

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

In the Matter of	)	
	)	
Media Bureau Seeks Comment on	)	MB Docket No. 15-64
DSTAC Report	)	

**COMMENTS OF COMCAST CORPORATION**

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**TABLE OF CONTENTS**

**I. INTRODUCTION AND SUMMARY.....2**

**II. THE APPS-BASED APPROACH CONTINUES TO SUCCESSFULLY EXPAND  
DEVICE CHOICES FOR CONSUMERS.....5**

**A. Xfinity Apps Allow Customers To Access Their Xfinity TV Service on a  
Wide and Growing Array of Retail Devices. ....6**

**B. Apps Also Advance a Number of Other Pro-Consumer and Pro-Competitive  
Benefits.....9**

**III. ALLVID IS A FLAWED AND UNNECESSARY TECHNOLOGY MANDATE  
AND EXCEEDS THE COMMISSION’S AUTHORITY. ....11**

**A. Prior Commission Technology Mandates Have Proven Ineffective and  
Detrimental to Consumers and Innovation. ....11**

**B. AllVid Exceeds the Commission’s Authority. ....14**

**C. The DSTAC Report Catalogues the Numerous Technical and Other Flaws  
with AllVid.....16**

**IV. CONCLUSION .....20**

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**COMMENTS OF COMCAST CORPORATION**

Comcast Corporation (“Comcast”) hereby submits comments in response to the Media Bureau’s Public Notice seeking comment on the Report of the Downloadable Security Technical Advisory Committee (“DSTAC”) submitted to the Commission on August 28, 2015.<sup>1</sup> Comcast representatives served on DSTAC, and Comcast recognizes the significant effort that went into preparing the Report in a timely manner. The Report provides a detailed discussion of downloadable security methods, in fulfillment of Congress’s directive<sup>2</sup> and documents the expanding array of choices that consumers have to access content over retail devices. In particular, the Report details the widening availability of apps to access multichannel video programming distributor (“MVPD”) services on connected devices. The Report, however, also goes beyond the DSTAC’s statutory mission to describe a proposal by some DSTAC members for a new AllVid-type technology mandate, and also documents the significant costs and harms associated with such a technology mandate. In light of the growing proliferation of the apps-based approach, the Commission should not impose new, costly technology mandates that

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<sup>1</sup> *Media Bureau Seeks Comment on DSTAC Report*, Public Notice, MB Docket No. 15-64, DA 15-982 (Aug. 31, 2015); *see also* Downloadable Security Technical Advisory Committee, Summary Report (Aug. 28, 2015), <https://transition.fcc.gov/dstac/dstac-report-final-08282015.pdf> (“DSTAC Report” or “Report”).

<sup>2</sup> *See* STELA Reauthorization Act of 2014, Pub. L. No. 113-200, 128 Stat. 2059 § 106(d) (“STELAR”).

threaten to stifle innovation, and would go beyond Congress’s mandate in STELAR and exceed the Commission’s rulemaking authority under Section 629.

## **I. INTRODUCTION AND SUMMARY**

In today’s highly competitive video marketplace, consumers have more choices than ever before for accessing a rich variety of high-quality content. They can subscribe to traditional MVPDs – where 99 percent of consumers can choose from three or more MVPDs – and also have the option to subscribe to video services from a growing array of online video distributors (“OVDs”), including traditional powerhouses like Netflix and Amazon as well as newer entrants like Sling TV and Sony’s PlayStation Vue, which offer a combination of linear and on-demand content. Faced with a growing number of providers vying for their attention, consumers have come to expect – and demand – access to content anytime, anywhere, and on the device of their choice.

MVPDs like Comcast, as well as OVDs, rely on apps to support the delivery of their services to connected devices and to provide the flexible viewing options that consumers demand. This apps revolution is already well underway today – with even more to come in the future – and is being driven by market forces, in the absence of any government mandates. With apps, consumers can watch video on a variety of retail consumer electronics (“CE”) devices like connected smart TVs; streaming media players such as Roku, Apple TV (with a next-generation Apple TV to be released this month), and Amazon Fire TV; streaming sticks such as Google’s Chromecast, the Roku Streaming Stick, and Amazon’s Fire TV Stick; gaming consoles; mobile devices such as phones and tablets; and PCs and Macs. There are hundreds of millions of these connected devices in the marketplace – far outpacing the number of traditional MVPD-supplied set-top boxes – and the popularity and use of these devices continue to soar. In fact, over 460 million connected devices support one or more MVPD apps, and 66 percent of them support

apps from all of the top 10 MVPDs.<sup>3</sup> To date, there have been more than 56 million downloads of MVPD apps, and on average each consumer household already has four retail devices with available MVPD apps.<sup>4</sup> In Comcast's case, customers have downloaded its Xfinity apps 17.9 million times to a variety of connected devices.

This apps-based approach is providing clear pro-consumer and pro-competitive benefits and advancing Congress's and the Commission's goal under Section 629 of promoting retail device alternatives to operator-supplied set-top boxes.<sup>5</sup> And this apps revolution is ongoing and accelerating, as Comcast and other MVPDs continue to explore additional opportunities and new innovations to expand the reach of their apps to even more devices.

