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Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street S.W.  
Washington, DC 20554

**Re: Notice of Ex Parte Presentation, MB Docket 15-64**

Dear Ms. Dortch:

As reported in our ex parte notice of November 23, 2015, the National Cable & Telecommunications Association (NCTA) and AT&T/DIRECTV committed to gather additional information in response to a request by the Media Bureau for more information on the role of licensing under DFAST and potential use with VidiPath.

As discussed below, one reason why TiVo and other one-way UDCPs have not rearranged cable operator channel lineups, replaced advertising, or otherwise altered the cable service is that CableCARD devices like TiVo have always operated under license requirements that they not impede or impair the delivery of any services offered over the cable system, with express contractual responsibilities to content providers and cable operators. CableCARDS and the applicable license were designed more than a decade ago and only for reception of one-way linear cable channels from digital cable systems.

Today MVPDs and online video distributors like Netflix use apps and direct business-to-business agreements with device manufacturers to deliver their modern interactive service to retail devices while meeting the individually-negotiated rights obtained from content providers.

VidiPath uses a combination of DLNA guidelines, commercial DRMs, security certificates, DLNA testing and certification and an MVPD-supplied app to protect access and rights of copyright owners, to ensure the delivery of the MVPD service as intended and to facilitate adoption by retail manufacturers. Each MVPD relies on its *app* to protect its arrangement, appearance, branding, advertising and other features. VidiPath does not include “hook IP” on which MVPDs could base an additional technology license.

### **DFAST License**

MVPDs enter into contracts and licenses with content providers for distribution of content, as do online video distributors like Netflix, Amazon, and Hulu. MVPD distribution agreements establish the terms for payment, channel placement, branding, advertising, permitted uses, in-home limitations, footprint limitations and more. But unrelated manufacturers of retail devices typically do not have such contractual and license privity with content providers or distributors. Rather, complementary technology license regimes and technological protection measures are designed to ensure that the terms of distribution are respected as content flows from content providers to distributors through equipment to subscribers. This well-established ecosystem is based upon a chain of trust described in the DSTAC Report.<sup>1</sup> If the device that receives the programming does not respect the chain of trust, then there is no assurance that the distribution and use of content will be limited to the consumers and uses authorized by content providers.

DFAST is the patented security used across the CableCARD interface to CableCARD Host devices like TiVo. The DFAST technology is licensed to Host manufacturers, with provisions covering security, robustness, testing and certification of devices. DFAST also protects the cable service from harm. Under the DFAST license, the manufacturer licensee warrants that the retail device will “not (i) cause physical harm to the network or disruption of service to any Host Device or CableCARD, (ii) impede or impair the delivery of any services offered over the cable system to cable subscribers, (iii) jeopardize the security of any services offered over the cable system or (iv) impede the legal rights of the cable operator to prevent theft of service....” DFAST is licensed by CableLabs, but content providers and cable operators are express third-party beneficiaries of the DFAST agreement who may enforce its terms and warranties.

The presence of such warranties and enforcement mechanisms is one reason why TiVo and other DFAST licensees have not rearranged cable operator channel lineups, replaced advertising, or otherwise altered the cable service in violation of programming agreements. From time to time there is debate about what is or is not allowed under the DFAST license. But it is clear that protecting the cable service is not left to simply trusting the device manufacturer to behave, as is proposed by AllVid proponents.<sup>2</sup>

As reported in DSTAC, the CableCARD/UDCP model adopted more than a decade ago was designed only for reception of one-way linear cable channels from digital cable systems, and

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<sup>1</sup> Working Group 2 Report (Apr. 21, 2015), DA 15-982 at 24-29 (Aug. 31, 2015).

