

*Before the*  
**Federal Communications Commission**  
**Washington, D.C. 20554**

<i>In the Matter of</i>	)	
	)	
Expanding Consumers' Video Navigation Choices	)	MB Docket No. 16-42
	)	
Commercial Availability of Navigation Devices	)	CS Docket No. 97-80

**COMMENTS OF THE CONSUMER VIDEO CHOICE COALITION**

April 22, 2016

**TABLE OF CONTENTS**

SUMMARY ..... 5

I. INTRODUCTION..... 7

II. THE FCC’S PROPOSALS WILL INTRODUCE MUCH-NEEDED COMPETITION IN THE MARKET FOR RETAIL NAVIGATION DEVICES AND FINALLY BRING TO CONSUMERS THE BENEFITS OF CHOICE ENVISIONED BY CONGRESS..... 10

    A. Opening Up the Navigation Device Market to Competition Will Give Consumers Greater Choice, Save Them Money, and Unleash Innovation..... 14

    B. The FCC’s Proposal Has Been Endorsed By the Administration, Major Publications, Industry Experts, and Consumers..... 16

III. THE COMMISSION HAS THE AUTHORITY TO IMPLEMENT THE RULES AS PROPOSED..... 21

    A. Section 629 and STELAR Provide Explicit Instructions to the Commission to Assure a Competitive Market..... 21

    B. The Commission has the Requisite Authority under Sections 629 and 624A to Write Rules for a Successor to CableCARD That Encompasses Software-Based Applications..... 23

    C. Section 624A is both a grant of authority and an instruction to promote competition. .... 24

IV. THE PROPOSED RULES ARE TECHNICALLY FEASIBLE AND CAN BE IMPLEMENTED IN A NON-BURDENSOME AND INTEROPERABLE MANNER WITH GOOD FAITH COOPERATION FROM ALL INTERESTED INDUSTRY PARTICIPANTS. 26

    A. The NPRM Correctly Defines the Scope of the MVPD Services Covered by the Proposed Rules..... 27

*i.* Consumer choice should be supported. .... 27

*ii.* Section 629 covers all MVPD services..... 28

*iii.* Navigation devices remain accurately defined. .... 29

    B. A Competitive User Interface, National Portability Among MVPDs And Their Systems, And Standards-Based Technologies Not Subject To MVPD Approval Are Essential To Enable Competition..... 29

    C. Provision of Service Discovery Information Is Essential To Enable Competition..... 31

D. Provision of Entitlement Information Ensures That Consumers Receive The Services To Which They Subscribe.....	32
E. Provision of Content Delivery Data Enables Consumer Choice Without Impinging on Speech Protections.....	33
F. Published and Transparent References Should Be Established for the “Three Flows.” ....	34
G. Referenced Technologies Should Maximize the Potential For Competition.....	36
H. Referenced Technologies Should Ensure Security.....	37
<i>i.</i> Interoperability across MVPD systems is just as achievable and essential for security as it is for programming and data flows.....	37
<i>ii.</i> Trust authority is necessary and should not be MVPD-controlled. HTML5 comprises a non-essential constraining layer rather than benefit.....	38
<i>iii.</i> Use of a link technology from the headend is no less secure than other approaches; the key is the provisions for remediation.....	38
I. Proposals Regarding App Parity Create a Level Playing Field for Competitors While Ensuring That Consumers’ Expectations Are Met.....	40
<i>i.</i> The same program rights should apply to “open” apps.....	40
<i>ii.</i> Building a competitive implementation must be possible.....	41
J. Licensing and Certification Processes Should Accommodate Consumer Protections And An Environment For Innovation.....	41
K. Competitive Device Providers and Network Operators Can Take Reasonable Steps To Prevent Electronic Harm To MVPD Systems and Theft of Service.....	42
<i>i.</i> Network certification.....	43
<i>ii.</i> Cure for breach of certificate representation.....	43
<i>iii.</i> Mechanism for communicating certificate to MVPDs.....	43
V. PROTECTION OF CONSUMERS’ PRIVACY REMAINS STRONG UNDER THE FCC’S PROPOSALS.....	44
VI. PRICING AND BILLING PRACTICES SHOULD NOT BE MISUSED TO DISCOURAGE COMPETITION.....	46

VII. CABLECARD SUPPORT SHOULD REMAIN INTACT. .... 48

VIII. DIVERSE AND INDEPENDENT PROGRAMMING PROVIDERS WILL BENEFIT  
FROM ADOPTION OF THE FCC’S PROPOSALS. .... 49

IX. CONCLUSION..... 53

## **SUMMARY**

For two decades, consumers have awaited the emergence of a competitive market for navigation devices. During that time, they have paid billions of dollars in fees to their pay-TV providers to lease set-top boxes that contained antiquated technologies. With the advent of the Internet ensuring that video programming takes an even more prominent position in Americans' lives, infusing competition in the navigation device market has taken on increased importance.

Creating a competitive navigation device market will unleash numerous benefits. Consumers will have more choices. Pay-TV subscribers will save on monthly device lease fees. And, new innovations will be discovered, enhancing the viewing experience. For these reasons, the Commission's proposed rules have received ringing endorsements from the Administration, major news publications, industry experts, and consumers.

The Commission is acting well within its authority in initiating this proceeding. Congress provided the Commission with explicit direction twenty years ago in Section 629 of the Telecommunications Act of 1996 to ensure that consumers could purchase competitive navigation devices at retail. The instruction to "promote the competitive availability of navigation devices" was repeated by Congress just two years ago in the STELA Reauthorization Act of 2014. Moreover, Sections 629 and 624A of the Telecommunications Act make clear that the Commission's authority extends not just to consumer hardware, based also to software-based applications.

The Commission's proposals contain many of the components necessary for creation of a vibrant, competitive navigation device market. Manufacturers would have access to inputs essential to offering competitive devices. Users would have more choices over their user

interface. Devices would not be limited to working on only one MVPD's system, but would be portable among pay TV providers to enable customer switching. Consumers would receive the content to which they are entitled and the features that they expect without harm occurring to pay TV providers' networks or impingements on speech or intellectual property rights. Standards would be created based on the input of multiple industry participants and would not be controlled by cable operators as they are now. Deployment could happen expeditiously. For instance, the CVCC has shown through its technical demonstrations that the Commission's proposals are technically feasible using existing technologies. With good faith cooperation from industry stakeholders, standards could be quickly created to ensure implementation that results in interoperability, but not in undue burdens. Even if some stakeholders tried to hold up the standards process, creation of a default set of standards or specifications by the Commission would ensure that consumers would reap benefits in the near-term.

None of these advances would come at the expense of consumer privacy, which would be protected by existing laws at the federal and state levels. Intellectual property rights would not change. Contrary to the arguments of some naysayers, consumers would enjoy even greater opportunities to discover independent and diverse content, as offerings that have never before graced television screens suddenly become accessible through competitive navigation devices.

Finally, as the Commission moves forward, it's important to make sure that competition does not move backward. Pricing and billing practices that would discourage or even thwart competition should be prohibited. And, CableCARD support should remain intact to ensure that existing competitive technologies, as well as those that may be in the pipeline, are sustained during the transition to a successor solution.

***Before the***  
**Federal Communications Commission**  
**Washington, D.C. 20554**

<i>In the Matter of</i>	)	
	)	
Expanding Consumers’ Video Navigation Choices	)	MB Docket No. 16-42
	)	
Commercial Availability of Navigation Devices	)	CS Docket No. 97-80

**COMMENTS OF THE CONSUMER VIDEO CHOICE COALITION**

The Consumer Video Choice Coalition (“CVCC” or “Coalition”) hereby files these comments in support of the Commission’s proposed rules in the above-captioned Notice of Proposed Rulemaking.<sup>1</sup> Members of the Consumer Video Choice Coalition include Common Cause; the Computer & Communications Industry Association (CCIA); Consumer Action; Google, Inc.; Hauppauge; INCOMPAS; New America’s Open Technology Institute; Public Knowledge; and Consumers Union also joins these comments.

**I. INTRODUCTION.**

Competition and choice are fundamental principles of the American economic engine. They herald innovation, and are the hallmarks of a vibrant, open marketplace.

But competition and choice are absent in today’s set top box options. In fact, 99 percent of cable and pay TV subscribers are being forced to rent an outdated set top box.

That’s not a market – it’s a monopoly. A monopoly that is stifling innovation and costing American families billions of dollars of each year in wasted rental box fees. The cost of a set top

---

<sup>1</sup> *Expanding Consumers’ Video Navigation Choices; Commercial Availability of Navigation Devices*, MB Docket No. 16-42, CS Docket No. 97-80, Notice of Proposed Rulemaking and Memorandum Opinion and Order, FCC 16-18 (rel. Feb. 18, 2016) (“NPRM”).

box has risen 185 percent over the past two decades. At the same time, prices have fallen by 90 percent for phones, computers, and televisions – technology device markets where competition and choice drive innovation up and costs down.

A U.S. Senate report found consumers are paying an average of \$231 dollars per year in box rental fees. These monopoly set top boxes also restrict consumers' ability to stream new Internet programming, thus suppressing an entire industry of new content creators, including young, diverse independent programmers seeking to connect with a new audience.

Twenty years ago, a bi-partisan Congress called for an end to the set top box monopoly in the landmark Telecommunications Act of 1996, enshrining competition in law. Thus, the Commission is acting well within its authority in initiating this proceeding. Congress provided the Commission with explicit direction twenty years ago in Section 629 of the Telecommunications Act of 1996 to ensure that consumers could purchase competitive navigation devices at retail.

The instruction to “promote the competitive availability of navigation devices” was repeated by Congress just two years ago in the STELA Reauthorization Act of 2014. Sections 629 and 624A of the Telecommunications Act make clear that the Commission's authority extends not just to consumer hardware, but also to software-based applications.

The Consumer Video Choice Coalition is a collection of consumer advocates, small device manufacturers, content creators, technology innovators and competitive trade associations.



This filing seeks to provide a roadmap for an open, interoperable video device standard. Creating a competitive navigation standard will unleash numerous benefits, including the advent of new innovations that will enhance the viewing experience and reduce consumer costs.

The Commission's proposed rules to unlock the set top box have received ringing endorsements from the Administration, editorial boards from major news publications, industry experts, minority programmers, content creators and thousands of consumer voices.

Consumers would receive the pay TV content to which they are entitled and the features that they expect, without harm to pay TV providers' networks or impingements on speech or intellectual property rights.

Standards would be created based on the input of multiple industry participants, and would not be controlled by cable operators as they are now. And, as the CVCC has shown with technical demonstrations, deployment could happen expeditiously, using existing technologies.

With good faith cooperation from industry stakeholders, standards could be quickly created to ensure implementation in a manner that results in interoperability, but not in undue burdens. Even if some stakeholders tried to hold up the standards process, creation of a default set of standards or specifications by the Commission to use until standards have been finalized would ensure that consumers would reap benefits in the near-term.

None of these advances would come at the expense of consumer privacy, which would be protected by existing laws at the federal and state levels. Intellectual property rights would not change. Consumers would enjoy even greater opportunities to discover independent and diverse content, as offerings that have never before graced television screens suddenly become accessible through competitive navigation devices.

Finally, as the Commission moves forward, it's important to make sure that the sliver of existing competition does not move backward. Pricing and billing practices that would discourage or even thwart competition should be prohibited. CableCARD support should remain intact to ensure that existing competitive technologies, as well as those that may be in the pipeline, are sustained during the transition to a successor solution.