To its credit, the DSTAC Report correctly recognizes that the apps-based model for the delivery of entertainment content is rapidly proliferating in today's marketplace and expanding opportunities and access to content. Unfortunately, the Report also trots out a warmed-over version of the AllVid concept that was considered and later abandoned by the Commission over five years ago in the face of the dramatic innovations in the device marketplace that had already occurred back then. This outmoded scheme, advocated by certain DSTAC members, would upend today's functioning marketplace in an effort to accomplish what apps *already* are successfully achieving – which makes the proposal not only unwarranted but especially indefensible. As catalogued in the Report, AllVid would impose rigid, “unduly burdensome” technology mandates ill-suited for this rapidly changing marketplace and raise a host of legal

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<sup>3</sup> See Letter from American Cable Association et al., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 15-64, at 1 (Aug. 28, 2015) (“Joint Statement on DSTAC Report”).

<sup>4</sup> See *id.*

<sup>5</sup> See 47 U.S.C. § 549.

issues.<sup>6</sup> It would require MVPDs to redesign their networks (notwithstanding the consensus view in the DSTAC Report that “[i]t is not reasonable to expect that all [operators] will re-architect their networks in order to converge on a common solution”);<sup>7</sup> break apart their services into piece parts that CE manufacturers could repackage with their own user interfaces, effectively turning MVPDs into wholesale content suppliers to these manufacturers (but without contractual privity or protections); and develop an undefined, new piece of on-premises equipment that customers would have to rent to enable access to MVPD service on an AllVid-compatible CE device. AllVid would have other harmful consequences, including undermining recent industry gains on energy efficiency, eroding consumer protections and content security, and jeopardizing the video ecosystem that is providing an abundance of high-quality programming to consumers today. The proposal goes beyond Congress’s mandate under STELAR to report on downloadable security and would exceed the Commission’s authority under Section 629. While the statute authorizes the Commission to promote a market for retail devices that receive MVPD services, it provides no basis to impose AllVid’s unbundling mandate. Moreover, such a mandate would ignore the D.C. Circuit’s warning in *EchoStar* against “unbridled” constructions of Section 629.<sup>8</sup>

DSTAC and the Commission have fulfilled their statutory obligation by reporting on downloadable security methods. Given the success of the rapidly evolving apps-based approach in delivering the choice and flexibility that consumers demand and the many well-documented flaws with AllVid, the Commission should resist entreaties to intervene in the robust and dynamic video marketplace with new technology mandates. Such intervention is unwarranted

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<sup>6</sup> See DSTAC Report, Working Group 4 Report at 144-65 (“WG4 Report”).

<sup>7</sup> See DSTAC Report at 3.

<sup>8</sup> See *EchoStar Satellite L.L.C. v. FCC*, 704 F.3d 992, 997 (D.C. Cir. 2013) (“*EchoStar*”).

and risks undoing all of the gains over the last several years, to the detriment of consumers and continued marketplace innovation.

## **II. THE APPS-BASED APPROACH CONTINUES TO SUCCESSFULLY EXPAND DEVICE CHOICES FOR CONSUMERS.**

Apps are revolutionizing the way consumers access video programming. The apps-based approach detailed in the DSTAC Report has already been extraordinarily successful in expanding device options for accessing MVPD services, and those options are only growing.<sup>9</sup> As Apple CEO Tim Cook correctly observed just last month, “[T]he future of TV is apps.”<sup>10</sup> Apps enable consumers to watch MVPD content, as well as content from OVDs, on a number of IP-enabled devices.<sup>11</sup> This creates a world of opportunity throughout the ecosystem: for device manufacturers, who can ensure that there will be a healthy audience for their products; for consumers, who can increasingly get a broad and growing range of the content they want from their traditional or over-the-top provider of choice over their preferred devices; and for content providers, who can promote their content broadly over all types of consumer device options. As noted, over 460 million IP-enabled retail devices support one or more MVPD apps, and 66 percent support apps from all of the top 10 MVPDs.<sup>12</sup> To date, MVPD apps have been downloaded more than 56 million times.<sup>13</sup> Indeed, Apple recently noted that over 60 percent of

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<sup>9</sup> See WG4 Report at 127-43.

<sup>10</sup> Cat Zakrzewski, *Apple’s Tim Cook: “We Believe the Future of TV Is Apps,”* Wall St. J. (Sept. 9, 2015), <http://blogs.wsj.com/personal-technology/2015/09/09/apples-tim-cook-we-believe-the-future-of-tv-is-apps/>.

<sup>11</sup> MVPD and OVD apps are delivered through the CE devices’ own distinctive user interfaces.

<sup>12</sup> See Joint Statement on DSTAC Report at 1.

<sup>13</sup> See *id.*

pay TV streaming video is consumed through an app.<sup>14</sup> According to a recent Adobe Digital Index report, TV Everywhere viewership via apps on tablets, smartphones, computers, and SmartTVs increased by 282 percent year-over-year in just the first quarter of 2015.<sup>15</sup>

**A. Xfinity Apps Allow Customers To Access Their Xfinity TV Service on a Wide and Growing Array of Retail Devices.**

Comcast is committed to enabling customers to access their subscription video services on a wide variety and growing number of customer-owned retail devices, including, among others, PCs and Macs; iOS devices like iPhones, iPads, and later generation iPods; the Kindle Fire and other Amazon devices; and numerous Android phones and tablets. Through the Xfinity TV Go App,<sup>16</sup> customers have access to Comcast's robust TV Everywhere library, which currently includes 80 live TV channels and more than 22,000 on-demand choices that they can watch anywhere at any time.<sup>17</sup> Customer response has been extremely positive: The Xfinity TV

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<sup>14</sup> See Goldman Sachs, *Company Update: Apple Inc.; A Broad Refresh, With Several Key Platform Enhancements*, Sept. 9, 2015 (noting that the redesigned Apple TV operating system is built on the premise that apps are the future of TV).

