

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

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

COMMENTS OF TIVO INC.

TIVO INC.

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SUMMARY

TiVo Inc. (“TiVo”) strongly supports the Commission’s proposed rules, which will help establish a long-awaited successor to CableCARD to assure the competitive availability of retail navigation devices for the benefit of consumers in accordance with Section 629 of the Communications Act.

The Commission’s goal in this proceeding of requiring MVPDs to use open standards to enable competition in the market for communications equipment reflects the success of the *Carterfone* principle in creating consumer benefits in the form of greater innovation, lower prices, and higher quality. The public interest is best served when consumers have a realistic option to use a retail device or competitive application that provides functionality, features, and MVPD programming equivalent to that of an operator-supplied set-top box or proprietary app. The proposed rules, moreover, will benefit minority, independent, and other non-mainstream programmers because consumers will be able to find such program content more easily.

In order to achieve the Commission’s pro-consumer objectives, rules adopted in this proceeding must contain the following necessary elements: (1) allowing consumers to access the full range of programming to which they subscribe on devices of their choice, (2) enabling a competitive user interface, (3) enabling “innovation without permission” by competitive navigation device vendors within the bounds of copyright and other law, and (4) enabling device portability, so that consumers can use their retail navigation device even if they switch MVPD providers.

In addition, the Commission should clarify the scope of entitlement data and restrictions on lawful use of content. Manufacturers of competitive devices cannot be bound to confidential programming agreements, entered into by MVPDs, to which they are not parties. TiVo supports a license or certification structure with restrictions similar to those contained in the DFAST license, along with encoding rules. TiVo urges the Commission to reinstate its encoding rules, which set a ceiling on the constraints that MVPDs can impose on content.

TiVo has long supported industry standard-setting processes to develop a successor solution to CableCARD, and looks forward to helping develop open standards that fulfill the goals of Section 629, as discussed in the NPRM. The Commission should maintain sufficient oversight over the standard-setting process to assure that its pro-consumer goals are met.

TiVo supports the proposed rule requirements designed to ensure that retail navigation devices and applications do not require unnecessary MVPD-specific equipment, that content available via leased devices and proprietary apps is also available to competitive navigation devices and applications, and that devices that are able to access content using proprietary apps can also receive content using competitive apps. Finally, if certain content is available to MVPD subscribers using leased navigation devices, it should be available to subscribers using competitive navigation devices irrespective of how it is searched for, requested, or delivered.

With respect to customer privacy, while TiVo's retail devices are not subject to Section 631, TiVo's devices are nonetheless subject to similar privacy requirements.

TiVo is ultimately responsible to the Federal Trade Commission and state attorneys' general by virtue of the company's public privacy commitments and the enforcement powers granted by Section 5 of the FTC Act and state Unfair and Deceptive Acts and Practices ("UDAAP") statutes. A similar solution could be proposed for competitive navigation device companies through the FCC's rule making. Nevertheless, if the Commission believes that compliance with the provisions of Section 631 and 338 is required, TiVo fully intends to comply with such provisions as it has for the last decade-plus in which it has sold retail navigation devices.

It is also important to note that Commission's proposed rules do not introduce new concerns regarding targeted advertising. MVPDs and those who provide competitive devices already are free to use set-top box data to target advertising, perform analytics, or combine it with other sources of data which they are doing more and more extensively. Allegations that the proposed rules will permit "tech companies" to make more intrusive use of set-top box data than MVPDs are doing today are inaccurate.

The Commission should maintain regulatory oversight of MVPD device charges and billing transparency and require MVPDs to state separately a charge for leased navigation devices and to reduce their charges by that amount to customers who use retail navigation devices. The FCC should also prevent cross-subsidization of device charges with service fees.

As to smaller MVPDs, given the economic challenges they face, TiVo supports an exemption for MVPDs serving one million or fewer subscribers from the standards-

focused rules adopted in this proceeding. Alternatively, the Commission could simply limit application of its proposed rules to MVPDs serving one million or fewer subscribers on the basis that such smaller MVPDs will have little ability to advance the statutory goal of assuring the availability of third-party navigation devices.

More generally, as to all MVPDs, the Commission's CableCARD supply and support rules are critical to support a competitive market for retail navigation devices while the Commission's new rules are implemented. The Commission should take the opportunity presented by this proceeding to state clearly and definitively that, while cable operators are free to use their own proprietary security solutions for their own leased devices, cable operators must supply CableCARDS and only CableCARDS to satisfy the separable security requirement. Making clear that the supply of CableCARDS is required until successor solutions are in place will help ensure that operators do not develop divergent separable security technologies in the interim.

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COMMENTS OF TIVO INC.

TiVo Inc. ("TiVo") hereby files these comments in response to the Notice of Proposed Rulemaking in the above-captioned proceeding in support of the Commission's efforts to help establish a long-awaited successor to CableCARD to assure the competitive availability of retail navigation devices in accordance with Section 629.

I. THE PROPOSED RULES WILL PROVIDE A MUCH-NEEDED SUCCESSOR TO CABLECARD AND WILL SPUR CONSUMER CHOICE AND INNOVATION IN THE SET-TOP BOX MARKET.

A. A Successor To CableCARD That Provides Consumer Choices And Spurs Set-Top Box Innovation Is More Needed Today Than Ever.

The central purpose of Section 629 – to ensure that consumers have retail choices from unaffiliated set-top box manufacturers – remains an essential, pro-consumer policy. History has shown time and again that when consumers and operators have greater choice, innovation is unleashed. Indeed, examples of such

innovation can be found in almost every other segment of the communications device market – smartphones, laptops, smart televisions, and others. In enacting Section 629, Congress was clear that it wanted similar benefits for the set-top box market, and stressed the importance of competition in the set-top box market by saying that “[c]ompetition in the manufacturing and distribution of consumer devices has always led to innovation, lower prices and higher quality.”¹

The Commission’s goal in this proceeding of requiring MVPDs to use open standards to enable competition in the market for communications equipment – leading in turn to consumer benefits in the form of greater innovation, lower prices, and higher quality – is one of the most settled and successful principles in telecommunications policy. The principle dates back to the seminal *Carterfone* decision, which successfully opened up the telephone network to device competition.² The success of *Carterfone* demonstrates 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. Outside of the cable arena, this principle was followed in the wireline telephone market, the enhanced services market in the Commission’s *Second Computer Inquiry* proceeding,³ and in the Commission’s 2007 700

¹ H.R. Rep. No. 104-204, at 112 (1995).

² *Use of the Carterfone Device in Message Toll Telephone Service*, 13 FCC 2d 420, 424-25 (1968).

³ *Amendment of Section 64.702 of the Commission’s Rules and Regulations (Second Computer Inquiry)*, Final Decision, 77 FCC 2d 384; *modified on recon.*, 84 FCC 2d 50 (1980); *further modified* 88 FCC 2d 512 (1981), *aff’d sub nom.*, *Computer and Communications Industry Ass’n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), cert. denied, 461 U.S. 938 (1983), *aff’d on second further recon.*, FCC 84-190 (rel. May 4, 1984).

MHz Auction Order.⁴ Policymakers across the aisle both at the Commission and on Capitol Hill also have supported this same basic principle for wireless networks – that consumers should be able to use the device of their choice on any wireless network.⁵ The same logic applies in the market for retail navigation devices in pay TV networks.

