

Before the
Federal Communications Commission
Washington, D.C.

In the matter of

Expanding Consumers' Video Navigation
Choices

Commercial Availability of Navigation
Devices

MB Docket No. 16-42

CS Docket No. 97-80

**COMMENTS OF THE
COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION (CCIA)**

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TABLE OF CONTENTS

I. Introduction and Summary..... 4

II. There is a Marked Lack of Competition in the Market for Set-Top Boxes..... 5

III. The Commission is Squarely Within its Authority to Promulgate Rules Promoting a Software Successor for CableCARD. 6

IV. An Apps-Based Solution Will not Effectively Promote the Commercial Availability of Third-Party Navigation Devices. 7

 A. Apps are Not a Substitute for Set-Top Boxes. 7

 B. Cable’s Apps Approach Will Simply Perpetuate the Status Quo. 9

 i. Under the Apps Approach, MVPDs Are Still Gatekeepers to Their Walled Gardens. 9

 ii. Despite Claims of Support for Apps, and that Apps Are the “Future of TV,” MVPDs Are Often Quick to Pull Their Support for Their Own Apps. 11

V. Contrary To MVPD Claims, Set-Top Boxes Are Not Going Away Anytime Soon. 13

 A. Despite Recent Announcements by Comcast, Set-Top Boxes Remain an Important Part of its Future. 14

 B. The MVPDs’ Reticence To Providing Access for Third-Party Devices Hinders the Development of a Competitive Retail Market. 14

VI. The NPRM is Not “AllVid.” 16

VII. The Cable Lobby Previously Supported Retail Navigation Device Competition but Has Since Changed Its Tune. 17

VIII. Cable’s Complaints Regarding the NPRM Are Unfounded. 19

 A. The Technology Behind the NPRM Is Already Used by MVPDs. 20

 B. The NPRM Provides Strong Copyright Protections. 22

 C. The Commission has the Authority to Ensure Privacy Protections for Users of Third-Party Devices. 25

IX. The NPRM Will Unleash Competition. 28

 A. Competition Will Promote Innovation and Improve the Consumer’s Experience. 28

 B. Competition Will Help Consumers Save Money. 30

 C. Competition Will Yield More Efficient Set-Top Boxes. 31

X. Recommendations. 32

XI. Conclusion. 36

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CCIA respectfully submits these comments in the above-referenced proceeding regarding how the Commission can promote innovation and consumer choice in accessing multichannel video programming distributor (MVPD) programming while also fulfilling its obligations under Section 629 of the Communications Act.²

With this Notice of Proposed Rulemaking (NPRM),³ the Commission has proposed a forward-looking solution that will foster the development of new technologies and user experiences that will be driven by the private sector. The Commission's approach in the NPRM will promote a private sector-driven process that will be more akin to other areas of consumer electronics that have led to rapid innovation in products and services, competition, and, most importantly, increased consumer choice and lower costs.

¹ CCIA represents large, medium, and small companies in the high technology products and services sectors, including computer hardware and software, electronic commerce, telecommunications, and Internet products and services. Our members employ more than 750,000 workers and generate annual revenues in excess of \$540 billion. A list of CCIA's members is available online at <http://www.cciagnet.org/members>.

² See 47 U.S.C. § 549a (requiring the FCC to "adopt regulations to assure the commercial availability . . . of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems, from manufacturers, retailers, and other vendors not affiliated with any multichannel video programming distributor.").

³ Expanding Consumers' Video Navigation Choices, *Notice of Proposed Rulemaking and Memorandum Opinion and Order*, MB Docket No. 16-42, FCC 16-18 (rel. Feb. 18, 2016).

I. Introduction and Summary.

President Obama has noted how opening up the set-top market to competition, as promoted by the NPRM, could yield tremendous benefits for consumers and innovation.⁴ As Jason Furman, the Chairman of the Council of Economic Advisors explained, “Instead of spending nearly \$1,000 over four years to lease a set of behind-the-times boxes, American families will have options to own a device for much less money that will integrate everything they want — including their cable or satellite content, as well as online streaming apps — in one, easier-to-use gadget.”⁵ Indeed, the Commission has previously noted how the lack of competition in this marketplace inhibits innovation: “As navigation devices are the means to deliver analog and digital communications, competition in the navigation equipment market is central toward encouraging innovation in equipment and services, and toward bringing more choice to a broader range of consumers at better prices.”⁶

CCIA, along with the leading technology companies, consumer advocacy groups, and innovative video device manufacturers in the Consumer Video Choice Coalition (CVCC), agrees that consumers and our economy would benefit from greater competition in the video navigation device marketplace. The central fact is that consumers are paying ever-increasing fees just to lease their cable providers’ antiquated equipment, with little opportunity to go elsewhere. CCIA applauds the Commission for moving forward on the work done by the Downloadable Security Technical Advisory Committee (DSTAC) in fulfillment of its clear, statutory mandate.

⁴ Jason Furman and Jeffrey Zients, *Thinking Outside the Cable Box: How More Competition Gets You a Better Deal*, THE WHITE HOUSE BLOG (Apr. 15, 2016), <https://www.whitehouse.gov/blog/2016/04/15/ending-rotary-rental-phones-thinking-outside-cable-box>.

⁵ *Id.*

⁶ *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Report and Order, 13 FCC Rcd 14775, 14776, ¶ 3 (1998) (“*First Plug and Play Report and Order*”).

II. There is a Marked Lack of Competition in the Market for Set-Top Boxes.

“A consumer should be able to choose [a set-top box] the same way he or she chooses other products, by going to the store, comparing the quality, features, and price, and buying or renting the best one.” – Congressman Tom Bliley in 1995⁷

Over two decades ago, Tom Bliley, then the Republican Chairman of the House Commerce Committee, recognized the lack of competition inherent in the set-top box marketplace where consumers were forced to rent equipment from their cable provider.⁸ With then-Congressman Ed Markey, he introduced the Competitive Consumer Electronics Availability Act of 1995,⁹ which later became the basis for Section 629 as part of the Telecommunications Act of 1996.¹⁰ Despite different efforts by the Commission to promote a competitive market over the past twenty years, Congressman Bliley’s vision has yet to become reality, and an overwhelming number of consumers are still leasing set-top boxes from their pay-TV providers.

Last summer, Senators Markey and Richard Blumenthal released the results of a study noting that 99% of customers lease set-top boxes from their cable providers.¹¹ In its most recent Commission-mandated filing¹² regarding the status of CableCARD deployment and support, the National Cable & Telecommunications Association (NCTA) noted that since 2007, the nine

⁷ 141 CONG. REC. E635 (daily ed. Mar. 21, 1995) (statement of Rep. Bliley), *available at* <https://www.congress.gov/crec/1995/03/21/CREC-1995-03-21-pt1-PgE635.pdf>.

⁸ *See generally* John Howes, Jr., *Today’s FCC Action on Cable Boxes, 20 Years in the Making*, THE DISRUPTIVE COMPETITION PROJECT (Feb. 18, 2016), <http://www.project-disco.org/telecom/021816-todays-fcc-action-on-cable-boxes-20-years-in-the-making/>.

⁹ H.R. 1275, 104th Cong. (1995), *available at* <https://www.congress.gov/bill/104th-congress/house-bill/1275>.

¹⁰ 47 U.S.C. § 549a (requiring the FCC to “adopt regulations to assure the commercial availability . . . of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems, from manufacturers, retailers, and other vendors not affiliated with any multichannel video programming distributor.”); *see also* S. REP. NO. 104-230, at 113 (1996) (joint explanatory statement of Committee of Conference) (showing that Congress aimed “to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition.”).

¹¹ Press Release, Office of Sen. Ed Markey, Markey, Blumenthal Decry Lack of Choice, Competition in Pay-TV Video Box Marketplace (July 30, 2015), *available at* <http://www.markey.senate.gov/news/press-releases/markey-blumenthal-decry-lack-of-choice-competition-in-pay-tv-video-box-marketplace>.

¹² Letter from Neal M. Goldberg, Vice President and Gen. Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Fed. Comm’n Sec’y, CS Docket No. 97-80 (July 31, 2015), <http://apps.fcc.gov/ecfs/document/view?id=60001119614> (providing data from the nine largest incumbent cable operators in the country).

largest cable operators have deployed about 617,000 CableCARDs for use in retail devices that consumers have bought.¹³ However, that pales in comparison to the nearly 53,000,000 CableCARDs that cable providers have deployed in the devices they lease to subscribers.¹⁴

Based on NCTA's numbers, the proportion of subscribers leasing set-top boxes from their providers has actually increased over the past decade. By the end of 2008, about 96% of subscribers used a box from their provider.¹⁵ In 2012, NCTA reported that the percentage of subscribers using their provider's set-top boxes climbed to 98.3%.¹⁶ With 99% of customers currently renting their provider's preferred set-top box, the situation has only gotten worse. The competition for retail devices that Congress envisioned has actually deteriorated over time.

