

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

In the Matter of

Media Bureau Request for Comment  
on DSTAC Report

MB Docket No. 15-64

**COMMENTS OF GOOGLE INC.**

The Downloadable Security Technical Advisory Committee's (DSTAC) Final Report lays the necessary groundwork for a rulemaking to achieve the important goals underlying Section 629 of the Communications Act.<sup>1</sup> Acting to promote a competitive retail market for navigation devices is particularly timely as multichannel video programming distributors (MVPDs) transition to interactive, Internet Protocol (IP)-based methods of delivering content. Introducing a successor to the CableCARD standard would further other important Commission objectives as well, including expanded broadband availability and greater competition in video services.

The Final Report demonstrates that establishing a standard that embraces interactive, two-way, and IP-based technologies is technically feasible. Implementation of the "competitive navigation" solution proposed in the Final Report would promote competition, spark innovation, and enable new ways of viewing and interacting with content on television screens. The Commission should commence a rulemaking quickly to unleash competition in the retail navigation device market.

---

<sup>1</sup> See DSTAC, *Final DSTAC Summary Report*, Aug. 28, 2015, available at <https://transition.fcc.gov/dstac/dstac-report-final-08282015.pdf> (Final Report).

**I. Section 629 Continues To Have an Important Role To Play in Today's Video Ecosystem.**

For nearly two decades, Section 629 of the Communications Act has directed the Commission to assure the commercial availability of equipment used to access services provided by MVPDs.<sup>2</sup> By its own measure, the Commission has not yet successfully implemented Congress's mandate.<sup>3</sup> With the repeal of the integration ban in Section 106 of the STELA Reauthorization Act of 2014 (STELAR), moreover, the CableCARD regime that served as the Commission's marquee effort to enact Section 629 is being phased out.<sup>4</sup> As MVPDs turn toward interactive, IP-based delivery, Section 629's mandate to promote a competitive retail market for navigation devices remains relevant and necessary.

To date, no retail device has been able to provide an integrated viewing experience across MVPDs' service offerings (i.e., linear content, video on demand (VOD), pay per view, etc.) that is comparable to what MVPDs provide with their leased navigation devices. Nearly all MVPD subscribers therefore pay monthly fees to lease technologically stunted set-top boxes.<sup>5</sup>

---

<sup>2</sup> 47 U.S.C. § 549(a) (directing the Commission to "adopt regulations to assure the commercial availability, to consumers of ... 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 MVPD).

<sup>3</sup> *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, et al.*, Fourth Further Notice of Proposed Rulemaking, 25 FCC Rcd. 4303, ¶ 1 (2010) (stating that the "Commission has not been fully successful in implementing the command of Section 629 of the Communications Act to ensure the commercial availability of navigation devices used by consumers to access" MVPDs' services).

<sup>4</sup> STELA Reauthorization Act of 2014, Pub. L. No. 113-200, § 106 (2014).

<sup>5</sup> Senators Markey and Blumenthal recently released a study that found that approximately 99 percent of MVPD subscribers use set-top boxes leased from their MVPDs, and MVPDs receive nearly \$20 billion per year in leasing fees from subscribers. Press Release, *Markey, Blumenthal Decry Lack of Choice, Competition in Pay-TV Video Box Marketplace* (July 30, 2015), available at

The lack of robust retail options for navigation devices is especially striking when compared to the fast-evolving, competitive markets for virtually every other category of consumer electronics.<sup>6</sup> Telephony devices provide an obvious comparison. Telephone innovation has its roots in the seminal *Carterfone* case, which allowed for connection of non-harmful devices to the telephone network.<sup>7</sup> After *Carterfone*, innovation exploded. Consumers gained choices beyond the bulky black telephone leased to them by AT&T. New innovations evolved, providing new ways of communicating. Cordless phones, fax machines, and modems came into being. Today, consumers have a seemingly endless array of wireless device choices available to them. These devices are available at a wide variety of price points and include unique designs, user interfaces, and features. Why shouldn't consumers have the same degree of choice for viewing content on television?