As the commission forges a new future for competition and innovation, lessons from history can serve as their guide. Ending the black rotary dial phone monopoly, which produced similar arguments of opposition from the very same companies fighting to preserve the set top box monopoly today, unleashed an era of American technology innovation that is unmatched, not only for smart phone devices, but for an entire ecosystem of apps transforming the way we work, learn and connect.

Ending the set top box monopoly has the power to do the same. By setting an open standard, the FCC will immediately help consumers and let imagination and competition bring about the future of innovation.

## **II. THE FCC'S PROPOSALS WILL INTRODUCE MUCH-NEEDED COMPETITION IN THE MARKET FOR RETAIL NAVIGATION DEVICES AND FINALLY BRING TO CONSUMERS THE BENEFITS OF CHOICE ENVISIONED BY CONGRESS.**

More than ever before, video programming plays an integral role in our daily lives. Recently, FCC Chairman Tom Wheeler indicated that the average adult in the U.S. watches five-and-a-half hours of video a day.<sup>2</sup> Despite the importance most Americans place on getting news and entertainment from video, the user experience, as it relates to the functionality of a

---

<sup>2</sup> Tom Wheeler, Chairman, Fed. Comm'ns Comm'n, Keynote Address at INCOMPAS Policy Summit (Apr. 11, 2016) (transcript available at <https://www.fcc.gov/document/remarks-chairman-wheeler-incompas-policy-summit>).

consumer's navigation device, continues to frustrate and disappoint. Multichannel video programming distributors ("MVPDs") have used their monopoly power to stifle competition and innovation in the retail navigation device market and have perpetuated a system in which 99 percent of their video subscribers must lease a set-top box, at exorbitant monthly rates, to access all of the content to which they're entitled. Consumers are denied both the ability to purchase their own navigation device and the flexibility to seamlessly interact with content of their choice, whether from their MVPD or an over-the-top source. The Commission should act quickly to fulfill the purpose of Section 629 of the Communications Act by bringing competition and innovation to the retail navigation device market as Congress had originally intended when it enacted the law twenty years ago.

The Notice of Proposed Rulemaking ("NPRM") is the natural continuation of the process started by the Downloadable Security Technical Advisory Committee ("DSTAC") last year. Congress directed the Commission in the STELA Reauthorization Act of 2014 ("STELAR") to "establish a working group of technical experts" to address salient technical issues related to promoting the competitive availability of navigation devices.<sup>3</sup> Using the foundation established by the DSTAC, the Commission finally can identify a successor to the CableCARD standard that "promote[s] the competitive availability of navigation devices in furtherance of Section 629."<sup>4</sup>

Two decades after a bipartisan Congress passed Section 629, the competitive set-top box market that was contemplated has not yet been established. A study conducted by Senators Markey and Blumenthal just last year found that approximately 99 percent of MVPD subscribers use set-top boxes rented from an MVPD. Decrying the almost \$20 billion per year (\$231 per

---

<sup>3</sup> STELA Reauthorization Act of 2014, Pub. L. No. 113-200, 128 Stat. 2059, § 106(d)(1).

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

household) paid in leasing fees,<sup>5</sup> the senators called for “a new, national consumer-friendly standard that will allow consumers to choose their own video box irrespective from their pay-TV provider.”<sup>6</sup>

For more than a decade, the Commission has recognized the need for a successor solution to CableCARD that reflects modern technologies while maintaining flexibility for the future.<sup>7</sup>

Unfortunately, a successor has yet to emerge and innovation relative to other consumer electronic products has been limited. In the markets for every other consumer electronics device,

---

<sup>5</sup> Press Release, *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>. As Senator Blumenthal remarked: “The average household is forced into fees of more than \$200 a year on set-top boxes — an expense that is unjust and unjustifiable. As the world becomes increasingly connected and technology advances, new innovations must be able to break into the cable marketplace and provide the vigorous competition that drives down prices for consumers. Consumers deserve competitive options in accessing technology and television — not exorbitant prices dictated by monopoly cable companies.” *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> See *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Order and Further Notice of Proposed Rulemaking, FCC 03-89, at 2, ¶ 4 (rel. Apr. 25, 2003) (expressing hope that negotiations between the cable and consumer electronics industries would lead to a specification that would permit bidirectional navigation devices); *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Docket No. 97-80, PP Docket No. 00-67, Second Report and Order and Second Further Notice of Proposed Rulemaking, FCC 03-225, at 6, ¶ 7 (rel. Oct. 9, 2003) (noting that “negotiations are ongoing for a bidirectional receiver specification which would eliminate the need for an external navigation device to receive advanced services”); See *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Second Report and Order, FCC 05-76, at 8-10, 15-16, ¶¶ 17-20, 28 (rel. Mar. 17, 2005) (summarizing negotiations between the cable and consumer electronics industries and concluding that “the bidirectional negotiations have been disappointing” and that “a competitive market for two-way navigation devices is, at this point, far from assured.”); *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Docket No. 97-80, PP Docket No. 00-67, Third Further Notice of Proposed Rulemaking, FCC 07-120 (rel. June 29, 2007) (seeking comment on proposed standards to ensure bidirectional compatibility of cable television systems and consumer electronics equipment to allow navigation devices to access “two-way features available on cable systems, including electronic programming guides, video-on-demand, pay-per-view, and other interactive television capabilities.”); FCC, *Connecting America: The National Broadband Plan*, Section 4.2, available at <https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf> (“*National Broadband Plan*”) (discussing the need for a successor solution to CableCARD and the advantages that would flow from such a successor solution); *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, FCC 10-60 (rel. Apr. 21, 2010) (seeking comment on a successor solution to CableCARD that would work with any MVPD).

consumers benefit from a wide array of choices with respect to features as well as cost. Contrary to the arguments of some MVPDs, consumers want similar choices for navigation devices. Unfortunately, lack of support for CableCARD technologies coupled with developers' inability to access all of the MVPD service offerings to which consumers subscribe has kept navigation device innovations off the shelves and has left consumers with little choice but to lease widely-criticized boxes from their operator.<sup>8</sup> New devices from new manufacturers will create a competitive ecosystem that benefits consumers, innovators, and content creators.

History has shown time and again that when devices are untethered from the network operator's control, consumers benefit from more choices, greater innovation, lower prices, and higher quality. The seminal *Carterfone* decision<sup>9</sup> established that the public interest is best served when consumers have a wide array of equipment choices and are not limited to equipment supplied by a bottleneck network operator. In enacting Section 629, Congress was clear that it wanted similar benefits for the navigation devices market, stressing that “[c]ompetition in the manufacturing and distribution of consumer devices has always led to innovation, lower prices and higher quality.”<sup>10</sup> The use of open standards for navigation devices will allow consumers to access more content and incentivize manufacturers to give users an increased number of features and options, advancing the goals of Section 629.

---

<sup>8</sup> See, e.g., Consumer Reports, *4 Reasons You Hate Cable Boxes*, Mar. 30, 2014, at <http://www.consumerreports.org/cro/news/2014/03/4-reasons-you-hate-cable-boxes/index.htm>; John Patrick Pullen, *America's Most Hated Device: The Cable Box*, Aug. 27, 2013, at <http://fortune.com/2013/08/27/americas-most-hated-device-the-cable-box/>.

<sup>9</sup> *Use of the Carterfone Device in Message Toll Telephone Service*, 13 FCC 2d 420 (1968).

<sup>10</sup> H.R. Rep. No. 104-204, at 112 (1995).

**A. Opening Up the Navigation Device Market to Competition Will Give Consumers Greater Choice, Save Them Money, and Unleash Innovation.**

A competitive retail market for navigation devices will increase competition among device manufacturers, content providers, and network operators to the benefit of consumers.<sup>11</sup>

Devices: In markets characterized by competition, consumers have enjoyed the ability to choose from a wide array of innovative devices and falling prices. For example, *Carterfone* led to an explosion of choice in telephones available to consumers and to innovations such as cordless phones, fax machines, and modems — which, of course, played a vital role in the early growth of the Internet. Today, the smartphone market exemplifies the range of choices available to consumers in a competitive retail market, with consumers enjoying a wide variety of choices with respect to features, user interfaces, price, etc. Consumers can buy the device of their choice and use it with their wireless carrier, and in many cases can keep the same device — with its features, user interface, and stored information — when they switch carriers.

In the navigation device market, however, almost 99 percent of MVPD subscribers are denied the opportunity to choose which device best suits their needs. Consumers continue paying lease fees for the device long after they have covered the cost, and are unable to use the device if they switch to another MVPD. Additionally, lack of competition has suppressed innovation in navigation devices compared to other consumer electronics products. While innovations such as the DVR and streaming and side-loading video content to tablets and smartphones emerged from competitive retail navigation devices, they only were introduced in operator-leased set-top boxes after substantial delay.

---

<sup>11</sup> See Comments of the Consumer Video Choice Coalition, MB Docket 15-158, at 4-8 (filed Aug. 21, 2015) (demonstrating the pro-consumer impact on a competition-driven navigation device market); see also Comments of the Consumer Video Choice Coalition, MB Docket 15-64, at 6-9 (filed Oct. 8, 2015).

A hallmark of competition is different manufacturers producing reasonably-priced devices that do more than simply perform the same basic functions. Consumers benefit from product and user interface differentiation, giving them more choices in how they access, view, interact with, and organize content. With the appropriate rules and standards in place, retail navigation device manufacturers will be able to provide innovative and distinctive features, including unique user interfaces, enhanced search functionality, and improved means for recording and viewing content consistent with copyright law.

Content: Online video has shifted consumer viewing habits, with many consumers today viewing content from a mix of MVPD (including Video on Demand (“VOD”)), broadcast, and over-the-top providers. The growth of video options available online has given consumers greater choice in programming and subscription packages, and also has introduced more options for creators, including independent and minority programmers, to distribute their content. However, as long as incumbent MVPDs control the development and distribution of navigation devices, they can steer consumers toward their own content offerings at the expense of alternative offerings that viewers may prefer.<sup>12</sup> Set-top boxes leased from MVPDs generally do not allow users to view third-party content available online; such content only is available on TVs if consumers purchase, install, and use a separate device and switch video source inputs.<sup>13</sup>

---

<sup>12</sup> Several parties, including members of the Coalition, raised related concerns in the context of the proposed Comcast-Time Warner Cable merger, but the concern that MVPD control of navigation devices leads to control over what consumers watch applies across the industry. See Susan Crawford, *The Big Lock-In*, MEDIUM, Feb. 16, 2015, at <https://medium.com/backchannel/the-clock-is-ticking-on-comcasts-plan-to-take-over-internet-tv-460295f8d33a>; Petition to Deny of Netflix, Inc., MB Docket No. 14-57, at 73-75, 88-89 (Aug. 27, 2014) (discussing Comcast’s ability and incentive to discriminate against OVDs based on its control of consumer set-top boxes); Petition to Deny of COMPTTEL, MB Docket No. 14-57, at 22-27 (Aug. 25, 2014) (same); Petition to Deny of Public Knowledge and Open Technology Institute, MB Docket No. 14-57, at 36-40 (Aug. 25, 2014) (same).

<sup>13</sup> Consumers would prefer to use a single device to access all forms of video content. According to a recent survey, a majority of cord cutters and those seeking to reduce their spend on pay TV services would maintain their current spend if they could use a single source to search, discover, and watch all of their content, including content available online. *The Digital Consumer: Global Views on the Pay TV Experience, Cable Analytics and Cable Wi-Fi* at 7,

Unaffiliated retail navigation devices, on the other hand, do not have the same incentive to favor MVPD content offerings. Using these devices, users could search for, watch, and navigate content across all sources — OTT, linear, and VOD – in one integrated device. Consumers could use neutral user interfaces to search for content across different sources.