III. The Commission is Squarely Within its Authority to Promulgate Rules Promoting a Software Successor for CableCARD.

By enacting Section 629, Congress provided a clear mandate for the Commission to ensure competition in the set-top box marketplace.¹⁷ Still, some have questioned the Commission's authority to pursue this course of action in the NPRM,¹⁸ including one Commissioner, who has claimed that the Commission does not have the requisite authority to promote a software-based successor to CableCARD under the STELA Reauthorization Act of

¹³ *Id.*

¹⁴ *Id.*

¹⁵ Letter from Neal M. Goldberg, Vice President and Gen. Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Fed. Comm'n Comm'n Sec'y, CS Docket No. 97-80 (Dec. 22, 2008), <http://apps.fcc.gov/ecfs/document/view?id=6520191566> (reporting the ten largest incumbent cable operators in the country had deployed 392,000 CableCARDs in retail devices but more than 9,766,000 operator-supplied set-top boxes).

¹⁶ Letter from Neal M. Goldberg, Vice President and Gen. Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Fed. Comm'n Comm'n Sec'y, CS Docket No. 97-80 (Jan. 30, 2012), <http://apps.fcc.gov/ecfs/document/view?id=7021857180> (reporting the ten largest incumbent cable operators in the country had deployed 554,000 CableCARD in retail devices but more than 32,000,000 operator-supplied set-top boxes).

¹⁷ Comments of CCIA, MB Docket 15-64, at 2-4 (filed Oct. 8, 2015) (explaining how Section 629 mandated that the Commission write rules to promote competition for video navigation devices).

¹⁸ See Jon Brodtkin, *FCC votes to "unlock the cable box" over Republican opposition*, ARS TECHNICA (Feb. 18, 2016), <http://arstechnica.com/business/2016/02/fcc-votes-to-unlock-the-cable-box-over-republican-opposition/> (quoting Comcast Senior Executive VP David Cohen).

2014 (STELAR).¹⁹ However, in Section 106 of STELAR, Congress required that the DSTAC recommend a “platform-neutral software-based downloadable security system designed to promote the competitive availability of navigation devices in furtherance of Section 629 of the Communications Act.”²⁰ The NPRM is plainly an extension of Congress’ mandate to the FCC in STELAR.

IV. An Apps-Based Solution Will not Effectively Promote the Commercial Availability of Third-Party Navigation Devices.

A. Apps are Not a Substitute for Set-Top Boxes.

Although there have been remarkable innovations in streaming video on devices through apps, apps are currently not a substitute for video navigation devices because they do not provide the same functionality and level of service. Opponents of the NPRM have frequently quoted Apple CEO Tim Cook as saying that “the future of TV is apps[,]”²¹ claiming that apps are a substitute widely available on many devices and that set-top boxes are going away.²² However, consumers have not been given an opportunity to determine if they prefer the functionality of MVPDs’ apps to that of a third-party set-top box. And, it is unclear how many subscribers continue to use their MVPD’s app for weeks, months, or years after downloading it and whether

¹⁹ STELA Reauthorization Act of 2014, Pub. L. No. 113-200, § 106(d), 128 Stat. 2059, 2063 (2014). See NPRM at 65 (dissenting statement of Commissioner O’Rielly).

²⁰ STELAR, § 106(d).

²¹ THE FUTURE OF TV, <http://futureoftv.com/> (last visited Apr. 20, 2016); Stacy Fuller, *While the Future of TV is Apps, the FCC is Locked in the Box of the Past*, AT&T PUBLIC POLICY BLOG (Feb. 3, 2016), <http://www.attpublicpolicy.com/fcc/while-the-future-of-tv-is-apps-the-fcc-is-locked-in-the-box-of-the-past/>; Reply Comments of NCTA, MB Docket 15-64, at 8 (filed Nov. 9, 2015); Comments of NCTA, MB Docket 15-64, at 4, 20 (filed Oct. 8, 2015); Comments of Comcast Corp., MB Docket 15-64, at 5 (filed Oct. 8, 2015).

²² Comments of AT&T, MB Docket 15-64, at 2 (filed Oct. 8, 2015) (“Consumers can readily access MVPD programming and services via MVPD apps that serve over 450 million consumer-owned devices, including Android and iOS smartphones and tablets, PCs and Macs, game consoles, Smart TVs, and other retail devices such as Roku, Google Chromecast, and Kindle Fire”); Comments of NCTA, *supra* note 21 at 2 (“There have already been over 56 million MVPD app downloads to iOS and Android devices. Apps from MVPDs are now available on more than 460 million devices in the United States – more than twice the number of set-top boxes currently in use – including smartphones, tablets, smart TVs, streaming set-top boxes like Roku, game consoles, and other connected devices.”); Comments of Comcast Corp., *supra* note 21 at 2-3 (“In fact, over 460 million connected devices support one or more MVPD apps, and 66 percent of them support apps from all of the top 10 MVPDs. To date, there have been more than 56 million downloads of MVPD apps, and on average each consumer household already has four retail devices with available MVPD apps.”) (footnote omitted).

it truly substitutes for a set-top box. Indeed, numerous Silicon Valley companies are now talking about creating solutions to the problem of “app overload.”²³

Most MVPDs still require set-top boxes to view their programming, especially for HD channels.²⁴ It is very likely that set-top boxes will be required for the foreseeable future as an Apps Approach would impose additional costs on smaller MVPDs that would have to develop apps for delivery of their programming.²⁵

Though MVPDs tout their apps, they do not explain how an Apps Approach would affect their business model of leasing set-top boxes. The leasing model generates at least \$19.5 billion every year. If an MVPD moved to apps, it would have to recoup that sizeable amount of money. Comcast recently announced its “Xfinity TV Partner Program,” through which Comcast is “providing a common framework . . . [for] device manufacturers to bring [its] Xfinity TV Partner App to customers on their devices.”²⁶ However, Comcast has not explained how it would derive revenue from this program, how consumers would pay for the app, whether subscribers still would need a set-top box in their homes, or whether the fees that consumers pay would be decreased. Comcast’s “Xfinity TV Partner Program” appears to be a closed system that would

²³ Robert McMillan, *Facebook Hopes Chatbots Can Solve App Overload*, THE WALL ST. J. (Apr. 17, 2016), <http://www.wsj.com/articles/facebook-hopes-chatbots-can-solve-app-overload-1460930220>.

²⁴ See, e.g. *HD Equipment Requirements*, COMCAST XFINITY, <http://customer.xfinity.com/help-and-support/cable-tv/equipment-needed-for-high-definitionservice/> (last visited Apr. 21, 2016) (“To view high-definition (HD) programs, you’ll need: An HD-enabled cable box, such as an HD-DVR box or HD set-top box. We’ll provide this box for an additional monthly fee.”); *Required Equipment for FiOS TV*, VERIZON, <https://www.verizon.com/support/residential/tv/fiostv/general+support/new+to+fios+tv/questionsone/84832.htm> (last visited Apr. 21, 2016); *Additional information regarding FiOS TV equipment*, VERIZON, <https://www.verizon.com/support/residential/tv/fiostv/general+support/new+to+fios+tv/questionsone/84837.htm> (last visited Apr. 21, 2016) (“Rental is the only option for Verizon FiOS TV Set-Top Boxes. . . . Set-Top Boxes are required for each television where you would like to receive digital programming.”).

²⁵ Nilay Patel, *The Divergence: Comcast really loved the idea of open cable boxes before hating it*, THE VERGE (Feb. 17, 2016, 6:00 PM), <http://www.theverge.com/2016/2/17/11039542/comcast-open-cable-boxes-brian-roberts-fcc> (questioning whether small cable providers would be able to “write, support, and maintain apps for all of these platforms”).

²⁶ Mark Hess, *Comcast seeks partners to bring Xfinity tv cable service to more retail devices*, COMCASTVOICES (Apr. 20, 2016), <http://corporate.comcast.com/comcast-voices/comcast-seeks-partners-to-bring-xfinity-tv-cable-service-to-more-retail-devices> [hereinafter *Xfinity TV Partner Program Announcement*].

not promote the kind of innovation supported by the NPRM. Notably absent from the announcement of the new program is any mention of Comcast's X1 set-top box, of which Comcast reportedly installs 40,000 per day, or that Comcast aims to have X1s in the homes of half of its 22 million video subscribers by the end of 2016.²⁷ The Commission's response to the program notes some deeper concerns: Comcast would still control the user interface, the program would only support Comcast services, and it would not support searching across platforms.²⁸ Comcast's "Xfinity TV Partner Program" appears to be a closed system that would not promote the kind of innovation supported by the NPRM.

Furthermore, apps are not widely available across MVPD systems. Although consumers utilize apps for a variety of entertainment purposes, the cost of subscribing to different apps in addition to an MVPD's service will add up quickly for consumers. Therefore, apps are not a complete substitute for MVPD programming on a set-top box, and they simply do not solve the fundamental problem of maintaining a subscriber's access to the cable signal. An apps-based solution is no solution at all to the problem of the lack of competition for video navigation devices, which the Commission must remedy in response to Congress's mandate in Section 629.

B. Cable's Apps Approach Will Simply Perpetuate the Status Quo.

- i. Under the Apps Approach, MVPDs Are Still Gatekeepers to Their Walled Gardens.*

The apps approach would allow MVPDs to continue to be gatekeepers to content for devices that would compete with their offerings. Although opponents of the NPRM excitedly

²⁷ Reinhardt Krause, *Comcast Ramps X1 Set-Top Boxes As FCC Plans Market Makeover*, INVESTOR'S BUSINESS DAILY (Feb. 22, 2016), <http://www.investors.com/news/technology/comcast-ramps-x1-set-top-boxes-as-fcc-plans-market-makeover/>.

