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**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)

REPLY COMMENTS OF THE CONSUMER VIDEO CHOICE COALITION

SUMMARY

Congress did not direct the FCC to convene the Downloadable Security Technical Advisory Committee (DSTAC) merely to engage in a thought exercise that could never be implemented. Congress instructed that the DSTAC’s Final Report recommend technologies “designed to promote the competitive availability of navigation devices in furtherance of Section 629 of the Communications Act.”¹ The record shows that the competitive navigation proposal as described and supported by public interest groups, competitive network operators, and existing and potential new entrant device manufacturers can achieve that end if the Commission accepts this recommendation. Only the competitive navigation proposal has the technological and marketplace characteristics necessary to create a competitive and innovative market for consumer video devices that can access MVPD programming.

The FCC should move expeditiously to initiate a rulemaking to implement the proposal and assure the benefits of competition in a navigation device market based on Internet Protocol

¹ STELA Reauthorization Act of 2014, Pub. L. No. 113-200, 128 Stat. 2059, § 106, 128 Stat. 2059, 2063 (2014) (“STELAR”).

(“IP”) technology. Members of the Consumer Video Choice Coalition join here to reiterate their support for this course of action, to elaborate upon the competitive navigation proposal’s merits, and to correct mischaracterizations of the competitive navigation proposal.

I. THE FCC SHOULD ADOPT AN UPDATED STANDARD THAT PROMOTES TRUE COMPETITION IN NAVIGATION DEVICES AS ENVISIONED BY SECTION 629

The competitive navigation solution would promote a vibrant marketplace by creating the necessary groundwork for innovation and differentiation. Across a wide range of products, the consumer electronics industry is highly competitive, offering consumers numerous choices for devices. MVPD subscribers, though, are for the most part still obligated to lease set-top equipment because, if they wish to receive all services from an operator, they have few options other than to lease whatever device is made available to them by that operator.² The competitive navigation solution supports consumer choice in devices and user interfaces, and can support choice among competing MVPDs as well. As was noted in the DSTAC Recommendations, the major advances in device presentation and storage and user control over MVPD services have originated in competitive rather than in leased products.³

In a competitive marketplace, companies must create products that consumers actually want in terms of, among other things, their feature set, cost, design, and interoperability.

Because consumer preferences are not uniform, a competitive marketplace is more likely to

² Indeed, some cable operators have been found to be liable for requiring their customers to lease set-top boxes in order to receive all of the content they have paid for. *See* Chris Morran, *Jury: Cox Violated Antitrust Laws by Forcing Customers to Rent Set-Top Boxes* (Oct. 30, 2015), at <http://consumerist.com/2015/10/30/jury-cox-violated-antitrust-laws-by-forcing-customers-to-rent-set-top-boxes/>; *see also* *Federal Judge Rejects \$15.5 Million Settlement of Comcast Set-top Box Litigation*, *Comm. Daily*, Nov. 9, 2015 (proposed settlement for class action lawsuit “alleging [Comcast] wrongfully tied subscribing to its Premium Cable tier to rental of a Comcast set-top box”).

³ Report of Working Group 4 to DSTAC, Aug. 4, 2015, at 180-82, *available at* <https://transition.fcc.gov/dstac/wg4-draft-report-08042015.pdf>.

produce a variety of different devices, each optimized for particular market segments. One customer may value price above all else. Another, mobility. A different customer might want a smart TV that seamlessly integrates all navigation features. Another customer might prefer a device that is most compatible with some broader computing ecosystem (*e.g.*, iOS, Windows, or Android). A different customer might want a device that, in addition to accessing their subscription television content, is a powerful games console, or contains multiple terabytes of storage for recorded programs.

MVPD-provided solutions (including the MVPD-supported app approach) are unlikely to support this range of consumer-determined outcomes. Cable-provided set-top boxes have features that are constrained by the MVPD's own business models and incentives. For instance, MVPD devices are less likely to allow consumers to compare their own options with others, such as OTT sources, to which the consumer has rights. MVPD subscribers are paying for information about and access to programming. Nothing in the competitive solution would disable this information or access. Conversely, no device for which consumers pay should *block* information about programming they are entitled to receive, or make comparison and choice more difficult. Competition means enabling consumers to search across all programming sources to compare their options, and choose the best one on a competitive basis. The leased box-plus-app approach recommended by MVPDs needlessly removes or impairs this ability.