Much more is at stake here than just the ease with which an MVPD subscriber can channel-surf. Innovation and competition in navigation devices will promote numerous policies important to the Commission:

- Greater consumer choice, lower prices, and more robust device functionality;
- More competitive opportunities for small MVPDs or new entrants, which may be without access to the latest navigation device technologies because of their lack of purchasing scale;
- The possibility of an integrated, customized user interface that presents all of the content that the subscriber has purchased from an MVPD alongside content available from sources on the Internet; and

---

<http://www.markey.senate.gov/news/press-releases/markey-blumenthal-decry-lack-of-choice-competition-in-pay-tv-video-box-marketplace>.

<sup>6</sup> FCC, *Connecting America: The National Broadband Plan* § 4.2 (2010) (stating that by “any measure, innovation is thriving in mobile and computing devices. The same is not true for set-top boxes.”).

<sup>7</sup> *In the Matter of Use of the Carterfone Device in Message Toll Telephone Service, et al.*, 13 F.C.C.2d 420 (1968).

- Getting more people online and increasing Internet usage and demand via video adoption.

Google's experience proves the point. To provide its TV service subscribers a better and more customizable offering, and thereby make its package of broadband and TV services more attractive to subscribers, Google Fiber had to develop its own set-top equipment. Unlike most set-top equipment, the Google Fiber devices and interfaces allow subscribers easily to switch between Google Fiber's linear programming channels and online video options like VUDU, YouTube, and a Netflix account.<sup>8</sup> The Commission should commence a rulemaking to ensure that all consumers enjoy these sorts of options.

## **II. The Final Report Charts a Course to a Competitive Retail Navigation Device Ecosystem.**

Although DSTAC members were unable to produce a consensus technical recommendation, the Final Report provides a sound basis for the Commission to propose a path forward in a rulemaking proceeding. In particular, the Final Report demonstrates that a solution to promote competitive availability of navigation devices in accordance with Section 629 is technically feasible.

Of particular promise is the competitive navigation solution, in which a "virtual headend" performs network security and conditional access functions in the cloud located on the Internet or within the network on the subscriber's premises.<sup>9</sup> Secure transport of

---

<sup>8</sup> See Google Fiber, *Fiber Help: Learn About Your Devices*, at <https://support.google.com/fiber/answer/2464928> (last visited Oct. 8, 2015) (explaining that Google Fiber's TV Box provides "access to hundreds of HD channels, thousands of on-demand TV shows and movies, and fully integrated online video services including Netflix, VUDU, and YouTube.").

<sup>9</sup> See Final Report, Report of Working Group 4 to DSTAC at 190 (DSTAC WG4 Report) (noting that the competitive navigation solution "could serve as both an [e]nd-to-end system and a local system. . . . A provider interface effectively serves as a Virtual Headend device, allowing MVPDs to alter underlying network delivery mechanisms without disturbing customer service.").

content between the “virtual headend” and retail navigation device would be enabled by use of a widely accepted link protection mechanism such as DTCP-IP, which would free the subscriber to choose between different MVPDs and user experiences.<sup>10</sup> In the competitive navigation solution, the navigation of content (the control plane) is fundamentally separate from the secure transport of digital content (the data plane), allowing for secure transport of video.<sup>11</sup> “Because the interface to the home network (and retail devices) is standardized across MVPDs at the link protection layer, this enables nationally portable retail navigation devices,” enhancing consumers’ ability to switch MVPDs.<sup>12</sup>

The competitive navigation solution presents a number of desirable qualities. It would operate across different MVPDs’ networks. It would allow equipment manufacturers to develop customizable user interfaces. It would contain essential security protections to ensure that video signals remain secure. It would allow over-the-top content to appear side-by-side with MVPDs’ offerings on an interface of the subscriber’s choice, allowing them to enjoy the full benefit of the MVPD content they pay to receive. Manufacturers could design and compete on unique content discovery, selection, and storage features, as well as customizable user interfaces and an improved overall user experience.

The competitive navigation solution could be implemented without undue burdensome changes to MVPD systems. Content, channels, on-demand offerings, and

---

<sup>10</sup> Final Report at 4.

<sup>11</sup> Final Report, DSTAC WG4 Report at 189-190.