²⁸ Billy Steele, *Comcast Xfinity Cable TV Without a Box*, ENGADGET (Apr. 20, 2016), <http://www.engadget.com/2016/04/20/comcast-xfinity-cable-tv-without-a-box/>.

tout apps,²⁹ they do not explain that apps currently do not provide the same functionality or support the same range of programming as set-top boxes. The Commission rightly notes that “MVPDs that provide their service to subscribers via proprietary applications on certain equipment such as mobile devices often provide only a subset of their multichannel video programming, reserving the full service for set-top boxes or other in-home viewing options.”³⁰ Apps usually do not have all of the channels to which subscribers are accustomed.³¹ For example, local channels are often missing. Apps also do not have the same DVR functionality. Apps are merely complementary to leased devices and thus unlikely to lead to retail competition. Shifting cable access to apps will result in consumers getting less than they would today.

Apps will remain a closed universe—a walled garden—where consumers would only be able to access MVPD service offerings on MVPD-approved devices. An apps-based solution would maintain MVPD control and thwart the potential for innovation innovations that simply occur first outside the MVPD bubble. For example, DVRs have become almost standard MVPD offerings, but this technology was brought to the market by TiVo rather than MVPDs. The closed nature of some apps also is problematic. As Chairman Wheeler recently noted: “[I]f they close the app it’s just as awful as a closed piece of hardware.”³²

²⁹ See *supra* note 21 (detailing many of the times that opponents of the NPRM have quoted Apple CEO Tim Cook); NCTA Cable, *LIVE on #Periscope: .@chairmanpowell demonstrating latest app and OTT devices and services*. *Periscope.tv/w/adz7zjlwNTI5* ..., TWITTER (Apr. 13, 2016 10:21 AM), <https://twitter.com/NCTACable/status/720255481785135104> [hereinafter NCTA Cable, *LIVE on #Periscope*].

³⁰ NPRM at 32, ¶66.

³¹ Jon Brodtkin, *Verizon kills FiOS live TV apps for Xbox and smart TVs*, ARS TECHNICA (Mar. 21, 2016), <http://arstechnica.com/business/2016/03/verizon-kills-fios-live-tv-apps-for-xbox-and-smart-tvs/> (“Verizon also said the app had only a “limited number of channels available,” rather than the full lineup.”).

³² Nilay Patel, *The Dragonslayer*, THE VERGE (Mar. 9, 2016), <http://www.theverge.com/2016/3/9/11181450/fcc-chairman-tom-wheeler-interview-5g-internet-net-neutrality>.

ii. *Despite Claims of Support for Apps, and that Apps Are the “Future of TV,” MVPDs Are Often Quick to Pull Their Support for Their Own Apps.*

While opponents of the NPRM have pointed to apps as a solution, MVPDs are often quick to pull their support for their own apps from platforms the MVPDs do not control – often without explanation. In addition to the many past instances listed in the NPRM where MVPDs have pulled their apps,³³ this problem has persisted. Verizon recently announced that it would pull its apps from Xbox consoles and Samsung Smart TVs due in part to the “limited number of FiOS customers who were using the FiOS app on the Xbox 360 and Xbox One.”³⁴ This suggests that even though MVPDs proudly extol the number of platforms on which their apps are *available*, the real question is how many customers are actively using the apps.

MVPDs’ willingness to pull their apps from different platforms is a serious concern for consumers, who relied on the ability to access via an app the programming to which they had subscribed. The subscribers may have returned or ditched their set-top boxes under the belief that they were no longer necessary because “the future of TV is apps.”³⁵ Again, although MVPDs have claimed that their apps are available on hundreds of millions of devices, in reality, the current presence of apps on consumer devices depends on the whims of the MVPD. There is no guarantee that the app will remain on a certain platform.

In addition, apps are not fully available across platforms and operating systems. During a recent presentation, NCTA President Michael Powell stated that Time Warner Cable’s app “can theoretically run on any IP device.”³⁶ Theoretically, MVPD apps could run on any IP device, but recent actions from MVPDs show that they do not. This problem also has major consequences

³³ NPRM at 28 n. 159.

³⁴ See Brodtkin, *Verizon kills FiOS*, *supra* note 31 (“Verizon also said the app had only a “limited number of channels available,” rather than the full lineup.”).

³⁵ See *supra* note 21 (detailing many of the times that opponents of the NPRM have quoted Apple CEO Tim Cook).

³⁶ NCTA Cable, *LIVE on #Periscope*, *supra* note 29.

for competition. Verizon is not the only MVPD that has recently discontinued support for its apps. Last summer, Comcast pulled its Xfinity On Demand app from Xbox 360s.³⁷ The nation's largest cable provider has yet to provide an updated or new Xfinity app have for gaming consoles or third-party boxes even though it promised to provide "updates and improvements to [its] online experience."³⁸

NCTA also says that the cable industry is not "picking and choosing their competitors" and is committed to "extending apps to many more platforms."³⁹ However, this is not always the case. In another example of MVPDs blocking competitive third-party device manufacturers from accessing apps, CCIA brought to the Commission's attention the drastically different treatment of third-party devices by Charter and the companies it is attempting to purchase: Time Warner Cable and Advance/Newhouse Partnership.⁴⁰ CCIA observed that Charter had been blocking the authentication credentials necessary to utilize those apps on devices made by NVIDIA, which compete with the set-top boxes that Charter leases to its subscribers. For example, the HBO Go app is available on the same NVIDIA device to Time Warner Cable and Bright House Networks subscribers, but it is not available to Charter's subscribers.⁴¹ Similarly, last year Comcast blocked the HBO Go app on PlayStation 4, as well as HBO Go and Showtime

³⁷ Jared Newman, *Comcast Xfinity's Xbox 360 app is going away soon*, TECH HIVE (Aug. 18, 2015), <http://www.techhive.com/article/2972580/streaming-media/comcast-xfinitys-xbox-360-app-is-going-away-soon.html>.

³⁸ Jared Newman, *Verizon Fios kills Xbox and smart TV apps, making rental fees harder to avoid*, TECH HIVE (Mar. 22, 2016), <http://www.techhive.com/article/3046702/streaming-media/verizon-fios-kills-xbox-and-smart-tv-apps-making-rental-fees-harder-to-avoid.html>.

³⁹ Reply Comments of NCTA, *supra* note 21.

⁴⁰ Ex Parte, Applications of Charter Communications, Inc., Time Warner Cable, Inc., and Advance/Newhouse Partnership For Consent to Transfer Control of Licenses and Authorizations, MB Dkt. No. 15-149; Media Bureau Request for Comment on DSTAC Report, MB Dkt. No. 15-64, *available at* <http://apps.fcc.gov/ecfs/document/view?id=60001426688>.

⁴¹ *Id.*

for customers who used Roku devices in 2014.⁴² More recently, Comcast will not authenticate a new app, developed by the premium channel, Starz.⁴³

These examples illustrate the broader implications of the set-top box debate. Currently, MVPDs like Charter can pick and choose on which devices they want to support with their apps. This creates a broader problem for competition where an MVPD can pull support for apps on devices that may pose a competitive threat.

V. Contrary To MVPD Claims, Set-Top Boxes Are Not Going Away Anytime Soon.

The growing frequency of MVPDs changing their support or not authenticating apps on competing platforms also shows that, despite MVPD claims to the contrary, set-top boxes are not going away anytime soon. In the case of Verizon subscribers who recently lost support for the FiOS app on their Xbox consoles or Samsung TVs, “[t]he only way to get them back will be to rent additional set-top boxes from Verizon, each priced at \$12 per month.”⁴⁴ Indeed, when an MVPD pulls its apps from a platform, that MVPD’s subscribers must then get the MVPD’s set-top box to access the MVPD’s programming. That customer may have utilized the app in order to avoid ever-increasing leasing fees, but now he or she will have to revert to leasing the MVPD’s set-top box.

If “the future of TV is apps,”⁴⁵ it is curious that MVPDs are referring apps viewers back to set-top boxes. Many are even introducing their own next-generation set-top boxes. For

⁴² John Bergmayer and Shiva Stella, *It’s Absurd That Comcast Can Block the HBO Go App on Your PS4*, SLATE (Mar. 13, 2015), http://www.slate.com/blogs/future_tense/2015/03/13/it_s_absurd_that_comcast_can_block_hbo_go_on_your_ps4.html.

⁴³ Kent Gibbons, *Comcast Won’t Authenticate Subs for New Starz App*, MULTICHANNEL NEWS (Apr. 20, 2016), <http://www.multichannel.com/news/cable-operators/comcast-wont-authenticate-subs-new-starz-app/404340> (noting that, according to a Starz spokesman, Comcast “Xfinity is the only major distributor not authenticating subscribers to watch Starz and Starz Encore content on the app.”).

⁴⁴ Newman, *Verizon Fios kills Xbox and smart TV apps*, *supra* note 38.

