

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
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Protecting and Promoting the Open Internet)	GN Docket No. 14-28
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COMMENTS OF ROKU, INC.

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EXECUTIVE SUMMARY

The Federal Communications Commission (“FCC” or “Commission”) has long recognized the incentive and ability of large, vertically integrated Internet service providers (“ISPs”) to constrain consumer choice by favoring their own content and content delivery systems through blocking or throttling. However, these are only the most transparent of a long list of discriminatory actions that ISPs can engage in. To promote and protect an open Internet—including the streaming video market that increasingly offers consumers access to content whenever, wherever, and however they choose—the Commission’s rules and policies must guard against a broader range of discriminatory conduct.

First, the Commission should ensure that consumers have access to the lawful content of their choice by establishing minimum performance criteria below which an ISP’s broadband service may not fall, and by targeting the rift that has developed between actual and advertised service speeds. Consumers currently enjoy a wealth of over-the-top video streaming options, but a fast and reliable broadband Internet connection is necessary to access this content. Similarly, consumers must have accurate information to truly “choose” a particular broadband or content provider in the first place.

Second, the Commission should prevent ISPs from using data caps in discriminatory ways that limit consumer choice, constrain content diversity, and thwart competition. In particular, the Commission should require ISPs to disclose the practices and policies by which they exempt traffic from data caps, and find that discriminatory carve-outs from data caps are *per se* unreasonable.

Third, the Commission should keep ISPs affiliated with multichannel video programming distributors (“MVPDs”) from favoring certain content and platforms over others through the use of discriminatory authentication. For instance, MVPDs may agree to authenticate an app on some platforms but not others, or discourage consumers from using third-party over-the-top IP applications in the first place by requiring third-party providers to unlock multiple apps individually. To guard against such practices, the Commission should require ISPs affiliated with MVPDs to disclose the MVPD’s authentication arrangements, and to authenticate third-party apps and devices to the same extent that they authenticate their own and their affiliates’.

With consumer Internet video traffic estimated at 66 percent of all traffic in 2013 and expected to rise to nearly 79 percent in just four years, preserving competition in the streaming video market is critical. To protect this burgeoning but nascent market, the Commission should adopt open Internet rules and policies that prevent powerful participants in the home entertainment ecosystem from restricting, degrading, or otherwise interfering with consumer access to lawfully available streaming content, platforms, and services.

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I. INTRODUCTION

Roku, Inc. (“Roku”) respectfully submits these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) request for input from stakeholders interested in protecting and promoting an open Internet.¹ Consumer demand for audio and video delivered over the Internet is surging, and innovative businesses are offering high-quality news, entertainment, and sports programming that is more accessible, innovative, and convenient than ever before. Unfortunately, however, consumer access to these innovative new offerings is at risk due to the capacity for Internet service providers (“ISPs”) to leverage bottleneck control over last-mile connections to thwart competition.

The Commission has long recognized the incentive and ability of large, vertically integrated ISPs to constrain consumer choice by favoring their own content and content-delivery systems over those of their competitors. While an ISP can throttle content delivery speeds to effect anti-competitive discrimination, throttling is only the most transparent of a long list of discriminatory actions that an ISP with market power can undertake. To promote and protect an open Internet, the FCC’s rules and policies must guard against a broader list of discriminatory conduct that has the effect of restricting, degrading, or otherwise interfering with consumer access to lawfully available content or services. That list includes using control

¹ See *Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking, 29 FCC Rcd 5561 (2014) (“NPRM”).

over data caps and authentication to hinder content and platforms that directly compete with the ISP's own or affiliated content. With consumer Internet video traffic estimated at 66 percent of all traffic in 2013 and expected to rise to 79 percent in just four years,² preserving an open marketplace for competition in Internet streaming of audio and video content and services is essential to continued growth and innovation.

