

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

**EXPANDING CONSUMERS' VIDEO NAVIGATION
CHOICES**

**COMMERCIAL AVAILABILITY OF NAVIGATION
DEVICES**

MB Docket No. 16-42

CS Docket No. 97-80

COMMENTS OF ECHOSTAR TECHNOLOGIES L.L.C. AND DISH NETWORK L.L.C.

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SUMMARY

In this proceeding, the Commission proposes rules that would, among other things, require multichannel video programming distributors (“MVPDs”) to modify their systems and products to enable third parties to build devices or develop software that can be used to navigate multichannel video programming. EchoStar Technologies L.L.C. (“EchoStar”), a leading designer and manufacturer of such equipment, and DISH Network L.L.C. (“DISH”), the nation’s third largest MVPD, would be directly affected by these proposals, if they are to be applied to satellite MVPDs. Yet the regime proposed in the *Notice* is unworkable for satellite operators, and deeply flawed with respect to all MVPDs. Adopting the rules proposed in the *Notice* would disserve the public interest and threaten competition in the video marketplace.

Satellite MVPDs deliver their television service via a one-way transmission path. As a result, they must do so in a fundamentally different way than do two-way terrestrial competitors, such as cable and telco providers. In order to perform many of the functions provided by the network in a two-way system, satellite operators must support those functions in the set-top box in each subscriber’s home. This unidirectional architecture has significant implications for the rules proposed in this proceeding, which generally seek to impose a “one-size-fits-all” technology mandate on MVPD consumer technologies.

None of this comes as news to the Commission. The Downloadable Security Technical Advisory Committee (“DSTAC”), whose report informed the Commission’s proposals, recognized the unique challenges faced by satellite MVPDs. The report concluded that some form of satellite “gateway device” in each subscriber’s home “will continue to remain a practical necessity” in any regime mandating MVPD support for third-party devices. The Commission echoed this conclusion in the *Notice*, stating that “DBS providers specifically will be required to

have equipment of some kind in the home to deliver the three Information Flows over their one-way network.”

Yet, having recognized that a different approach would be required for satellite MVPDs, the *Notice* fails to propose rules that would accommodate such an approach. As a result, the *Notice* provides the text of proposed rules for implementation of a regime that the Commission recognizes would *not* be appropriate for satellite systems, and makes only a very brief and generalized request for comment on satellite-related issues. It would not be a simple matter to add the concept of a satellite gateway device to the proposed rules, as implementation would present its own challenges that could vary depending upon the path chosen. The failure to propose rules that solve for the recognized disparities that satellite systems present is a significant shortcoming in a rulemaking that contemplates a substantial reorientation of the MVPD and consumer electronics industries. More importantly, the Commission has failed to provide the notice and opportunity for meaningful comment by satellite providers required under the Administrative Procedure Act, and thus cannot adopt rules for satellite systems without issuing a further notice describing alternative approaches for satellite operators with the specificity required by law.

Yet even putting aside satellite-specific issues, the regime proposed in the *Notice* is flawed in several significant respects. For example, the *Notice* improperly ignores potential contractual violations, despite clear evidence for that concern in the DSTAC process specifically and the market more generally. Nothing in the proposed rules would, for example, preclude a third-party device from overlaying advertisements on programming, changing the presentation of channel line-ups in a manner that would disrupt required programming “neighborhoods,” improperly associate incompatible content (*e.g.*, a children’s network next to adult content), or

placing frames around the programming screen to create space for additional content selected by the third-party manufacturer – all of which could place MVPDs in violation of their contractual obligations. Moreover, the copyright interests that each MVPD has in the compilation and “look and feel” of its service would be jeopardized in a regime where third-party devices are allowed to slice, dice, and reassemble the service to their own tastes.