⁴⁵ *See supra* note 21 (detailing many of the times that opponents of the NPRM have quoted Apple CEO Tim Cook).

example, Cox⁴⁶ and Charter⁴⁷ have recently introduced their own upgraded boxes. The set-top box remains a significant part of the future of many MVPDs.

A. Despite Recent Announcements by Comcast, Set-Top Boxes Remain an Important Part of its Future.

Comcast's insistence that the "the future of TV is apps"⁴⁸ and that set-top boxes are antiquated equipment are belied by its significant investment in rolling out its own next-generation, set-top box. Comcast is aggressively pushing its X1 box, reportedly installing 40,000 X1 set-top boxes per day and aiming to have X1s in the homes of half of its 22 million video subscribers by the end of 2016.⁴⁹ According to Comcast's CEO and chairman, X1 is viewed as "absolutely a game-changer."⁵⁰ Despite Comcast's announcement of its aforementioned "Xfinity TV Partner Program" days before the NPRM's comment deadline, X1 shows that set-top boxes are not in Comcast's rear view mirror.⁵¹

B. The MVPDs' Reticence To Providing Access for Third-Party Devices Hinders the Development of a Competitive Retail Market.

Furthermore, even though there are an increasing number of video streaming devices available at retail, it is very rare that an MVPD will provide access to its signal and programming to a third-party device. Streaming video devices, like Roku and Apple TVs, have become more

⁴⁶ See Karl Bode, *Cox Deploying New 'Contour' Set Top Box Upgrade*, DSLREPORTS (Apr. 6, 2016), <http://www.dslreports.com/shownews/Cox-Deploying-New-Contour-Set-Top-Box-Upgrade-136657> ("Cox says it is now offering the upgraded box in the majority of its markets as of this week. Only Virginia has yet to see the deployment, which the company says should occur on April 26. Just like the X1, the Contour features an improved interface, voice controls, some integrated cloud functionality, and 2 terabytes of storage -- capable of holding up to 300 hours of HD shows, or 1,000 hours of SD shows.").

⁴⁷ *Charter Announces Fourth Quarter and Full Year 2015 Results*, CHARTER 3 (Feb. 4, 2016), available at <http://ir.charter.com/phoenix.zhtml?c=112298&p=irol-earnings> ("Charter is also poised to launch its new set-top box, *World Box*, which features downloadable security along with other advanced functionality . . .").

⁴⁸ Comments of Comcast Corp., *supra* note 21 at 5 (quoting Apple CEO Tim Cook).

⁴⁹ Krause, *supra* note 27.

⁵⁰ *Id.*

⁵¹ *Xfinity TV Partner Program Announcement*, *supra* note 26.

prevalent;⁵² however, these devices are generally not CableCARD-ready unless an MVPD has decided to work out a deal with the device manufacturer. This trend has continued as MVPDs deny access to their apps on various platforms and devices. The central problem underlying Section 629 is access to the MVPD's signal. The MVPDs' reticence to providing access for third-party devices ensures that these devices are not a substitute to the MVPD's own set-top boxes.

Because of the limited availability of CableCARD devices, the MVPDs have been able to maintain control over who can access their signal. Without effective support for third-party devices that can access the signal, there has been little to no impetus for MVPDs to move away from the leasing model. Indeed, with this captive market in which consumers have little to no choice but to rent a box, it is easy to increase set-top box lease fees to generate new revenue. The Consumer Federation of America and Public Knowledge found that the average charge for set-top boxes has increased 185% since 1994, meaning that MVPDs overcharge customers between \$6 billion and \$14 billion every year.⁵³ However, the price of other consumer electronics, such as computers, televisions, and mobile phones, has decreased over 90% since 1994.⁵⁴ In fact, in January 2016, Time Warner Cable announced that it would increase leasing fees on its HD set-top boxes from \$6.98 per month to \$8.50 per month with little rationale for doing so.⁵⁵

⁵² Bret Swanson, *Regulation by narrative, Part III: The set-top box diversion*, TECHPOLICYDAILY.COM (Mar. 10, 2016), <http://www.techpolicydaily.com/communications/regulation-by-narrative-part-iii-the-set-top-box-diversion/> (reporting that consumers bought about 42 million streaming video devices in 2015, including Roku, Google Chromecasts, and AppleTVs).

⁵³ Letter from Consumer Federation of America and Public Knowledge, to Marlene H. Dortch, Sec'y, Fed. Comm'n Comm'n, MB Docket No. 15-64, at 2 (filed Jan. 20, 2016), <http://apps.fcc.gov/ecfs/document/view?id=60001409005> [hereinafter Consumer Federation of America and Public Knowledge Letter].

⁵⁴ *Id.*

⁵⁵ Larry Rulison, *Time Warner Cable raises TV and Internet rates once again*, TIMESUNION (Jan. 18, 2016), <http://blog.timesunion.com/business/after-ny-oks-merger-time-warner-cable-raising-rates/72121/>.

VI. The NPRM is Not “AllVid.”

Opponents of the NPRM have gone to great lengths to incorrectly label the DSTAC’s Competitive Navigation Solution and now the Commission’s proposal in the NPRM as “AllVid.”⁵⁶ The proposal in the NPRM is not “AllVid.”

AllVid was an idea from the National Broadband Plan, which would have required an intermediary “gateway device” —another piece of hardware.⁵⁷ The idea would have essentially removed the CableCARD from the set-top box, turning it into a separate, gateway device that would serve as a physical intermediary between the set-top box and the cable connection. The AllVid device would “bridge the proprietary or unique elements of the MVPD network (e.g., conditional access, tuning and reception functions) to widely used and accessible, open networking and communications standards.”⁵⁸

Nothing in the NPRM requires a second box. The NPRM does not mandate or even suggest an intermediary, hardware, physical device that would perform the conditional access function like AllVid. The Commission explains in the NPRM that AllVid “would have required all operators to put a new device in the home between the network and the retail or leased set-top box. Now, as MVPDs move to Internet Protocol (‘IP’) to deliver their services and to move content throughout the home, those difficulties are gone.”⁵⁹ A physical AllVid or even CableCARD-like device is no longer necessary. Technology has developed in such a way that “most MVPDs have coalesced around a few standards and specifications for delivery of the

⁵⁶ See Reply Comments of NCTA, *supra* note 21 *passim* (using the term “AllVid” 153 times); Comments of NCTA, *supra* note 21 *passim* (using the term “AllVid” 152 times).

⁵⁷ Fed. Comm’n Comm’n, Connecting America: the National Broadband Plan 51 (2010), *available at* <https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf> (“The FCC should initiate a proceeding to ensure that all multichannel video programming distributors (MVPDs) install a gateway device or equivalent functionality in all new subscriber homes and in all homes requiring replacement set-top boxes, starting on or before Dec. 31, 2012.”).

⁵⁸ *Id.*

⁵⁹ NPRM at 3, ¶4.

video content itself, and many have progressed to sending content throughout the home network via IP.”⁶⁰

VII. The Cable Lobby Previously Supported Retail Navigation Device Competition but Has Since Changed Its Tune.

Until recently, Cable actively advocated for and pursued options that would have supported retail navigation device competition. Six years ago, the cable industry was “committed to providing content to consumers where and when they want it, on all possible consumer devices, and for those devices to be innovative platforms for new applications.”⁶¹ Back then, Cable proclaimed six “consumer principles to which cable operators [were] committed.”⁶² The first principle stated: “Consumers should have the option to purchase video devices at retail that can access their multichannel provider’s video services without a set-top box supplied by that provider.”⁶³ Since at least 2005, cable providers had been working on a conditional access systems that could be downloaded onto “a variety of set-top boxes and to consumer electronics products” and would “enable customers to access individually-authorized levels of service.”⁶⁴ Comcast and other Cable industry representatives even held a technical demonstration for Commission staff of such technology at that time over a decade ago.⁶⁵

⁶⁰ *Id.*

⁶¹ Letter from Kyle McSillarow, President and CEO, NCTA, to Julius Genachowski, Chairman, Fed. Commc’ns Comm’n, NBP Public Notice #27; GN Docket Nos. 09-47, 09-51, 09-137; CS Docket No. 97-80, at 1 (filed Mar. 12, 2010), <http://apps.fcc.gov/ecfs/document/view?id=7020395645> [hereinafter McSillarow consumer principles letter].

⁶² *Id.*; see also Letter from Neal M. Goldberg, Vice President and General Counsel, NCTA, to Marlene H. Dortch, Sec’y, Fed. Commc’ns Comm’n, CS Docket No. 97-80; NBP Public Notice #27; GN Docket Nos. 09-47, 09-51, 09-137, at (Mar. 25, 2010), <http://apps.fcc.gov/ecfs/document/view?id=7020397391> (Cable reinforced that “we discussed the cable industry’s commitment to consumer principles which could serve as the foundation for Commission and inter-industry efforts to develop a fully-competitive and innovative retail video device marketplace.”).

⁶³ McSillarow consumer principles letter, *supra* note 61.

⁶⁴ Letter from James L. Casserly, Willkie Farr & Gallagher LLP, to Marlene H. Dortch, Sec’y, Fed. Commc’ns Comm’n, CS Docket No. 97-80, at 1 (filed Nov. 30, 2005), <http://apps.fcc.gov/ecfs/document/view?id=6518185105>.