<sup>15</sup> Giselle Abramovich, *Apple Leads Streaming Video Battle: ADI*, CMO.com (June 4, 2015), <http://www.cmo.com/articles/2015/6/3/apple-leads-streaming-video-battle-adi.html>.

<sup>16</sup> Comcast is currently in the process of consolidating its Xfinity TV app and Xfinity TV Go app for on-demand and linear programming.

<sup>17</sup> Matt Strauss, *Bringing More Video on Demand Choices to More Customers Through the Comcast-TWC Transaction*, Comcast Voices (Apr. 6, 2015), <http://corporate.comcast.com/comcast-voices/bringing-more-video-on-demand-choices-to-more-customers-through-the-comcast-twc-transaction>. Customers can also stream the same amount of live channels and access more than 477,000 on-demand entertainment choices over a number of different customer-owned devices via the XfinityTV.com website. Outside of Comcast's own apps, Comcast also provides robust authentication services for a wide variety of programming on a number of retail devices, enabling Comcast customers to use their Xfinity TV credentials to access TV Everywhere content on third-party network apps and websites. Currently, Comcast authenticates more than 90 networks such as ESPN, Disney, NBC, Telemundo, HBO, and Showtime across 18 devices like the iPad, Roku, Xbox, and smartphones, among others. See Matt Strauss, *HBO GO, Showtime Anytime Now Available for Xfinity TV Customers on Amazon Fire TV Devices*, Comcast Voices (May 20, 2015), <http://corporate.comcast.com/comcast-voices/hbo-go-showtime-anytime-now-available-for-xfinity-tv-customers-on-amazon-fire-tv-devices>.

Go app has been downloaded more than 17.9 million times (an increase of over 60 percent in the last seven months alone).<sup>18</sup>

Comcast's ongoing transition to IP cable is further expanding customers' device options in viewing their Xfinity TV service beyond their television screen and set-top box. Comcast's cloud-based X1 entertainment operating system, which is built on top of the Reference Design Kit and other open-source technologies,<sup>19</sup> is a platform that allows for rapid innovation, including Comcast's industry-leading talking program guide and other accessibility features as well as access to Comcast's advanced guide features and Internet apps like Pandora. Innovative X1 features are not limited to X1-capable set-top boxes: Xfinity TV customers with X1 DVR with cloud technology can stream their entire X1 video lineup in IP format to mobile devices and computers through the Xfinity TV app when connected to their in-home Xfinity network, and can stream or download their DVR recordings while connected to any Wi-Fi or mobile network.<sup>20</sup>

In addition, Comcast recently launched two IP cable offerings delivered over Comcast's managed network that allow customers to watch live TV and on-demand content on IP-enabled devices via the Xfinity TV app without the need for a Comcast-supplied set-top box at all. One service, Stream, will allow customers who purchase standalone Xfinity Internet service to add a slim cable package for \$15 a month and watch live TV from around a dozen networks –

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<sup>18</sup> See Press Release, Comcast Corp., Comcast Adds More Live Streaming Networks to Xfinity TV Go (Feb. 17, 2015), <http://corporate.comcast.com/news-information/news-feed/comcast-adds-more-live-streaming-networks-to-xfinity-tv-go-as-tv-everywhere-usage-soars> (noting that, as of February 2015, the Xfinity app had been downloaded over 11 million times).

<sup>19</sup> Reference Design Kit ("RDK") is a pre-integrated software platform based upon a collection of open-source modules, including Linux and others, and is licensed on a royalty-free basis to more than 200 entities. See Reference Design Kit, <http://rdkcentral.com/> (last visited Oct. 6, 2015).

<sup>20</sup> See X1 DVR with Cloud Technology: Available Features, <http://customer.xfinity.com/help-and-support/cable-tv/x1-dvr-with-cloud-technology-available-features> (last visited Oct. 6, 2015).

including all major broadcast networks, PEG channels, and a premium network – on laptops, tablets, and smartphones in their home.<sup>21</sup> The other box-free IP cable service, Xfinity on Campus, gives college students access to approximately 80 channels of live TV as well as on-demand content over customer-owned CE devices.<sup>22</sup> The service launched last fall on five college campuses (with trials at several additional schools), and this fall the number of participating schools grew to 27, nearly quadrupling the number of schools in less than a year.<sup>23</sup> Comcast also recently launched Watchable, a cross-platform video service that curates a selection from popular online video networks and shows in an easy-to-use experience accessible on iOS and other devices.<sup>24</sup>

Beyond Comcast's offerings through its existing apps, Comcast is pursuing other innovations to expand further consumers' device options. As described in the DSTAC Report, Comcast is collaborating with others in the industry to further increase customers' viewing options through the Digital Living Network Alliance's VidiPath initiative, which enables customers to stream cable service over the home network to VidiPath-compatible customer-

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<sup>21</sup> Matt Strauss, *Introducing a New Streaming TV Service from Comcast*, Comcast Voices (July 12, 2015), <http://corporate.comcast.com/comcast-voices/a-new-streaming-tv-service-from-comcast>. Stream customers will have access to a robust library of movies and shows on demand, as well as access to TV Everywhere and cloud DVR services. The service is first being launched in Boston, and Comcast plans to make it available in all markets by early 2016.