A study released by Senators Markey and Blumenthal found that consumers have very little set-top box choice.⁶ At a time when small MVPDs are faced with rising programming costs and over-the-top (OTT) competition, having more options in terms of consumer equipment and innovative user experiences could help both consumers and operators. Consumer electronics prices almost always drop over time, but monthly cable set-top rental prices have risen over time.⁷ In consumer electronics generally, competition at retail leads to lower prices and innovation, but this has not happened in

⁴ *Service Rules for the 698-746, 747-762, and 777-792 MHz Bands*, WT Docket No. 06-150, at ¶¶ 189-230 (rel. Aug. 10, 2007) (“700 MHz Auction Order”).

⁵ See, e.g., Letter from Tom Wheeler, Chairman, FCC, to Steve Largent, President and CEO, CTIA – The Wireless Association, Nov. 14, 2013; Ajit V. Pai, *Don’t Treat Consumers Like Criminals*, NY Times, June 6, 2013, at A23, available at <http://www.nytimes.com/2013/06/06/opinion/switching-wireless-carriers-shouldnt-be-a-crime.html>; T.C. Sottek, *Senator Announces Bill to Legalize Cell Phone Unlocking Following Support from White House*, Mar. 5, 2013, at <http://www.theverge.com/2013/3/5/4068602/senator-klobuchar-cell-phone-unlocking-bill> (discussing proposals from Democratic and Republican members of Congress in support of phone unlocking by consumers).

⁶ 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>.

⁷ *Ex Parte* Letter from Consumer Federation of America and Public Knowledge, MB Docket No. 15-64, at 1-2 (Jan. 20, 2016) (finding that the average charge for a set-top box leased from an MVPD has increased 185% since 1994, while the costs of other consumer electronics have decreased 90% over the same time period).

the set-top box market because consumers and operators have limited choices. The fact that cable set-top box fees do not follow consumer electronic pricing trends and innovation in user experience is limited to all but the largest operators demonstrates that the Commission's proposed rules are needed to provide consumers and operators with competition and choice accordance with Section 629.

The MVPD-supported DSTAC proposal based on proprietary apps offers no path forward for competition from "manufacturers, retailers, and other vendors not affiliated" with MVPDs, as required by Section 629. TiVo has explained in the past that, while such apps will continue to be available to those consumers who wish to use them, they do not offer the type of retail competition mandated by Section 629.⁸ Using proprietary apps to watch content on tablets, smartphones, and other devices does not give consumers options for viewing video content using more innovative and user-friendly user interfaces, or for retail navigation device manufacturers to develop innovative search, storage, and viewing technologies that TiVo has pioneered. Retail competition involves more than simply viewing video programming on different screens; it involves innovative user interfaces, search functions, and so on that give consumers greater choice and an enhanced user experience — a true alternative to what is provided by the operator. Section 629 uses the term *navigation* device — and not

⁸ See, e.g., Reply Comments of TiVo Inc., MB Docket No. 15-158, at 2-3 (filed Sep. 21, 2015); Reply Comments of TiVo Inc., MB Docket No. 14-16, at 2-4 (filed Apr. 21, 2014); Comments of TiVo Inc., MB Docket No. 14-16, at 10-14 (filed Mar. 21, 2014); Reply Comments of TiVo Inc., CS Docket No. 97-80, PP Docket No. 00-67, at 7-10 (Oct. 25, 2013).

viewing device – for a reason.

The finding that approximately 99 percent of MVPD subscribers lease set-top boxes from their operator demonstrates that the millions of proprietary app downloads purportedly being used to view MVPD programming on tablets and other devices cited by NCTA are not examples of competition; instead, they merely extend the reach of the MVPD controlled user experience to other devices. A truly competitive market for navigation devices, as required by Section 629, is one in which consumers have a realistic option to use a retail device or competitive application instead of an operator-supplied set-top box or app. Moreover, that competitive option must provide equivalent functionality, features, and MVPD programming as an operator-supplied set-top box or proprietary app, along with a unique user experience.⁹ Consumers are simply using different screens to view programming while continuing to pay MVPDs to

⁹ The functionality of apps is typically limited and generally does not give consumers access to all of the channels they get from their set top box. Proprietary MVPD apps generally do not allow consumers to search across MVPD and OTT services. Nor do apps allow consumers to record programs for viewing later. Proprietary apps are also not portable; *i.e.*, they will not work with another provider's network. Finally, as consumers have seen, apps for consumer devices can also be withdrawn at any time. See, e.g., Laura Northrup, *Verizon Ends FiOS Streaming Apps for Xbox and Smart TVs March 31*, Consumerist, March 21, 2016, <https://consumerist.com/2016/03/21/verizon-ends-fios-streaming-apps-for-xbox-and-smart-tvs-march-31/>; Jeff Baumgartner, *Dish Stops Sales of 'Virtual Joey,'* Multichannel News, Oct. 2, 2015, <http://www.multichannel.com/news/content/dish-stops-sales-virtual-joey/394246>; John Callahan, *Comcast's Xfinity App for Xbox 360 to Shut Down on September 1* (Aug. 17, 2015), at <http://www.windowscentral.com/comcasts-xfinity-app-xbox-360-shut-down-september-1>; Jeff Baumgartner, *AT&T U-verse TV to Drop Support for Xbox 360 on December 31*, Multichannel News (Nov. 26, 2013), at <http://www.multichannel.com/news/content/att-u-verse-tv-drop-support-xbox-360-december-31/356856>.

lease set-top boxes – this is hardly the hallmark of a competitive market for navigation devices.¹⁰

The proposed rules do more than benefit consumers and competitive device manufacturers, they would also benefit others in the video programming and distribution ecosystem. For example, as universal search functions enable consumers to find content more easily from a variety of programming sources, minority, independent, and other non-mainstream programmers will be able to reach viewers without having to go through an MVPD bottleneck.¹¹ High quality content that may

¹⁰ Brian Barrett, *Cable Boxes Suck. One Day They'll Die. Until Then We Have To Fix Them*, April 22, 2016, at <http://www.wired.com/2016/04/cable-box-dying-still-needs-fixed/> (“More to the point, a cable company developing apps is in no way mutually exclusive with letting third-parties develop box hardware...” and “when we do fix the cable box, let’s not leave that reform up to the people who’ve profited from them for years.”).

¹¹ NPRM at 17 & n.52 (citing a letter from Brian Woolfolk of Swann Creek Strategies describing the difficulties of independent and minority programmers in obtaining carriage on large MVPDs, and noting the benefits to such programmers of a competitive market for navigation devices); Robert L. Johnson, *Consumers deserve choice and minority programmers deserve opportunity*, The Hill (Jan. 22, 2016), at <http://thehill.com/blogs/congress-blog/technology/266653-consumers-deserve-choice-and-minority-programmers-deserve> (explaining that independent and minority programmers would more easily be able to reach underserved populations if set-top boxes were to integrate streaming and OTT content and provide a competitive user interface with enhanced search and recommendation features that allow “consumers to navigate among a wide variety of choices, without a bias toward programming favored by the network operator”); Joe Torres & Michael Scurato, *Unlocking Opportunities for Video Programmers of Color*, Huffington Post (Feb. 18, 2016), at http://www.huffingtonpost.com/joe-torres/unlocking-opportunities-f_b_9266944.html (“Set-top boxes that integrate cable programming and streaming services would also make it easier for Black and Latino media makers to distribute their own work directly to households across the country. It would give communities of color – who stream video for a significant portion of their TV-viewing time – the ability to find culturally relevant programming without having to depend on gatekeepers to determine what they should watch. The status quo hasn't worked for diverse programmers.”).

not have a track record of success in gaining carriage on MVPD systems will nonetheless be able to find an audience without seeking the permission of the MVPD.