The proposed rules could also dramatically degrade customer service and cause consumer confusion. Today, when a DISH subscriber seeks help with a technical issue, DISH knows exactly what set-top box equipment the subscriber has and can efficiently walk through an appropriate diagnostic regime to resolve the problem. DISH will not be able to support a proliferating range of navigation devices from manufacturers with which, by definition, it has no relationship. Yet, most consumers will likely call their MVPD, and not the third-party manufacturer, when problems occur. Moreover, because third-party manufacturers typically have no ongoing relationship with purchasers of their equipment, they have no incentive to update software or replace hardware as necessary to keep up with new features and functions introduced by MVPDs. In the past, this has not only denied some consumers the full set of features they pay to receive from their MVPD, but has actually left them stranded when equipment they bought becomes incompatible with MVPD system upgrades. Because of their ongoing relationships with subscribers, MVPDs have strong incentives to ensure smooth transitions to new technology and features.

These problems would be insurmountable even if there were a demonstrated need for Commission action. Given that MVPDs, programmers, and over-the-top (“OTT”) video providers (among others) are offering services on more devices than ever before, consumers,

competition, and innovation would be best served if the Commission did *not* intervene, but instead allowed these market-based forces to continue to drive the desired result.

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EchoStar Technologies L.L.C. (“EchoStar”) and DISH Network L.L.C. (“DISH”) submit these comments in response to the Commission’s Notice of Proposed Rulemaking (the “*Notice*”),¹ which proposes rules that would, among other things, require multichannel video programming distributors (“MVPDs”) to modify their systems and products to enable third parties to build devices or develop software that can be used to navigate multichannel video programming.

Unfortunately, the regime proposed in the *Notice* is deeply flawed. For example, although it recognizes that the one-way architecture of satellite MVPD systems presents unique challenges, it nowhere attempts to even propose solutions to accommodate those differences that would enable satellite operators to comply with the proposed rules. It generally invites satellite carriers to identify issues the Commission should consider further, but does not include any satellite-specific proposals. The Commission cannot adopt rules knowing that regulated parties serving one third of the market could not comply. Such an approach is particularly troubling

¹ See *Expanding Consumers’ Video Navigation Choices*, Notice of Proposed Rulemaking and Memorandum Opinion and Order, 31 FCC Rcd 1544 (2016) (“*Notice*”).

given that the D.C. Circuit invalidated the last regime enacted by the Commission to implement Section 629 of the Communications Act² based in part on the fact that the overall regime did not adequately consider the interests of satellite providers.³ The Commission cannot lawfully adopt its proposed regime without – at a minimum – proposing rules to accommodate the recognized differences in satellite architecture and allow informed comment, or exempting satellite providers from the new regime altogether.

Moreover, even setting aside satellite-specific issues, the *Notice* suffers from numerous other flaws. For example, the proposed rules do not adequately protect the interests of MVPDs by allowing third-party devices to present programming in ways that could violate distribution agreements and to alter the services carefully crafted by the MVPD. The proposed rules would also result in consumer confusion and hamper MVPDs’ ability to provide customer service. In addition, as EchoStar and DISH will address further in a subsequent filing, the proposed rules raise serious intellectual property issues, including imposing potentially unlawful requirements on patent holders to license their technology to third-parties.

These problems would be insurmountable even if there were a demonstrated need for Commission action. Given that MVPDs, programmers, and over-the-top (“OTT”) video providers (among others) are offering services on more devices than ever before, consumers, competition, and innovation would be best served if the Commission did *not* intervene, but instead allowed these market-based forces to continue to drive the desired result.

² 47 U.S.C. § 549.

³ See *EchoStar Satellite L.L.C. v. FCC*, 704 F.3d 992 (D.C. Cir. 2013) (“*EchoStar Invalidation Order*”).