II. BACKGROUND

Roku was founded in Saratoga, California in 2002 by Anthony Wood, an entrepreneur who is recognized as the inventor of the digital video recorder. Roku has developed an open Internet streaming platform that is used by millions of consumers in the United States to access a wide variety of audio and video programming that can be enjoyed simply by connecting a Roku streaming player to a consumer's television set and home network. In recent years, Roku has experienced rapid growth in the scale of its business and the size of its operations. Roku currently employs approximately 250 people in Silicon Valley and other locations across the United States, and has sold approximately 8 million streaming players. Roku's business is enabled by, and is entirely dependent upon, consumers' unfettered ability to access lawfully available content over a broadband Internet connection to their home.

Roku has built an extensive ecosystem of content providers, application developers, end-users, and retail distributors. Roku offers a rich software development kit enabling third-party developers to create content applications, which Roku refers to as "channels," and optimize content for Roku's streaming platform. Roku also offers billing, advertising integration, and other capabilities for content providers seeking new ways to distribute and monetize their content.

Millions of people use Roku's streaming players to access their favorite content, including, movies, network and cable TV shows, news, sports, health and religious programming, music, and games. With a Roku streaming player, consumers can choose from the more than 1,500 individual content channels that are available on the Roku platform and

² Cisco Visual Networking Index: Forecast and Methodology, 2013–2018 (June 10, 2014), *available at* http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white_paper_c11-481360.html.

accessed through the Roku Channel Store. Last year alone, consumers streamed 1.7 billion hours of programming using Roku streaming players.

As more consumers have discovered streaming, both the quantity and quality of content available for streaming has quickly evolved. In addition to making previously released movies and television programs available for streaming, today content is being developed specifically for streaming. Popular television series such as *House of Cards*, *Orange is the New Black*, and *Behind the Mask*, as well as live-streamed concerts and sporting events are changing the media landscape and offering consumers greater choice in what they watch on television, in addition to when and how they watch it. Not surprisingly, industry analysts have reported that consumers with broadband video access have dramatically increased the percentage of their television viewing time spent watching programming that is streamed via the Internet and delivered to their homes over a broadband connection.³

Over-the-top streaming platforms such as Roku have also injected new diversity into program offerings. Historically, independent producers distributed their content through multichannel video programming distributors (“MVPDs”). As a result, they lacked direct relationships with consumers and had to convince the MVPD of the value of negotiating a commercial relationship for what, to any one MVPD, might be an extremely limited market. With the advent of over-the-top streaming platforms, however, independent content providers can now aggregate demand across MVPDs and directly reach their audiences by creating channels on Roku or other third-party platforms to deliver content directly over the Internet. The emergence of over-the-top streaming platforms has unlocked hundreds of new channels and tens of thousands of new programs. Roku, for example, offers the *Black Heritage Network*, which bills itself as the only full-time television destination for the real stories of African American life; *Gay Life Television*, which seeks to educate and entertain the LGBTQ community; *i-Italy TV*, which features videos on Italian culture in the United States; and hundreds of other

³ See, e.g., Marlena Haller, *Harris Poll: Popularity of Streaming Increases with TV Viewers*, ETCENTRIC (June 20, 2014), <http://www.etcetric.org/harris-poll-popularity-of-streaming-increases-with-tv-viewers/> (reporting that the number of Americans that most often stream shows is up three percent since 2012, and that nearly a quarter of Americans say that they watch more streaming television than they did a year ago).

specialty channels. Roku also offers more than 70 different specialty faith channels – from *Holy Spirit and Fire TV* to the *Hebraic Roots Network* to the *Mormon Channel*. Roku channels offer dedicated arts and cultural programming such as Artcast, The Artistic Blog, ArtKick and Docurama, and dedicated instructional programming through channels like Innovative Language and Pro Guitar Lessons. In addition, Roku offers dozens of foreign-language and international networks, such as *TamilTV*, *AfricaLive*, *Saraha TV*, and *HaitiTV*, each of which provides content directly to small, historically under-served communities. For all of the diversity of these innovative content offerings though, they share one thing in common: few, if any, would exist without open and non-discriminatory video programming delivery over the Internet.