Network Competition: Progress toward goals related to greater facilities-based broadband- and video-network competition has been limited because of high costs faced by new entrants, including the excessive costs of procuring video navigation devices.<sup>14</sup> A competitive retail market for navigation devices would help to lower costs for differentiated devices in the wholesale market. Today, large MVPDs benefit from economies of scale because set-top box manufacturers are incentivized to focus on orders from these larger MVPDs. Robust retail competition would allow manufacturers to take advantage of economies of scale over a larger base of retail navigation device users — ultimately lowering or eliminating costs for new entrants and other small network operators to acquire innovative navigation devices. Where consumers can choose from several MVPDs, retail device competition also would lower switching costs because consumers could change service providers without being forced to switch navigation devices.

#### **B. The FCC’s Proposal Has Been Endorsed By the Administration, Major Publications, Industry Experts, and Consumers.**

During the DSTAC proceeding, the Coalition indicated that a number of prominent national publications had weighed in on the consumer benefits that would result from retail

---

available at <http://www.amdocs.com/Solutions/cable-satellite/Documents/Amdocs-IEMR-Consumer-Pay-TV-Survey-2015-Highlights.pdf> (citing a survey by Linx-IE Market Research Corp.).

<sup>14</sup> See Sean Buckley, *Google Fiber Says TV Service is Essential to Compete in the Broadband Game*, Apr. 15, 2015, at <http://www.fiercetelecom.com/story/google-fiber-says-tv-service-essential-compete-broadband-game/2015-04-15>.



device competition<sup>15</sup> and encouraged the Commission “to open the way for better devices.”<sup>16</sup>

Since the Commission announced that it would conduct a rulemaking to address competition in the retail navigation device market, the Obama Administration as well as dozens of major publications and commentators have joined this chorus in calling for MVPDs to unlock the set-top box and increase consumer choice.<sup>17</sup>

In an official blog post earlier this month, the Obama Administration announced a new initiative to “stoke competition across our economy.”<sup>18</sup> Referring to the *Carterfone* decision, the Administration encouraged the Commission to open up set-top boxes to competition and called

---

<sup>15</sup> See, e.g., The Editorial Board, N.Y. Times, *Let Consumers Use Better, Cheaper Cable Boxes*, Aug. 31, 2015, at <http://www.nytimes.com/2015/08/31/opinion/let-consumers-use-better-cheaper-cable-boxes.html> (“*Let Consumers Use Better, Cheaper Cable Boxes*”); The Editorial Board, USA Today, *End the Cable-Box Rip-Off: Our View*, Sep. 14, 2015, at <http://www.usatoday.com/story/opinion/2015/09/14/cable-tv-set-top-box-editorials-debates/71892068/> (“*End the Cable-Box Rip-Off*”); Nancy Marshall-Genzer, *Why We Don’t Buy Cable TV Set-top Boxes*, Aug. 31, 2015, at <http://www.marketplace.org/topics/business/why-we-dont-buy-cable-tv-set-top-boxes>; Bourree Lam, *Cable Box Rentals: A Needless \$19-Billion Industry*, Sep. 2, 2015, at <http://www.theatlantic.com/business/archive/2015/09/cable-boxes-fcc-television/403180/>.

<sup>16</sup> *End the Cable-Box Rip-Off: Our View*, *supra* note 15.

<sup>17</sup> The Editorial Board, Bloomberg View, *Cheaper Cable TV Starts With a Better Box*, Apr. 20, 2016, at <http://www.bloombergvew.com/articles/2016-04-20/cheaper-cable-tv-starts-with-a-better-box>; The Editorial Board, Los Angeles Times, *Thinking outside the cable box*, Jan. 28, 2016, at <http://www.latimes.com/opinion/editorials/la-ed-cable-boxes-20160128-story.html> (“*Thinking outside the cable box*”); The Editorial Board, The Chicago Tribune, *Imagine your viewing options if the FCC unlocks the cable box*, Feb. 15, 2016, at <http://www.chicagotribune.com/news/opinion/editorials/ct-cable-fcc-box-netflix-espn-edit-0216-jm-20160215-story.html> (“*Imagine your viewing options if the FCC unlocks the cable box*”); The Editorial Board, Boston Globe, *FCC should unlock savings for cable consumers*, Feb. 10, 2016, at <https://www.bostonglobe.com/opinion/editorials/2016/02/09/fcc-should-unlock-savings-for-cable-consumers/2msnvpfsddJbvbiYiX9u2N/story.html> (“*FCC should unlock savings for cable consumers*”); The Editorial Board, N.Y. Times, *The F.C.C. Gets Ready to Unlock the Cable Box*, Feb. 8, 2016, at [http://www.nytimes.com/2016/02/08/opinion/the-fcc-gets-ready-to-unlock-the-cable-box.html?\\_r=0](http://www.nytimes.com/2016/02/08/opinion/the-fcc-gets-ready-to-unlock-the-cable-box.html?_r=0) (“*The F.C.C. Gets Ready to Unlock the Cable Box*”); The Editorial Board, USA Today, *Let TV viewers buy cable boxes*, Feb. 17, 2016, at <http://www.usatoday.com/story/opinion/2016/02/17/cable-tv-set-top-box-fcc-tom-wheeler-editorials-debates/80474618/> (“*Let TV viewers buy cable boxes*”); JR Ball, *Three cheers to FCC for wanting to bust cable box monopoly*, Feb. 2, 2016, at [http://www.nola.com/opinions/baton-rouge/index.ssf/2016/02/fcc\\_cable\\_box\\_requirement.html](http://www.nola.com/opinions/baton-rouge/index.ssf/2016/02/fcc_cable_box_requirement.html); The Editorial Board, The Buffalo News, *Consumers are the winners as FCC acts to end cable monopoly on set-top boxes*, Feb. 22, 2016, at <http://www.buffalonews.com/opinion/buffalo-news-editorials/consumers-are-the-winners-as-fcc-acts-to-end-cable-monopoly-on-set-top-boxes-20160222>.

<sup>18</sup> Jason Furman & Jeffrey Zients, *Thinking Outside the Cable Box: How More Competition Gets You a Better Deal*, WHITE HOUSE BLOG (Apr. 15, 2016), <https://www.whitehouse.gov/blog/2016/04/15/ending-rotary-rental-phones-thinking-outside-cable-box>.

these devices a “mascot” for its competition initiative.<sup>19</sup> The Administration stated that the FCC proceeding:

[W]ill allow companies to create, new, innovative higher-quality, lower-cost products. Instead of spending nearly \$1,000 over four years to lease a set of behind-the-time 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.<sup>20</sup>

Similarly, numerous major publications embraced the Commission’s efforts to ignite competition in the navigation device market. For example, the *Los Angeles Times* Editorial Board scrutinized the limited retail device choices for consumers and suggested that “it’s far better to let consumers decide . . . for themselves in an open, competitive market” than to trust cable operators to “promote indie networks, limit consumers’ exposure to advertising and protect privacy.”<sup>21</sup> In endorsing retail navigation device competition, the *Chicago Tribune* Editorial Board described the potential impact that the Commission’s proposal could have on a consumer’s viewing experience:

Even if this simply means getting rid of a few remotes or paying less for an ugly, required contraption, we’re all in. . . . Give us the option of buying a box, the way we buy a cheap router for home Wi-Fi, and give us fewer remotes, and we’ll be happy enough.

But that should be just the beginning. It’s reasonable to expect that competition will mean much bigger changes to the TV experience . . .

Imagine buying a device or service that simplifies and integrates the experience of watching cable TV and Internet-based streaming video programming. Imagine,

---

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> *Thinking outside the cable box, supra* note 17.

too, the ability to channel surf easily between ESPN, Hulu, Netflix and other offerings.<sup>22</sup>

Noting that the “FCC can’t pull the plug on” the MVPD navigation device lease scheme fast enough, the *Boston Globe* Editorial Board stated that under the Commission’s “common-sense proposal . . . the regressive era of never-ending payments could give way to greater innovation, and savings for consumers.”<sup>23</sup> Likewise, the *New York Times* Editorial Board asserted that “Americans have waited long enough for more and better choices than the cable box” and urged the FCC to adopt a final rule that makes room for innovative new devices and technologies.<sup>24</sup> In addition, the Editorial Board of *USA Today* pointed out that the Commission’s “worthy proposal” holds the potential to get “rid of absurdly anti-competitive business practices that stifle innovation and force most consumers to rent instead of buy.”<sup>25</sup>

Several other media and telecommunications industry experts endorse the Commission’s actions and contend that consumers will benefit from an increased number of competitive retail navigation device options.<sup>26</sup> The National Hispanic Media Coalition addressed the panoply of consumer benefits in *USA Today*, noting that Commission action “could potentially allow

---

<sup>22</sup> *Imagine your viewing options if the FCC unlocks the cable box*, *supra* note 17.

<sup>23</sup> *FCC should unlock savings for cable consumers*, *supra* note 17.

<sup>24</sup> *The F.C.C. Gets Ready to Unlock the Cable Box*, *supra* note 17.

<sup>25</sup> *Let TV viewers buy cable boxes*, *supra* note 17.

<sup>26</sup> *See, e.g., Lily Hay Newman, The FCC Just Voted to Break the Chains Binding You to Your Cable Box*, SLATE (Feb. 18, 2014, 2:46 PM), at

[http://www.slate.com/blogs/future\\_tense/2016/02/18/fcc\\_votes\\_3\\_2\\_in\\_favor\\_of\\_proposal\\_to\\_open\\_cable\\_boxes\\_to\\_third\\_parties.html](http://www.slate.com/blogs/future_tense/2016/02/18/fcc_votes_3_2_in_favor_of_proposal_to_open_cable_boxes_to_third_parties.html); Brandon Russell, *FCC votes to move forward with plan to free the cable box*, TECHNOBUFFALO (Feb. 18, 2016), at <http://www.technobuffalo.com/2016/02/18/fcc-votes-to-move-forward-with-plan-to-free-the-cable-box/> (“Wheeler’s plan would make it so consumers can choose whatever set top box they want, rather than being forced to use what a cable company provides. Not only will this be better for you and me, but it’ll make for some good competition among companies vying for a spot in your living room. Also, part of the FCC’s goal is to lower bills for cable viewers and provide consumers with more Internet-based programming. That sounds good to me . . . .”); Sarah Hope, *Big Win for Cordcutters: FCC decides to “unlock the box*, SYRACUSE NEW TIMES (Feb. 25, 2016), at <http://www.syracusenewtimes.com/big-win-for-cordcutters-fcc-decides-to-unlock-the-box/>; Robert Evatt, *Bits and Bytes: Will we still get freedom from cable boxes?*, TULSA WORLD (Feb. 7, 2016, 12:00 AM), at [http://www.tulsaworld.com/business/technology/bitsbytes/bits-and-bytes-will-we-still-get-freedom-from-cable/article\\_c9accf4f-eaf3-5b2b-b40e-822bf4b1f020.html](http://www.tulsaworld.com/business/technology/bitsbytes/bits-and-bytes-will-we-still-get-freedom-from-cable/article_c9accf4f-eaf3-5b2b-b40e-822bf4b1f020.html).

consumers greater access to the content that they pay for, granting greater control over when, where, and how they want access to it, on the device they choose, without being locked into constant, unnecessary fees and excruciating installation and repair appointments.”<sup>27</sup> In a broader article on how to fix the cable box, the *Washington Post*’s consumer technology reporter noted that proprietary applications currently offered by cable providers “aren’t necessarily the greatest solution for video streaming, since they’re really just aggregating lots of little buckets into the same place, rather than creating one great menu of all your options.”<sup>28</sup> Because the options offered by the cable industry often seem like a “stopgap,” the Commission’s proceeding to unlock the cable set-top box could be one way to give consumers the kind of simple, integrated video experience they have been demanding.<sup>29</sup> In an analysis of Comcast’s announcement that it would make its proprietary application available on Roku and Samsung TV platforms, *Wired* proclaimed that while this may be a “step in the right direction . . . a cable company developing apps is in no way mutually exclusive with letting third-parties develop box hardware.”<sup>30</sup> Because streaming devices are not ubiquitous, Comcast’s announcement and the current app-based model do not “justify propping up an unfair system that still affects 99 percent of cable subscribers.”<sup>31</sup>

Each of these endorsements of the Commission’s proposal lends substantial weight to the argument that consumers are ready to embrace choice in their video programming and that a

---

<sup>27</sup> Mike Snider, *FCC Chairman wants openness for TV set-top boxes*, USA TODAY (Jan. 27, 2016, 4:47 PM), at <http://www.usatoday.com/story/tech/news/2016/01/27/fcc-chairman-wants-openness-tv-set-top-boxes/79403894/> (quoting Michael Scurato, vice president of policy for the National Hispanic Media Coalition).