<sup>22</sup> Press Release, Comcast Corp., *Bringing TV to Every Screen for Colleges and Universities* (Aug. 21, 2014), <http://corporate.comcast.com/news-information/news-feed/comcast-brings-tv-to-every-screen-for-colleges-and-universities>. Students also have access to a robust amount of TV Everywhere content that students can watch over the Internet when they are away from campus.

<sup>23</sup> See Marcien Jenckes, *Students at These College Campuses Will Stream TV for Free This Semester*, Comcast Voices (Sept. 9, 2015), <http://corporate.comcast.com/comcast-voices/xfinity-on-campus-expands-comcast-now-brings-streaming-tv-to-24-colleges-and-universities>.

<sup>24</sup> See Sam Schwartz, *Introducing Watchable: Bringing the Web's Best Networks and Shows – from BuzzFeed, GoPro, Maker Studios, Refinery29, Vice, Vox Media & More – to All Screens, Including the Television*, Comcast Voices (Sept. 29, 2015), <http://corporate.comcast.com/comcast-voices/introducing-watchable>.

owned devices via a downloaded MVPD app.<sup>25</sup> Comcast also is working with TiVo on a downloadable security solution for accessing the Comcast cable service.<sup>26</sup>

Further, while Comcast and other MVPDs have, thus far, focused primarily on developing apps for tablets and smartphones given the popularity of these devices with consumers, Comcast also is developing an HTML5-based app with Encrypted Media Extensions (“EME”), which would enable access to Xfinity service on compatible device platforms without the need for building customized native apps for every device platform. This approach holds particular promise for facilitating delivery of Comcast’s service to Smart TVs, retail set-top boxes, and other TV-connected devices, which currently operate in much more fragmented markets using different operating systems. Comcast also is working towards supporting HTML5 with EME on its X1 platform, so that X1-capable set-top boxes will be able to support a wider range of third-party apps.

**B. Apps Also Advance a Number of Other Pro-Consumer and Pro-Competitive Benefits.**

Aside from expanding customers’ device options, Comcast’s apps-based approach provides a number of other pro-consumer and pro-competitive benefits:

*Xfinity Apps Allow for Rapid Innovation.* With apps, Comcast can quickly deploy new services and feature upgrades through automatic app updates as the service evolves, without the need to change out equipment or a tech visit. This allows Comcast to leverage the latest

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<sup>25</sup> See DSTAC Report, Working Group 2 Report at 14-15 (“WG2 Report”). VidiPath is the product of joint development efforts by MVPDs, programmers, and consumer electronics companies. ABI Research projects that VidiPath Certified devices will be available in approximately 40 percent of all U.S. cable households that subscribe to advanced services by 2016, and 70 percent by 2020. See Press Release, Digital Living Network Alliance, ABI Research Study Now Available on the Role of DLNA’s VidiPath for Transforming Subscription Content in Today’s Multiscreen Environment (May 14, 2015), <http://www.businesswire.com/news/home/20150514006465/en/ABI-Research-Study-Role-DLNA%E2%80%99s-VidiPath-Transforming#.VbpKyjvD-ic>.

<sup>26</sup> See Letter from Kathryn A. Zachem, Comcast Corp., to Marlene H. Dortch, FCC, MB Docket No. 14-57, at 8 (Apr. 13, 2015).

technological advances and deploy them in a more accelerated and cost efficient manner. Customers, in turn, benefit from these innovations more quickly and more conveniently.<sup>27</sup> Comcast, for example, continues to add more advanced content filtering features into its app, such as filtering content with closed captioning, through automatic app updates.

***Xfinity Apps Provide Full Title VI Protections.*** The Xfinity apps used to deliver Comcast's Title VI cable service are designed to fully implement all applicable Title VI protections. These include Emergency Alert Systems, accessibility requirements like closed captioning, consumer privacy protections with respect to customers' viewing history and other personally identifiable information, commercial time limits for children's programming, and parental controls. In addition, as noted, Comcast ensures that its apps deliver all PEG and, where authorized, local broadcast channels.

***Xfinity Apps Honor Programming Agreements and Ensure Robust Security.*** Comcast's apps fully implement all of the requirements set out in its agreements with programmers, such as those regarding geographic restrictions, copy restrictions, and the display and branding of content. Comcast's apps also ensure robust content security (consistent with programmer and studio requirements) by utilizing digital rights management software in conjunction with hardware security elements embedded in many CE devices. Thus, with the apps model, Comcast is able to provide programmers with necessary assurances so they will continue to license the full range of content customers demand.

The apps-based approach is a market-based solution that has proven immensely successful in expanding device choices for consumers to access MVPD, as well as OVD, content. Given the innovations and pro-consumer and pro-competitive benefits under this model,

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<sup>27</sup> See WG4 Report at 166-67.

there is no justification for the Commission to take any new regulatory action in this area, which is likely to disrupt the ongoing progress of the apps-based revolution.