II. COMMENTS FROM MVPDS AND THEIR VENDORS DEMONSTRATE THAT THEY ARE NOT SERIOUS ABOUT ENABLING A COMPETITIVE MARKET

Chairman Wheeler has frequently stated that increasing competition is of “paramount” concern and a “foundational requirement for the modern FCC.”⁴ However, competition has remained elusive in the market for video navigation devices. Senators Markey and Blumenthal recently found that approximately ninety-nine percent of MVPD subscribers use set-top boxes leased from their MVPD.⁵ Indeed, the National Cable & Telecommunications Association (NCTA) recently noted that the nation’s nine largest cable operators have deployed over 53,000,000 CableCARDs in devices that they leased to their subscribers, but only about 617,000 CableCARDs for retail devices.⁶ In an open marketplace, competitive suppliers surely would have a much greater presence than that 85:1 ratio suggests.

MVPDs ask the Commission to mistake dispersion for choice.⁷ They list examples of streaming media players, gaming consoles, mobile devices, and other connected devices through which customers can access OTT video, plus particular MVPD content on an ancillary basis.⁸ The missing fact, of course, is that virtually all consumers still have one primary way to watch

⁴ Prepared Remarks of FCC Chairman Tom Wheeler, The Brookings Institution, at 4 (June 26, 2015).

⁵ Press Release, *Markey, Blumenthal Decry Lack of Choice, Competition in Pay-TV Video Box Marketplace* (July 30, 2015), available at <http://www.markey.senate.gov/news/press-releases/markey-blumenthal-decry-lack-of-choice-competition-in-pay-tv-video-box-marketplace>. As Senator Blumenthal remarked: “The average household is forced into fees of more than \$200 a year on set-top boxes — an expense that is unjust and unjustifiable. As the world becomes increasingly connected and technology advances, new innovations must be able to break into the cable marketplace and provide the vigorous competition that drives down prices for consumers. Consumers deserve competitive options in accessing technology and television — not exorbitant prices dictated by monopoly cable companies.” *Id.*

⁶ Letter from Neal M. Goldberg, Vice President and Gen. Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80 (July 31, 2015).

⁷ See NCTA Comments at 2 (“Consumers have never had more choices for different providers, different packages, and different devices for video services.”).

⁸ See NCTA Comments at 2; Comcast Comments at 2; AT&T Comments at 2.

MVPD content at home — the leased set-top box. In their praise of the *status quo*, MVPD supporters have said that “MVPDs are constantly innovating to attract and retain consumers.”⁹ But, as EFF explained, “MVPDs and their licensed equipment manufacturers have faced little competitive pressure to improve their end-user hardware, and have nearly complete control over the user experience.”¹⁰ MVPDs supply their customers with an MVPD-preferred set-top box, so consumers often do not even know they can use another device to access content through their MVPD. This also lets MVPDs continue to control how users view their content.

Regardless of the fact that consumers spend almost \$20 billion per year leasing set-top boxes, which generally are considered among the least sophisticated and usable CE devices, MVPDs maintain that the market is working and the FCC should do nothing and “call it a day.”¹¹ This would be a big mistake. Congress mandated that the Commission convene a working group of experts and stakeholders from a wide range of perspectives “to identify, report, and recommend performance objectives, technical capabilities, and technical standards of a not unduly burdensome, uniform, and technology- and platform-neutral software-based downloadable security system designed to promote the competitive availability of navigation devices in furtherance of Section 629 of the Communications Act.”¹² Simply “call[ing] it a day” would be contrary to Congress’ goals and create public interest harms.

According to the MVPDs, the solution for a more competitive marketplace is an “apps approach” because apps already “are revolutionizing the way consumers access video programming.”¹³ ARRIS claims that the “apps approach” is the wave of the future because “on

⁹ American Cable Association Comments at 12.

¹⁰ Electronic Frontier Foundation Comments at 2.

¹¹ AT&T Comments at 22.

¹² STELAR § 106(d).