<sup>28</sup> Hayley Tsukayama, *I don’t care how you do it. Someone has to fix the cable box.*, THE WASHINGTON POST (Feb. 5, 2016), at <https://www.washingtonpost.com/news/the-switch/wp/2016/02/05/i-dont-care-how-you-do-it-someone-has-to-fix-the-cable-box/> (“Someone has to fix the cable box”);

<sup>29</sup> *Id.*

<sup>30</sup> Brian Barrett, *Cable Boxes Suck. One Day They’ll Die. Until Then We Have To Fix Them.*, WIRED (Apr. 22, 2016, 6:49 AM), at <http://www.wired.com/2016/04/cable-box-dying-still-needs-fixed/>.

<sup>31</sup> *Id.*

competitive retail navigation device market is in the public interest. The Coalition encourages the Commission to fulfill the purpose of Section 629 and make the set-top box market another example of success that is spurred by innovation and competition.

### **III. THE COMMISSION HAS THE AUTHORITY TO IMPLEMENT THE RULES AS PROPOSED.**

#### **A. Section 629 and STELAR Provide Explicit Instructions to the Commission to Assure a Competitive Market.**

Through Section 629<sup>32</sup> and STELAR,<sup>33</sup> Congress has given the Commission a clear mandate to ensure that consumers can use retail video navigation devices to access MVPD programming. Over two decades ago, Congress recognized a problem in the lack of competition for set-top boxes. Former House Commerce Committee Chairman, Tom Bliley (R-VA), and then-Congressman Ed Markey (D-MA) introduced a bill to require that the Commission “adopt regulations to assure competitive availability, to consumers of telecommunications services, of converter boxes, interactive communications devices, and other customer premises equipment from manufacturers, retailers, and other vendors not affiliated with any telecommunications system operator.”<sup>34</sup> Bliley stated that their bill sought to:

[E]nsure that we follow the competitive market model rather than the monopoly model. . . . 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.<sup>35</sup>

This bill became the basis for Section 629 in the Telecommunications Act of 1996, in which

---

<sup>32</sup> 47 U.S.C. § 549(a) (2012).

<sup>33</sup> STELA Reauthorization Act of 2014 (STELAR), Pub. L. No. 113-200, § 106(d), 128 Stat. 2059, 2063 (2014).

<sup>34</sup> Competitive Consumer Electronics Availability Act of 1995, H.R. 1275, 104<sup>th</sup> Cong. (1995).

<sup>35</sup> 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>.

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.”<sup>36</sup> With language very similar to the Bliley-Markey bill, Section 629 directs the FCC to write rules to promote competition for video navigation devices.<sup>37</sup>

Since 1996, however, competition in the set-top box market has remained elusive. Recognizing the inadequate competition in the video navigation device market, in late 2014, Congress gave the Commission a new grant of authority to develop a successor to the CableCARD regime that had been the Commission’s most prominent effort to promote competition to date. Congress passed STELAR, providing clear direction to and goals for the Commission: convene a panel of experts to make recommendations for a “technology- and platform- neutral software-based downloadable security system” that would advance Section 629’s goal of facilitating a viable, retail market.<sup>38</sup>

Following its Congressional mandate, in January 2015, the Commission convened the DSTAC, whose members represented a wide range of interests from MVPDs, to device manufacturers, to public interest groups. After seven open meetings, extensive study, and presentations, the DSTAC submitted its report, which contained two major proposals, and

---

<sup>36</sup> S. REP. NO. 104-230, at 113 (1996) (joint explanatory statement of Committee of Conference).

<sup>37</sup> 47 U.S.C. § 549(a) (2012) (“The Commission shall . . . 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.”).

<sup>38</sup> Pub. L. No. 113-200, § 106(d), 128 Stat. 2059, 2063 (2014) (requiring that the Commission’s Chairman convene a working group of experts and stakeholders from a wide range of perspectives “to identify, report, and recommend performance objectives, technical capabilities, and technical standards of a not unduly burdensome, uniform, and technology- and 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.”).

recommendations to the Commission on August 28, 2015.<sup>39</sup> The “Competitive Navigation” proposal, supported by the CVCC, would facilitate retail competition by promoting custom features and user interfaces in third party navigation devices. The other proposal, the “MVPD Application-based proposal,” would maintain the status quo where MVPDs provide programming via their apps. However, it would not address the central problems of ubiquitous set-top box leasing; whether MVPDs would continue to support CableCARD-ready, third party navigation devices; or how the Commission could “assure the commercial availability . . . of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming . . . from manufacturers, retailers, and other vendors . . . .”<sup>40</sup> Although some parties have requested that the Commission “call it a day” on the DSTAC’s recommendations,<sup>41</sup> with the NPRM, the Commission is acting on the work it facilitated pursuant to Congress’ mandate in STELAR.

**B. The Commission has the Requisite Authority under Sections 629 and 624A to Write Rules for a Successor to CableCARD That Encompasses Software-Based Applications.**

As the Commission notes, “Section 629 is plainly written to cover any equipment used by consumers to access multichannel video programming and other services, and software features have long been essential elements of such equipment.”<sup>42</sup> Congress wanted the Commission to be forward-looking and embrace technological changes as it promoted a competitive market where

---

<sup>39</sup> DSTAC Summary Report, (Aug. 28, 2015) <https://transition.fcc.gov/dstac/dstac-report-final-08282015.pdf>.

<sup>40</sup> 47 U.S.C. § 549(a) (2012).

<sup>41</sup> See Comments of AT&T, MB Docket 15-64, at 22 (filed Oct. 8, 2015) (“[T]he commission should carefully review the DSTAC Report and then call it a day, allowing the Apps Approach to continue its virtuous development unencumbered.”).

<sup>42</sup> NPRM at ¶22.

consumers could purchase navigation devices from “a variety of sources.”<sup>43</sup> Congress advised the Commission that it should “avoid actions which could have the effect of freezing or chilling the development of new technologies and services.”<sup>44</sup> While some opponents of the NPRM have claimed that the Commission is trying to “lock” them into antiquated technology, the proposals in the NPRM would work to ensure that device manufacturers can innovate and build more advanced boxes that have access to MVPD programming.

**C. Section 624A is both a grant of authority and an instruction to promote competition.**

In addition to Congress’ intent that Section 629 allow the Commission to update its rules to reflect technological change, Section 624A provides the Commission with an additional grant of authority and instruction to make sure that its regulations do not become stale or obsolete. Section 624A requires that the Commission “periodically review and, if necessary, modify the regulations issued pursuant to this section in light of any actions taken in response to such regulations and to reflect improvements and changes in cable systems, television receivers, video cassette recorders, and similar technology.”<sup>45</sup> The D.C. Circuit has found that Section 624A’s reach is “limited by its plain language to cable systems,” which would suggest that the principles of Section 624A(d) should not apply to DBS. However, the Commission has the authority “to impose on direct broadcast satellite service, public interest or other requirements for providing video programming.”<sup>46</sup> Moreover, immediately before (and in the same sentence as) the D.C. Circuit’s aforementioned phrase on Section 624A’s exclusivity, that court held that Section 629

---

<sup>43</sup> H.R. REP. NO. 104-204, at 112 (1995).

<sup>44</sup> S. REP. 104-230, at 181 (1996) (Conf. Rep.).

<sup>45</sup> 47 U.S.C. § 544a(d) (2012). *But see* EchoStar Satellite L.L.C. v. FCC, 704 F.3d 992, 999 (D.C. Cir. 2013). The D.C. Circuit did not decide Section 624A’s continued applicability to new technologies. NPRM P. 14-15 n. 77.

<sup>46</sup> 47 U.S.C. 335(a) (2012).



“applies to all MVPDs.”<sup>47</sup> Therefore, because the Commission has authority to set requirements for DBS provision of video programming, it should be able to apply new rules for IP-based delivery of video to DBS because Section 629 applies to all MVPDs.

Because many MVPDs already deliver content over IP, the Commission is within its proper authority to “modify [its] regulations . . . to reflect improvements and changes in cable systems” related to IP delivery. Furthermore, a software-based solution was within the contemplation of Congress, which discussed how the “devices will connect consumers to the network of communications and entertainment services.”<sup>48</sup> The Commission’s rules also account for the means by which consumers access MVPD programming in the definition of “navigation devices.”<sup>49</sup>

Enabling an IP-based successor to the CableCARD rules will help ensure “the commercial availability” of navigation devices. There is broad dissatisfaction among consumers with the devices leased to them by their MVPD.<sup>50</sup> Although third party devices are available, the percentage of consumers leasing MVPD-provided boxes has increased during the CableCARD era<sup>51</sup> because MVPDs have made it prohibitively difficult for third-party devices provide access to MVPD service offerings.<sup>52</sup> Thus, consumer demand has not developed, and neither has a viable commercial market.<sup>53</sup>

---

<sup>47</sup> EchoStar Satellite L.L.C., 704 F.3d at 999.

<sup>48</sup> H.R. REP. NO. 104-204, at 112 (1995).

<sup>49</sup> See 47 CFR § 76.1200(c) (“Devices such as 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.*”) (emphasis added).

<sup>50</sup> See Comments of Consumers Union, MB Docket 15-64, at 4 (filed Oct. 8, 2015) (“there is great consumer demand for additional features beyond what cable companies have made available.”).

<sup>51</sup> See CCIA comments at 5-6 (filed Apr. 22, 2016).

<sup>52</sup> See NPRM at ¶¶ 7-8.

<sup>53</sup> *EchoStar Satellite L.L.C. v. FCC*, 704 F.3d 992, 997 (D.C. Cir. 2013).

**IV. THE PROPOSED RULES ARE TECHNICALLY FEASIBLE AND CAN BE IMPLEMENTED IN A NON-BURDENSOME AND INTEROPERABLE MANNER WITH GOOD FAITH COOPERATION FROM ALL INTERESTED INDUSTRY PARTICIPANTS.**

Drawing on the DSTAC's work and comments on its Final Report, the proposed rules would fulfill Section 629's mandate to assure a competitive market for navigation devices. The proposed rules also would comply with STELAR's requirement of a uniform technological framework that does not impose undue burden on providers of programming or devices. In particular, the technical requirements and proposed rules strike an appropriate balance between promoting innovation and maintaining flexibility.

The competition envisioned in Section 629 and STELAR can be achieved only if devices are interoperable across MVPD services. While maintaining MVPD flexibility is important, having a fallback, or default, reference set of technologies provides a clear blueprint for compliant implementation. The Coalition agrees that this can be achieved without requiring "common reliance" or that any MVPD "re-architect" its network.<sup>54</sup> The Coalition and its members successfully demonstrated a competitive navigation solution in December 2015 and January 2016, and have provided a core set of references and a schematic for their operation that illustrates how this can be achieved.<sup>55</sup> The Coalition also supports, and believes to be feasible, the NPRM's "app parity" proposal, which provides additional consumer choice and sovereignty. A Technical Appendix attached to these comments elaborates on the Three Flow Schematic in light of proposals and questions in the NPRM.