### **III. ALLVID IS A FLAWED AND UNNECESSARY TECHNOLOGY MANDATE AND EXCEEDS THE COMMISSION'S AUTHORITY.**

The AllVid proposal in the DSTAC Report has the potential to undermine the benefits and success of today's app-based offerings. Under this proposal, MVPDs would be forced to overhaul their networks (notwithstanding the consensus view in the Report that such a requirement is unnecessary)<sup>28</sup> and to develop an undefined piece of equipment – all, ultimately, at great costs to consumers – in order to have their service disaggregated into individual piece parts and then reassembled into a new service and presented using the CE device's own interface. Today's AllVid proposal is modeled after a similar concept that the Commission considered over five years ago, and later abandoned in light of the rapid pace of innovation in the video marketplace at that time – innovation that is dwarfed by more recent developments. Given the tremendous success of the apps-based approach in offering consumers unprecedented and growing device choices to receive their MVPD service, the new AllVid proposal makes even less sense today and suffers from many of the same legal infirmities as its predecessor. In short, AllVid would amount to a flawed, costly, and unnecessary government technology mandate.

#### **A. Prior Commission Technology Mandates Have Proven Ineffective and Detrimental to Consumers and Innovation.**

In today's fast-changing video and device marketplaces, AllVid would be the very type of government-imposed, one-size-fits-all technology mandate that has, time and again, proven ineffective and costly to consumers. CableCARD is the major recent example of the government's ill-fated forays into the device marketplace. The retail market for CableCARD-

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<sup>28</sup> See DSTAC Final Report at 2-3.

enabled devices never materialized as the Commission predicted, despite the cable industry's longstanding and ongoing support for CableCARDs.

Comcast, in particular, has a strong track record of supporting such devices,<sup>29</sup> and has deployed over 343,000 CableCARDs for use in retail devices, providing the first CableCARD per retail device at no additional charge.<sup>30</sup> In fact, Comcast has gone above and beyond the Commission's CableCARD requirements by giving TiVo customers access to Comcast's VOD services on TiVo devices (which are otherwise not accessible via retail CableCARD devices) across Comcast's footprint.<sup>31</sup> And Comcast ensures that customers who opt to use retail CableCARD devices are properly supported by providing customers with CableCARD self-installation kits (in addition to a professional installation option) and a dedicated CableCARD activation line.<sup>32</sup> In addition, Comcast is working towards offering a self-service tool for CableCARD activation, an option to direct ship CableCARDs for self-installation, and a single support line for all CableCARD activation, support, and billing questions beginning early next year.

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<sup>29</sup> Comcast has remained committed to providing and supporting CableCARDs in retail devices, notwithstanding the D.C. Circuit's *EchoStar* decision vacating certain CableCARD rules.

<sup>30</sup> See Letter from Neal M. Goldberg, General Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, FCC, CS Docket 97-80, at 6 (July 31, 2015) ("NCTA Letter"). In situations where a customer would receive a set-top box as part of a service package but elects instead to use a retail CableCARD device, Comcast provides a \$2.50 monthly credit to the customer.

<sup>31</sup> See Jeff Baumgartner, *Comcast, TiVo Complete VOD Connection*, Multichannel News (July 9, 2014), <http://www.multichannel.com/news/tv-apps/comcast-tivo-complete-vod-connection/375794>.

<sup>32</sup> Comcast, About CableCARDs, <http://customer.xfinity.com/help-and-support/cable-tv/about-cablecards/> (last visited Oct. 6, 2015); Comcast, How to Get a CableCARD, <http://customer.xfinity.com/help-and-support/cable-tv/how-to-get-a-cablecard> (last visited Oct. 6, 2015). Indeed, TiVo representatives recently praised Comcast's efforts to support CableCARD-enabled retail devices. See Letter from Devendra T. Kumar, Goldberg, Godles, Wiener & Wright LLP, Counsel for TiVo Inc., to Marlene H. Dortch, Secretary, FCC, CS Docket 97-80 et al., at 2 (Aug. 6, 2015) (also noting that Comcast has established an easy-to-access website with information on CableCARDs).

Notwithstanding Comcast's and other cable operators' support, only 617,000 CableCARDS are used in retail devices today (in contrast to the more than 53 million used in operator-supplied set-top boxes pursuant to the integration ban).<sup>33</sup> Meanwhile, the CableCARD requirements for operator-supplied boxes have resulted in well over \$1 billion in completely unnecessary costs for cable operators and their customers.<sup>34</sup> Moreover, as detailed above, consumers are demonstrating a growing preference for accessing MVPD service using apps on smartphones, tablets, smart TVs, and other IP-enabled devices.

This experience is not just limited to CableCARDS. Other technology mandates have likewise proved to be unnecessary – and costly – failures. For example, the mandated inclusion of IEEE 1394 outputs on cable boxes went on for years even after HDMI prevailed in the marketplace (with the Commission waiting nearly a decade before finally permitting cable operators to use an alternative).<sup>35</sup>

Indeed, the Commission itself previously acknowledged that imposing technology mandates “is perilous because regulations have the potential to stifle growth, innovation, and technical developments at a time when consumer demands, business plans, and technologies remain unknown, unformed or incomplete,” and warned of the dangers of “fixing into law the current state of technology.”<sup>36</sup> As the CableCARD and IEEE 1394 experiences help demonstrate, technology mandates are not agile enough to respond to changes in the marketplace

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<sup>33</sup> See NCTA Letter at 1; see also WG4 Report at 163.