Others in the video programming and distribution ecosystem that would benefit include the many smaller MVPDs themselves. Smaller MVPDs that do not own their own content would be able to partner with new content sources using innovative user interfaces not available from the dominant suppliers to the larger operators. In one glaring example, some operators have already decided to “throw in the towel” on defining their own offering and are going to just re-deploy the Comcast experience with its walled-garden hold on content sources determined entirely by Comcast.¹²

The Commission’s proposed rules come at an opportune time, as consumers have a growing number of choices for video programming and growing confusion and difficulty in finding the programming they want to watch. Faced with this choice, some consumers are choosing to cut the cord and eliminate the MVPD’s program bundle entirely. However, TiVo’s business has always focused on giving consumers more innovative and user-friendly ways to search for, watch, and record pay TV content – a reason to keep the pay TV bundle. By enabling even greater consumer choice, the proposed rules will give consumers more reasons to continue subscribing to and watching MVPD content.¹³

¹² Jeff Baumgartner, *Cox Inks National X1 Deal with Comcast*, Multichannel News, Nov. 11, 2015, <http://www.multichannel.com/news/content/cox-inks-national-x1-deal-comcast/395239>.

¹³ Comments of the Consumer Video Choice Coalition, MB Docket No. 15-64, at 8 n.12 (filed Oct. 8, 2015).

B. There Is Widespread Consensus That Retail Choice In The Set-Top Box Market Will Lead To Benefits For Consumers.

The benefits of retail choice in the set-top box market are much more than theoretical. The Commission's proposal has been met with an outpouring of public support. Consumer groups, commentators ranging from major national editorial boards¹⁴ to more tech-focused publications,¹⁵ and even President Obama¹⁶ have praised

¹⁴ 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> ("N.Y. Times Op-ed"); 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> ("Boston Globe Op-ed"); 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>; 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> ("L.A. Times Op-ed"); 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"); The Editorial Board, Bloomberg View, *Cheaper Cable TV Starts With a Better Box*, April 20, 2016, at <http://www.bloombergvew.com/articles/2016-04-20/cheaper-cable-tv-starts-with-a-better-box>.

¹⁵ Jon Bodkin, *Ignoring Cable Industry Protest, FCC Says It Will "Unlock the Set-Top Box"*, Jan. 27, 2016, at <http://arstechnica.com/business/2016/01/in-blow-to-cable-lobby-fcc-wants-tv-to-be-available-on-any-device/>; Pete Pachal, *The FCC Wants to Open The Doors to a Smarter, Better Cable Box*, Jan. 27, 2016, at <http://mashable.com/2016/01/27/fcc-cable-box-proposal/#mrrzgywx7Pqq>.

¹⁶ Brian Fung, *Obama is Urging the FCC to Open Up the Cable Box So You Can Watch TV How You Really Want*, April 15, 2016, at <https://www.washingtonpost.com/news/the-switch/wp/2016/04/15/obama-is-urging-the-fcc-to-open-up-the-cable-box-so-you-can-watch-tv-how-you-really-want/>; 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>.

the Commission's initiative as fostering more affordable and more innovative and consumer-friendly navigation devices. As the *New York Times* explained:

Every year, American cable-TV subscribers spend \$231 on average to rent cable boxes that they should be able to buy outright, potentially saving them hundreds of dollars over several years. Consumers could soon have that option under an excellent proposal by the chairman of the Federal Communications Commission.¹⁷

The *Boston Globe* also noted the potential cost savings to consumers, noting that “[u]nder a common-sense proposal put forth by Wheeler, the regressive era of never-ending payments could give way to greater innovation, and savings for consumers.”¹⁸

The *Boston Globe* also explained that today's market dominated by leased devices lacks the benefits of a competitive market, noting that “[s]et-top cable and satellite television boxes look, and sometimes act, like relics from an earlier technological age. Most of them are clunky, finicky, and ugly.”¹⁹ The *Los Angeles Times* agreed, and explained other benefits that would result from greater consumer choice:

[C]onsumers have been stuck with whatever their local cable operator offered, which has slowed innovation in program guides, digital recorders, the integration of online content and other key aspects of TV service.

That market should be competitive. And rather than trusting cable operators to promote indie networks, limit consumers' exposure to advertising and protect their privacy, it's far better to let consumers decide such things for themselves in an open, competitive market.²⁰

¹⁷ *N.Y. Times Op-ed*, *supra* note 14.

¹⁸ *Boston Globe Op-ed*, *supra* note 14.

¹⁹ *Id.*

²⁰ *L.A. Times Op-ed*, *supra* note 14.

The position expressed by these major national editorial boards is just the tip of the public support iceberg.

II. DIRECTION FROM THE CONGRESS IN SECTION 629 AND STELAR REQUIRE THE FCC TO ADOPT MEANINGFUL RULES TO ASSURE THAT THERE WILL BE A SUCCESSOR TO CABLECARD THAT SPURS COMPETITION AND INNOVATION.

Section 629, titled “Competitive Availability of Navigation Devices,” instructs the Commission to:

[I]n consultation with appropriate industry standard-setting organizations, adopt regulations to assure the commercial availability, to consumers of multichannel video programming and other services offered over multichannel video programming systems, 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.²¹

In this NPRM, the Commission proposes to do just that. The Commission correctly identifies that the market for navigation devices from “manufacturers, retailers, and other vendors not affiliated with any [MVPD]” is not competitive, and proposes to adopt regulations to assure such commercial availability utilizing open standards-setting organizations.

More recently, Congress confirmed its continued support of Section 629 in STELAR, which required the Chairman of the FCC to 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

²¹ 47 U.S.C. § 549.

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.*²² Thus, Congress made clear that promoting the competitive availability of navigation devices in accordance with Section 629 remains a priority. In accordance with this directive in STELAR, Chairman Wheeler convened the Downloadable Security Technical Advisory Committee (“DSTAC”), which issued its technical report last August. In this NPRM, the Commission uses the technical findings from the DSTAC report to act in accordance with Section 629’s instructions to assure the commercial availability of retail navigation devices.

Section 624A provides the Commission with additional authority, at least with respect to cable systems. Section 624A directs the FCC, “in consultation with representatives of the cable industry and the consumer electronics industry,” to “issue such regulations as are necessary” to ensure “compatibility between televisions and video cassette recorders and cable systems ... so that cable subscribers will be able to enjoy the full benefit of both the programming available on cable systems and the functions available on their televisions and video cassette recorders.”²³ Congress also required the Commission to continue to review regulations requiring such compatibility in light of changes in technology, requiring that the Commission “shall periodically review and, if necessary, modify the regulations issued pursuant to this

²² Pub. L. No. 113-200, § 106(d), 128 Stat. 2059, 2063 (2014) (emphasis added).

²³ 47 U.S.C. § 544a(b)(1).

section ... to reflect *improvements and changes* in cable systems, television receivers, video cassette recorders, and *similar technology*.”²⁴ Although the statute was written when devices such as video cassette recorders were the norm, it was written to give the Commission the authority to adapt its regulations to changing technology, such as today’s Digital Video Recorders and other similar navigation devices that serve as the modern-day VCRs.