---

<sup>54</sup> See MB Docket No. 15-64, ex parte letter of Coalition, Jan. 21, 2016.

<sup>55</sup> MB Docket No. 15-64, ex parte letter of Public Knowledge, Oct. 20, 2015 ("Three Flow Schematic"). See also ex parte letter of Angie Kronenberg, Chief Advocate & General Counsel, INCOMPAS, on behalf of Consumer Video Choice Coalition, Dec. 14, 2015.

**A. The NPRM Correctly Defines the Scope of the MVPD Services Covered by the Proposed Rules.**

Section 629 is plainly written to cover any equipment used by consumers to access MVPD programming and other services; such “equipment” includes embedded software, wherever located in the home network. The commercial market would not be adequately served if, as proposed by DSTAC’s MVPD participants, it consisted only of those Navigation Devices that an MVPD chooses to support and only the software applications controlled by the operator. To so limit the competitive market would eliminate competition in user interfaces and in consumer-directed storage, and it would subject consumers to having their devices cease to be supported when contracts expire or business preferences change, as has already occurred with cable, DBS, and IPTV providers having withdrawn support as a matter of strategic choice.<sup>56</sup> However, nothing in the NPRM would prevent entities that have business relationships with an MVPD from deploying the technologies referenced in this proceeding, should they wish to implement or rely on them.

*i.* Consumer choice should be supported.

MVPDs should not be able to impose artificial distinctions among hardware, software, and app classifications to deny necessary information and access to the discovery and delivery of programming. Historically, the Commission’s navigation device rules have been targeted to

---

<sup>56</sup> See Jeff Baumgartner, *AT&T U-verse TV To Drop Support For Xbox 360 on December 31*, Multichannel News, Nov. 26, 2013, <http://www.multichannel.com/news/content/att-u-verse-tv-drop-support-xbox-360-december-31/356856>; Richard Lawler, *Next month Comcast will turn off the Xbox 360 app Netflix hated*, Engadget, Aug. 17, 2015, <http://www.engadget.com/2015/08/17/comcast-will-turn-off-its-xbox-360-app-september-1st/>; Jeff Baumgartner, *Dish Stops Sales of ‘Virtual Joey,’* Multichannel News, Oct. 2, 2015, <http://www.multichannel.com/news/content/dish-stops-sales-virtual-joeey/394246>; Laura Northrup, *Verizon Ends FiOS Streaming Apps for Xbox and Smart TVs March 31*, Consumerist, Mar. 21, 2016, <https://consumerist.com/2016/03/21/verizon-ends-fios-streaming-apps-for-xbox-and-smart-tvs-march-31/>.

ensure that necessary information would be available and neither withheld nor restricted unless to protect against harm to the network or theft of service. Thus, existing Commission rules require that all information and access to technologies necessary for operation of a competitive device be provided transparently.<sup>57</sup> To assure that license conditions would not contravene this protection, the Commission has provided<sup>58</sup> that a licensee could seek relief from the FCC when an MVPD offers an unduly restrictive license. These rules, and the availability of FCC review, guided the parties in negotiating the DFAST License, to which the Commission rightly refers as a model for a balanced approach to provisions that ensure copyright compliance and robustness against attack without unduly constraining device design.

*ii.*     Section 629 covers all MVPD services.

Section 629 applies not only to cable programming and services, but also to programming and services from other MVPDs, including DBS providers. As the NPRM notes,<sup>59</sup> reasons that previously justified assigning a lower priority to addressing DBS no longer apply. Absent requirements of common reliance, implementation of a competitive interface based on the information flows identified in the NPRM is not difficult or unique for DBS. A DBS provider is fundamentally equivalent to a cable operator using one-way technology. Both require an in-

---

<sup>57</sup> 47 C.F.R. §§ 76.1200 - 1205. With respect to the NPRM's definition of "navigable services," we note that user-directed cloud recording is not legally regarded as an MVPD "service." *Cartoon Network, LP v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008). However, as discussed below, pursuant to 47 C.F.R. §§ 76.1201 and 1203, an MVPD may not disable this feature for competitive devices.

<sup>58</sup> *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Further Notice of Proposed Rulemaking and Declaratory Ruling, CS Docket No. 97-80, 15 FCC Rcd. 18199, 18209-12, ¶ 29 & n. 71 (rel. Sept. 18, 2000) ("Declaratory Ruling"); Reply Comments of the National Cable & Telecommunications Association on Further Notice of Proposed Rulemaking at 21 and n. 66 (Apr. 28, 2003).

<sup>59</sup> "[I]t appears that the market for devices that can access DBS multichannel video programming has devolved to one that relies almost exclusively on equipment leased from the DBS provider." NPRM ¶ 20.

home device to convert the proprietary network's RF signal<sup>60</sup> into common IP. Nothing in the NPRM would impede implementation of the proposed rules for cable or satellite. In fact, much of the technology referred to in the Coalition's illustrative filings and in the NPRM is already being implemented in DBS and cable MVPD systems.<sup>61</sup>

*iii.*     Navigation devices remain accurately defined.

The FCC should not modify the existing definition of "navigation device" in the agency's rules. As explained above in Section II, Section 624A comprises an instruction and grant of authority to the FCC to update its regulations with respect to successor technologies. Although the specific instructions in Section 624A refer to then-extant cable and home network technologies, the grant of authority and direction are built upon by the comprehensive directions to the FCC in the Communications Act and in STELAR, which address additional technologies and means of delivery within the Commission's jurisdiction.

**B. A Competitive User Interface, National Portability Among MVPDs And Their Systems, And Standards-Based Technologies Not Subject To MVPD Approval Are Essential To Enable Competition.**

To fulfill Section 629's requirements and to meet expectations in STELAR, MVPDs must field standards-based and RAND-licensed technologies that support:

---

<sup>60</sup> For example, cable operators require modems or set-top devices with RF QAM converters; IPTV services require modems with DSL or Fiber network terminators; and satellite requires RF receivers.

<sup>61</sup> See, e.g., *About RVU: What is RVU*, RVU ALLIANCE, <http://rvualliance.org/what-rvu> (last visited Apr. 22, 2016) (noting that PayTV provider use RVU to "enable the same User Interface and feature set experience across every TV in the home."); VIDIPATH, <http://vidipath.com/> (explaining how VidiPath "enables streaming of subscription TV to any VidiPath Certified device throughout the home regardless of the manufacturer.").

- A competitive User Interface with access to data necessary to search for and identify available MVPD programming;<sup>62</sup>
- Viable portability of competitive devices among MVPDs and their systems;<sup>63</sup>
- Content protection according to rules that apply to MVPD-provided devices;<sup>64</sup>
- Neutrality between hardware and software implementations;<sup>65</sup> and
- Commercial entry not subject to MVPD approval, apart from receipt of a certificate of compliance with consumer protection requirements.<sup>66</sup>

Reference to open standards and RAND technologies in transparent formats is necessary, but not sufficient, to meet Commission objectives. Access to flows identified in the NPRM should be interoperable across all MVPD systems, and any necessary technology should be licensed on a RAND basis. MVPD flexibility need not and should not impair innovation, competition, and usefulness to consumers.

Accordingly, the FCC should identify a default compliant solution that consistently supports the attributes listed above; any solution that does not meet these metrics should be deemed non-compliant. If a solution provided by an MVPD works only for its services, it would not reach STELAR's requirements of being uniform or technologically neutral, and would not assure commercial availability of truly of independent competitive products, as required by Section 629.<sup>67</sup>

If MVPD portability is preserved it should not matter whether the choice is made by each MVPD or by consensus. However, implementation of technologies chosen by MVPDs to

---

<sup>62</sup> NPRM ¶ 27.

<sup>63</sup> *Id.* ¶¶ 28, 31.

<sup>64</sup> *Id.* ¶ 29.

<sup>65</sup> *Id.* ¶ 30.

<sup>66</sup> *Id.* ¶ 28.

<sup>67</sup> For a company to invest in building a competitive navigation device, it needs to have assurance that it will work across various MVPDs for a reasonable period of time (*e.g.*, at least five years).

support competitive devices should be sufficiently stable so that manufacturers have incentives to invest in creating new devices, and so that retailers and consumers have confidence that these devices will operate on MVPD systems as designed and advertised for a reasonable period of time. This environment can be achieved within the proposed two-year time period, although MVPDs should be able to begin supporting devices on this basis within one year from the release of any rules.

### **C. Provision of Service Discovery Information Is Essential To Enable Competition.**

For service discovery to meet the requirements listed above, the factual, non-copyrighted data sufficient to identify a program must be provided for all content, particularly VOD. Copyrighted program description and scheduling information would be available from other sources under license, as it is to MVPDs.

The Commission's proposal to rely on Entertainment Identifier Registry ("EIDR")<sup>68</sup> information is useful but insufficient.<sup>69</sup> Not all programming contains EIDR information. Where EIDR information is not available to a navigation device, an MVPD should provide sufficient data to enable guides and search, in a competitive UI, to uniquely identify the program. This unique identification is critical for VOD because unlike linear TV it cannot be correlated by time + channel. Program identity (as opposed to content descriptive) data is all that is necessary for this purpose because navigation devices can rely on additional data obtained under license from independent providers. A standard referenced as a default for compliance purposes should provide for such flexibility for MVPDs.

---

<sup>68</sup> See <http://eidr.org/>.

<sup>69</sup> NPRM at n.105.

Discovery data should include information on the number of simultaneous available streams. Parity regarding the number of tuners should be required for devices that support Service Discovery and those that do not. For example, where an MVPD would provide a leased device with six tuners and VidiPath support for six televisions at once, but does not expose the Service Discovery interface, the support for a competitive alternative should not be limited to leasing six single tuner devices with Service Discovery interfaces to support six televisions. Requiring Service Discovery parity will avoid such discrimination against competitive products.

**D. Provision of Entitlement Information Ensures That Consumers Receive The Services To Which They Subscribe.**

Rights to content Entitlement Data should be defined as the same rights and security obligations, including copy protection, that pertain to the programming when delivered through the MVPD's user interface or device. The expression of such rights through the DFAST License has been a successful model. Compliance and Robustness obligations comparable to those of the DFAST License are conventionally expressed in the licenses to any DRM and/or link technology necessary to decrypt protected content. These licenses require that obligations regarding storage or downstream home network or other sharing be passed on to and implemented in any device receiving the content. It will still be necessary for competitive navigation devices and any home networks they serve to obtain access to content through conformance to these licenses and to their security and copy protection provisions.

For the initial decade of DFAST licensing of CableCARD-reliant third-party devices, the obligation of such devices to be controlled (and potentially shut off) by the coding of content providers and distributors was balanced by the Commission's Encoding Rules, which limited the



circumstances in which such encoding could be employed so as to constrain device functionality and constrain consumers. In adopting the proposed rules in this proceeding, and similarly subjecting independent devices to the control of content providers and distributors, the FCC should reinstate these encoding rules by acting on the pending petition to do so.<sup>70</sup>

**E. Provision of Content Delivery Data Enables Consumer Choice Without Impinging on Speech Protections.**

For every potential implementation, there is a home device (*e.g.*, a “box,” a modem or, in the case of apps, a portable device) on which necessary software for supporting client displays or devices resides. Thus, it’s not necessary for a network operator to provide an additional “box.” Conversely, nothing in these technologies or standards constrains an MVPD’s flexibility to provide services through more than the minimally necessary number of devices. This tradeoff could evolve, depending on the number of functions the MVPD wishes to perform in the “cloud.”