The Internet’s open architecture is what enables Roku and other over-the-top streaming platforms to deliver innovative video, audio and gaming experiences to consumers. As the Commission recognized in its *Open Internet Order*, the Internet’s open “architecture enables innovators to create and offer new applications and services without needing approval from any controlling entity, be it a network provider, equipment manufacturer, industry body, or government agency.”⁴ The Commission added that “[u]nimpeded access to Internet distribution . . . has allowed new video content creators to create and disseminate programs without first securing distribution from broadcasters and MVPDs such as cable and satellite television companies.”⁵ That openness is precisely what created the conditions that allow innovations in Roku’s streaming platform and robust third-party content ecosystem to thrive.

As the Commission has found, however, one threat to this burgeoning market is the market power of ISPs, which allows them to favor certain content with faster delivery or higher

⁴ *Preserving the Open Internet Broadband Industry Practices*, Report and Order, 25 FCC Rcd 17905, 17910 ¶ 13 (2010) (“*Open Internet Order*”).

⁵ *Id.* at ¶ 17.

performance.⁶ Broadband providers that are vertically integrated with content providers, in particular, have strong incentives to favor their own content over that of their rivals.⁷

To protect the dynamism of the emergent Internet protocol (“IP”) video market, the Commission’s open Internet rules and policies should promote continued investment and innovation in both streaming content and the devices available for accessing that content. Specifically, the Commission should carefully examine the role of ISPs in: (i) constraining consumer access to the lawful content of their choice through the selective application of data caps; and (ii) limiting consumer access to “TV Everywhere” content through discriminatory authentication practices.

III. CONSUMER ACCESS TO LAWFUL CONTENT

Consumers should have access to the lawful content of their choice. As the Commission has repeatedly found, “the freedom to send and receive lawful content’ is ‘essential to the Internet’s openness and to competition in adjacent markets such as voice communications and video and audio programming.”⁸ Currently, consumers have access to a wealth of online content using over-the-top video streaming.⁹ However, that access depends on ISPs offering service that is sufficient to support streaming video.

Without a fast and reliable broadband Internet connection, a Roku box or other streaming platform may provide frustratingly inconsistent access—or worse, no access—to movies, TV shows, and other video programming. Chairman Wheeler recently stated that he is aware of this problem and “know[s] how exasperating it can be.”¹⁰ Moreover, access speeds and quality standards for video streaming have, and will continue to, evolve over time. For

⁶ See, e.g., *NPRM*, 29 FCC Rcd at 5576-77 ¶ 43; see also *Verizon v. FCC*, 740 F.3d 623, 646 (D.C. Cir. 2014) (finding the Commission’s conclusions to be supported by “common sense and economic reality”).

⁷ See, e.g., *Open Internet Order*, 25 FCC Rcd at 17918-19 ¶ 23.

⁸ See *NPRM*, 29 FCC Rcd at 5593 ¶ 89 (quoting *Open Internet Order*, 25 FCC Rcd at 17941-42 ¶ 62).

⁹ See, e.g., *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Fifteenth Report*, 28 FCC Rcd 10496, 10627-32 ¶¶ 270-275 (describing the offerings of OVDs such as Netflix, Hulu, and Amazon Instant Video).

¹⁰ See FCC, *Statement by FCC Chairman Tom Wheeler on Broadband Consumers and Internet Congestion* (June 13, 2014), available at <http://www.fcc.gov/document/chairman-statement-broadband-consumers-and-internet-congestion> (“Wheeler Statement”).

example, streaming 1080p content already requires a 6 Mbps connection,¹¹ and 3D content requires over a 9 Mbps connection.¹² Soon, consumers will need speeds of around 20 Mbps to watch 4K content without glitches.¹³