<sup>34</sup> See NCTA, *Now Is the Time for Congress To Eliminate the Integration Ban* (Mar. 31, 2014), <https://www.ncta.com/platform/public-policy/now-is-the-time-for-congress-to-eliminate-the-integration-ban/>.

<sup>35</sup> See *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, Third Report and Order and Order on Reconsideration, 25 FCC Rcd. 14657 ¶ 43 (2010) (“We conclude that the best step we can take . . . is to modify our interface rule to require cable operators to include an IP-based interface . . . without specifying a physical interface.”).

<sup>36</sup> *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CS Docket 97-80, Report and Order, 13 FCC Rcd. 14775 ¶¶ 15-16 (1998).

and technology, and threaten the innovation and dynamism which are hallmarks of today's app-centric video marketplace.

**B. AllVid Exceeds the Commission's Authority.**

Congress directed DSTAC to report on downloadable security as part of STELAR,<sup>37</sup> and the Report issued in late August fulfilled that requirement with its detailed discussion of downloadable security methods. However, the Report goes beyond its congressionally-directed mission by including the AllVid proposal, which would require MVPDs to break apart the programming, features, and functions that make up their distinctive services so any CE manufacturer could then selectively reassemble the parts into a new service using the manufacturer's own interface. In addition, as discussed below, given that AllVid would require MVPDs to redesign their networks and adopt other measures at substantial cost, the proposal would contravene Congress's directive that any downloadable security regime not be "unduly burdensome."<sup>38</sup> It bears emphasis that the very same provision of STELAR that authorized DSTAC also repealed the integration ban – a technology mandate that had cost consumers well over \$1 billion since its adoption.<sup>39</sup> Yet, AllVid proponents are now asking the Commission to pursue this far more expansive and costly AllVid mandate that is nowhere contemplated in STELAR and is contrary to the deregulatory thrust of the legislation.<sup>40</sup>

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<sup>37</sup> See STELAR § 106(d).

<sup>38</sup> See *id.*

<sup>39</sup> See *id.* § 106(a).

<sup>40</sup> In fact, during consideration of STELAR in Congress, the Senate Commerce Committee did not adopt a proposed amendment directing the Commission to conduct a rulemaking on AllVid after the DSTAC report was released. See John Eggerton, *STAVRA Bill Passes Senate Commerce*, Multichannel News (Sept. 17, 2014), <http://www.multichannel.com/news/policy/stavra-bill-passes-senate-commerce/383940>; John Hendel, *Senate Commerce Clears STELA Reauthorization Bill with Little Fanfare*, Communications Daily (Sept. 18, 2014); see also John Eggerton, *Amendments for Satellite Bill Teed Up*, Broadcasting & Cable (Sept. 15, 2014), <http://www.broadcastingcable.com/news/washington/amendments-satellite-bill-teed/134062>.

The AllVid proposal also would exceed the Commission’s authority under Section 629.<sup>41</sup> The navigation device statute authorizes the Commission to promote a market for retail devices that receive an MVPD’s service, but provides no basis to impose AllVid’s unbundling mandate. Indeed, the legislative history of Section 629 confirms Congress’s intent to limit the scope of the statute and the Commission’s rulemaking authority to promoting retail devices that receive services “provided by” MVPDs.<sup>42</sup> Moreover, where Congress has imposed such unbundling mandates, it has done so explicitly.<sup>43</sup> That is clearly not the case here.<sup>44</sup> And Congress further underscored the narrow grant of authority in Section 629 by directing in the legislative history that the Commission “avoid actions which could have the effect of freezing or chilling the development of new technologies and services.”<sup>45</sup> As detailed below, AllVid would have precisely such harmful effects, as well as jeopardizing the security of MVPD services in contravention of Section 629(b).<sup>46</sup>

The D.C. Circuit expressly warned the Commission in the 2013 *EchoStar* decision against “unbridled” interpretations of Section 629.<sup>47</sup> In invalidating encoding and other rules

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<sup>41</sup> See 47 U.S.C. § 549. The various legal infirmities with AllVid-type mandates have been catalogued in the Commission’s 2010 proceeding. See AT&T Comments, MB Docket No. 10-91 et al., at 43-49 (July 13, 2010); NCTA Comments, MB Docket No. 10-91 et al., at 47-50 (July 13, 2010); Verizon Comments, MB Docket No. 10-91 et al., at 21-24 (July 13, 2010); AT&T Reply Comments, MB Docket No. 10-91 et al., at 37-43 (Aug. 12, 2010); NCTA Reply Comments, MB Docket No. 10-91 et al., at 30-32 (Aug. 12, 2010); Verizon Reply Comments, MB Docket No. 10-91 et al., at 14-17 (Aug. 12, 2010); see also WG4 Report at 149.

<sup>42</sup> See H.R. Rep. No. 104-204, at 112 (1995) (noting that broader language in an earlier version of Section 629 that would have promoted access to third-party services was rejected in the final version and narrowed to cover only access to services provided by MVPDs).