Implementation of the Content Delivery and Service Discovery interfaces is inter-related. The Service Discovery interface exposes the information needed to find and access a particular piece of content (*e.g.*, linear TV channel or VOD item, through a URL). The Content Delivery interface is the mechanism by which that content is delivered (*i.e.*, HTTP Server) and does not need to extend to services beyond linear TV and VOD services (plus emergency alerting if delivered over the Content Delivery interface). The Service Discovery interface must include all relevant information needed to access the content by a third party device over the Content

---

<sup>70</sup> TiVo Inc. Petition for Rulemaking, CS Docket No. 97-80, PP Docket No. 00-67 (filed July 16, 2013); *Media Bureau Seeks Comment on TiVo Petition for Rulemaking To Reinstate the Commission’s Second Report and Order Implementing Section 629 of the Act and Associated Rules*, Public Notice, CS Docket No. 97-80, PP Docket No. 00-67, DA 13-1626 (rel. July 24, 2013).

Delivery interface. The Content Delivery interface also must include all information relating to accessibility such as closed captioning, descriptive video services and multiple audio languages (generally embedded inside the audiovisual content itself). EAS message delivery can be performed via either the Service Discovery interface or the Content Delivery interface; the corresponding standard utilized for the implementation must indicate how this is done. The information necessary to locate and identify programming for discovery and delivery is factual rather than expressive, and hence cannot be deemed “compelled speech.”<sup>71</sup>

**F. Published and Transparent References Should Be Established for the “Three Flows.”**

An Open Standards Body should have an established decision-making process, as well as simple membership or participation processes that are reasonably accessible to smaller companies, consumer interest organizations, and trade associations and not unduly influenced by MVPDs. However, it should still be permissible to reference work product by standards bodies not meeting these Commission requirements. Indeed, the Commission should be able to account for circumstances where not every element of a solution has been or can be entirely standardized (as in the case of access control technologies that rely on secrets but are subject to RAND licensing). Furthermore, the Commission should be able to account for circumstances in which a solution meeting necessary requirements can be defined and referenced and is substantially built on one or more open standards, but has not been wrapped into a single package, and thus incorporates variations involving additional specifications of technologies available on a RAND basis. The Commission also should anticipate, as it has with identification of digital output

---

<sup>71</sup> *Feist Publications, Inc., v. Rural Telephone Service Co.*, 499 U.S. 340, 347-348 (1991).

technologies,<sup>72</sup> that further iterations of referenced technologies may provide more complete guidance or may be more concretely formulated as a single “standard.”

If an MVPD’s implementation complies with all requirements including pan-MVPD portability, there can be more than one “standard” or iteration of standards. Conversely, if an MVPD’s choice fails to provide sufficient interoperability for “navigable services,” it cannot be deemed compliant. Section 76.1203 of the FCC’s rules currently limits MVPD control over competitive devices to protection against electronic harm to the network or unauthorized receipt of service. This rule should be understood as guarding against MVPD imposition of technological constraints, such as requiring support for MVPD UIs or mandatory access to MVPD non-programming services such as sports scores, social media feeds, or other information not necessary for receipt of programming or for legal or regulatory compliance. Similarly, competitive access may not necessarily require access to MVPD features such as user-directed recording and cloud storage. However, a competitive device should be able to provide for user-directed cloud storage through its own user interface, and an MVPD should not be able to block or restrict any such feature from being offered in a competitive device, whether or not the MVPD offers it in its own devices.

This range of requirements provides ample flexibility for MVPD implementation. To ensure a balance between requirements of consumer portability across MVPDs and MVPD flexibility, the FCC should identify a benchmark “default” standard, or set of technologies and specifications, considered compliant in both of these respects. Availability of this reference will

---

<sup>72</sup> CS Docket No. 97-80 and PP Docket No. 00-67, Third Report And Order And Order On Reconsideration, ¶¶ 43 - 44 (rel. Oct. 14, 2010) (“*Third R&O*”); *see also* CS Docket No. 97-80, In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996; Tivo’s Request for Clarification or Waiver of the Audiovisual Output Requirement of Section 76.640(b)(4)(iii), Memorandum Opinion And Order, ¶4 (rel. April 4, 2014).

assure that a compliant solution is available within the timeframe established by the Commission for effectiveness of the rules.

### **G. Referenced Technologies Should Maximize the Potential For Competition.**

Availability of the three information flows in standardized and transparent formats is necessary, but not sufficient, to support a market for competitive navigation devices. Among existing known solutions, primary challenges include removing unnecessary limitations to a remote user interface and standardizing UPnP references. The ease or difficulty of resolving these challenges, however, is defined only by the willingness of standards body participants to do so. By contrast, accommodating “all” or even several of the proprietary app approaches advocated by MVPDs would be prohibitively expensive even if, contrary to present practice, such apps were made available to all competitors.<sup>73</sup> Thus, this approach would not comport with the requirements of Sections 629, 624A, and STELAR.

Compliance with Section 629 must include serving Navigation Devices from entities without a business relationship with an MVPD. Moreover, as currently provided and as advocated for by MVPDs,<sup>74</sup> proprietary apps are at best ancillary to leased devices. Section 629 directs the FCC to look to standards bodies to determine solutions for precisely the types of problems identified in this proceeding concerning apps’ limited interoperability, capacities, and reliability. As the NPRM notes,<sup>75</sup> MVPD members of DSTAC proposed that the only apps to be made available would be licensed by them on a proprietary basis. This does not fulfill the

---

<sup>73</sup> See DSTAC Final Report, Report of Working Group 2 to DSTAC, III. E., Table 1, Apr. 21, 2015, <https://transition.fcc.gov/dstac/dstac-report-final-08282015.pdf>.

<sup>74</sup> See Mari Silbey, *The Future of TV Is... Wait, Where Are the Apps?* Light Reading, Apr. 18, 2016, <http://www.lightreading.com/cable/set-top-boxes/the-future-of-tv-is-wait-where-are-the-apps/a/d-id/722695>.

<sup>75</sup> NPRM ¶ 47 and n.135.

statutory requirement that they support “competitive” devices.<sup>76</sup> However, technologies on which some proprietary solutions are based could constructively be included or referenced in standards-based solutions that fulfill the NPRM’s requirements, including that of MVPD portability and competitive user experiences.

#### **H. Referenced Technologies Should Ensure Security.**

Given its importance to the viability of any competitive navigation solution, “compliance” should require support for portability among MVPDs on a basis not unduly burdensome for the development and offering of competitive navigation devices. Compliance ultimately should be linked to identification and reference of a default framework.

- i.* Interoperability across MVPD systems is just as achievable and essential for security as it is for programming and data flows.

“Undue burden” as referred to in STELAR should be understood as a choice favoring a proprietary option that impedes competitive device development and fails to strike an appropriate balance between MVPD business preferences and interoperability. To be “uniform,” as required by STELAR, the entitlement technology and content and data flows of a compliant solution must demonstrate commercially reasonable interoperability across MVPD systems over the same range of program availability supported for MVPDs’ proprietary navigation devices. The present definition of “conditional access” need not be modified if this is understood. To achieve flexibility and interoperability, however, the FCC should offer clear guidance in a “default” implementation about permissive methods to meet these requirements.

---

<sup>76</sup> *Id.* ¶¶ 14-16.

- ii. Trust authority is necessary and should not be MVPD-controlled. HTML5 comprises a non-essential constraining layer rather than benefit.

A Trust Authority not controlled by MVPDs is essential. Use of HTML-5 as proposed by MVPDs would serve as a constraining (rather than an enabling) layer. HTML5 allows an MVPD to port an app to devices via a common HTML5 platform, but it does nothing to provide the three flows, enable a uniform security solution, or promote interoperability. HTML5 EME separates the HTML5 app from the device DRM, which aids in portability of an operator's app, but it provides no portability for a competitive app.

The DRM element and implementation is completely separable from HTML5 technologies and does not rely on them. HTML5 is only one of a number of APIs that can be used to access the DRM implementation and is not necessary to its utilization.<sup>77</sup> Underneath the HTML5 technologies, an actual DRM implementation can be accessed and fully utilized without the need for HTML5. Thus, HTML5 is not required for utilization of DRM technologies.

- iii. Use of a link technology from the headend is no less secure than other approaches; the key is the provisions for remediation.

In determining whether a link protection technology is sufficiently robust, consideration should be given to present uses and to technical and license provisions and requirements for remediation. For example, a technology as widely used in home networks as DTCP already can be considered to pose a “single point of failure” to those who would seek to “hack” and exploit the technology.<sup>78</sup> Rather than moving to a competing technology, it would be more secure and

---

<sup>77</sup> Others available include the Android MediaDRM API, which is similar to the WebCrypto/EME APIs.

WebCrypto/EME for Chrome running on Android is implemented on top of the Android MediaDRM APIs.

<sup>78</sup> Apart from the consideration of such incentives, reliance on a single protection technology is *more secure* than reliance on a series of technologies that are potential targets, each of which presents a point of vulnerability.

efficient to remediate any breach through certificate revocation or other available measures, as well as ultimately movement to an evolved successor. Requiring that some alternative must exist may provide flexibility if it does not impair portability, but this will not necessarily make an implementation more secure.

No system can avoid offering a “single point of attack” once its first attack point has been identified. The concern is actually the size of the “target.” For major systems, all such targets are large. The question is how well they are backed up and defended. DTLA has provided information of record about the levels and types of defenses and recovery resources available. The FCC should focus on these measures in balancing flexibility, interoperability, and security.

DTLA was formed in response to a multi-industry consensus in the Copy Protection Technical Working Group about the need for a widely interoperable link protection system. So, it should not be a surprise that, despite purported concerns about a “single point of attack,” DTLA is the only widely available and RAND system meeting this need.<sup>79</sup> DTLA’s licensing provides that content-owner licensees of DTCP are third-party beneficiaries who may initiate renewal and enforcement.

DRM should not be based on technology not widely available or that is difficult to deploy.<sup>80</sup> Furthermore, if viable commercial portability is to be maintained it may be appropriate for multiple types of content protection systems to be in use. Because there are very few options for link protection (especially ones already approved by CableLabs/MovieLabs), DTCP-IP

---

<sup>79</sup> See MB Docket No. 15-64, Comments of Digital Transmission Licensing Administrator LLC (Oct. 8, 2015).

<sup>80</sup> Parity may be enabled by use in competitive apps of DRMs widely used by MVPD applications already deployed on at least one million retail devices currently in use. This would effectively limit the scope of DRM to the three most widely deployed versions: Microsoft PlayReady, Widevine, and Apple FairPlay.

seems ideal as a link protection mechanism and DTCP-HE (in development) would support cloud delivery.

**I. Proposals Regarding App Parity Create a Level Playing Field for Competitors While Ensuring That Consumers' Expectations Are Met.**

While previous approaches have focused on “common reliance,” IP technology invites development of standards-based interfaces on a parity basis. In the absence of common reliance, however, there is significant potential for abuse in failing to offer competitive applications that are equal in flexible implementation, sophistication, and avoidance of burden. Identification of and reference to a default solution that is technologically neutral and not unduly burdensome would help avoid such abuse.

*i.* The same program rights should apply to “open” apps.

The “apps parity proposal” affords consumers the opportunity to acquire competitive apps with the same program rights made available through proprietary apps running on MVPD-leased devices or on MVPD-licensed third party devices. While this proposal entails some additional standards work with respect to out-of-home use – where it will require a registry to select the appropriate MVPD and self-authenticate to that service – it is laudable and feasible, preferably through the same set of default standards that pertain to in-home navigation devices.