At the same time, however, ISPs affiliated with MVPDs have an incentive to favor MVPD-supplied services over independent IP video streaming products and services, and a particular incentive to favor commonly-controlled MVPD-supplied services such as affiliated programming. As the Commission has found, ISPs that are integrated with MVPDs can have “an incentive to prevent [over-the-top] services from developing . . . and to hinder the competition from those that do develop,” along with the opportunity and “incentive to discriminate against unaffiliated content and distributors in [their] exercise of control over consumers’ broadband connections.”¹⁴ With their control over last-mile facilities, these entities may block, degrade, or otherwise impair their competitors’ ability to offer streaming video services. If the Commission fails to protect streaming video from such anti-competitive efforts, it risks losing competition in this market and, with it, “a tangible opportunity to bring customers additional benefits.”¹⁵

The Commission’s proposal to adopt a rebuttable presumption that a broadband provider’s exclusive (or effectively exclusive) arrangement prioritizing service to an affiliate would be commercially unreasonable is a step in the right direction,¹⁶ but further action is needed to preserve consumer access to the streaming content and platforms of their choice.

¹¹ Roku, How Is Video Streaming Quality Related to Internet Speed and Networking?, <http://support.roku.com/entries/22282284-How-is-video-streaming-quality-related-to-Internet-speed-and-networking-> (last visited July 15, 2014).

¹² See, e.g., Barb Gonzalez, *How Much Bandwidth Do You Need for Streaming Video*, SOUND AND VISION (Jul. 16, 2012), <http://www.soundandvision.com/content/how-much-bandwidth-do-you-need-streaming-video>.

¹³ See Jane Wakefield, *BBC to Stream World Cup Matches in 4K Ultra HD*, BBC (June 4, 2014), <http://www.bbc.com/news/technology-27713243>.

¹⁴ *Applications of Comcast Corporation, General Electric Company, and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licenses*, Memorandum Opinion and Order, 26 FCC Rcd 4238, 4268-69, 4275 ¶¶ 78, 93 (2011).

¹⁵ *Id.* at ¶ 78; see also *NPRM*, 29 FCC Rcd at 5606 ¶ 126.

¹⁶ See *NPRM*, 26 FCC Rcd at 5606 ¶ 126.

First, if the Commission elects to allow individualized bargaining rather than require ISPs “to hold themselves out to serve all comers indiscriminately on the same or standardized terms,”¹⁷ then it should also establish minimum performance criteria below which a broadband service provider’s speed and quality may not fall. Whether or not the Commission permits “paid prioritization,” ensuring that the baseline consumer Internet access offering supports video streaming at a level of quality and reliability sufficient to meet evolving viewer expectations is critical to protecting free competition, free expression, and consumer choice. Over-the-top video services should have access to transmission speeds capable of supporting the same level of video quality as an ISP’s own video and IP services.

Second, the Commission should address the separation that has developed between actual and advertised broadband performance measurements, especially in connection with popular services such as those provided by Netflix and Amazon.¹⁸ ISPs’ advertisements should be truthful, not misleading, and intelligible to the average consumer. Thus, if an ISP advertises its service as providing speeds “up to 50 Mbps,” then it should build out the infrastructure necessary to support those speeds—including the “on ramps” necessary to accept traffic onto its network. In the alternative, if an ISP chooses not to invest in such infrastructure, it should be required to disclose to its customers (and potential customers) that its advertised speeds may not apply to certain popular services.¹⁹ This sort of up-front transparency would help prevent the confusion and frustration that often occur when a consumer’s services do not perform as expected.²⁰ It would also empower consumers to make informed choices about both their broadband providers and their content providers.

¹⁷ See *id.* at ¶ 93 (quoting *Verizon*, 740 F.3d at 658).

¹⁸ See, e.g., Jeffrey J. Rose, *FCC: ‘Serious’ Internet Congestion Found at Some Points*, NEWS FACTOR (June 19, 2014), http://www.newsfactor.com/story.xhtml?story_id=11300ADXPY95 (describing concerns that some ISPs are purposely allowing congestion to pressure streaming video services into contracting with them for special treatment).

¹⁹ For instance, instead of advertising a service as offering speeds “up to 50 Mbps,” an ISP could advertise it as offering “up to 50 Mbps (may not apply to streaming video from Netflix or Amazon).”

²⁰ See, e.g., Wheeler Statement.