BACKGROUND

DISH is the nation’s third largest MVPD, serving nearly fourteen million subscribers as of March 31, 2016. EchoStar designs, develops, and manufactures innovative set-top-box and video solutions for customers across the globe. It engineered the award-winning Hopper with Sling and Joey whole-home HD DVR solutions for DISH, as well as advanced technologies such as PrimeTime Anytime, which helps maximize the use of tuners on the set-top box so customers can record as many as six shows at once; AutoHop, which gives consumers the ability to skip commercials; and integrated Sling technology, which gives customers the ability to watch their video anywhere they have an Internet connection. Accordingly, the proposals made in the *Notice*, if imposed on satellite MVPDs, would directly impact both companies.

DISH and EchoStar compete in a video market characterized by innovation. In 1992, when Section 629 was enacted, the only options for viewing video programming were over-the-air broadcasting (principally composed of three or four national networks) and analog cable systems (offering a fairly limited number of channels).⁴ Today, the video landscape is very different. Consumers can choose from a wide array of viewing options, including facilities-based competitors such as Direct Broadcast Satellite (“DBS”) systems (DISH and DIRECTV),⁵ telcos (including AT&T U-Verse and Verizon FiOS), and other significant overbuilders (including Google Fiber, WideOpenWest, and RCN).

⁴ “In most of the local markets where cable operators provide cable service to subscribers, they remain the sole distributors of multichannel video programming.” *Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992*, 9 FCC Rcd. 7442, ¶ 141 (1994). In 1993, the vast majority of cable systems had fewer than 53 channels. *See id.*, App. C, Table 2.

⁵ For purposes of these comments, we use the term “DBS” to refer to the full range of satellite-delivered multichannel video programming distribution, regardless of the frequency band involved.

OTT video services delivered via the Internet have now gained prominence as yet another alternative – one not even imagined at the time Section 629 was adopted. Services such as Netflix, Amazon Prime, and Hulu offer video-on-demand (“VOD”) programming, including both new scripted series and archival shows. These OTT services have rapidly attracted viewers. Indeed, the top two video subscription services in the United States are both OTT providers: Netflix and Amazon Prime, with 43.4 million and 33.7 million subscribers, respectively.⁶ For some viewers, OTT has replaced traditional MVPD service. According to SNL Kagan, while MVPD subscribership is declining, approximately 9.2 million households rely on OTT delivery to view video content in lieu of an MVPD service, and that number is expected to grow to as many as 12.9 million (10.3 percent of households) by 2019.⁷ Those figures do not even include subscribers to services such as Sling TV and PlayStation Vue, which stream a wide variety of U.S. and international channels of live programming and offer a robust selection of VOD content to provide a multichannel video experience similar to that of traditional MVPDs.⁸ SNL Kagan projects that subscribership to such virtual providers will grow from approximately 500,000 today to 3.2 million in 2019.⁹

In order to compete in this vibrant marketplace, MVPDs have (among other things) moved away from a model that requires a fully-functional set-top box at each television set. Advances include the development of whole-home systems, where a single master device feeds

⁶ See Ian Olgeirson and D. Myers, “OTT players take top 2 video subscription service spots in Q4’15,” SNL Kagan (Mar. 29, 2016).

⁷ See Ian Olgeirson, “Online Substitution Pressures Multichannel, Mitigated by Influence of VSP Skinny Packages,” SNL Kagan (Nov. 20, 2015) (“Kagan Online Substitution”).

⁸ Additional information on Sling TV is available at www.sling.com.

⁹ See Kagan Online Substitution.

less obtrusive and more energy efficient client devices throughout the home. An even more revolutionary change has reduced reliance on MVPD-provided hardware altogether. MVPDs have recognized that consumers want to view content anytime, anywhere, and on the devices of their choice. In order to accommodate that desire, MVPDs have developed software applications that enable subscribers to access content on a wide variety of third-party devices, including smartphones, tablets, gaming consoles, and other devices used to aggregate online content. Thus, for example, subscribers can download the free DISH Anywhere app for iPhone, iPad, Android, and Kindle Fire HDX devices, and then watch live TV and VOD content, browse the program guide, schedule DVR recordings, and manage their DVR library anywhere they have Internet access. MVPDs have also begun to host OTT apps on their own navigation devices, as illustrated by DISH's integration of the Netflix app on its Hopper device.¹⁰