(a) The same formats and resolutions should be supported.

Competitive products should have access to all formats and resolutions for each type of device or presentation supported. An MVPD should be able to choose not to offer a format or resolution for a type of device or presentation if there is equal support for competitive devices



with respect to the formats and resolutions otherwise supported. Lack of two-way communication over DBS does not present any inherently different content protection issues, other than inability to engage in “cloud” security without any DBS-specific device/receiver in the home.

*ii.*     Building a competitive implementation must be possible.

MVPDs need not support app functions or features on competitive devices if the function or feature is not supported on the MVPD’s proprietary apps or is not a video programming service related to the three information flows. Functions related to programming that are provided on proprietary devices, however, must be available on competitive devices. If an app’s Content Security System relies on the device’s operating system (*e.g.*, PlayReady or Widevine on Android or FairPlay on iOS) the competitive app must be able to utilize that same Content Security System, with access to the same license key servers (albeit through a proxy when required for authentication).

**J. Licensing and Certification Processes Should Accommodate Consumer Protections And An Environment For Innovation.**

The DFAST License’s Compliance and Robustness Rules have been an effective regime that serves as a non-controversial model and affords third-party beneficiary rights to content providers who are licensees. As in DFAST, Compliance Rules should address only the storage and transmission of Controlled Content, as defined in the DFAST License. And, as in DFAST, Robustness Rules should address only the network’s technical security in maintaining electronic security and in avoiding electronic harm to the network.

For content protection, the Compliance Rules list the technologies that conform to security requirements and may receive handoffs of content for internal or external storage or for display or streaming. The listed technologies implement rules for “Copying, Recording, and Storage of Controlled Content.” The Robustness Rules have served without incident to protect cable networks from electronic harm as a consequence of competitive device operation. The Commission also should require that cures for material breach of Compliance and Robustness Rules be modeled on Paragraph 8.2 of the DFAST License Agreement, which provides for consultation and cure over 30- or 60-day periods, for a general right to sell existing inventory, and for any sanction to the devices (at most, models) in question.

Because the Compliance Rules give content owners and distributors effective absolute control over what can be stored or sent to a display, the FCC should reinstate the Encoding Rules as a specific counterweight to the unbridled power over use granted in the DFAST License.

**K. Competitive Device Providers and Network Operators Can Take Reasonable Steps To Prevent Electronic Harm To MVPD Systems and Theft of Service.**

The technologies for secure provision of the “three flows” are IP-based<sup>81</sup> and do not require “direct connection” to the MVPD’s access network. Conformance certification of devices should not be necessary to protect MVPD networks, but a test suite verifying proper support of the three information flows from MVPD implementations is necessary to assure that competitive devices will be supported.

---

<sup>81</sup> Compliant standards should specify that the three information flows be provided over an IP interface through standard or wireless Ethernet connections. Thus, the competitive devices would not attach directly to an MVPD’s network and should not cause harm to it. Consumers already attach a wide array of devices to IP networks without harm.

i. Network certification

In the absence of common reliance, conformance testing and certification of the MVPD's implementation of the information flows should be required. Because a navigation device must conform to receive content, certification need not be required, although compliance with incorporated specifications and necessary implementation of compliance and robustness rules as required by license or covenant may imply self-certifications specific to those technologies.

ii. Cure for breach of certificate representation

Paragraph 8.3 of the DFAST License, addressing the cure process for any breach of representations, warranties, or covenants, serves as a model for the cure of any representation made by a device provider in a "certificate" as defined in proposed Section 76.1200(l) in App. A. Paragraph 8.3 requires notice of breach. Before termination can ensue, the breach must remain uncured for 60 days following the date of notice. During this period, if a competitive device provider is alleged not to be in compliance with its certificate's commitment to consumer rights protection, the service provider and the device provider can resolve any issue to avoid interruption of service to consumers. The FCC can adjudicate disputes in the event of an impasse, as it has been prepared to do regarding CableCARD license terms potentially exceeding the FCC's existing rules.<sup>82</sup>

iii. Mechanism for communicating certificate to MVPDs

The FCC need not become involved in the mechanics of how MVPDs become aware of device provider certificates of compliance with consumer protection requirements. In the

---

<sup>82</sup> Declaratory Ruling, *supra* note 58.

process of a device authenticating itself to a network, it can provide a URL that can be verified through an SSL certificate as part of a standard HTTPS connection. Authentication can be denied, after failure of the remediation process described above

## **V. PROTECTION OF CONSUMERS' PRIVACY REMAINS STRONG UNDER THE FCC'S PROPOSALS.**

There is no reason to expect privacy protections to be weaker under the NPRM's proposed rules, and some reason to expect that they may be stronger. A competitive market will allow consumers to choose between different providers, in part based on their different privacy policies. Currently, cable companies, other MVPDs, some competitive device providers, and Internet programming and service providers all collect and monetize viewer data.<sup>83</sup> To the extent that this is facilitated through MVPD control of the set-top box, viewers have no real alternative to receive multichannel programming. A competitive market will present consumers with a variety of different choices, some of which may have stricter controls on the collection and use of viewing data, than MVPD customers have access to now.

For example, the California Online Privacy Protection Act ("CalOPPA")<sup>84</sup> applies to all commercial online services or sites that reach consumers in California (which is to say, all online services) and requires consumer protections comparable to those of Sections 631 and 338(i) of the Communications Act. CalOPPA requires that the provider must, on a home page or a first significant page on a maintained site, post a privacy policy that identifies the information

---

<sup>83</sup> See, e.g., Shalini Ramachandran & Suzanne Vranica, *Comcast Seeks to Harness Trove of TV Data*, WALL STREET JOURNAL (Oct. 20, 2015), <http://www.wsj.com/articles/comcast-seeks-to-harness-trove-of-tv-data-1445333401>; *From DAI to Programmatic: Why Advanced Advertising is Giving Pay-TV Operators a Reason to Stay in the Video Biz*, FierceCable, (Dec. 1, 2015) <http://www.fiercecable.com/special-reports/dai-programmatic-why-advanced-advertising-giving-pay-tv-operators-reason-st>.

<sup>84</sup> BUSINESS AND PROFESSIONS CODE – BPC DIVISION 8. SPECIAL BUSINESS REGULATIONS, CHAPTER 22. Internet Privacy Requirements.

collected and provides a means for consumer input to review or request changes. It was amended in 2013 to require operators to disclose how the service responds to “do not track” signals and other browser-based protections.<sup>85</sup> The California Attorney General’s Office has established a Privacy Enforcement and Protection Unit and has issued explicit guidance and recommendations for maintaining compliance with the law.<sup>86</sup>

Moreover, because such state laws require that a Privacy Policy be posted, any noncompliance may be addressed not only under state law (e.g., California’s Unfair Competition Law or False Advertising Law), but also under Section 5 of the Federal Trade Commission Act. The FTC regularly holds companies to account if they fail to live up to the promises contained in their privacy policies.<sup>87</sup> Products that are also sold abroad are subject to the European Data Privacy Directive, which informs how many companies design and run their products.

The NPRM’s proposed Section 76.1211(a) will require that in order to receive the necessary data comprising program receipt, a provider of a competitive device must maintain a “certificate” that, as defined in proposed Section 76.1200(l), certifies that the Navigation Device will honor privacy and other consumer protection expectations as listed. In Part III.K(c) above, the Coalition outlines how a competitive navigation device can provide a URL, subject to verification, to an MVPD headend, to assert that a compliant certificate exists.<sup>88</sup> In the event this

---

<sup>85</sup> Lee J. Eulgen, Andrea Steing Fuelleman, Michael B. Gray, Sarah E. Smit, *Amendments in California’s Online Privacy Law Addressing “Do Not Track” Disclosures May Put Website Operators at Risk*, Dec. 5, 2013, <http://www.ngelaw.com/alert-california-online-privacy-protection-act/>.

<sup>86</sup> Kamala D. Harris, Attorney General, *Making Your Privacy Practices Public*, California Dept. of Justice, May 2014, [https://oag.ca.gov/sites/all/files/agweb/pdfs/cybersecurity/making\\_your\\_privacy\\_practices\\_public.pdf](https://oag.ca.gov/sites/all/files/agweb/pdfs/cybersecurity/making_your_privacy_practices_public.pdf).

<sup>87</sup> FTC, *Enforcing Privacy Promises*, <https://www.ftc.gov/news-events/media-resources/protecting-consumer-privacy/enforcing-privacy-promises>. (“When companies tell consumers they will safeguard their personal information, the FTC can and does take law enforcement action to make sure that companies live up these promises.”).

<sup>88</sup> With respect to receipt of EAS information, as well as privacy, *see also* Ex Parte Filing by the Consumer Video Choice Coalition, MB Docket No. 15-64 (Jan. 26, 2016).

representation is breached, a competitive app or device, after the cure process based on DFAST outlined above in subpart (b), may be denied device authentication through this same process.

## **VI. PRICING AND BILLING PRACTICES SHOULD NOT BE MISUSED TO DISCOURAGE COMPETITION.**

The Commission should modify its billing and anti-subsidy requirements,<sup>89</sup> and reverse the *First Report and Order*.<sup>90</sup> The Commission should no longer allow for cross-subsidization where MVPDs are not price-regulated.<sup>91</sup> The Commission, in the *First Report and Order*, rejected the argument that Section 629 “expressly prevents all MVPDs from subsidizing equipment cost with service charges.”<sup>92</sup> Section 629 states that the Commission’s regulations “shall not prohibit *any* multichannel video programming distributor from also offering converter boxes . . . to consumers, *if* the system operator’s charges to consumers for such devices and equipment *are separately stated and not subsidized by charges for any such service.*”<sup>93</sup> This means that the Commission should not prohibit “any” MVPD from offering, for example set-top boxes to consumers, as long as that MVPD separately states the charge for such a device and it is not subsidized by charges for any other service. The Commission should reverse its earlier reading of Section 629 and no longer allow for cross-subsidization.

Pricing of set-top boxes should accurately reflect device acquisition. These prices should not be subject to artificial manipulation. For example, set-top box pricing can be used by MVPDs as a tool to drive out competition from new entrants to the set-top box marketplace. If

---

<sup>89</sup> NPRM at ¶ 83; *see* 47 C.F.R. § 76.1206.

<sup>90</sup> *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, 13 FCC Rcd 14775 (1998) (hereinafter “*First Report and Order*”).

<sup>91</sup> *See id.* ¶ 92 (rejecting arguments that “the Commission should apply anti-subsidy rules to all MVPDs . . . even for non-cable MVPDs and cable companies that face effective competition”).

<sup>92</sup> *Id.*

<sup>93</sup> 47 U.S.C. § 549(a) (2012) (emphasis added).

consumers are to be encouraged to have a real choice, they must be provided with adequate information from their MVPD. We agree with the Commission “that customers may likely consider the costs of lease against purchase when considering whether to purchase a competitively provided device, and must know what it costs to lease a device in order to make an informed decision.”<sup>94</sup>

Moreover, a ban on cross-subsidization should apply not only to all navigation devices, but also to modems and routers. For example, the Consumer Federation of America and Public Knowledge found that the average charge for an MVPD-leased set-top box has increased 185% since 1994, but the costs of other consumer electronics have decreased 90% over the same time period.<sup>95</sup> As the Consumer Federation of America and Public Knowledge explained, “the reforms of the 1996 Act were insufficient to prevent pricing abuse by cable companies.”<sup>96</sup> If the proposed rules go into effect, MVPDs could eliminate the need for a set-top box, and programming could be delivered over IP with a retail box connecting to the service through a router. Many MVPDs also lease modems and routers to consumers. If MVPDs can no longer cross-subsidize their services via set-top box leasing fees, which have increased 185% over two decades, they may try to increase their revenue through the lease fees they charge to subscribers for renting modems or routers.<sup>97</sup> Therefore, in order to fully protect consumers from rising fees

---

<sup>94</sup> NPRM ¶83.