<sup>2</sup> The parties urging the Commission to mandate specific technical standards have changed their approach (and the names for their proposals) several times. We have used the term AllVid as a short-hand descriptor for all of these varied proposals, which share characteristics of the 2010 AllVid proposal that the Commission declined to pursue, such as compelling MVPDs to devote substantial economic and technical resources to build a new interface that would enable retail device manufacturers to obtain unbundled access to the piece parts of an MVPD’s service from which they could create their own service offering without regard for MVPD-content supplier agreements, copyright, licensing and other restrictions, and Title VI requirements.

was designed to be transitional.<sup>3</sup> The FCC specified that the rules for UDCPs did not extend to “interactive two-way digital television”<sup>4</sup> and required CE manufacturers to inform customers that a set-top box was needed to access advanced interactive digital cable services such as video-on-demand, a cable operator’s enhanced program guide, and data enhanced television service.<sup>5</sup> The 2002 DFAST license was designed for these one-way UDCPs that received only unenhanced one-way linear service. At the time, linear content was for in-home use. Internet streaming video was just beginning, with limited content at 56 kbps or slower.<sup>6</sup> Remote viewing and out-of-home use was barely imagined. And of course, DFAST was never a national standard: it applied to cable operators, but not to satellite or any other MVPD.

Subsequently, two-way interactive retail cable devices were able to present the full cable service using an MVPD app running on common middleware, not on protocols.<sup>7</sup> The cable operator’s application delivered the cable service to the interactive retail device for presentation as intended by the cable operator and consistent with the operator’s content licenses. The license developed for interactive retail CableCARD devices that received the full cable service (such as the interactive TV’s marketed by Panasonic in 2008) included similar warranties prohibiting harm to service.

### **Today’s Programming Agreements and Licenses**

The programming and other rights used to create today’s competing MVPD services have evolved far beyond the unenhanced linear rights covered in DFAST. Today, linear channels are a portion of MVPD service that has expanded to include tens of thousands of choices of on-demand content, plus integrated apps and other programming enhancements that distinguish each

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<sup>3</sup> Unidirectional CableCARD devices used their own guides because of basic technical limitations at the time: a one-way device could not support interactive services or the cable program guide, and suitable remote user interface technology did not exist. Working Group 4 Report, DA 15-982 at 149-50.

<sup>4</sup> See former rule 47 C.F.R. §15.123(a) (“Unidirectional digital cable products do not include interactive two-way digital television products.”).

<sup>5</sup> See former rule 47 C.F.R. §15.123(d) (“Manufacturers and importers shall provide in appropriate post-sale material that describes the features and functionality of the product, such as the owner’s guide, the following language: ‘This digital television is capable of receiving analog basic, digital basic and digital premium cable television programming by direct connection to a cable system providing such programming. A security card provided by your cable operator is required to view encrypted digital programming. Certain advanced and interactive digital cable services such as video-on-demand, a cable operator’s enhanced program guide and data-enhanced television services may require the use of a set-top box. For more information call your local cable operator.’”).

<sup>6</sup> *Competition in the Video Programming Distribution Market (Ninth Annual Report)*, 17 FCC Rcd 26901, 26943 at ¶88 (2002).

<sup>7</sup> Working Group 4 Report, DA 15-982 at 149-50. The 2002 Memorandum of Understanding that led to the 2003 “Plug and Play” rules explicitly contemplated that the cable operator EPG would be provided to two-way devices. *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, FCC 03-3, Further Notice of Proposed Rulemaking, CS Docket No. 97-80, 18 FCC Rcd 518, 548 (Appendix B) (2003) (“MOU”) (“for Advanced Interactive (two-way) Digital Cable Products ... Cable operators’ EPG will be provided for advanced interactive digital cable products via OCAP or its successor technology.”).

provider. Programming rights licenses, retransmission consent and affiliation agreements establish highly-individualized linear and on-demand rights, in-home and out-of-home rights, trusted and untrusted devices, acceptable and unacceptable advertising, and various other terms governing the packaging, presentation, and protection of content.<sup>8</sup> Each programming agreement is negotiated business-to-business and is updated and expanded every few years to address new products, new usages, new content security threats and new devices. MVPDs compile and arrange their individually negotiated rights for programming, guides, navigation features, original content and interactive applications and other inputs into distinctive, branded, differentiated retail offerings which are themselves also protected by copyright. As the DSTAC Report catalogues, consumers today can watch cable and competing MVPD programming on smart TVs, streaming boxes, gaming devices, PCs, smartphones, tablets and other consumer-owned devices without a set-top box, delivered via IP-based applications tailored to different platforms and CE devices.