IV. DATA CAPS

While data caps can advance reasonable network management goals, ISPs have the potential to use data caps in discriminatory ways that limit consumer choice and constrain content diversity and free expression. For instance, one way that ISPs can discourage their customers from using over-the-top content is by exempting other content—especially their own or commonly-controlled content—from data caps. A number of ISPs have chosen this path already.²¹ As a result, the streaming video offered by those ISPs does not count against their customers' data caps, but competing services offered by over-the-top providers do. This sort of special treatment for an ISP's own or affiliated content poses an imminent threat to consumer choice and competition, and it is exactly the type of activity the Commission's open Internet rules should guard against.

A related way that ISPs can discourage consumption of over-the-top video content in favor of ISP-affiliated content is by establishing artificially low data caps. By using data caps that are lower than needed to ensure sufficient network capacity, ISPs can exert pressure on consumers to choose the video content that they and their affiliates provide (and are thus exempt from the caps). Moreover, the lower the data cap, the greater the potential for competitive harm. For example, customers with low data caps are more likely to be mindful of their data usage and, as a result, prefer video options that do not count against the data caps over video options that do.

To prevent data caps from being used as a tool to thwart competition, the Commission should conclude that discriminatory carve-outs from data caps are *per se* commercially unreasonable. Absent a showing that the market for broadband access is robustly competitive in a given market, an ISP's selective application of data caps would not only materially raise the cost of consuming content over a rival's platform, but also allow the excluding ISP to gain the power to price its content offerings below the level that would otherwise exist in a competitive marketplace. To prevent this competitive harm, an ISP's own IP video services should count

²¹ See, e.g., Michael Weinberg, *AT&T Exempts Itself From its Data Cap, Violates (at least) the Spirit of Net Neutrality*, Public Knowledge (Jan. 15, 2013), <https://www.publicknowledge.org/news-blog/blogs/att-exempts-itself-its-data-cap-violates-leas>.

against the same data caps applicable to over-the-top video services. For the same reason, the selective exemption of IP video traffic from *any* particular source or provider (whether affiliated with the ISP or not) from data caps should also be deemed *per se* commercially unreasonable. Finally, ISPs should be required to disclose the practices and policies by which they exempt traffic from data caps. This information is relevant to the Commission, consumers, and various stakeholders (such as streaming player manufacturers like Roku), and should be readily available to the public.

V. AUTHENTICATION

Historically, many major MVPDs were wary of streaming video because of the potential disruption to their traditional Pay TV bundled business model; therefore, MVPDs tended to discourage direct streaming of popular TV content in their contracts with content originators. TV Everywhere, also known as “TVE” or “authenticated streaming,” allows the MVPD to continue to charge for premium content, thus eliminating the incentive to “cut the cord,” while still permitting content originators to meet burgeoning consumer demand for the ability to access content over the Internet on mobile devices and Internet-connected devices in the home.

TVE uses content apps that run on various platforms, such as Android, iOS and other systems, and enables consumers to access content on demand on various types of Internet connected devices, including mobile phones, tablets, video game consoles, smart TVs, and streaming players. To ensure that the user has subscribed for the content as part of an MVPD subscription, the content providers rely on the MVPDs to authenticate the end user’s right to access premium content. A subscriber can only access the TV Everywhere app developed by a content provider for a particular streaming platform after entering an authentication provided by the MVPD. Specifically, the consumer must enter a user name and password established through its MVPD, and then the TVE app checks with the MVPD’s back end systems to determine if the app has been authenticated for use on the desired streaming platform. Once the MVPD confirms that the end user has the right to access a TV Everywhere app on the targeted streaming platform, the MVPD unlocks the consumer’s access to the TVE app by “authenticating” it. This approach satisfies the needs of MVPDs, content providers, the ISP, and

consumers: it preserves the pay TV “bundle” business model for MVPDs; establishes more outlets for the content provider and the consumer to connect; and opens new types of content and new levels of service flexibility for consumers.