<sup>43</sup> See, e.g., 47 U.S.C. § 251(c)(3).

<sup>44</sup> In fact, pursuant to Section 624(f) of the Communications Act, the Commission is barred from imposing “requirements regarding the provision or content of cable services, except as expressly provided in [Title VI].” *Id.* § 544(f)(1).

<sup>45</sup> H.R. Rep. No. 104-458, at 181 (1996).

<sup>46</sup> See 47 U.S.C. § 549(b); see also discussion *infra* p.16.

<sup>47</sup> See *EchoStar*, 704 F.3d at 997.

adopted previously pursuant to the Commission’s Section 629 authority, the court stated that the Commission “cannot simply impose any regulation . . . as a means of promoting the commercial availability of navigation devices, no matter how tenuous its actual connection to [Section] 629’s mandate” and that the Commission’s authority outlined in the statute “is not as capacious as the agency suggests.”<sup>48</sup> The disaggregation mandate contemplated by AllVid proponents would go well beyond the rules at issue in *EchoStar*.

**C. The DSTAC Report Catalogues the Numerous Technical and Other Flaws with AllVid.**

AllVid is riddled with a number of other serious flaws that the Commission must not ignore. While the DSTAC Report contains a fuller, more detailed critique of the AllVid proposal,<sup>49</sup> below are a few of the most notable shortcomings of this approach:

***Increased Security Risks.*** Today, with the apps-based approach, service providers and device manufacturers have a number of competitive choices for content protection technologies, and this choice and diversity allow them to stay ahead of new and growing security threats. The AllVid proposal, however, would limit these content protection choices and pose serious potential security risks, leaving content vulnerable to piracy and thereby threatening the economics that support the availability of quality programming.<sup>50</sup> Specifically, the proposal contemplates a single common security interface to retail devices for all MVPDs: DTCP-IP. A mandated link-layer protection for all MVPDs would undermine the competitive marketplace for security solutions, create a single, national point of attack vulnerable to hackers, and impose an

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<sup>48</sup> *Id.* at 997-98.

<sup>49</sup> *See* WG4 Report at 144-65.

<sup>50</sup> As noted, Section 629 expressly forbids rules that would jeopardize security. *See* 47 U.S.C. § 549(b) (“The Commission shall not prescribe regulations . . . which would jeopardize security of multichannel video programming and other services offered over multichannel video programming systems, or impede the legal rights of a provider of such services to prevent theft of service.”).

inflexible security standard that may not be able to respond as quickly as today's various and diverse security systems as such attacks become more sophisticated and complex. Content protection – or lack thereof – is one of the biggest problems facing the programming industry today, and it is essential that the Commission acknowledge this critical concern and not unwittingly contribute to the billions of dollars lost to IP theft each year.

***Threat to Quality Programming Model.*** Consumers today have immense choice when it comes to high-quality video programming, but the AllVid mandate would put this highly successful video ecosystem at risk. MVPDs and programmers negotiate licensing agreements that detail such terms as the particular channel position, tier placement, acceptable advertising, scope of distribution, security requirements, and presentation of content.<sup>51</sup> These agreements give content creators the assurances they need to negotiate with advertisers and to secure funding. But AllVid “fails to enforce the requirements from content providers.”<sup>52</sup> AllVid proponents on DSTAC stated that CE manufacturers are not necessarily bound by the licensing agreements between MVPDs and programmers, and therefore may have the ability to block or overlay advertisements, or to ignore other negotiated terms.<sup>53</sup> Such actions would threaten the economic model that supports and helps ensure the supply of diverse, high-quality programming.

***Unnecessary Costs to Consumers.*** Unlike the apps-based approach, which already exists and has been widely deployed and adopted in the marketplace, AllVid is a purely hypothetical concept that would impose very real, but unnecessary, costs. Notwithstanding the fact that the DSTAC Final Report agreed that it is “not necessary to disturb” MVPDs’ diverse delivery networks and conditional access systems and found it “unreasonable to expect that MVPDs will

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<sup>51</sup> WG4 Report at 161.

<sup>52</sup> *Id.* at 155.

<sup>53</sup> *Id.* at 155-56.

modify their access networks to converge on a single common security solution,”<sup>54</sup> the AllVid proposal would effectively mandate these very types of disruptions and modifications. AllVid requires a Virtual Headend System that does not exist and the development of brand new standards and protocols, which would need to be agreed upon, tested, and certified prior to implementation and deployment. Moreover, the AllVid proposal calls for a redesign of MVPDs’ network architectures, overhaul of their delivery infrastructure, and installation of new, yet-to-be-invented on-premises equipment.<sup>55</sup> And the costs associated with implementing AllVid would ultimately be borne by MVPD subscribers – expenses that are unwarranted given that MVPD apps are already delivering service to millions of retail devices.

***A Step Backwards for Energy Efficiency.*** Under AllVid, consumers would have to rely on additional servers and on-premises devices to receive their MVPD service on retail devices.<sup>56</sup> Rather than simplify home networks as the apps-based approach does, AllVid could actually complicate such networks and require *more* equipment for customers, increasing energy consumption. All told, the new AllVid equipment would add more than \$1.6 billion in increased residential electric costs and nine million metric tons of additional greenhouse gas emissions each year, and threatens to undermine the progress Comcast and others in the industry have made with respect to energy efficiency.<sup>57</sup>

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<sup>54</sup> DSTAC Final Report at 2-3.