AllVid proponents are now seeking FCC license to circumvent the very arrangements that have created such abundance of consumer choice in today's video marketplace. TiVo's representative told DSTAC that "operators have made agreements where there's not a disaggregation perhaps with the content owners, *[but] that those should not necessarily apply to a third party device which should have the freedom to not be bound...*"<sup>9</sup> Public Knowledge claims respect for "copyright law,"<sup>10</sup> but it does not consider AllVid manufacturers to be a party to or bound by the copyright *licenses and distribution agreements* under which content providers lawfully segment the market. The Public Knowledge representative told DSTAC "an operator might have agreed to channel numbers and channel line ups *but ... a lot of those sorts of restrictions that operators have agreed to may not make any sense in a retail place.*"<sup>11</sup> Another AllVid proponent dismissed video distribution agreements as irrelevant: "*Device manufacturers, of course, cannot violate contracts to which they are not a party.*"<sup>12</sup> Amazon's representative dismissed a negotiated programming agreement enabling customers to view multiple screens of Olympic events simultaneously, saying "I'm perfectly happy as a DISH subscriber to have never viewed that. ... And if the device that I have is unable to do that, it's no skin off my back at all. In fact, I want a refund because I don't want to view that."<sup>13</sup> AllVid proponents assert that they

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<sup>8</sup> See, e.g., Working Group 1 Report, DA 15-982 at 6 ("For example, the content provider may define a geographic area, give larger in-home rights than out-of-home rights, require a hardware root of trust for high value content, limit what content is available to less trusted devices, and require other terms that rely on an unbroken chain of trust. Licenses may also include terms to protect the content providers' brand, such as acceptable advertising, channel position and neighborhood, and subscription tier placement."); DSTAC WG1 Requirements of Content Owners on DBS Providers 13 March 2015 at §7 ("A content owner will also often require that its programs be kept apart from other programs, for example by disallowing subscriber searches and recommendations from bringing up lists that include both adult programs (e.g. 'X-rated') and that content owner's programs.") available at <http://apps.fcc.gov/ecfs/comment/view?id=60001097369>.

<sup>9</sup> Transcript of March 24, 2015 DSTAC meeting at 96-97(emphasis added).

<sup>10</sup> Public Knowledge December 3 *ex parte*.

<sup>11</sup> *Id.* at 38-39 (emphasis added).

<sup>12</sup> Comments of Computer & Communications Industry Association at 10 (emphasis added).

<sup>13</sup> Transcript of July 7, 2015 DSTAC meeting at 177 (Matt Chaboud for Amazon).

would be “answerable to the marketplace, not to network operators or programmers,”<sup>14</sup> and *they would not be required to honor the conditions of “rights holders or intermediaries.”*<sup>15</sup>

Just as DFAST did not simply trust the device manufacturer not to harm service, neither do today’s arrangements. MVPDs use apps and direct business-to-business agreements with device manufacturers to deliver today’s service to retail devices in accordance with their distinctive rights and service offerings. Indeed, as TiVo expanded beyond one-way linear service, TiVo entered into direct agreements with distributors for delivery of two-way services, as it has with Comcast for video-on-demand and Netflix for streaming video.