⁶⁵ *Id.*

In 2008, Comcast’s Chairman and CEO, Brian Roberts, declared: “The era of closed cable is over and the era of open cable is here.”⁶⁶ At that time, Roberts and the cable industry were trumpeting Tru2way, which would have allowed third-party devices and even TVs to access a cable provider’s programming and guides as well as video on-demand (VOD). Tru2way would have been “an open platform for development with open APIs and a Java based system.”⁶⁷ Subscribers would have no longer needed to lease their cable provider’s set-top box because “choice sells.”⁶⁸ In promoting this effort, Cable lined up the support of content providers like the MPAA and Disney.⁶⁹ However, Cable was never able to convince the Commission to move forward with Tru2way, because it would have maintained MVPDs control.

Tru2way offers important lessons for how the NPRM’s proposal can truly promote competition. The Commission noticed that Tru2way’s licensing agreements would limit “a device’s ability to integrate video from multiple sources into a consistent viewing experience by limiting the presentation and content of a tru2way device’s graphical user interface.”⁷⁰ In reality, the MVPDs would still have control over what they had presented to the public as an open platform. The MVPDs would have restricted a third party’s ability to innovate with new user interfaces and by presenting better information than what is in the MVPD’s programming guide.

⁶⁶ Yinka Adegoke, *Comcast, Panasonic launch portable digital video player*, REUTERS (Jan. 7, 2008), <http://www.reuters.com/article/us-show-comcast-panasonic-idUSN0624673520080107>; *see also* Michael Turk, *Comcast CEO Brian Roberts Addresses CES*, PLATFORM (Jan. 8, 2008), <https://www.ncta.com/platform/industry-news/comcast/comcast-ceo-brian-roberts-addresses-ces/> [hereinafter *Comcast CEO Brian Roberts Addresses CES*] (“Today we’re announcing the age of the closed proprietary set-top box is behind us.”).

⁶⁷ *Comcast CEO Brian Roberts Addresses CES*, *supra* note 66.

⁶⁸ *See Id.* (“Today we’re announcing the age of the closed proprietary set-top box is behind us.”).

⁶⁹ *See* Yinka Adegoke, *supra* note 66 (detailing MPAA’s and Disney’s support); *see also* Comments of MPAA, MB Docket 15-64 (filed Oct. 8, 2015); Letter from Susan L. Fox, Vice President Government Relations, The Walt Disney Company, to Marlene H. Dortch, Sec’y, Fed. Commc’ns Comm’n, MB Docket No. 16-42; CS Docket No. 97-80, (filed Apr. 8, 2016), <http://apps.fcc.gov/ecfs/document/view?id=60001568965>.

⁷⁰ *In the Matter of Video Device Competition, Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility Between Cable Systems and Consumer Electronics Equipment*, MB Docket No. 10-91, CS Docket No. 97-80, PP Docket No. 00-67, Notice of Inquiry, at 5 (rel. Apr. 21, 2010), https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-60A1.pdf [hereinafter AllVid NOI].

Tru2way's details revealed that it could have also hindered searching across platforms,⁷¹ and it would not have worked on DBS.

The Commission's approach with the NPRM would succeed unlike Tru2way, which posed problems for competition. The NPRM will allow third parties to access the cable signal and promote innovation without Cable's restrictive licensing agreements or interface requirements. The Commission should move forward on the NPRM and resist Cable's disingenuous attempts at innovation, such as the Apps Approach, which would just perpetuate MVPD control over the user experience without addressing competition concerns or consumer choice.

Just eight years ago, the cable industry tried to develop a platform that would have encouraged third-party devices and even TVs to access a cable provider's programming, guides, and VOD. At least at that time, cable companies were supportive of a retail set-top box market under the mantra that "choice sells."⁷² Just six years ago, Cable was committed to the principle that "[c]onsumers should have the option to purchase video devices at retail that can access their multichannel provider's video services without a set-top box supplied by that provider."⁷³ More recently, however, the industry and its allies have changed their tune.

VIII. Cable's Complaints Regarding the NPRM Are Unfounded.

Since the DSTAC committee met and produced its report, MVPDs and their allies have espoused a myriad of arguments to obfuscate the public debate and halt the Commission from acting on its Congressional mandates in Section 629 and STELAR. Although there are too many

⁷¹ See McSllarrow consumer principles letter, *supra* note 61. (declaring a "commitment" by the cable industry to searching across platforms: "Consumers should have the option to purchase video devices at retail that can search for video content across multiple content sources, including content from their multichannel provider, the Internet, or other sources.").

⁷² Comcast CEO Brian Roberts Addresses CES, *supra* note 66.

⁷³ McSllarrow consumer principles letter, *supra* note 61.

to count, CCIA feels compelled to refute the arguments regarding technological impossibility, copyright violations and piracy, and privacy.

A. The Technology Behind the NPRM Is Already Used by MVPDs.

MVPDs and their allies have tried to claim repeatedly that the technology behind the NPRM, which was explained as the Competitive Navigation Solution in the DSTAC Report, is not feasible, too costly to implement, or nonexistent. In its comments on the DSTAC Report, NCTA claimed that the Competitive Navigation Solution (which NCTA still inaccurately referred to as “AllVid”) was “a skeletal wish list of suggestions never demonstrated to be feasible. It would require uninvented equipment and technologies, the development or extension of dozens of standards, interfaces, and applications, and a complete re-architecture of many MVPD services.”⁷⁴ This contradicts the fact that over a decade ago, NCTA representatives attended Comcast’s technical demonstration of technology similar to what was proposed in the DSTAC’s Competitive Navigation Solution.⁷⁵ Indeed, the technical demonstration from Comcast and other cable industry representatives, over a decade ago, showed the effectiveness of the technology on third-party, retail devices, “illustrating the suitability of (downloadable conditional access systems) DCAS for the retail environment.”⁷⁶ Despite its presence at this demonstration from 2005, NCTA called the CVCC’s recent technical demonstrations to Commission, “obfuscation.”⁷⁷ However, in 2008, NCTA touted technology that would allow consumers to “plug [a TV or device] directly into the cable network with no set-top box, no extra

⁷⁴ Comments of NCTA, *supra* note 21 at 3.

⁷⁵ See Casserly Letter, *supra* note 64.

⁷⁶ *Id.*

⁷⁷ See Notice of Ex Parte Presentation from Neal M. Goldberg, Vice President and Gen. Counsel, NCTA, to Marlene H. Dortch, Sec’y Fed. Comm’n, MB Docket 15-64 (filed Dec. 18, 2015), <http://apps.fcc.gov/ecfs/document/view?id=60001388487> (calling “obfuscation,” the CVCC’s technical demonstrations to Commission, for which the CVCC dutifully provided *ex parte* letters).

wires, and access to cable’s interactive services”.⁷⁸ The technology that would enable the NPRM is not “a skeletal wish list”⁷⁹ nor is it “vaporware.”⁸⁰ The cable industry has been using similar technology for a decade, and until recently was committed to the principle that “[c]onsumers should have the option to purchase video devices at retail that can search for video content across multiple content sources, including content from their multichannel provider, the Internet, or other sources.”⁸¹

Furthermore, MVPDs have been using software-based solutions for downloadable security for over a decade. As CTA, then known as CEA, noted in 2006, “The non-OCAP approach would minimize the burden on cable operators by incorporating existing open standards for interactive functionality already employed by many of cable’s current equipment suppliers.”⁸² CEA’s proposal was based on open standards that were already in existence and used by the industry in 2006. Furthermore, CEA, at the time stated that its solution was “technically feasible and relatively inexpensive to implement, reasonable from the business perspectives of all affected industries.”⁸³ Although there are differences between CEA’s 2006 proposal and the current NPRM, and there have been significant, technological advances since 2006, technological innovation lowers costs over time.

In 2016, many MVPDs are already delivering their video programming over IP.⁸⁴ For example, Roku is working with Time Warner Cable and Charter on IP-based delivery pay-TV

⁷⁸ Comcast CEO Brian Roberts Addresses CES, *supra* note 66.

⁷⁹ Comments of NCTA, *supra* note 21 at 3.

⁸⁰ Reply Comments of NCTA, *supra* note 21 at 25, 26, 33, 39.

⁸¹ McSarrow consumer principles letter, *supra* note 61.

⁸² Letter from Consumer Elecs. Ass’n, to Marlene H. Dortch, Sec’y, Fed. Comm’n, CS Docket No. 97-80, at 6 (filed Nov. 7, 2006) <http://apps.fcc.gov/ecfs/document/view?id=6518539867> [hereinafter CEA Letter]

⁸³ *Id.* at 1.

⁸⁴ NPRM at 3, ¶ 4.

for its retail streaming devices.⁸⁵ It is incorrect to claim that the technology to accomplish the NPRM's goals does not exist.⁸⁶

B. The NPRM Provides Strong Copyright Protections.

Providing consumers with competitive options for set-top boxes will not expose copyrighted works to risk. On the contrary, enabling consumers to access content for which they have paid on the device of their choosing would help to reduce content piracy by frustrated consumers.