TiVo agrees that the Commission’s authority extends to both hardware and software means used by consumers to access multichannel video programming and thus extends to assuring a competitive retail market for “apps” used to access MVPD content. The Commission’s rules must reflect evolving technology and thus should reflect the reality that modern computing technology and consumer interfaces have blurred the distinction between “hardware” and “software.” As the Commission notes, it has already interpreted the term “navigation device” to include software apps for the purposes of the CVAA.²⁵ Moreover, as the Commission notes, the legislative history makes clear that Congress intended that the Commission’s policies should reflect the evolving market and technologies.²⁶ For example, Section 629 co-sponsor Chairman Tom Bliley (R-VA) said at the time that the legislation addressed “the question of access – allowing these devices, however they operate or are configured, whether they are separate or built into TV’s or personal computers, to connect to the [network].”²⁷

²⁴ 47 U.S.C. § 544a(d) (emphasis added).

²⁵ NPRM at 13 n.66.

²⁶ NPRM at 13 & n.67.

²⁷ The Competitive Consumer Electronics Availability Act of 1995, Statement of Hon.

Chairman Bliley's statement makes it clear that Section 629 was intended to be interpreted broadly to cover evolving technology and market conditions, including developments such as "apps" that run on smart TVs or computers.

III. THE PROPOSED RULES INCORPORATE THE NECESSARY ELEMENTS FOR IMPLEMENTING A SUCCESSOR SOLUTION THAT ADVANCES THE GOALS OF SECTION 629.

In the NPRM, the Commission discusses several objectives of its proposed rules that are intended to enable the retail availability of competitive navigation devices by entities unaffiliated with MVPDs in accordance with Section 629. TiVo believes that the objectives discussed below must be necessary elements of any such rules : (1) allowing consumers to access the full range of programming to which they subscribe on devices of their choice, (2) enabling a competitive user interface, (3) enabling "innovation without permission" by competitive navigation device vendors within the bounds of copyright law, and (4) enabling device portability, so that consumers can use their retail navigation device even if they switch MVPD providers.

Access to Programming and Scope of "Navigable Services"

TiVo agrees that consumers should be able to choose how they access multichannel video programming that they have purchased and generally agrees that the scope of the "Navigable Services" should cover both linear and on-demand video programming in every format and resolution of that programming that the MVPD

Thomas J. Bliley, Jr of Virginia, Mar. 21, 1995, 141 Cong. Rec. E635-01, 1995 WL 118602 (1995). Note that The Competitive Consumer Electronics Availability Act of 1995 went on to be codified (with slight modifications not relevant to this discussion) as Section 629 in the Telecommunications Act of 1996.

makes available to subscribers using MVPD-supplied devices and applications.²⁸ The scope of Navigable Services should be understood in the context of the proposed parity rules²⁹ – ultimately, users of retail navigation devices should have access to all the content that they have purchased and should not be disadvantaged *vis-à-vis* users of operator-supplied navigation devices. For example, while TiVo regards user-initiated cloud DVR functionality as offered by an MVPD as a feature rather than a “Navigable Service,” the content that is subject to the MVPD feature remains a part of the MVPD’s navigable services and so must remain available to users of competitively-supplied navigation devices via access to the program as stored in the MVPD’s cloud locker, and/or capable of being recorded and stored, at the subscriber’s direction, by the competitively-supplied navigation device supplier. In short, there should be parity of access to, and flexibility of use of, MVPD programming between an MVPD subscriber who is using a retail navigation device and one using an MVPD-supplied navigation device.

Competitive User Interfaces

The Commission recognizes correctly in the NPRM that competitive user interfaces are critical to a competitive navigation devices market – indeed, there can be no meaningful device competition in accordance with Section 629 without the opportunity for manufacturers of retail devices to differentiate themselves and compete

²⁸ NPRM at 15-16, ¶ 26.

²⁹ See Section IV.C, *infra*.

“based on the user interface and complementary features they offer users.”³⁰

Competitive user interfaces allow consumers to access MVPD content in more innovative, interesting, and user-friendly ways than the typical MVPD-supplied device or proprietary app. As TiVo has explained to the Commission and proven in the marketplace, the user experience is what differentiates consumer electronics products and is the reason that a consumer would purchase a retail device that provides a better experience than the consumer can get with an MVPD-supplied navigation device.

Retail competition in accordance with Section 629 involves more than simply viewing video programming on different screens; it involves innovative user interfaces, improved search functions including the ability to search across MVPD and OTT content, content recommendation, social media features, and so on that give consumers greater choice and an enhanced user experience – a true alternative to what is provided by the MVPD. As discussed above, the universal search functionality benefits not just consumers trying to find and watch content from a variety of sources, but also minority and independent programmers who will more easily be able to reach viewers without being forced to rely on carriage on MVPD systems.

MVPD Approval is not Needed and Would Threaten Competition if Required

The Commission is correct in emphasizing that competitive navigation device manufacturers and developers must be able to “innovate without permission” – *i.e.*, “build competitive navigation devices, including applications, without first obtaining

³⁰ NPRM at 17, ¶ 27.

approval from MVPDs or organizations they control.”³¹ Innovation will thrive when competitive navigation device vendors know that they can design products to established standards within the bounds of copyright law and not be at the mercy of MVPD gatekeepers offering their own leased devices. As the Commission recognizes, large MVPDs have strong financial and business incentives to preserve today’s market conditions in which an estimated 99 percent of subscribers lease set-top boxes from their MVPD.

As one example, one of the reasons retail devices using the existing CableCARD standard have lagged behind leased set-top boxes is the fact that retail CableCARD devices cannot access bidirectional services such as VOD absent a specific arrangement between the device manufacturer and an MVPD. The Commission has been aware of this shortcoming for over a decade and has repeatedly addressed and sought comment on the need for a successor to CableCARD that includes bidirectional services.³² Yet,

³¹ NPRM at 17, ¶ 28.

³² See, e.g., *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

almost a decade later, other than Comcast and Cox, MVPDs have not allowed retail navigation devices to access bidirectional services or any other portions of the MVPD service that the subscriber has paid for beyond those enabled by the CableCARD standard.

Device Portability

The Commission rightly recognizes that device portability is critical to a competitive market for navigation devices. Portability allows consumers to invest in a device knowing that they can use it if they move or otherwise decide to switch MVPDs. Indeed, as noted in the NPRM, one of the benefits of device portability is to promote competition among MVPDs by lowering switching costs for consumers who have a choice in MVPDs or other sources of video programming.³³ Thus, TiVo agrees with the Commission's objective that compliant standards should allow consumers to use the same device with different MVPDs.³⁴

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.").

³³ NPRM at 17, ¶ 31.

³⁴ *Id.* Note that both the Commission and the D.C. Circuit have in the past discussed the importance of portability of standards for retail navigation devices. See, e.g., *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Report and Order, FCC 98-116, ¶ 70 (rel. June 24, 1998) ("What is important is for the [POD] supplied by the service provider to

Disparate Standards Threaten Retail Device Competition

Finally, while the rules enabling a competitive market for navigation devices need not prescribe a single particular solution, there is a balance between flexibility for MVPDs and increased cost and complexity for competitive devices to support multiple security systems. Lack of uniformity carries substantial risk to support for competitive navigation devices, particularly in an environment in which large operators are unsupportive of the very notion of competitive devices and user experiences.

Supporting multiple security systems threatens to make retail devices more expensive and complex when compared to operator-supplied devices, which need to support only a single security system. This would be contrary to the goal of this proceeding, *i.e.*, to enable a competitive market for retail devices. The Commission should therefore seek to ensure that MVPDs converge on no more than a small number of solutions to ensure that competitive device manufacturers and app developers are not faced with having to produce different products for each MVPD.