¹³ Comcast Comments at 5.

average, there are four retail devices with available MVPD apps in consumer homes, well exceeding the 2.4 MVPD set-top boxes per home.”¹⁴ However, the apps approach is ancillary to, and not competitive with, leased set-top boxes — and support for apps can be withdrawn at any time.¹⁵ As the CVCC has explained, the apps approach will further entrench MVPD control of how consumers access content.¹⁶ Although the apps approach would allow consumers to access programming on additional devices, it would not foster the competition and choice envisaged by Section 629. As AT&T admits, the apps approach would do no more than “ensure that the MVPD’s subscribers will receive their MVPD service with the ‘look and feel’ intended by their MVPD.”¹⁷ NCTA also poses a false choice between control and competition: “Apps assure that channels and services are presented as intended and that the presentation carries the content, features, brand, look and feel of the MVPD and its content providers.”¹⁸

Yet, crucially, an MVPD-provided app, as discussed and illustrated in the course of the DSTAC discussion, provides for nothing more than display. The actual presentation of what MVPD providers characterized as their “service” was presented in the context of leased gateways and set-top boxes, through reliance on standards-based technologies, primarily DLNA and VidiPath. The competitive recommendations, as discussed below, derive from the same core of standards and guidelines, with the added ingredient of competition and user choice in the manner in which all options, including MVPD service, are presented.

¹⁴ ARRIS Comments at 3.

¹⁵ CVCC Comments at 14 n.20 (citing examples of Comcast and AT&T withdrawing support for Xbox 360 apps); *see also* Jeff Baumgartner, *DISH Stops Sales of ‘Virtual Joey’* (Oct. 2, 2015), at <http://www.multichannel.com/news/content/dish-stops-sales-virtual-joeey/394246>.

¹⁶ CVCC Comments at 12.

¹⁷ AT&T Comments at 8.

¹⁸ NCTA Comments at 18.

III. MVPDS PRESENT A WILDLY MISLEADING PICTURE OF THE PROPOSED COMPETITIVE NAVIGATION SOLUTION

MVPDs argue that the proposed competitive navigation solution, which NCTA insists on dubbing “AllVid,”¹⁹ will lead to all manner of horrors, from “disaggregation” to replacement of commercials to consumer confusion.²⁰ Arguments that any change to the *status quo* will lead to consumer confusion and marketplace disruption are specious. In fact, MVPDs want to foreclose the possibility of any competitive solution being permitted.

Indeed, the clearest indication that the MVPDs’ arguments lack merit is that, while competitive retail devices have not been able to gain a substantial foothold under the CableCARD regime, devices from makers like TiVo and Hauppauge do exist today without any of the troubles described by the MVPDs. For example, TiVo has been marketing and selling retail navigation devices for over a decade — devices that feature an improved, competitive UI and that allow consumers to replace the set-top box they would otherwise have to lease from the MVPD. TiVo’s UI allows consumers to search across MVPD and online video content from sources such as Netflix and Hulu. Importantly, TiVo’s products have existed for years without consumer confusion, copyright violations, substituting of advertisements, eroding consumer protection requirements, or any of the other negative consequences imagined by the MVPDs.

And yet, the MVPDs argue that the only viable option going forward is a perverse situation in which advances in technology would lead to consumers having even fewer options than they do today. While the CableCARD standard is limited by license to a unidirectional implementation and is not a form factor to be emulated in a successor solution, the functionality enabled by CableCARD is a useful baseline for what is achievable in a successor solution. There

¹⁹ See Opposition to Motion for Extension of Time of Public Knowledge et al, MB Docket No. 15-64, at 3 (Oct. 29, 2015).

²⁰ NCTA Comments at 26-37; AT&T Comments at 15-22; Comcast Comments at 16-20.

is no reason for a successor solution to not allow features such as competitive UIs and integrated search that are available in retail navigation devices today.

Finally, MVPDs ignore that the proposed competitive navigation solution is compatible with an apps approach. The two approaches do not need to be treated as mutually exclusive alternatives, as the MVPDs would have it. To the extent that the apps approach has advantages, it will remain an option for consumers, as will leasing set-top boxes from MVPDs. In a world with competitive navigation options, consumers will not lose any apps they use today to watch programming on tablets, smartphones, etc. The competitive navigation approach simply provides consumers greater choice among retail navigation devices, including products that can offer differentiated user interfaces and search and storage features, as intended by Section 629.