Although customers have embraced authenticated streaming, this technology has the potential to be abused by ISPs owned or affiliated with MVPDs. For instance, while consumers and content providers would like content to be available on as many hardware and software platforms as possible, MVPD contracts with content providers typically allow the MVPD to choose which streaming platforms a given TVE app can be authenticated on. Rather than prioritizing platform support by consumer interest or software compatibility, MVPDs can use their power of authentication to favor one streaming platform over another. A large and powerful MVPD may use this leverage in negotiations with content providers or operators of streaming platforms, ultimately favoring parties that can either afford to pay for the privilege of authentication, or have other business leverage that can be used as a counterweight to discriminatory authentication.

Additionally, MVPDs with affiliated ISPs can abuse their power over authentication by choosing to authenticate only their own or affiliated offerings. For instance, some MVPDs have begun offering their own streaming services through a new generation of proprietary, Internet-connected cable set-top boxes—in effect competing with online video distributors as well as with Roku and other manufacturers of streaming players. When these MVPD/ISPs refuse to authenticate third-party apps, they impair the functionality and utility of third-party streaming platforms such as Roku and use the impairments to drive competing content and platform providers out of the market. As the larger MVPDs consolidate and increase the size of their service areas, the scope of their anticompetitive conduct increases, too. Moreover, MVPDs seem poised to secure the right to authenticate content not only inside their service areas, but also outside of them, which would allow MVPD-affiliated ISPs to extend discriminatory authentication to out-of-region territories. As a result, an MVPD/ISP that offered its own line of over-the-top devices would have the power to “self-authenticate” its own devices nationally even as third-party, Internet distributors faced a variety of anticompetitive delays based on the particular practices that the customer’s local MVPD/ISP adopted for third-party authentication.

These practices would drive today's robustly innovative and competitive Internet streaming marketplace back to the closed, proprietary cable TV systems of the past. Worse, these practices would provide MVPDs/ISPs with control over most if not all of the critical elements of consumer choice and free expression, including: (1) the transmission facilities delivering Internet streaming content; (2) the codes required to access that content; (3) the terms and conditions for end-user access; and (4) the design and development of the streaming platforms and devices consumers use to access that content.

To guard against anticompetitive discrimination, the Commission should require MVPDs with affiliated ISPs to authenticate streaming video apps on over-the-top streaming platforms such as Roku to the same extent that the MVPD authenticates its own streaming platforms, including cable set-top boxes, and including the MVPD's own or its affiliates' video offerings. MVPDs with affiliated ISPs should not be allowed to leverage their power over authentication to weaken competitors and favor their own businesses such as streaming players or operating systems.

Another problematic practice involves leveraging authentication so as to discourage consumers from using TVE apps in the first place. For example, MVPDs often choose to require consumers to authenticate and unlock multiple apps individually, rather than simply authenticating a TV Everywhere device once to unlock all apps on that device, which would greatly simplify authentication for consumers. Similarly, some MVPDs may sunset authentication codes for third-party TVE apps after a limited period of time but not sunset authentication codes for their affiliated TVE apps. The discriminatory sunset provisions require consumers to update codes for third-party apps but not for the MVPD-provided apps, which can represent a major deterrent to consumer use of over-the-top TVE applications and is a practice that should be held *per se* unreasonable.

Individual channel authentication is cumbersome and thwarts innovation. The practice is also largely unnecessary because MVPDs have secure options to unlock TV Everywhere apps other than individual customer authentication, such as through IP address verification. Imagine, for example, if MVPDs erected similar requirements for channel by channel authentication on their own paid TV platforms, where every channel available over the set-top

box required a separate multi-digit, alphanumeric code to enable access. Greater transparency over authentication arrangements may help encourage MVPD/ISPs to streamline authentication procedures for the benefit of consumers.

