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<sup>12</sup> See Dan Seifert, *Sony PlayStation 4 Games Can Be Played While They Are Downloading*, The Verge (Feb. 20, 2013), <http://www.theverge.com/2013/2/20/4010466/sony-playstation-4-games-downloadable-play-ps4>.

<sup>13</sup> See Wesley Yin-Poole, *All the PS4 launch games and their install sizes*, Eurogamer.net (Nov. 13, 2013), <http://www.eurogamer.net/articles/2013-11-13-all-the-ps4-launch-games-and-their-install-sizes>.

- Action games, which often focus on combat and reward quick reflexes and accuracy, enable users to compete against each other online, or to play cooperatively against other users or virtual opponents.
- Sports games enable users to play against each other head-to-head in real-time, including in virtual leagues that simulate a sports season.
- Strategy games require careful planning to achieve victory (e.g., competing for economic resources, racing to develop new technologies, or engaging in military campaigns). Support for online play enables human players to play against each other, often by making critical decisions simultaneously.
- Online card, trivia, and puzzle games enable competition against human opponents in real time.

Beyond interactive game play, large numbers of users also access online platforms that feature content related to video games. For example, the Twitch website/platform includes real-time video feeds of gamers playing a wide variety of video games, talk shows related to video games, and coverage of video game tournaments.<sup>14</sup> Game consoles, including the PS4 and Xbox One, have built-in support for some Twitch features, and users can also access Twitch content via the Internet.

### **C. Interactive Gaming Requires Fast, Reliable, Low-Latency Connections.**

In order to support the interactive gaming features described above, the user's broadband connection must be fast and reliable. Gaming content is often data intensive, and a connection with limited or congested bandwidth can make it difficult or impossible for a consumer to obtain and access the games he or she wishes to play.

Beyond broadband speed, for many of these interactive features to work properly, a consumer's broadband connection must also support low-latency connections with online gaming servers and other users.<sup>15</sup> Latency represents the amount of time it takes for a particular

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<sup>14</sup> See generally [www.twitch.tv](http://www.twitch.tv).

<sup>15</sup> Latency is also critical in other contexts. Low-latency connections allow edge providers to provide the immediate, responsive feedback in web applications that consumers expect, allow doctors to participate in

data packet to move from its origin to its destination on the network. Latency is distinct from bandwidth, which indicates the amount of data a connection is capable of transmitting within a defined period of time, such as megabits per second. Thus, even if a high-bandwidth connection supports fast maximum transmit speeds, a connection suffering from high latency—as would be the case if a portion of the network is congested or if it otherwise takes a long time for a particular piece of data to traverse the network—will experience delays of time-sensitive interactive features.<sup>16</sup>

Timely delivery of gaming data is often critical when gamers in far-flung locations play over the Internet. For example, delayed gaming data could result in a late swing of the bat in an online baseball game, the inability to repel a surprise attack from an arthropodal alien in an action game, forfeiting a turn in a strategy or card game, a missed instruction from an online teammate, or even being disconnected from a game server entirely. In other words, increases in latency could render the most important feature of a game—the interactivity—useless. Moreover, streaming game services, such as Sony’s PlayStation Now, provide a new way to experience games. Instead of the game software residing on the console, either through download or physical media, it’s stored on a remote server. This approach has the potential to expand consumer choice and the range of price points for accessing popular game titles. Streamed games depend upon low-latency broadband connections to enable split-second interactivity. Critically, unlike streamed movies, music or other linear content, games require immediate and frequent interactivity. Interactive features cannot be buffered to compensate for lags in delivery.

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medical procedures remotely, and allow consumers to communicate without awkward lag, among other latency-sensitive Internet services.

<sup>16</sup> Of course, we recognize that ISPs must be able to engage in “reasonable network management” to address congestion in an even-handed manner that does not discriminate among lawful applications and services.

**IV. ANY NETWORK NEUTRALITY RULES THE COMMISSION MAY ADOPT SHOULD ACCOUNT FOR THE IMPACT ON THE GAME INDUSTRY.**

With this background in mind, ESA urges the Commission to consider the impact of any proposed network neutrality regulations on the game industry, the jobs the industry supports, and the tens of millions of consumers who play games regularly. In that vein, three core issues are particularly important to the gaming industry: (1) latency, (2) application-specific standards, and (3) an expanding competitive marketplace for high-quality broadband service. Regardless of the approach the Commission ultimately adopts, network neutrality rules should address these key issues.