Online video providers also rely on applications for distributing their respective services. Even when Netflix was building out its distribution relationships and offered a “public API” from which developers could add Netflix to their devices, Netflix required retail devices to present Netflix programming through the Netflix app as intended by Netflix, without adding advertising or overlays, and without circumventing the restrictions of Netflix content licenses (such as streaming only rights). Under Netflix’s terms, the device must present Netflix content through the Netflix app. The device may not modify, add to, remove, overlay or obscure any of the Netflix content. And because Netflix has streaming only rights from content licensors, the device may not store any Netflix programming. Netflix shut down the public API and has since moved to business-to-business contractual relationships to define these terms and assure delivery of the Netflix service.<sup>16</sup>

### **VidiPath**

VidiPath was developed in the Digital Living Network Alliance (DLNA) by major retail device manufacturers (including Samsung, Panasonic and Sony); major chip manufacturers (Intel and Broadcom) and major MVPDs (including Comcast, Time Warner Cable, and AT&T). It uses a combination of technological measures, including an MVPD-supplied app, to protect access and rights of copyright owners and ensure the delivery of the MVPD service as intended. It is designed to deliver MVPD service over wired or wireless home networks to retail VidiPath certified devices such as video receivers, PCs, game stations, and smart TVs. Each MVPD presents service through an MVPD app, assuring that the service and experience is delivered as intended by the MVPD, without added advertising or overlays, consistent with the MVPD’s content licenses, and protecting the MVPD’s and content providers’ brands.

VidiPath includes support for one or more DRMs. The DRM provides both contractual and technological protection measures. The device manufacturer executes a commercial DRM license. Typical DRM licenses address discrete sets of issues (such as “compliance” and

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<sup>14</sup> Public Knowledge Comments at 15.

<sup>15</sup> Electronic Frontier Foundation Comments at 2 (emphasis added).

<sup>16</sup> See Working Group 4 Report, DA 15-982 at 142 n. 47; *Gigaom: Netflix is shutting down its public API today*, available at <https://gigaom.com/2014/11/14/netflix-is-shutting-down-its-public-api-today/>.

“robustness”),<sup>17</sup> while, as noted above, each MVPD *app* ensures the arrangement, appearance, branding, advertising and other features of service as offered by the various MVPDs and purchased by their subscribers.

VidiPath also uses security certificates augmented with an additional field to authenticate a device for VidiPath. These certificates are used to address technical security and authentication, and do not address the arrangement or other features of the service.

DLNA has established testing and certification requirements for VidiPath, but these do not test for or certify the performance of the devices in rendering the service as intended by the various MVPDs. DLNA requires testing and conformance to its guidelines for VidiPath as a condition to using the DLNA certification mark on a retail device.

VidiPath does not provide a patent, trade secrets, or other “hook IP” on which MVPDs could base an additional technology license for access to MVPD service. The MVPD relies on its *app* to protect its arrangement, appearance, branding, advertising and other features and deliver its service, as provide in DLNA guidelines. The MVPD *app* is also solely responsible for authenticating that the user is a subscriber. The MVPD *app* also enforces certain content requirements, such as limiting content to certain geographic areas, enforcing the specific in-home and out-of-home rights licensed by each content provider, and controlling the number of permitted active streams.

All of these technological measures, agreements, guidelines and apps are utilized together in order to protect commercial content and service, enforce MVPD obligations to the content owners, and facilitate adoption by retail manufacturers.

VidiPath is one of many app-based approaches that have been adopted in the marketplace. The business models, content rights, technology solutions, and associated technological measures and contractual requirements are highly inter-related, and constantly and rapidly evolving. This complex and dynamic marketplace has consistently demonstrated that marketplace solutions, not government mandates for technical requirements or license terms, are the most effective approach to deliver commercial content to an ever-expanding number of retail devices.

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<sup>17</sup> For example, a “compliance rule” might allow the licensed device to decrypt protected content only if it reads and respects signals not to copy video-on-demand content. Another “compliance rule” might require the device to limit copies of certain cable network programming to circulation inside the home, rather than to output content for redistribution over the Internet. Typical “robustness rules” might require the manufacture of devices that meet an agreed-upon level of resistance to hackers, to respond to breaches, and to update the resistance over time.

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If you have any further questions, please contact me.

Respectfully submitted,

**/s/ Neal M. Goldberg**

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