A variety of “software-based content protection systems” are already in use in the market today, and the NPRM explicitly provides for the continued use of such systems.⁸⁷ These software-based content protection systems already protect audiovisual content on various consumer electronics like computers and mobile devices, and are widely used on Internet-based video distribution platforms. The growth of licensed, over-the-top (OTT) video services was anticipated in the 1990s, and protecting video was a leading justification for the anti-circumvention protections in the extensive 1998 amendments to copyright law known as the Digital Millennium Copyright Act (DMCA).⁸⁸ That is, Congress was urged to substantially

⁸⁵ Jeff Baumgartner, *'Unlocking' the Box Brings Uncertainty*, MULTICHANNEL NEWS (Mar. 28, 2016), <http://www.multichannel.com/unlocking-box-brings-uncertainty/403621>.

⁸⁶ Comments of Comcast Corp., *supra* note 21 at 18 (stating that the Competitive Navigation Solution – though mistakenly referred to as “AllVid” – requires a “Virtual Headend System that does not exist and the development of brand new standards and protocols.”).

⁸⁷ NPRM at 7, ¶9.

⁸⁸ *See, e.g.*, MPAA, Sept. 4, 1997, Copyright Infringement Liability of Online and Internet Service Providers, Presented to the Senate Committee on the Judiciary by Fritz E. Attaway, Sr. Vice President, Government Relations and Washington General Counsel, Motion Picture Association of America, *available at* https://web.archive.org/web/20001115001100/http://www.mpaa.org/legislation/press/97/97_9_4.htm (stating that Internet technology “will smooth the way for legitimate delivery of video on demand over digital networks”); MPAA, Oct. 29, 1996, Copyright Protection Technical Working Group Announces DVD Encryption Achievement (A Joint Release from the Co-Chairs of the Copyright Protection Technical Working Group), *available at* https://web.archive.org/web/20010115045100/http://www.mpaa.org/legislation/press/96/96_10_29a.htm (quoting David Stebbings, Senior Vice President of Technology for the Recording Industry Association of America, saying that a new “encryption scheme is a welcome first step in crafting a multimedia copy protection system” which “provides a technical means of protecting audio and video”).

reform copyright law in the 1990s to accommodate the content protection software that would be used in relation to audiovisual works on digital networks.

Congress agreed, and responded by dramatically revising the U.S. Copyright Act. The U.S. Government similarly led a dramatic restructuring of international copyright law at the World Intellectual Property Organization,⁸⁹ and proceeded to insert additional provisions regarding audiovisual content protection schemes in relation to digital networks in free trade agreements with a dozen countries.⁹⁰ Rightsholders continue to push for exporting these policies. The MPAA recently emphasized the importance of technological protection measures (TPMs) to video, including digital video, in a recent statement in support of the Trans-Pacific Partnership (TPP).⁹¹

In short, the U.S. Government has spent the past 20 years redesigning domestic and international copyright law to strengthen the legal and technological protections available to audiovisual rightsholders. These efforts were intended to facilitate a competitive market for accessing audiovisual content on a variety of devices and services—including those contemplated by the NPRM. Yet now that the FCC is poised to provide a framework that will bring this competitive marketplace to consumers' televisions, rightsholders have raised piracy concerns⁹² as if the past two decades had not been devoted to providing them with sweeping new legal rights for content protection schemes around the world. An extraordinary amount of U.S.

⁸⁹ Jessica Litman, *Digital Copyright* 128-130 (2001).

⁹⁰ Anupam Chander, *Exporting DMCA Lockouts*, 54 CLEV. ST. L. REV. 205, 217 (2006) (“In its understandable zeal to deter widespread copying of digital films and music, the U.S. government has aggressively required the promulgation of extremely strict anti-circumvention provisions as one cost of entry into a free trade agreement”).

⁹¹ See Anissa Brennan, *The TPP Will Foster Digital Trade & Grow Our Economy*, MPAA, Feb. 18, 2016, <http://www.mpa.org/the-tpp-will-foster-digital-trade-grow-our-economy/> (“[T]he TPP includes protections for technological protection measures (TPMs), which allow creators to control access to their works and, in so doing, enable the functionality of online business models, contributing to the expansion of digital offerings for viewing movies and TV shows.”).

⁹² Gale Anne Hurd, *Stop piracy apocalypse: ‘Walking Dead’ producer*, USA TODAY (Apr. 12, 2016), <http://www.usatoday.com/story/opinion/2016/04/12/fcc-set-top-box-proposal-cable-internet-piracy-walking-dead-zombies-gale-hurd-column/82919704/>.

Government resources have been invested in providing legal and technological protection for rightsholders precisely so that consumers can enjoy the benefits of competitive marketplaces for digital content.

As a result of these efforts, copyright holders have a broad suite of exclusive rights under Section 106 of the Copyright Act,⁹³ which are backed up with powerful remedies.⁹⁴ In addition, rightsholders transmitting content to a television or similar device also benefit from paracopyright protections in Section 1201 of the Act, which have their own potent remedies,⁹⁵ not to mention state “theft-of-services” laws. Because the NPRM already mandates the implementation of robust content protection for good measure, these additional paracopyright protections will also attach to MVPD streams. If a device manufacturer’s handling of an MVPD’s stream were to violate any of these statutes, the rightsholder would have powerful recourse under existing law. Thus, rightsholders cannot plausibly complain that competitive navigation devices would “interfere with contracts [or] upset copyright law”. Rightsholders remain free to contract with any MVPD or device manufacturer they choose, and bring infringement actions against any device manufacturer who violates their statutory rights. Given the numerous forms of state, federal, and international protection for both content *and* content protection schemes, it strains credulity for rightsholders to suggest that device competition puts copyrighted works at risk.

⁹³ 17 U.S.C. § 106 (providing rightsholders with the exclusive right to reproduce, distribute, publicly perform and prepare derivative works).

⁹⁴ 17 U.S.C. § 504 (providing statutory damages up to \$150,000 per work infringed for copyright infringement); *see also* 18 U.S.C. § 2319 (providing penalties including jail time for criminal copyright infringement under 17 U.S.C. § 506).

⁹⁵ 17 U.S.C. §§ 1201, 1203 (prohibiting circumvention of technological protection measures).

C. The Commission has the Authority to Ensure Privacy Protections for Users of Third-Party Devices.

Concerns about the privacy of the viewing habits and personally identifiable information of consumers who use competitive navigation devices are important and worth the Commission's attention in the Final Rule. The Commission has the authority and ability to ensure that viewers using competitive navigation devices receive the same privacy protections as those using MVPD-provided devices by building on effective existing privacy regimes. This means that viewing habits and personally identifiable information of consumers should not be improperly disclosed, and protections should be enforceable by administrative and private rights of action in the event of a violation, just as in the obligations that apply to MVPDs.⁹⁶

The behavior of developers of existing competitive navigation devices is instructive as to the degree of regulatory oversight necessary from the Commission. As the Commission observed, consumers have enjoyed currently marketed retail navigation devices, like TiVos, for over a decade without allegations of privacy violations.⁹⁷ The ongoing absence of harms to consumer privacy is reflective of the efficacy of existing regulatory and enforcement regimes at the state and federal levels, which the Commission should build upon in meeting the goals of Section 629.

The Commission has proposed that for competitive navigation devices to receive the three Information Flows from MVPDs, developers should certify that, among other things, the developer will adhere to the same privacy protections that apply to MVPDs.⁹⁸ This adherence should be demonstrated through a self-certification process, with the representations that developers make in their certifications subject to enforcement by the Federal Trade Commission

⁹⁶ See 47 U.S.C. §§551, 338(i).

⁹⁷ NPRM at 36, ¶73.

⁹⁸ *Id.*

(FTC) under its well-exercised authority to bar unfair and deceptive acts and practices in or affecting commerce.⁹⁹ This satisfies the need for administrative enforcement of potential privacy violations by developers of competitive navigation devices.

The FTC regularly enforces the privacy promises that companies make to consumers,¹⁰⁰ and a self-certification process whereby companies promise to adhere to the requirements of Sections 631 and 338(i) would fall squarely within the scope of its authority under Section 5 of the FTC Act. A long-standing example of this was the FTC's role as the enforcement authority behind the self-certification process through which companies certified compliance with the terms of the U.S.-EU Safe Harbor Framework.¹⁰¹ The FTC settled with companies for both falsely claiming certification and for substantive violations of the privacy principles with which self-certifying companies promised to comply.¹⁰² The FTC will continue to play a similar role in the recently negotiated EU-U.S. Privacy Shield that is poised to replace the Safe Harbor,¹⁰³ and is well positioned to do so for promises made by competitive device manufacturers pursuant to the Commission's rulemaking.

In addition to the FTC's administrative enforcement authority over privacy promises, developers of competitive navigation devices are and will continue to be subject to an overlapping system of state and federal privacy laws that protect the personal information of

⁹⁹ 15 U.S.C. § 45.

¹⁰⁰ *Enforcing Privacy Promises*, FED. TRADE COMM'N, <https://www.ftc.gov/news-events/media-resources/protecting-consumer-privacy/enforcing-privacy-promises> (visited Apr. 18, 2016).

¹⁰¹ *Federal Trade Commission Enforcement of the U.S.-EU and U.S.-Swiss Safe Harbor Frameworks*, FED. TRADE COMM'N, <https://www.ftc.gov/tips-advice/business-center/guidance/federal-trade-commission-enforcement-us-eu-us-swiss-safe-harbor> (visited Apr. 18, 2016).