As the Commission recognized in its first *Open Internet Order*, incumbent video providers have strong incentives to leverage their bottleneck control and discriminate against Internet-enabled video platforms like Roku's streaming platform.²² To help guard against such practices, the Commission should require ISPs to disclose arrangements by which they either provide or refuse access to particular content, applications, services, or other traffic for particular devices and platforms, including TV Everywhere authentication. The Commission—and the public—can then compare these practices against the provider's treatment of self-provisioned content over alternative platforms. It is in the best interest of consumers for TVE apps to be made accessible by MVPDs on a non-discriminatory basis, and discrimination against the authentication of third-parties' Internet-based platforms is inconsistent with the open Internet goals of making lawful content available to consumers and promoting innovation in both technology and content development.

VI. SUCCESSFUL BUSINESS MODELS FOR MVPDS AND VIDEO STREAMING

While Roku is a well-recognized and independent brand and has a growing and highly engaged base of users, Roku is still a relatively small company when compared to the large MVPDs, OVDs, Internet sites, consumer electronics manufacturers and other business enterprises that have significant, if varying, interests in the delivery of audio and video content to the home via the Internet. As an independent technology innovator that has developed and operates an open Internet streaming platform used by millions of consumers to access an incredibly broad array of content in their homes, Roku has a unique perspective on the impact that the Commission's rulemaking regarding the open Internet could have on the future of home entertainment.

²² See *Open Internet Order*, 25 FCC Rcd at 17916-17 ¶ 22 ("Several MVPDs have stated publicly that they view these services as a potential competitive threat to their core video subscription service. . . . By interfering with the transmission of third parties' Internet-based services or raising the cost of online delivery for particular edge providers, telephone and cable companies can make those services less attractive to subscribers in comparison to their own offerings").

A common misperception is that independent streaming platforms such as Roku's are betting their futures on consumers cancelling their cable or satellite subscriptions and relying exclusively on Internet delivered content. Roku does not see the world in such stark terms. In fact, most Roku users have a cable or satellite TV subscription service in addition to their Roku player.²³ They use their Roku players to access both new entertainment choices, as well as to get more value out of a cable or satellite television service.

In fact, services like Roku's are becoming an alternative way for some MVPDs to reach consumers. For example, Roku has a programming partnership with Dish Network to stream their international programming to those who may not be able to install a satellite dish. Similarly, Time Warner Cable ("TWC") customers can access virtually their entire service offerings through a Roku app developed by Time Warner. By using this app on a Roku streaming player, a TWC customer can eliminate the need to rent an additional cable set top box for a second or third television set. This innovative feature is a win-win for both Time Warner Cable and its customers, as it cost-effectively increases the value of both the customer's cable subscription and Roku streaming player.

Ample opportunities exist for Roku to expand existing and develop new relationships with MVPDs, and fostering these relationships will benefit consumers who increasingly demand access to content whenever, wherever, and however they want it. As the Commission considers these issues in connection with the *NPRM*, it should take into account the degree to which innovative companies such as Roku depend on the ability of consumers to access all lawful content over the Internet. Devices such as Roku players represent an exciting area of innovation that is being embraced by all segments of the entertainment industry as a means to expand the business opportunities for legitimate content distribution, and they are also driving the adoption of broadband connections.

²³ See, e.g., *Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licenses*, Memorandum Opinion and Order, 26 FCC Rcd 4238, 4269 ¶ 79 (2011) (noting that cord-cutting is relatively infrequent and finding that most consumers do not see OVD service as a substitute for their MVPD service).

VII. CONCLUSION

Consumers have a deeply vested interest in an open marketplace for competition in Internet streaming of video content and services. That openness includes not only open competition between makers of various types of streaming devices, but also open competition between video streaming services. As a relatively small but highly innovative company that has demonstrated strong consumer demand for its products, Roku is happy to compete on a level playing field where consumers can choose among the products and services that they purchase and use. However, the widespread availability of affordable broadband Internet that is open to all lawful content sources, and that treats all streaming products and services equally, is essential to the continued growth and innovation in this market. The Commission should adopt open Internet rules and policies that prevent powerful participants in the home entertainment ecosystem from restricting, degrading, or otherwise interfering with consumer access to lawfully available content or services—whether it be through blocking or degrading certain lawful content, using data caps to discriminate against over-the-top services, or favoring one platform over another through authentication.

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