Even with a limited number of solutions, operators also should not be permitted to specify or require operator-specific chipsets or implement security solutions in ways that are tied to an operator-specific chipset. Because the chipset is typically the most

be designed to connect to and function with other navigation devices through the use of a *commonly* used interface or through an interface that conforms to appropriate technical standards promulgated by a *national* standards organization.”) (emphasis added); *id.* ¶49 (discussing the importance of a conditional access security solution that permits portability of equipment); *Charter Commc’ns, Inc. v. FCC*, 460 F.3d 31, 43 (D.C. Cir. 2006) (explaining that retail navigation devices that cannot be used nationwide do not meet the requirements of Section 629).

expensive component of a set-top device and today integrates almost every hardware function such as memory and graphics, having to support more than one for portability is economically and technically infeasible. Similarly, operators should not be able to have an MVPD-proprietary root of trust that applies only to one or a few operators. It will be difficult to create a cost-effective portable device even if a Compliant Security System is not substantially controlled by an MVPD if each MVPD requires a separate Trust Authority. Even a single security solution can be made specific to an MVPD by using a different Trust Authority or hardware requirement for each operator. To ensure that MVPDs converge on a small number of solutions, the Commission should require that any Compliant Security System be supported by multiple MVPDs, in aggregate serving at least 15 million subscribers without being tied to an MVPD-specific Trust Authority or chipset or other hardware requirement. This would ensure that any Compliant Security System is at least somewhat portable across MVPDs without the Commission dictating which particular technology solutions are selected.

IV. COMMENTS ON OTHER ISSUES RELATED TO THE FCC'S PROPOSALS.

A. The FCC Should Clarify the Scope of Entitlement Data and Restrictions on Lawful Use of Content.

Under the CableCARD regime, TiVo is not, and never has been, bound to programming agreements entered into by MVPDs to which TiVo is not a party. As the Commission is aware, the terms of such programming contracts are confidential and it makes no sense for competitive device providers to have to adhere to licensing terms that they have no way of knowing and which would vary drastically across MVPDs.

Nevertheless, TiVo devices have always protected content, not only from unlawful copying (*i.e.*, piracy), but also in accordance with the copy control information associated with the programming. This is because TiVo complies with the DFAST license that is part of the CableCARD regime, which requires that competitive devices protect the security of and do not impair the delivery of MVPD services. TiVo supports a similar license or certification structure with restrictions similar to those contained in the DFAST licensing along with encoding rules.

Industry norms, as well as consumer expectations, have developed for different classes of programming – *e.g.*, VOD is marked “copy never” and may not be copied, premium content is marked “copy one generation,” etc. The Commission’s encoding rules helped establish the ground rules for how copying of content could be limited, balancing the desire of programmers to control and “window” the distribution of content with consumers’ fair use rights. The encoding rules also allowed retail device manufacturers to build a product that worked across all operators, while limiting use of content in predictable ways and leaving enough room for innovation in allowing consumers to watch content they have paid for.³⁵

³⁵ TiVo has petitioned the FCC to reinstate its encoding rules to provide limits on copy protections that cable operators can impose on content. 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) (“*TiVo Petition for Rulemaking*”). The Commission has not acted on TiVo’s Petition to date.

Accordingly, TiVo urges the Commission to reinstate its encoding rules, which set a ceiling on the copy protections that MVPDs can impose on content. While TiVo acknowledges the desire for programmers to restrict copying of premium content and to offer windows for making certain content available in different formats, competitive device manufacturers cannot conform to a potentially infinite number of difficult to determine and ever-changing copy protection levels across all MVPDs. A limit on copy protections that MVPDs can impose will also serve to limit consumer confusion and help establish consumer expectations regarding how different types of programming and services can be used.

B. The FCC Should Maintain Sufficient Oversight Over The Proposed “Open Standards Bodies” and the Solutions Adopted by MVPDs.

TiVo has long supported industry standards-setting processes to develop a successor solution to CableCARD, and looks forward to helping develop open standards that fulfill the goals of Section 629, as discussed in the NPRM. As both a manufacturer of retail navigation devices and as a provider of set-top boxes to numerous small and mid-size cable operators, TiVo understands the need for all parts of the video industry to work together in open standards bodies to develop solutions in accordance with the Commission’s proposed rules and in furtherance of the objectives of Section 629.

However, given the incentives and ability of large MVPDs to thwart device competition, the Commission should maintain sufficient oversight over the standard-setting process to ensure that MVPDs do not use the standards process to block or delay

competition. The Commission should also ensure that any standard developed by an open standards body and used by MVPDs actually satisfies the FCC’s proposed rules and the objectives of Section 629. For example, any standard developed by an open standards body must permit competitive user interfaces, enable device portability by not being specific to a particular MVPD, achieve parity for competitive devices, etc.

In addition to the attributes of an open standards body contained in the NPRM, an open standards body should have a clear, fair and balanced intellectual property rights policy (“IPR Policy”) – one that provides appropriate protection to companies using the inventions practiced by the standard but does not seek to devalue or otherwise hinder the ability of innovators to protect their inventions. Specifically, TiVo suggests that the Commission specify that an open standards body have an IPR Policy no more restrictive than requiring a Person to make claims of any of such Person’s Patents that are essential to implement a proposed standard (but not including any underlying or enabling technology that is not expressly set forth in the body of such proposed standard), as proposed and submitted by such Person, available to implementers of the standard on reasonable and non-discriminatory terms, conditioned on reciprocity from such implementers on terms no more favorable to the implementers than those provided in SCTE’s or American National Standards Institute’s Intellectual Property Rights policy.³⁶

³⁶ American National Standards Institute, *Guidelines for Implementation of the ANSI Patent Policy* (rev. Oct. 2012), available at <https://share.ansi.org/shared%20documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/ANSI%20Patent%20P>

C. The FCC Should Ensure Parity of Access to Content for All Navigation Devices.

TiVo supports the proposed rule provisions that ensure parity of access to content to all navigation devices, to “ensure that competitors have the same flexibility as MVPDs when developing and deploying devices, including applications, without restricting the ability of MVPDs to provide different subsets of content in different ways to devices in different situations.”³⁷ As the Commission notes, “[p]arity will also ensure that consumers maintain full access to content they subscribe to consistent with the access prescribed in the licensing agreements between MVPDs and programmers.”³⁸ TiVo supports the three proposed requirements designed to ensure that retail navigation devices and applications do not require unnecessary MVPD-specific equipment, that content available via leased devices and proprietary apps is also available to competitive navigation devices and applications, and that devices that are able to access content using proprietary apps can also receive content using competitive apps.³⁹

Ensuring parity is vital to ensuring a competitive navigation device market.

Consumers must be able to use competitive navigation devices and applications

<http://www.scte.org/documents/pdf/EC-STD-001r12%20Operating%20Procedures%20FINAL.pdf>; The Society of Cable Telecommunications Engineers, *Manual of Operating Procedures for the Society of Cable Telecommunications Engineers Standards Program* (rev. Jan. 7, 2015), available at <http://www.scte.org/documents/pdf/EC-STD-001r12%20Operating%20Procedures%20FINAL.pdf>.

³⁷ NPRM at 31, ¶ 63.

³⁸ *Id.*

³⁹ NPRM at 31-33, ¶¶ 63-68; Appendix A, 47 C.F.R. § 76.1211(b)-(d).

knowing that they will be able to access content in all the ways they would have had they leased a device from their MVPD. As the Commission explained when it addressed the use of switched digital video, which often denied access to certain channels to subscribers using retail CableCARD devices, “[p]roviding retail navigation devices and leased navigation devices with equivalent access to linear programming at an equivalent service price is essential to a retail market for navigation devices.”⁴⁰ The same logic holds for all types of programming that would be made available under the definition of “navigable services” proposed in the NPRM.⁴¹

Finally, the Commission should use the framework for assessing parity of access to content not just in assessing the implementation of security and non-security elements of a solution that conforms to the proposed rules, but also in evaluating whether an MVPD-supplied program, service, or other offering falls within the definition of a “navigable service” that must be made available to competitive navigation devices. In other words, if certain content is available to MVPD subscribers using leased navigation devices, it should be available to subscribers using competitive navigation devices irrespective of how it is searched for, requested, or delivered.