¹⁰² *See, e.g. In the Matter of MYSPACE, LLC*, F.T.C. File No. 102 3058 (2012) (decision and order) (finding that MySpace failed to adhere to particular Safe Harbor privacy principles); Press Release, Fed. Trade Comm'n, Thirteen Companies Agree to Settle FTC Charges They Falsely Claimed To Comply With International Safe Harbor Framework (Aug. 17, 2015), *available at* <https://www.ftc.gov/news-events/press-releases/2015/08/thirteen-companies-agree-settle-ftc-charges-they-falsely-claimed>.

¹⁰³ Letter from Edith Ramirez, Fed. Trade Comm'n, Chairwoman, to Věra Jourová, Comm. for Justice, Consumers and Gender Equality of the European Commission, Describing Federal Trade Commission Enforcement of the New EU-U.S. Privacy Shield Framework (Feb. 23, 2016), *available at* https://www.ftc.gov/system/files/documents/public_statements/927423/160229ftc_privacyshieldletter.pdf.

viewers at a level comparable to the protections provided by MVPD obligations. These laws satisfy the need for private rights of action for consumers whose privacy might be violated by improper disclosures of protected information, and provide additional avenues for administrative and civil enforcement.

At the federal level, the Video Privacy Protection Act (VPPA) generally prohibits companies that provide online video from disclosing the viewing history and other personally identifiable information of a consumer without the consumer's prior written consent.¹⁰⁴ This obligation logically applies to existing and potential competitive device manufacturers or application developers that are engaged in the business of the delivery of audio-visual materials to consumers in interstate commerce.¹⁰⁵ In 2012, a magistrate judge concluded that OTT service provider Hulu fell under the VPPA's definition of "video tape service provider" because it delivered "similar audio visual materials" under the statute, which is a sufficiently "broad phrase designed to include new technologies for pre-recorded video content."¹⁰⁶ The VPPA was subsequently updated for the explicit purpose of allowing OTT services to obtain digital consent for the sharing of viewers' information, which indicates that they are subject to its terms.¹⁰⁷ The logic of applying the VPPA to OTT services naturally extends to the similar actions of competitive navigation devices.

Consumers' whose personally identifiable information is improperly disclosed under the VPPA are entitled to bring private civil actions against entities covered,¹⁰⁸ such as video navigation device manufacturers. To the extent competitive device manufacturers and

¹⁰⁴ 18 U.S.C. § 2710.

¹⁰⁵ 18 U.S.C. § 2710(a)(4).

¹⁰⁶ See *In re* Hulu Privacy Litigation, No. 3:11-cv-03764-LB at *7-12 (N.D.Cal. Aug. 12, 2010) (Order Denying Plaintiff's Motion to Dismiss).

¹⁰⁷ See U.S. Senate Committee on the Judiciary, Video Privacy Protection Act Amendments Act of 2012, S. REP. 112-258, at 3 (Dec. 20, 2012).

¹⁰⁸ 18 U.S.C. § 2710(c).

application developers provide programming guide, scheduling, and recording information to consumers via an online service, the additional protections of the Children’s Online Privacy Protection Act (COPPA) would also apply for viewers under the age of thirteen. Violations of COPPA protections are subject to enforcement by the FTC.¹⁰⁹

For the same reasons, state laws like the California Online Privacy Protection Act¹¹⁰ and the Delaware Online Privacy and Protection Act¹¹¹ would also apply to manufacturers of competitive devices, as noted by TiVo.¹¹² So long as users of competitive navigation devices reside in these states, the FTC and relevant state Attorneys General can enforce promises contained within manufacturers’ privacy policies with civil actions.¹¹³

IX. The NPRM Will Unleash Competition.

A. Competition Will Promote Innovation and Improve the Consumer’s Experience.

President Obama has noted how opening up the set-top market to competition, as promoted by the NPRM, could yield tremendous benefits for consumers and innovation.¹¹⁴ The Commission has previously noted how the lack of competition in this marketplace inhibits innovation: “As navigation devices are the means to deliver analog and digital communications, competition in the navigation equipment market is central toward encouraging innovation in equipment and services, and toward bringing more choice to a broader range of consumers at better prices.”¹¹⁵ Yet, opponents of the NPRM continue to claim that promoting open standards

¹⁰⁹ 15 U.S.C. § 6502.

¹¹⁰ Cal. Bus. & Prof. Code §§ 22575-79.

¹¹¹ Del. Code Tit. 6 § 1201C.

¹¹² Letter from Devendra T. Kumar, Goldberg, Godles, Wiener & Wright, LLP, Counsel to TiVo, Inc., to Marlene H. Dortch, Fed. Comm’n Comm’n, Sec’y, MB Docket No. 15-64, at 2 (filed Jan. 13, 2016).

¹¹³ See Cal. Bus. & Prof. Code § 22576; Del. Code Tit. 6 § 1203C.

¹¹⁴ Furman & Zients, *supra* note 4.

¹¹⁵ *First Plug and Play Report and Order*, *supra* note 6.

and encouraging customers to buy set-top boxes at retail would “stifle TV innovation.”¹¹⁶

Recently, third parties have developed the greatest innovations in TV viewing, and cable companies have vehemently resisted these technologies until consumers demanded them.

The NPRM will encourage device manufacturers to develop new features and user interfaces, which will enhance the user experience. Third parties, spurred by the ability to access the cable signal can drive innovation by integrating content from outside the MVPD’s closed universe. The NPRM would foster the competition exemplified by *Carterfone*.¹¹⁷ The principles of *Carterfone* have yielded unbelievable technological developments, ultimately leading to answering machines, modems, the commercial Internet and now smartphones. Currently, many MVPD-provided set-top boxes maintain a closed universe where consumers cannot link their accounts from OTT providers. However, in this “new Golden Age of Television,”¹¹⁸ consumers want to find more programming, and they are getting it from more platforms than ever. If a consumer wants to see a certain show or watch a movie with a certain actress on her TV, if it’s not currently on the MVPD’s line-up or VOD, that consumer has to exit the MVPD’s universe and then seek out that program via an OTT provider.

However, under the NPRM, the consumer can search across platforms, a feature that Cable supported in 2010,¹¹⁹ to find programming when she wants it from other OTT providers to which she subscribes or from whom she can legally access the program. Despite claims by MVPDs and their allies, the competition that would be promoted by the NPRM will make it easier for consumers to find and watch diverse and independent programming that may not be

¹¹⁶ Mark Hess, *FCC Action Could Stifle TV Innovation*, COMCASTVOICES (Jan. 28, 2016), <http://corporate.comcast.com/comcast-voices/fcc-action-could-stifle-tv-innovation>.

¹¹⁷ *Use of the Carterfone Device in Message Toll Telephone Service*, 13 FCC 2d 420 (June 26, 1968).

¹¹⁸ Comments of NCTA, *supra* note 21.

¹¹⁹ McSlarrow consumer principles letter, *supra* note 61 (“Consumers should have the option to purchase video devices at retail that can search for video content across multiple content sources, including content from their multichannel provider, the Internet, or other sources.”).

available on the cable lineup.¹²⁰ Moreover, with the presence of competition, device manufacturers will have to find new ways to make it easier for consumers to find whatever content they want.

B. Competition Will Help Consumers Save Money.

Opponents of the NPRM continue to espouse the belief that the Commission is pursuing an “anti-consumer government technology mandate.”¹²¹ This statement, however, comes from companies that seek to maintain their walled gardens and a system where they reap nearly \$20 billion every year, leasing often-antiquated equipment. MVPDs also curiously claim that the solutions in the NPRM will cost consumers more money.

Many opponents of the NPRM were proponents of repealing the integration ban in STELAR.¹²² They frequently stated that the integration ban had cost consumers over \$1 billion.¹²³ The Consumer Federation of America and Public Knowledge, however, found that consumer were overcharged between \$6 and \$14 billion for leasing their MVPD’s set-top boxes.¹²⁴ Despite assertions that consumers would save \$1 billion from the repeal of the

¹²⁰ See Robert L. Johnson, *Consumers deserve choice and minority programmers deserve opportunity*, THE HILL (Jan. 22, 2016), <http://thehill.com/blogs/congress-blog/technology/266653-consumers-deserve-choice-and-minority-programmers-deserve> (explaining the experience of the founder of Black Entertainment Television (BET) and other minority programmers in attempting to secure carriage on cable); Stephen Davis, *FCC and the set-top box*, THE HILL (Feb. 18, 2016), <http://thehill.com/blogs/congress-blog/technology/269778-fcc-and-the-set-top-box> (detailing the difficulty of the founder of the Black Education Network (BEN) in obtaining carriage when he was “repeatedly told that there was no market for positive, uplifting programming targeting the African American community,” yet with rules like those proposed in the NPRM, “We would have had access to millions of viewers, an ability to charge for content, and the opportunity to compete as equals in the video programming marketplace.”).

¹²¹ David L. Cohen, *A Sharply Divided FCC Votes to Force New Tech Mandates*, COMCASTVOICES (Feb. 18, 2016), <http://corporate.comcast.com/comcast-voices/a-sharply-divided-fcc-votes-to-force-new-tech-mandates>; see also Comments of NCTA, *supra* note 21 at 13, 46; Comments of Am. Cable Ass’n, MB Docket 15-64, *passim* (filed Oct. 8, 2015).