IV. THE DSTAC VIRTUAL HEADEND AND COMPETITIVE USER INTERFACE RECOMMENDATIONS ARE BASED ON ESTABLISHED STANDARDS, GUIDELINES, AND SPECIFICATIONS THAT CAN BE READILY IMPLEMENTED IN BOTH SERVICES AND COMPETITIVE DEVICES

On October 20, 2015, Coalition member Public Knowledge, with technical input from DSTAC participants Amazon, Google, and Hauppauge, filed with the Commission a technical paper demonstrating the manner in which referenced technical standards, guidelines, and specifications can comprise a system that can be readily and securely implemented in operator systems and competitive devices.²¹ On October 27, NCTA argued that the described system is a revival of “AllVid,” rather than the DSTAC Recommendations on which comment is sought.²² The October 27 objection was especially ironic and unpersuasive, for NCTA’s October 8 Comments had also dubbed the DSTAC Recommendations “AllVid,” and had further insisted

²¹ Letter from John Bergmayer, Senior Staff Attorney, Public Knowledge, to Marlene H. Dortch, MB Docket No. 15-64, Attachment (Oct. 20, 2015).

²² *Request for Extension of Reply Comment Deadline to Address Newly Filed Proposal*, MB Docket No. 15-64 (Oct. 27, 2015).

that it was unimplementable “Vaporware.” By demonstrating the feasibility of the competitive DSTAC Recommendations, Public Knowledge’s October 20 paper illustrates that *both* the NCTA’s “AllVid”²³ and “vaporware”²⁴ characterizations are unsound.

Relies on existing standards and guidelines. The October 20 filing illustrates that, rather than requiring any reinvention or re-architecture or new standardization as NCTA and others claim, the competitive DSTAC Recommendations can be implemented through combinations of existing UPnP standards and DLNA guidelines. The feasibility of a home network solution using UPnP standards and DTCP link protection to securely present system programming over a competitive (SageTV) graphical user interface *was demonstrated at CES in 2008* by DISH and EchoStar.²⁵

As the October 20 filing indicates, the competitive DSTAC description of a Virtual Headend most closely resembles DLNA-reliant VidiPath²⁶ as well as server technologies described in DLNA CVP-2 Guidelines, which are already referenced by the FCC.²⁷ Rather than requiring network re-architecture, new standards proceedings, etc., it is necessary only for an

²³ “AllVid” is a term first used by the Commission in its National Broadband Plan, and again in a Notice of Inquiry, to describe IP-based gateway solutions generally. As now employed by NCTA, it apparently applies to any IP-based solution that NCTA opposes, but not to any IP-based solution that an NCTA member plans. *See, e.g.,* Mari Silbi, *TWC Steps Toward All-IP TV*, Light Reading, Oct. 29, 2015, http://www.lightreading.com/video/video-services/twc-steps-toward-all-ip-tv/d/d-id/719018?itc=lrnewsletter_cabledaily. (“[A]n underlying current in the business is the potentially dramatic impact that Time Warner Cable could experience as it transitions to all-IP video delivery.”)

²⁴ NCTA at 5, 13, 26, 37, 46.

²⁵ *See* <https://www.youtube.com/watch?v=m0R8iJImPgg>.

²⁶ Comcast, for example, already supports Vidipath clients on networks via the Xg1 DVR, and provides instructions on how to connect devices: <http://customer.xfinity.com/help-and-support/cable-tv/vidipath-overview/>.

²⁷ 47 C.F.R. § 76.640(b)(4)(iii). *See, e.g., In the Matter of TiVo Inc. Petition for Clarification or Waiver of 47 C.F.R. 76.640(b)(4)(iii), Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices, MB Docket No. 14-146, CS Docket No. 97-80, Memorandum Opinion and Order ¶¶ 3-6 and n. 14, May 21, 2015.*