⁴⁰ 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 Report and Order, FCC 10-181, at 10, ¶ 14 (rel. Oct. 14, 2010) (“*Third Report and Order*”).

⁴¹ NPRM at 15-16, ¶ 26.

D. Consumers who Use Competitive Navigation Devices Will Enjoy the Same Level of Privacy Protection as Those Who Lease Devices from Their MVPD.

Amidst the fear-mongering by opponents of the Commission's proposed rules, TiVo reminds the Commission that it has been manufacturing and selling retail navigation devices for over a decade without any of the parade of horrors coming to pass. In particular, with respect to customer privacy, TiVo has never used customer information in any manner that is not permitted under the Cable Privacy Act and/or the substantive provisions of Sections 631 and 338(i) of the Communications Act. While TiVo's retail devices are not subject to Section 631 because TiVo is not a MVPD, TiVo's devices are nonetheless subject to similar privacy requirements. TiVo is ultimately responsible to the Federal Trade Commission ("FTC") and state attorneys' general by virtue of the company's public privacy commitments and the enforcement powers granted by Section 5 of the FTC Act and state Unfair and Deceptive Acts and Practices ("UDAAP") statutes.

Section 5 of the FTC Act makes unfair or deceptive acts or practices unlawful.⁴² States' attorneys general also have similar UDAAP authority to prosecute unfair or deceptive acts. The FTC has used this authority to hold companies to the privacy promises they make to the public, bringing enforcement actions when they discover that a company has violated such a promise. The FTC's authority extends beyond that of the Federal Communications Commission's ("FCC"), covering nearly every

⁴² 15 U.S.C. § 45(a)(1).

commercial actor. The broad scope of this jurisdiction means that competitive navigation device companies that make a public privacy statement regarding their handling of viewer data will be required to honor their privacy commitments, obviating the need for additional regulatory burden to be imposed by the FCC.

The FTC has been at the forefront of efforts to ensure that Internet-connected devices offer appropriate privacy and security protections for consumer data and that consumers are protected from unexpected collection of their data by new technologies. MVPDs agree that FTC's time-tested framework "provides consumers with meaningful privacy protection and helps to enable a dynamic marketplace that supports the emergence of innovative new business models."⁴³

The FTC actively uses its authority under Section 5 to hold companies accountable for their privacy commitments.⁴⁴ In *Nomi*, for a recent example, the FTC charged that the company promised consumers the ability to opt-out of in-store retail tracking services. The FTC alleged that the company failed to provide that opt-out and entered into a twenty year consent agreement with the FTC.⁴⁵ Because *Nomi* made a public privacy statements, and failed to honor that statement, it faced FTC action. It is

⁴³ Letter to Chairman Wheeler from the American Cable Ass'n, et al. at 1 (Feb. 11, 2016), available at <http://www.ctia.org/docs/default-source/fcc-filings/021116-privacy-letter.pdf>.

⁴⁴ See generally, *In re Nomi Technologies, Inc.*, Complaint, No. C-4538 (Sep. 3, 2015); *In re True Ultimate Standards Everywhere, Inc.*, Complaint, C-4512 (Mar. 18, 2015); *In re Snapchat, Inc.*, Complaint, C-4501 (Dec. 31, 2014); *In re Google Inc.*, Complaint, CV 12-04177 (Aug. 8, 2012 N.D. Cal);

⁴⁵ *In re Nomi Technologies, Inc.*, Decision and Order, C-4538 (Sep. 3, 2015).

fair to say that no U.S. government agency has been more vigilant about protecting consumer privacy and enforcing companies' privacy statements than the FTC.

Indeed, more than a decade ago, the FTC conducted an inquiry into TiVo's privacy practices at the request of then Representative Markey based on allegations concerning TiVo set forth in a report issued by the Privacy Foundation and the University of Denver Privacy Center. The FTC concluded that, in accordance with TiVo's published privacy policy, TiVo collected TV viewing information in an anonymous manner for the vast majority of its customers, and collected personally identifiable TV viewing information only from customers from whom it first obtained consent.⁴⁶ Accordingly, there was no basis for FTC action with respect to TiVo. However, the point is that there already is effective oversight of competitive navigation device makers.

One of the driving factors behind the FTC's ability to enforce companies' privacy statements is because the fact that all Internet based companies that operate in California must publicly post a privacy policy. This public posting is required by the California Online Privacy Protection Act ("CalOPPA"), which requires any operator of a commercial online service that collects or maintains personal information from California residents to conspicuously post a privacy policy stating what personal

⁴⁶ Letter from Robert Pitofsky, Chairman, Federal Trade Commission to The Honorable Edward J. Markey, Ranking Member, Subcommittee on Telecommunications, Committee on Energy and Commerce, May 11, 2001, *available at* https://www.ftc.gov/system/files/documents/public_statements/944143/010511tivoinvestigationltr.pdf.

information it collects, if it shares that data with third parties, and if third parties may collect personal information from their online services.⁴⁷ Because all Internet based companies likely come into contact with California residents, CalOPPA has effectively required all such companies to publicly post a privacy statement. By requiring these public facing policies California has effectively bound companies to these promises, promises enforceable by the FTC, state attorneys general, and potentially consumers.⁴⁸

A logical follow-on to the interplay between CalOPPA and the FTC, given the history of the FTC enforcing privacy policies against companies, is that a similar solution could be proposed for competitive navigation device companies through the FCC's rule making. If these companies were to be required to include public statements in a consumer privacy policy that they would not disclose personal data absent a consumer's consent – the protection that lies at the heart of Section 631 – the FTC would be able to enforce those promises, limiting the need for additional contractual and regulatory burdens. Nevertheless, if the Commission believes that compliance with the provisions of Section 631 and 338 is required,⁴⁹ TiVo fully intends to comply with such

⁴⁷ Cal. Bus. Prof. § 22575-22579.

⁴⁸ Section 22575 of CalOPPA states that an operator is in violation of the law if it fails to remedy a deficit policy with 30 days of being notified of noncompliance. Section 22576 of the statute states that an operator is in violation of the statute if it violates of Section 22575, or its posted privacy party, in a (a) knowing and willful manner or (b) negligent and material manner. While the statute itself does not offer a remedy by a private plaintiff, at least one case in California has interpreted a violation of CalOPPA to be sufficient for a consumer to maintain a claim under the California Unfair Competition Law. See *Svenson v. Google Inc.*, No. 13-CV-04080-BLF, 2015 WL 1503429, at *10 (N.D. Cal. Apr. 1, 2015).

⁴⁹ NPRM at 38, ¶ 78.

provisions as it has for the last decade-plus in which it has sold retail navigation devices.