¹²² John Eggerton, *NCTA Waves Goodbye to Set-Top Integration Ban*, BROADCASTING & CABLE (Dec. 2, 2015), <http://www.broadcastingcable.com/news/washington/ncta-waves-goodbye-set-top-integration-ban/146145>.

¹²³ See, e.g., Press Release, Office of Congressman Gene Green, Reps. Green and Latta Introduce Legislation to roll Back Outdated Integration Ban (Sept. 30, 2013), <https://green.house.gov/press-release/reps-green-and-latta-introduce-legislation-roll-back-outdated-integration-ban> (“By one estimate, the prohibition has cost cable operators and consumers more than \$1 billion since it went into effect in 2007.”).

¹²⁴ Consumer Federation of America and Public Knowledge Letter, *supra* note 53.

integration ban, cable companies continue to increase fees, locking consumers to their set-top boxes.¹²⁵

C. Competition Will Yield More Efficient Set-Top Boxes.

In the debate leading up to the integration ban's repeal, proponents on repealing the integration ban often stated that set-top boxes wasted energy. Indeed, Comcast and other MVPDs banded together to avoid nearly three million metric tons of carbon dioxide emissions related to set-top box energy consumption, saving consumers more than \$500 million in energy bills in two years.¹²⁶ While industry should be encouraged to take proactive measures like this on their own and should be commended when they yield real results, the NPRM will facilitate these efforts. If a vibrant retail market is allowed to grow, free from meddling by the cable industry, manufacturers will not only have to compete on price and features, it will also be to their benefit to develop energy-efficient products. If a device manufacturer makes a product that will increase a consumer's energy bills, that consumer could and should be able to seek a more efficient model. Therefore, it behooves device manufacturers to develop products that are energy-efficient.

With competition, consumers will have more choices for accessing pay-TV programming. Instead of being locked into leasing their MVPD's set-top boxes for years past the boxes' useful lives (the average family spends over \$1,000 on its MVPD's same set-top boxes over four years) consumers would be free to buy a new device at retail that is more suited

¹²⁵ Rulison, *supra* note 55 (reporting that in January 2016, Time Warner Cable announced that it would increase leasing fees on its HD set-top boxes from \$6.98 per month to \$8.50 per month). *But see* Charter Q4 2015 Report at 3, available at <http://ir.charter.com/phoenix.zhtml?c=112298&p=irol-earnings> (claiming that its new "World Box," featuring "downloadable security along with other advanced functionality [. . . will] reduc[e] incremental set-top box costs.").

¹²⁶ See Press Release, NCTA, Independent Audit Finds Consumers Have Saved More Than \$500 Million from Energy Efficient Set-Top Boxes (Aug. 6, 2015), <https://www.ncta.com/news-and-events/media-room/content/independent-audit-finds-consumers-have-saved-more-500-million-energy-efficient-set-top-boxes>.

to their needs. For example, if device manufacturers are assured that their devices can access pay-TV programming—a central goal of Section 629 and the NPRM—and consumers are not locked into lease agreements, then manufacturers will have a greater opportunity to build devices that consumers will buy. In a competitive market, manufacturers will have to differentiate their products to stand out and attract consumers. Device manufacturers will have to innovate with new features and compete on price to stay viable. For example, a manufacturer can develop a model with more basic features, which it could sell at a lower price. If this device were \$30, a customer could own it for about the same amount of money she would normally pay to rent the MVPD’s set-top box for four months. Quite simply, consumers save under the policies in the NPRM when compared to leasing the MVPD’s box for several years.

X. Recommendations.

CCIA believes that proposals in the NPRM could finally foster a competitive market for set-top boxes. Prospects for competition will be bolstered if the Commission takes into account the following principles:

- 1. MVPDs must provide parity of access to content to all third-party video navigation devices. The service received by a third-party device must remain consistent throughout the product’s life cycle.**

As the Commission rightly notes,¹²⁷ parity of access to content is crucial for third-party video navigation devices to compete, as well as the viability of a retail market. Similarly, it will also assure the expectations of an MVPD’s subscriber, who

¹²⁷ NPRM at 31-33, ¶¶ 63-69.

buys a third-party device under the belief that he or she can fully access the MVPD's programming.

- 2. The certification body should be outside of the control of the cable industry, and mechanisms should be in place so that the cable industry does not dominate the proceedings.**

The previous regime where CableLabs, whose “[m]ember companies do not include competitive network platforms, manufacturers[,] or content providers,”¹²⁸ developed and then certified CableCARD allowed the cable industry to have too much influence over the ability of third-party device manufacturers to compete with the cable industry's own set-top boxes.¹²⁹ We echo CTA's (then known as CEA) call from a decade ago that: “Cable should not, however, be permitted to leverage this otherwise legitimate interest to prevent or delay arbitrarily the introduction of devices into the market.”¹³⁰

- 3. The Commission should require that the MVPDs continue to supply and support retail CableCARD devices for five years after the date of compliance with the FCC's new rules.**

CableCARD has helped consumers access their cable subscription on third-party devices for many years; however, CableCARD has been plagued by

¹²⁸ *Member Companies*, CABLELABS, <http://www.cablelabs.com/about-cablelabs/member-companies/> (last visited Apr. 22, 2016).

¹²⁹ *See, e.g.* CEA Letter, *supra* note 82 at 9 n.20 (“The developers of DTCP/IP requested in the spring of 2005 that CableLabs approve DTCP/IP under the DFAST and CHILA licenses; they are still waiting for that approval to be granted, notwithstanding that the Motion Picture Association of America (‘MPAA’) and its member companies have publicly supported this request.”).

¹³⁰ *Id.* at 10-11 (noting that “cable providers have a legitimate interest in ensuring that retail interactive devices do not cause harm to the cable network or enable theft of cable services.”).

implementation and lack of support by the MVPDs.¹³¹ MVPDs should continue to support their customers who bought third-party devices believing in good faith that they would be able to access the MVPD's programming, to which they have subscribed.

4. The Commission should avoid CableCARD's onerous and expensive certification process.

The CableCARD certification process has been marked by high fees and lengthy review periods that inhibit the ability of innovators and new entrants to bring their products to market. For example, each certification or practice wave test of OCUR (CableCARD server) costs \$75,000.¹³² Coupled with additional fees, certification of a CableCard device can cost upwards of \$250,000 and more.¹³³

5. Consumers should be able to view, move, store, and access cable content that they legally obtain without restriction, other than as necessary to protect theft of service, electronic or physical harm to the network, and in accordance with reasonable content protection requirements.

6. The Commission should encourage fair and open technical standards.

As the Commission found with Tru2way, the MVPDs would have still had control because Tru2way's licensing agreements would limit "a device's ability to integrate video from multiple sources into a consistent viewing experience by limiting the presentation and content of a tru2way device's graphical user interface."¹³⁴ Open

¹³¹ See generally Howes, *Today's FCC Action on Cable Boxes, 20 Years in the Making*, *supra* note 8 (detailing problems with MVPD support for CableCARD).

¹³² *Certification*, CABLELABS, <http://www.cablelabs.com/specs/certification/> (last visited Apr. 22, 2016).

¹³³ See generally *id.* (detailing other fees and other aspects of CableLabs' certification process).

¹³⁴ AllVid NOI, *supra* note 70 at 5.

standards will promote the ability of third parties to innovate with new user interfaces and by presenting better information than what is in the MVPD's programming guide.

7. The Commission should explicitly require delivery over IP in its rules.

MVPDs are already moving to delivery over IP. IP-based transport, authentication, and security would make it easier for consumers to connect smart TVs and other devices.

8. The Commission is right to require that MVPDs support at least one “compliant” conditional access system.¹³⁵

This would ensure that third-party manufacturers and innovators have a fair opportunity to develop and bring their products to market.

9. The Commission should incentivize MVPD involvement in and support of an open standards process.

MVPDs lacked the incentive to fully support the implementation and installation of CableCARDS in third-party devices, which necessitated rules in 2011 establishing very basic rules of the road for CableCARD support.¹³⁶

10. The Commission should retain oversight of the standards process, and appeals should be available.

Oversight by the Commission will ensure that the goals of the NPRM and Section 629 are achieved.

¹³⁵ NPRM at 32, ¶67.

¹³⁶ *CableCARD: Know Your Rights*, FED. COMM'NS COMM'N, <https://www.fcc.gov/media/cablecard-know-your-rights> (last visited Apr. 22, 2016) (detailing the 2011 rules including a mandate that pay-TV providers give consumers accurate information on the provider's website about the cost of renting a CableCARD, billing inserts, or even when consumers can call; that providers not charge subscribers for using their own box; that providers allow subscribers to self-install CableCARDS into their own devices; and that if a subscriber opts for installation by the provider's technicians, that the technician must bring with them at least as many CableCARDS as the subscriber requested.).

XI. Conclusion.

After more than two decades, the Commission finally has an opportunity to promote real competition in the market for set-top boxes. The NPRM represents a balanced approach that will promote open standards and innovation, leading to benefits for consumers and the broader economy.

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Respectfully submitted,

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