MVPD's server to be compliant with VidiPath server guidelines and necessary content discovery elements. MVPD deployment of a guidelines-compliant VidiPath server — particularly as VidiPath clients are already widely deployed — hardly requires reinvention of the wheel. So if, as NCTA has variously and recently claimed, the virtual headend / competitive UI description in the DSTAC recommendations is “AllVid” and the October 20 description in terms of CVP-2 and VidiPath guidelines is also “AllVid,” then NCTA's own favored DSTAC gateway, set-top, and app recommendations, all based on IP implementations of the same technologies, standards, and guidelines, *must also be “AllVid.”*

The competitive solution reserves interactive elements. Proprietary network technologies can be supported in the server as well as the client. Indeed they must be if a MVPD is to move entirely to a box-free IP-based system.²⁸ For example, when a client device asks the virtual headend for a channel change via a standardized command, the virtual headend can implement any specific network technology to accomplish this. Indeed a VidiPath gateway now commonly supports clients across cable and satellite operators by translating the channel change request into whatever is required for those different networks. The client does not need to know the details of any network technology that is specific to the operator. This abstraction is fundamental to both the competitive DSTAC Recommendation and to VidiPath itself. It inherently allows client devices to operate across MVPDs and across VidiPath servers.

Does not require new servers or tuning adapters. The virtual headend neither specifies nor requires additional hardware or the consumption of any more power. It simply adds capabilities to whatever solution is offered by the MVPD. Both the competitive and the MVPD-supported DSTAC recommendations envisage the wired MVPD as choosing whether to require

²⁸ See Silbi, n. 23, *supra*. (“TWC wants the New York trial to be the first step in a transition to all-IP, set-top-free cable.”).

any reception hardware in the home. The only difference is whether the consumer's choice of device is mandated or otherwise controlled by the MVPD on a non-competitive basis.

Just as in the MVPD-supplied, non-competitive portion of the DSTAC Recommendations, an MVPD in all cases has the option of requiring a termination device in the home. As in the MVPD proposals, consumers will be able to choose whether or not to employ a local termination and storage device. The only difference is whether the device must be leased from the MVPD or proprietarily licensed on an ad hoc basis, or whether the device is subject to competition and can provide a competitively selected user interface that integrates MVPD and other content into a single menu. Indeed, to the extent the consumer may choose a solution integrated into another device such as a game console, the result may be fewer components and less use of power. Unlike the requirement of a leased set-top box, there is no aspect of the competitive solution that mandates redundancy or frustrates consumer choice.

Specifies a more secure interface than HDMI/HDCP. In claiming that any “single point of attack” attracts concentrated efforts by pirates, and is hence unacceptable, NCTA proposes a standard of impregnability that the cable industry itself has not adopted. In particular, NCTA ignores that a single secure interface, HDMI, is now universally relied upon, *despite* the fact that the HDCP content protection for that interface — unlike DTCP — is known to have been “hacked.”²⁹ DTCP, moreover, is accepted by CableLabs and relied upon by both cable and satellite operators. As the Commission has been advised,³⁰ DTCP is more flexible and adaptable than was claimed in MVPD-provided text of the DSTAC Recommendations, and can

²⁹ See, e.g., T.C. Sottek, *HDCP cracked using \$250 of gear and a lot of talent*, The Verge, Nov. 25, 2011, <http://www.theverge.com/2011/11/25/2586097/germans-crack-hdcp>; Joshua Topolsky, *Confirmed: Intel says HDCP 'master key' crack is real*, Engadget, Sept. 16, 2010, <http://www.engadget.com/2010/09/16/confirmed-intel-says-hdcp-master-key-crack-is-real/>.

³⁰ Digital Living Network Alliance Comments at 3-6.

further adapt as necessary. Nor does a competitive solution facilitate the hosting of “pirate” content any more than does a DOCSIS modem provided and supported by operators to support consumer home networks.

CONCLUSION

The competitive DSTAC proposals comprise a uniform and not unduly burdensome solution that fulfills the requirements of Section 629. The Commission should move forward expeditiously to implement them.

Respectfully submitted,

/s/

CONSUMER VIDEO CHOICE COALITION

Ceton Corp.
Common Cause
Computer & Communications Industry Association
Consumer Action
Google Inc.
Hauppauge
INCOMPAS³¹
New America’s Open Technology Institute
Public Knowledge
Silicondust USA, Inc.
VIZIO
Writers Guild of America, West

November 9, 2015

³¹ COMPTTEL is now doing business as INCOMPAS.