E. The FCC’s Proposal Does Not Introduce New Concerns Regarding Targeted Advertising.

It is somewhat surprising that large MVPDs have been raising concerns about the potential use of set-top box data by competitive device makers when the large MVPDs have been touting their use of set top box data to target advertising, analyze viewing habits, engage in programmatic advertising, and combine set-top box data with online and offline data to make advertising more efficient. These MVPD efforts recently were chronicled in a report by the Center for Digital Democracy.⁵⁰ AT&T, through its Adworks division, has been particularly outspoken about the importance of data, touting itself as “the nation’s largest addressable platform” enabling marketers to reach audiences across every screen and spanning “170 million US customer connections across TV, Broadband and Mobile.”⁵¹ Most large MVPDs sell television set-top box data for use by advertisers today. For example, DIRECTV and DISH are equity owners in comScore which sells their data.⁵²

⁵⁰ Center for Digital Democracy, *Big Data is Watching: Growing Digital Data Surveillance of Consumers by ISPs and Other Leading Video Providers*, Mar. 2016, available at <https://www.democraticmedia.org/sites/default/files/field/public-files/2016/ispbigdatamarch2016.pdf>.

⁵¹ AT&T Adworks, at <http://adworks.att.com>; see also Mike Shields, *AT&T Plans to Sell Linear TV Programmatically*, Mar. 3, 2016, at <http://www.wsj.com/articles/at-t-plans-to-sell-linear-tv-programmatically-1457002801>.

⁵² David Goetzl, *DISH Takes Stake in Tentrak, Agrees to Supply Data Exclusively*, Aug. 9, 2012, at <http://www.mediapost.com/publications/article/180571/dish-takes-stake-in-rentrak-agrees-to-supply-data.html>; David Goetzl, *Rentrak Deal Offers Juice for Set-Top-Box Data Advocates*, Aug. 8, 2013, at

TiVo does not view targeted advertising, analytics, and other uses of subscriber viewing information to improve the efficiency of advertising as cause for concern as long as those uses of data are appropriately disclosed to consumers in the provider's privacy policy as TiVo and other providers have done. The Cable Privacy Act restricts the *disclosure* of personally identifiable viewing information without consent. It does little to restrict the *use* of such data by MVPDs. Cable operators are free to use set-top box data to target advertising, perform analytics, or combine it with other sources of data which they are doing more and more extensively. Again, there is nothing inherently wrong with that. However, allegations that "tech companies" will be able to make more intrusive use of set-top box data than MVPDs are doing today are inaccurate.

F. The FCC Should Adopt Rules Addressing MVPD Billing Transparency and Cross-Subsidization of Device Charges with Service Fees.

TiVo supports the Commission's proposal to require MVPDs to state separately a charge for leased navigation devices and to reduce their charges by that amount to customers who "bring their own device."⁵³ The FCC should also prevent cross-subsidization of device charges with service fees.⁵⁴ In other words, all subscribers

<http://www.mediapost.com/publications/article/206436/rentrak-deal-offers-juice-for-set-top-box-data-adv.html#axzz2b5Q83Ngk>; Press Release, *comScore and Rentrak Complete Merger, Creating the New Model for a Dynamic Cross-Platform World*, Feb. 1, 2016, available at <https://www.comscore.com/Insights/Press-Releases/2016/2/comScore-and-Rentrak-Complete-Merger-Creating-the-New-Model-for-a-Dynamic-CrossPlatform-World>.

⁵³ NPRM at 42, ¶ 84.

⁵⁴ NPRM at 42, ¶ 85.

should pay for access to the video programming made available via their MVPD subscription, but those who use retail navigation devices should not “double pay” for additional features they can access only using leased navigation devices.

Each of these requirements is necessary for consumers to enjoy the benefits of competition in the navigation devices market. Separately stating charges and reducing charges for subscribers who bring their own box will allow consumers to compare the cost of leasing vs. purchasing a navigation device and to make informed choices. In addition, a prohibition on cross-subsidization will prevent MVPDs from disadvantaging competitive devices and potentially keeping a competitive device market from developing by using predatory pricing practices until the competitive entrants are forced out.

TiVo’s decade-long experience with MVPD support for retail CableCARD devices demonstrates that MVPDs will find ways to disadvantage competitive navigation devices. The Commission has examined and discussed the problems with CableCARD installation and support in the past,⁵⁵ and in its *Third Report and Order* in 2010, it adopted rules addressing several of the ways in which cable operators were

⁵⁵ National Broadband Plan at 52, Section 4.2 (discussing four major problems with CableCARD support); 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, Fourth Further Notice of Proposed Rulemaking, FCC 10-61, at 5-8, ¶¶ 11-18 (rel. Apr. 21, 2010) (proposing rules to attempt to address problems with support for CableCARD-enabled retail devices); Third Report and Order, FCC 10-181, at 6-20, ¶¶ 8-38 (adopting measures to attempt to address problems with support for CableCARD-enabled retail devices).

disadvantaging retail devices including a rule on CableCARD pricing and billing.⁵⁶ Unfortunately, operator support for retail devices has not improved and has in fact gotten worse in recent years — for example, a recent TiVo survey of cable operator support for CableCARD-enabled retail devices indicated that only 5-13% of customer service representatives offered discounts to subscribers who brought their own device. In light of the continued incentives of MVPDs to disadvantage competitive navigation devices, the Commission should maintain regulatory oversight of MVPD device charges and billing transparency and require MVPDs to state separately a charge for leased navigation devices and to reduce their charges by that amount to customers who use retail navigation devices.

V. TIVO SUPPORTS AN EXEMPTION FOR SMALL CABLE OPERATORS FROM RULES REQUIRING ADHERENCE TO A SUCCESSOR STANDARD.

TiVo has long recognized that smaller MVPDs are disadvantaged in the set-top box marketplace because they lack the economies of scale to participate meaningfully in standards-setting and implement any technology changes required by a new standard in a cost-efficient manner. Rather, large MVPDs have the financial and engineering resources and are best equipped to help develop and introduce new standards. This has always been the case in the multichannel video industry.

Once large MVPDs have helped set standards, smaller MVPDs are helped greatly by standardization, because they lack the purchasing power to negotiate affordable rates from set-top box manufacturers, conditional access vendors, etc. Thus,

⁵⁶ *Third Report and Order* at 11-13, ¶¶ 15-19.

standardized solutions that open set-top boxes to competition strongly benefit smaller operators. Only the largest MVPDs find it cost-effective to use unique or proprietary conditional access systems. The availability of non-proprietary nationwide security solutions makes it possible for MVPDs of all sizes to purchase set-top boxes from a variety of suppliers, rather than being locked in to purchasing set-top boxes from a single conditional access vendor. For example, the CableCARD standard has enabled a variety of set-top box manufacturers – including Samsung, Pace, TiVo, Evolution, and Arris (prior to acquiring Motorola) – to supply low-cost boxes to small and mid-sized cable operators thanks to the economies of scale that a nationwide standard allow.

Without CableCARD successor solutions enabled by the rules proposed in this proceeding, smaller operators will again be locked into a single supplier of conditional access solutions on a system-by-system basis as they were prior to CableCARD.⁵⁷

However, smaller MVPDs pay significantly higher programming and other costs to deliver video service to consumers. Their video service margins are razor thin and they cannot afford to participate in standard-setting activities, much less have any real ability to influence those activities. Given the economic challenges faced by smaller MVPDs, TiVo supports an exemption for MVPDs serving one million or fewer subscribers from the standards-focused rules adopted in this proceeding (e.g., proposed

⁵⁷ The national CableCARD standard has allowed small and medium size cable operators such as Mediacom, RCN, Suddenlink, GCI, Midcontinent, Atlantic Broadband, Grande, and Armstrong to offer the TiVo box to their subscribers as the cable-provided set-top box, thereby providing their customers with a superior product and viewing experience than they would have had with a typical cable set-top box.