<sup>12</sup> Final Report at 4.

sequencing could stay the same.<sup>13</sup> Apps could still exist on the platform, with independent parties able to create new apps from opens standards and APIs.<sup>14</sup>

By contrast, the “Application-based Service with Operator-Provided User Interface” proposal (app proposal) in the Final Report would not assure a competitive retail market for navigation devices. While this approach would provide another way of enabling consumers to watch MVPDs’ content on various devices like smartphones and tablets, it would not enable competitors to develop distinctive interfaces with which consumers can “discover, browse, select, record and view content.”<sup>15</sup> As observed in the DSTAC WG4 Report, because the “navigation device is given no resource to perform those functions on its own,” it is “by definition . . . not a competitive navigation device compared to one provided by the MVPD themselves.”<sup>16</sup>

The app proposal “would lock consumers into having their video consumption experience framed and controlled entirely by the MVPD,” leaving little to no room for customization or innovation by third parties.<sup>17</sup> Indeed, as observed by Working Group 4, this is a step back from the “competitive UI option that CableCARD provides” today.<sup>18</sup> Subscribers would need to lease a set-top device from their MVPD just to record programming for later viewing, locking them into continuing to pay an MVPD a monthly

---

<sup>13</sup> Final Report, DSTAC WG4 Report at 116 (noting that for “linear broadcast/multicast video (i.e., digital television)” and “unicast video-on-demand”, the “metadata describing available video services would be accessed from an MVPD source directly by a consumer device using standard protocols. In addition to discovery of linear services, available [pay per view] and VOD services should be accessible via the same format.”).

<sup>14</sup> *Id.* at 180 (explaining that the “[c]ompetitive proposal does not prohibit competitive app-based solutions from the MVPD directly, thus giving consumers both options”).

<sup>15</sup> *Id.* at 181.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> *Id.* at 180.

device rental fee, as opposed to being able to buy devices outright at competitive prices and/or bring over their own devices to their chosen MVPD. Thus, the apps proposal actually could make subscribers who want to record TV programming worse off than they are today: Many of today's MVPD-supplied apps do not provide access to the full line-up of the MVPD's linear channels and VOD content, or to any content recorded on the customer's digital video recorder (DVR). The apps approach also may not provide subscribers a full range of features and functionalities, making it all the more inferior to the competitive navigation solution.

MVPD apps already exist, and have not furthered the commercial availability of competitive navigation devices at retail. Even CableCARD provided better possibilities for third party innovation. Leading up to and during the CableCARD regime, third parties were able to develop "significant innovations" to empower consumers with "abilities to control access to content."<sup>19</sup> As discussed in the DSTAC WG4 Report,<sup>20</sup> these include:

- The DVR, pioneered by ReplayTV and Tivo with products launched in 1999.
- Whole home media with DVR, pioneered by SageTV and integrated into its products in 2003, which afforded consumer access to all household media content, including DVR recordings from any TV.
- Remote viewing, which was pioneered by Slingbox in 2005 and allowed consumers to view live television and DVR content from a location of their choice.
- Remote DVR management, which was released by SageTV in 2005 and allowed consumers to schedule recordings from anywhere at any time, through the use of a web browser.

The solution that the Commission adopts should enable third party innovations to reach consumers. Unlike CableCARD, the competitive navigation solution would allow these new

---

<sup>19</sup> *Id.* at 181.

<sup>20</sup> *Id.* at 181-182.

technologies to be “integrated into an MVPD service on a competitive basis,”<sup>21</sup> making it possible to create “cost effective” retail devices that interoperate in an “HDTV environment [and beyond] with all the different MVPD service offerings.”<sup>22</sup> It offers an ideal starting point for a Commission rulemaking to realize the benefits of Section 629.

### **CONCLUSION**

The DSTAC Final Report contains proposals that could form the basis for assuring the competitive retail availability of navigation devices. The Commission should commence a rulemaking to ensure that the objectives underlying Section 629 are finally achieved.

Respectfully submitted,



Austin C. Schlick

*Director, Communications Law*

Megan Anne Stull

*Counsel*

GOOGLE INC.

25 Massachusetts Avenue NW, 9th Floor  
Washington, DC 20001

October 8, 2015

---

<sup>21</sup> *Id.* at 182.

<sup>22</sup> *Id.*