<sup>55</sup> See WG4 Report at 148, 157-58.

<sup>56</sup> See *id.* at 151.

<sup>57</sup> As noted above, Comcast’s IP-delivered cable services like Stream and Xfinity on Campus accessible via Xfinity apps on retail devices are eliminating the need for a Comcast-supplied set-top box at all, reducing energy costs and consumption. In addition, less than two years ago, Comcast and other MVPDs, device manufacturers, and energy efficiency advocates, entered into a voluntary set-top box energy conservation agreement, and these efforts have saved American consumers more than \$500 million in energy bills and avoided nearly three million metric tons of carbon dioxide emissions in these last two years alone. See Press Release, NCTA, Independent Audit Finds Consumers Have Saved More Than \$500 Million from Energy Efficient Set-Top Boxes (Aug. 6, 2015), <https://www.ncta.com/news-and-events/media-room/content/independent-audit-finds-consumers-have-saved-more->

***Ability to Circumvent Consumer Protection Regulations.*** Regulated MVPDs like Comcast must abide by a number of consumer protection regulations when providing their MVPD services such as Emergency Alert System requirements<sup>58</sup> and privacy protections.<sup>59</sup> Comcast fulfills these obligations when it delivers its Title VI cable service to customer-owned devices via its Xfinity apps.<sup>60</sup> But under AllVid, consumers are no longer guaranteed these protections because CE manufacturers are manifestly *not* bound by the same consumer protection obligations.<sup>61</sup>

***Loss of Xfinity TV Service Features.*** The apps-based approach allows Xfinity customers to access their service from the device of their choice while still getting the Xfinity experience. In contrast, AllVid would allow CE manufacturers to pick and choose which service features to deliver on their device, resulting in the loss of features MVPDs like Comcast use to distinguish themselves among competitors, improve service, and provide value to their customers. Thomas Riedl, the head of Google's Android TV, acknowledged the importance to service providers of ensuring the delivery of such distinctive, customer-friendly features: “[W]hat’s crucial [for service providers and content owners] is they want to deliver the best user experience and make sure that the content they provide to the user is displayed exactly as they broadcast it.”<sup>62</sup> As with

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[500-million-energy-efficient-set-top-boxes](#). Between 2009 and 2014, Comcast reduced the annual energy consumption of a typical DVR set-top box by around 30 percent, and select Comcast non-DVR set-top boxes used 53 percent less energy on average in 2014 than comparable boxes in 2009. Power consumption across Comcast's overall fleet of deployed devices has been reduced by approximately 515 billion watt hours per year within the same time period, which equates to a reduction of approximately 355,000 metric tons of carbon dioxide each year. *See* Comcast 2015 Corporate Social Responsibility Report at 39, 41, <http://corporate.comcast.com/images/2015-Corporate-Social-Responsibility-Report.pdf>.

<sup>58</sup> *See* 47 C.F.R. § 76.1714; *see also id.* § 11.1 *et seq.*

<sup>59</sup> *See* 47 U.S.C. § 551.

<sup>60</sup> *See* discussion *supra* Section II.B.

<sup>61</sup> *See* WG4 Report at 160, 167-68.

<sup>62</sup> *Id.* at 141 (quoting Thomas Campbell, *Google: “Google TV has evolved into Android TV,”* IP&TV News (Apr. 21, 2015), <http://www.iptv-news.com/2015/04/google-google-tv-has-evolved-into-android-tv/>).

consumer protections, MVPDs would no longer be able to ensure the quality of the user experience under AllVid.

***Customer Service Confusion.*** AllVid would confuse and frustrate customers. If there is a problem with a CE manufacturer's AllVid implementation or user interface, the customer would likely either not know who is responsible for resolving the issue or would, by default, look to the MVPD for assistance. However, unlike with the apps-based approach where MVPDs can troubleshoot any issues with their own apps, MVPDs may be ill-equipped to resolve AllVid implementation issues that are within the CE manufacturer's control, particularly given the number of different CE devices in the market and various AllVid implementation configurations, and may have no choice but to direct the customer to the manufacturer. Moreover, AllVid would strip out the customer service and support features and diagnostics that many MVPDs integrate into their own user interfaces.<sup>63</sup> Improving the customer experience is of utmost importance to Comcast, and the company has made significant strides in customer service.<sup>64</sup> AllVid, however, could undermine these efforts.

#### **IV. CONCLUSION**

The apps-based approach has a proven track record of success, and is meeting consumer demand for expanded device options for accessing their MVPD service without the need for government intervention. In contrast, AllVid would mandate an inflexible, costly, and completely unproven technological solution. Comcast respectfully requests that the Commission take no further action on this flawed proposal.

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<sup>63</sup> See WG4 Report at 156-57.

<sup>64</sup> See Press Release, Comcast Corp., Comcast Creates More Than 5,500 New Jobs as Part of Multi-Year Customer Experience Transformation (May 5, 2015), <http://corporate.comcast.com/news-information/news-feed/customer-experience-transformation>.

Respectfully submitted,

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