Section 76.1211).⁵⁸ Alternatively, the Commission could simply limit application of its proposed rules to MVPD serving one million or fewer subscribers on the basis that such smaller MVPDs will have little ability to advance the statutory goal of assuring the availability of third-party navigation devices. Regardless, as suggested by the Commission,⁵⁹ such smaller MVPDs should continue to facilitate the use of retail navigation devices by being required to supply and support CableCARD in accordance with the FCC's CableCARD consumer support rules. TiVo believes that once CableCARD successor standards are in place and foster innovation and competition in navigation devices, smaller MVPDs will find it cost effective to use such standards voluntarily for the reasons discussed above.

VI. THE FCC'S CABLECARD SUPPORT RULES REMAIN IMPORTANT AND SHOULD BE RETAINED.

The CableCARD consumer support rules set forth in Section 76.1205(b) of the Commission's rules continue to serve an important purpose and must be retained to assure that a market for competitive retail navigation devices continues to exist during the period in which the Commission's new navigation device rules are implemented.

TiVo has previously explained that the rules regarding CableCARD supply and support, including those adopted in the *Third Report and Order* in 2010,⁶⁰ remain in effect

⁵⁸ NPRM at 40, ¶ 81 (citing Letter from Ross Lieberman, Senior Vice President of Regulatory Affairs, American Cable Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, at 6 (Feb. 11, 2016).

⁵⁹ *Id.* at 40, ¶ 81.

⁶⁰ *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 Report and

following the D.C. Circuit's decision in *EchoStar Satellite L.L.C. v. FCC*, 704 F.3d 992 (D.C. Cir. 2013).⁶¹ However, NCTA, Charter, and Verizon have taken the position that such rules are no longer in effect.⁶² Thus, the Commission should act to make clear that these rules remain in effect, including by acting on TiVo's long pending Petition for Rulemaking to reinstate the CableCARD technical standard for non-DBS MVPDs.⁶³

The CableCARD supply and support rules are critical to support a competitive market for retail navigation devices while the Commission's new rules are implemented. Without assurance that cable operators will supply CableCARDS and continue to support retail CableCARD devices during their expected lifetime, consumers will be unlikely to purchase retail set-top devices. This would undercut Section 629 and be counter to the Commission's goal in this proceeding to "empower consumers to choose how they wish to access" MVPD programming to which they subscribe. As the Commission explained when it adopted the CableCARD supply and support rules in 2010:

Based on the record before us, we conclude that modifications to our rules are necessary to improve the CableCARD regime and advance the retail market for cable navigation devices. We are sympathetic to concerns that we are adopting these rules while we consider a successor regime, but we

Order and Order on Reconsideration, FCC 10-181 (rel. Oct. 14, 2010).

⁶¹ TiVo Inc. Reply to Opposition, CSR-8740-Z, MB Docket No. 12-328, CS Docket No. 97-80, at 2-7 (June 10, 2013); *see also* Consumer Electronics Association Reply, CSR-8740-Z, MB Docket No. 12-328, CS Docket No. 97-80 (June 13, 2013); Reply Comments of the AllVid Tech Company Alliance, CS Docket No. 97-80 (Feb. 28, 2014).

⁶² Comments of National Cable & Telecommunications Association, CS Docket No. 97-80, at 4-5 (Feb. 14, 2014); Opposition of Charter Communications, Inc. to Petition for Reconsideration, MB Docket No. 12-328, CSR-8470-Z, at 3 (June 3, 2013); Comments of Verizon, CS Docket No. 97-80, at 5 (Feb. 14, 2014).

⁶³ *TiVo Petition for Rulemaking*, *supra* note 35.

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 implemented changes that will significantly improve the user experience for retail CableCARD devices.⁶⁴

This statement is as true today as it was when the Commission first made it.

In seeking to sunset the integration ban in STELAR, the cable industry assured Congress that “repealing the integration ban *will not affect the separate requirement for cable operators to make CableCARDS available* to cable customers who buy a retail set top box from TiVo or others... Even if the integration ban is repealed, third party set-top box makers will still be able to sell boxes to *any* cable customer wishing to purchase a box at retail.”⁶⁵ NCTA Chairman Michael Powell further testified before Congress that “it is important to remember that, even if Congress passed this provision eliminating the integration ban, we would have [the] absolute legal obligation to continue to provide separate security and cable cards. Unless you believe we just completely flaunt the law, with no consequences at the Commission, that will continue to be the case.”⁶⁶

Given these unequivocal statements, the NCTA and its members should have no

⁶⁴ Third R&O, ¶ 8 (citations omitted).

⁶⁵ Letter from James Assey, Executive Vice President, National Cable & Telecommunications Association to the Honorable Greg Walden, Chairman, and the Honorable Anna Eshoo, Ranking Member, Subcommittee on Communications and Technology, September 18, 2013 (emphasis added).

⁶⁶ Reauthorization of the Satellite Television Extension and Localism Act, House of Representatives, Committee on Energy and Commerce, Subcommittee on Communications and Technology, March 12, 2014.

objection to the Commission clarifying that cable operators must continue to supply and support CableCARDS in retail devices.⁶⁷

TiVo's concern about cable operators continuing to supply and support CableCARDS, however, has been exacerbated by statements and *dicta* from the Media Bureau regarding the acceptability of proprietary downloadable security solutions as means to comply with the Commission's separable security rule. TiVo has previously explained that the so-called downloadable security solutions contemplated by cable operators are incompatible with the Commission's rules enabling retail device competition for unidirectional MVPD content.⁶⁸ The DSTAC Report has now provided the Commission with the facts regarding the "downloadable" security proposed by MVPDs, noting that they typically require specific hardware and are not portable across MVPDs.⁶⁹

The Commission should take this opportunity to state clearly and definitively that, while cable operators are free to use their own proprietary security solutions for

⁶⁷ NCTA has previously cited a TiVo blog post reassuring consumers that TiVo expects CableCARDS will continue to be available, but TiVo's expectations as to what operators will do clearly is not a substitute for the Commission clarifying the continued applicability of its CableCARD support rules. See John Eggerton, *Sens. Slam Pay TV Set-Top Market*, Multichannel News (July 30, 2015), at <http://www.multichannel.com/news/fcc/updated-sens-slam-pay-tv-set-top-market/392625>.

⁶⁸ See, e.g., TiVo Inc. Reply to Opposition, MB Docket No. 12-328, CS Docket No. 97-80, at 7-10 (filed June 10, 2013).

⁶⁹ See, e.g., DSTAC Working Group 2 report at pp. 20-21 (explaining that "downloadable" conditional access requires a chip-based root of trust and explaining what additional elements would be needed if OMS were to be adopted for retail devices that were portable across MVPDs); see also NPRM at 25-26, ¶¶ 50, 51.

their own leased devices, cable operators must *supply* CableCARDS and only CableCARDS to satisfy the separable security requirement in 76.1204 on an ongoing basis, subject to review by petition to the Commission when there is evidence supporting the setting of a phase-out period. Even after the FCC's new rules have been implemented and products that use a successor solution are in the market, there will need to be a transition period in which older CableCARD models are flushed through the sales channel and new products are introduced. NCTA has informed the Commission that the cable industry has deployed approximately 55 million CableCARD devices which it will need to continue to support, so continuing to support less than 1 million retail CableCARD devices should not present any additional burden.

Making clear that the supply of CableCARDS is required until successor solutions are in place will help ensure that operators do not develop divergent separable security technologies in the interim. Competitive device manufacturers need to devote their resources toward helping develop and implement new open standards as required by the proposed rules, not implementing new separable one-way conditional access solutions that may be developed by individual MVPDs.

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Respectfully submitted,

_____/s/_____

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