**A. Any Network Neutrality Rules Should Prevent Degradation to Latency, Account for Application Specific Standards, and Promote Broadband Deployment.**

Much of the debate around proposed network neutrality rules has centered on their potential impact on the bandwidth or “capacity” of broadband connections. As discussed above, however, latency is not the same as bandwidth—yet it is often the most significant factor that contributes to the quality of the user’s online gaming experience. Accordingly, as the Commission considers network neutrality standards, it should take into account practices that could unreasonably increase latency in ways that impair the ability of consumers to use interactive video games.

In addition, the Commission should bear in mind that network capacity impacts applications in different ways. For example, posting a static HTML blog requires far less bandwidth than distributing video game content, and an interactive action game requires far lower latency than accessing a social networking website. Accordingly, ESA encourages the Commission to take into account the varying demands of Internet-based applications and ensure that gamers continue to enjoy the great game experiences they expect.

Finally, ESA supports the Commission's efforts to facilitate broadband deployment and expand broadband competition. Expanding the availability of high-quality broadband services and increasing competition will allow more consumers to download content and enjoy the features of interactive games, and help ensure the ability of gamers to reliably access gaming content. Gamers are a large, active, well-informed segment of the Internet ecosystem who will choose the best ISPs to suit their needs,<sup>17</sup> but without increased competition, they may have little opportunity to do so.

### **B. Key Areas of Focus Impacting Game Consumer Interests**

The ultimate objective of this proceeding is “protecting and promoting Internet openness,”<sup>18</sup> and the principles discussed above are key elements of an open Internet. Discrimination against gaming services, particularly in a manner that negatively impacts those key principles, threatens Internet openness. Such discrimination could degrade bandwidth and latency to the point where consumers can no longer acquire and use gaming applications and services as intended. Gaming content is especially vulnerable, as any increase in latency can be fatal to streaming and interactive features that are so critical to many of today's most popular games. As the Commission has discussed at length, degrading the quality of key online content can reduce demand for broadband services, which in turn could reduce ISPs' incentives to invest in new and upgraded networks, all of which is contrary to the public's strong interest in competitive, high-quality broadband services. As a result, ESA believes that ISPs should refrain from practices that impede the ability of consumers to acquire and use highly desired gaming

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<sup>17</sup> ISPs have recognized as much by tailoring ad campaigns to target the gamer constituency. See, e.g., Kate Cox, *The Consumerist*, *Comcast Commercial Claims Their Fast In-Home WiFi Can Make Your Offline Game Work Better* (May 28, 2014), available at <http://consumerist.com/2014/05/28/comcast-commercial-claims-their-fast-in-home-wifi-can-make-your-offline-game-work-better/>. Video clip of commercial available at <http://www.ispot.tv/ad/7KYH/xfinity-internet-gamers..>

<sup>18</sup> NPRM at ¶ 4.

applications. Regardless of the network-neutrality approach the Commission ultimately adopts, these key interests should be addressed.

*Commercially Unreasonable or Discriminating Impacts on Latency.* As discussed, low latency connections are critical to online gaming. Any evaluation of the impact of ISP practices on open Internet principles should thus take the effect on latency into account. Accordingly, if the Commission adopts the proposed “commercially reasonable” standard, or seeks to prohibit practices that constitute unreasonable discrimination under Title II, then the standard should prohibit ISP practices that increase latency to levels that impair consumers’ ability to play online games or use other latency-sensitive applications as intended.

*Application-Specific Minimum Levels of Service.* As discussed above, the Commission must bear in mind that different applications require different network resources to function effectively. Accordingly, in any consideration of a requirement for ISPs to offer a “minimum level of service,” “minimum” should be defined flexibly and in a generously inclusive manner, so that consumers are assured the service quality necessary to acquire and use their desired content, including games.

*Transparency.* Any standards the Commission adopts should ensure that ISPs disclose sufficient information about their network characteristics and management practices to ensure that consumers and game publishers can make informed decisions about their broadband service. Increased detail about ISP network-management practices will allow consumers and content providers to make informed decisions when choosing their broadband service, and market pressure will discourage practices that might result in degraded service quality. In particular, gaming consumers and producers will benefit from information about network congestion,<sup>19</sup>

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<sup>19</sup> *Id.* at ¶ 83.

which can increase latency and impair interactive game functionality. ISPs should make clear the congestion levels that trigger their traffic management techniques and make available their traffic shaping policies including what type of traffic is subjected to traffic shaping techniques.

**V. CONCLUSION.**

Video games are now mainstream. Online gaming is a large and still rapidly growing medium that employs tens of thousands, entertains tens of millions, and contributes tens of billions to the U.S. economy. It is also a medium that, because it is interactive, relies heavily on ubiquitous, low latency, Internet connections. As it works through the many issues raised in this proceeding, the Commission must ensure that whatever actions it takes promote the growth of such Internet connections, and do not interfere with the growth of online gaming or the online experience of the millions of gamers all across the country.

Respectfully submitted,

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