<sup>95</sup> Letter from Consumer Federation of America and Public Knowledge, to Marlene H. Dortch, Fed. Comm’n Sec’y, MB Docket No. 15-64, at 1-2 (Jan. 20, 2016), *available at* <http://apps.fcc.gov/ecfs/document/view?id=60001409005>.

<sup>96</sup> *Id.* at 1.

<sup>97</sup> See Jose Pagliery, *Comcast and Time Warner Cable hike modem fees as much as 33%. Time to buy your own*, CNN (Jan. 5, 2015, 2:59 PM), <http://money.cnn.com/2015/01/02/technology/comcast-time-warner-cable-modem/> (detailing how Time Warner Cable increased its leasing fee from \$5.99 to \$8, and Comcast increased its fee from \$8 to \$10).

for other leased equipment, the Commission should prevent the cross-subsidization of modems and routers leased to subscribers by MVPDs.

## **VII. CABLECARD SUPPORT SHOULD REMAIN INTACT.**

The Commission should retain its CableCARD support and reporting rules, and should clarify that cable operators must continue to supply CableCARDS to retail devices until the new rules go into effect and for a reasonable transition period thereafter. If necessary, the Commission should act on the outstanding Petition to reinstate the CableCARD rules with respect to retail devices.<sup>98</sup>

While the Coalition looks forward to new rules that enable competition from next-generation navigation devices, it is important that consumers continue to have retail alternatives in the interim. Without assurances that cable operators will supply CableCARDS and continue to support retail CableCARD devices, consumers will be unlikely to have such choices until the successor standard(s) in accordance with the rules adopted in this proceeding are in place and retail devices using such standards are actually available, established, and functioning in the marketplace.

When the Commission adopted the CableCARD support rules in 2010, it explained its decision to strengthen the CableCARD support requirements:

[W]e must keep in mind that CableCARD is a realized technology – consumer electronics manufacturers can build to and are building to the standard today. Until a successor technology is actually available, the Commission must strive to make the existing CableCARD standard work by adopting inexpensive, easily

---

<sup>98</sup> TiVo Inc. Petition for Rulemaking, *supra* note 70.



implemented changes that will significantly improve the user experience for retail CableCARD devices.<sup>99</sup>

The same logic applies today and explains why the Commission should maintain the CableCARD supply and support rules until after successor solution(s) are in place.

Furthermore, maintaining the existing CableCARD rules will ensure that both cable operators and retail device manufacturers are focused on working via open standards bodies to develop successor solutions. Having individual operators develop proprietary separable security solutions will lead to a fragmented market and needlessly wasted resources. Instead, all cable operators should continue to supply and support CableCARDS for retail devices notwithstanding any now moot waivers of the integration ban.

#### **VIII. DIVERSE AND INDEPENDENT PROGRAMMING PROVIDERS WILL BENEFIT FROM ADOPTION OF THE FCC'S PROPOSALS.**

The pay TV marketplace, and the cable TV industry in particular, have a poor track record when it comes to diversity. The Ralph J. Bunche Center for African American Studies at UCLA recently found that minorities are underrepresented by a factor of more than two to one among lead roles in cable, by a factor of nearly five to one among creators of cable shows,<sup>100</sup> and by a factor of greater than four to one among writers credited for cable scripted shows.<sup>101</sup> There is a lack of 100% African American-owned media represented on cable, and minority

---

<sup>99</sup> *Third R&O*, *supra* note 72, ¶ 8.

<sup>100</sup> Bunche Center, *Hollywood Diversity Brief: Spotlight on Cable Television* (2013), <http://www.bunchecenter.ucla.edu/wp-content/uploads/2013/10/Hollywood-Diversity-Brief-Spotlight-10-2013.pdf>.

<sup>101</sup> Bunche Center, *2016 Hollywood Diversity Report: Business as Usual?*, <http://www.bunchecenter.ucla.edu/wp-content/uploads/2016/02/2016-Hollywood-Diversity-Report-2-25-16.pdf>.

programming providers have had to sacrifice equity in exchange for carriage on the cable tier, including TV One who had to give away a reported 47.9 percent equity stake to Comcast.<sup>102</sup>

In the meantime, online distribution provides a way for creators to reach viewers that has fewer obstacles. As Internet-based companies endeavor to diversify their own workforce, they continue to develop products and solutions that eliminate access barriers that have marginalized certain communities. For example, the online video marketplace allows minority-owned businesses and creators to bypass traditional gatekeepers and reach viewers directly. This ensures that independent, diverse, and minority content--created by, owned by, and targeted to underserved audiences--can find online distribution a more friendly habitat than the traditional media ecosystem.

While the online video ecosystem is *already* a more open environment for diverse content creators, the FCC's proposal is likely to give it a boost by making online video more easily accessible to viewers, right on their TVs, without the need for extra boxes, switching inputs, or the need to output video from a laptop or mobile phone onto a TV. There are two simple propositions at the heart of this. First, device and app makers that are not MVPDs themselves, or closely affiliated with them, are more likely to provide consumers with devices that can access and display online video alongside, and integrated with, video from MVPDs. While the FCC's proposal as a technical matter is about third-party devices and apps being able access to a subscriber's MVPD video subscription, one of the major advantages that competitive devices likely would have is giving viewers access to lawful content outside of the MVPD ecosystem. The second proposition is that devices that can access and display a consumer's

---

<sup>102</sup> See Radio One Gears Up for TV One Deal, Inside Radio (Mar. 20, 2015), at [http://www.insideradio.com/free/radio-one-gears-up-for-tv-one-deal/article\\_4de2e636-cecb-11e4-9469-0701768ec384.html](http://www.insideradio.com/free/radio-one-gears-up-for-tv-one-deal/article_4de2e636-cecb-11e4-9469-0701768ec384.html).

MVPD subscription as well as online video will be popular with consumers. “Connected TV devices”--a broad category that includes streaming devices like the Apple TV, as well as connected Blu-Ray players, game consoles, and smart TVs--are already somewhat popular with consumers, with a U.S. install base of around 46 million.<sup>103</sup> Around half of these devices are smart TVs<sup>104</sup>--and the FCC’s proposal could allow consumers to access their MVPD subscriptions directly on such devices, instead of needing a separate TV-connected device. But there are nearly 100 million MVPD subscribers in the United States,<sup>105</sup> and nearly 100% of them use a device leased from their MVPD to access their subscriptions.<sup>106</sup> Allowing people to replace their MVPD-leased devices with these “Connected TV devices” increases the addressable market for such devices, which would be more appealing to those viewers who would rather not manage multiple devices just to watch video from different sources on one TV. Increasing the size of this market in turn creates more opportunities for online video creators to reach viewers.

Recognizing this, several content creators have spoken out about the opportunity the FCC’s proposal provides. Robert L. Johnson, Founder of Black Entertainment Television and RLJ Entertainment, noted that “The universal set-top box, unlike the leased cable box, opens up the unfettered opportunity for hundreds of minority programming aspirants who would like to

---

<sup>103</sup> NDP Group, *Half of U.S. Internet Homes Now Own A Connected TV Device*, According to the NPD Group (Aug. 26, 2015), available at <https://www.npd.com/wps/portal/npd/us/news/press-releases/2015/half-of-us-internet-homes-now-own-a-connected-tv-device-according-to-the-npd-group/>.

<sup>104</sup> Strategy Analytics, *Global Connected TV Device Vendor Share Q4 2015*, Mar. 1, 2016, available at <https://www.strategyanalytics.com/access-services/devices/connected-home/consumer-electronics/market-data/report-detail/global-connected-tv-device-vendor-share-q4-2015>. Additionally, many people purchase “Connected TV devices” without necessarily using them for online video. Many smart TVs are merely used as displays, many game consoles are used only for games, and so on.

<sup>105</sup> Leichtman Research, *Major Pay-TV Providers Lost About 385,000 Subscribers in 2015* (Mar. 10, 2016), <http://www.leichtmanresearch.com/press/031016release.html>.

<sup>106</sup> Markey, *Blumenthal Decry Lack of Choice, Competition in Pay-TV Video Box Marketplace*, (July 20, 2015), <http://www.markey.senate.gov/news/press-releases/markey-blumenthal-decry-lack-of-choice-competition-in-pay-tv-video-box-marketplace> (99% of subscribers rent set-top boxes from their providers).

create content success of their own, similar to what I enjoyed with BET.”<sup>107</sup> Eric Easter, chairman of the National Black Programming Consortium and CEO of BLQBOX, a streaming video service, wrote that “as long as the streaming world is locked out from the mainstream, many audiences will never find them and they will not succeed. Set-top box innovation would open that system,” and that “an open system could mean that two guys in their basement could create a new set-top software model that makes it easier for anyone to launch a new channel, and out of those new channels, a few smart people are going to get it right —without a cable system deciding whether one is worthy to reach an audience.”<sup>108</sup> Stephen Davis, founder of the Black Education Network, stated that, “On behalf of the dream that was the Black Education Network and on behalf of all of the other generations of quality programming strangled to demise by a merciless cable system, I enthusiastically applaud the FCC’s efforts to unlock the box!”<sup>109</sup> And the Writers Guild of America, West, representing writers of motion pictures, television, radio, and Internet programming, supported the FCC’s proposal by noting that “set-top box rules that increase competition and enable the integration of television programming and online video on one device will greatly expand consumer access to a wider range of diverse and independent programming and help level the playing field that has been dominated by too few companies for too long.”<sup>110</sup>

---

<sup>107</sup> Statement By Robert L. Johnson In Response To Comments Made By Alfred Liggins and Michael Powell On The Universal Set-Top Box (Feb. 16, 2016) <http://www.prnewswire.com/news-releases/statement-by-robert-l-johnson-in-response-to-comments-made-by-alfred-liggins-and-michael-powell-on-the-universal-set-top-box-300221113.html>.

<sup>108</sup> Eric Easter, *FCC’s Set-Top Box Proposal is Really About a Level Playing Field*, The Hill (Feb. 17, 2016), <http://thehill.com/blogs/congress-blog/technology/269588-fccs-set-top-box-proposal-is-really-about-a-level-playing>.

<sup>109</sup> 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>.

<sup>110</sup> WGA, *WGAW Supports FCC Action on TV Set-Top Box Competition* (Jan. 27, 2016), <http://www.wga.org/content/default.aspx?id=6141>.

There's no hiding from the fact that a more competitive, open market for video devices and apps and programming will shake things up. Some creators will find new audiences to which they never could have had access. Some incumbents or programmers that have made their peace with the status quo may lose viewers and market share to energetic new entrants. But the FCC's proposal to foster an open and competitive market for video devices and apps that breaks down many of the barriers and middlemen that stand in the way of creators and viewers will benefit creators, especially diverse and independent creators, by providing viewers with access to a whole new way to connect with programming.

## **IX. CONCLUSION.**

For two decades, consumers have paid billions of dollars in fees to their pay-TV providers to lease set-top boxes with antiquated technologies. The Commission's proposals in the NPRM contain many of the components necessary for creation of a vibrant, competitive video navigation device market. By facilitating open standards, the FCC will immediately help consumers and let imagination and competition bring about the future of innovation.

Respectfully submitted,

\_\_\_\_\_/s/\_\_\_\_\_  
\_\_\_\_\_

CONSUMER VIDEO CHOICE COALITION