Amidst all of the innovation and activity in the market for delivery of multichannel video programming, it is no surprise that the Commission's CableCARD regime – based on static technology and an instantly out-of-date understanding of consumer desires – did not engender the explosion of third-party navigation devices hoped for by the Commission.¹¹ The D.C. Circuit invalidated the CableCARD regime and, as required by Congress, the Commission created the Downloadable Security Technical Advisory Committee ("DSTAC") to evaluate potential options for a not unduly burdensome, uniform, and technology- and platform-neutral software-based downloadable security system.¹² The DSTAC's final report reflected a significant division

¹⁰ See Jeff Baumgartner, "Dish's Hopper 3 Serves Netflix 4K Streams," MULTICHANNEL NEWS (Apr. 8, 2016), available at <http://www.multichannel.com/news/content/dish-s-hopper-3-serves-netflix-4k-streams/403956>.

¹¹ See, e.g., *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 30 FCC Rcd. 3253, ¶ 330 (2015) ("2015 Video Competition Order") ("Consumer adoption of retail CableCARD-compatible devices has not matched the Commission's expectations.").

¹² See Public Notice, "Appointment of Members to the Downloadable Security Technology Advisory Committee," 30 FCC Rcd. 389 (2015).

between those who supported new hardware mandates and those who argued that the Commission should allow the industry to continue to innovate without new regulation.¹³

Despite the DSTAC raising significant questions about the feasibility of a new hardware mandate, the Commission chose the former approach. Among other things, the *Notice* proposes that MVPDs be required to:

1. Offer three Information Flows – Service Discovery Data, Entitlement Data, and Content Delivery Data – to devices from independent manufacturers¹⁴ using any published, transparent format that conforms to specifications set by open standards bodies;
2. Support at least one content protection system to protect its multichannel video programming that is licensable on reasonable and nondiscriminatory terms by an organization that is not affiliated with MVPDs; and
3. Offer the three Information Flows to unaffiliated software applications without the need for MVPD-specific equipment.

¹³ See generally Final Report of the DSTAC at 3-6 (Aug. 28, 2015) (“DSTAC Report”). For purposes of these comments, all citations to the DSTAC Report are to the version with continuous page numbering that the Commission placed into the docket for this proceeding. See *Notice* at n.9.

¹⁴ The *Notice* interprets Section 629 to mean broadly to encourage “entities independent of MVPDs” to manufacture competitive devices, “such that our rules must ensure the availability of Navigation Devices from entities that have no business relationship with any MVPD for purposes of providing the three Information Flows that we discuss below.” *Notice* ¶ 23. The Commission should clarify that, while it hopes to promote the development of devices by totally independent manufacturers, the Information Flows should be made available to any qualifying device that a consumer chooses to use, regardless of the manufacturer’s business relationships or affiliation with an MVPD.

DISCUSSION

I. THE *NOTICE* FAILS TO EVEN PROPOSE SOLUTIONS FOR SATELLITE SYSTEMS, DESPITE RECOGNIZING THE NEED TO DO SO

More than 34 million households – or over one-third of all MVPD subscribers – receive their MVPD service via satellite.¹⁵ This is a number roughly equal to the populations of California, Texas, and Florida combined. Yet while the *Notice* recognizes differences in satellite technology – and *references* the need for a gateway device in each DBS subscriber’s home – it makes no effort to explain how satellite carriers might possibly implement the rules as proposed. The Commission’s proposal in its current form cannot work for DBS operators and, of course, their subscribers.

A. The Differences Between Satellite and Terrestrial MVPD Systems Are Significant and Material to This Proceeding

DBS systems use a one-way architecture. The service is designed to give the subscriber a robust (and secure) video experience even in the absence of the reliable return path that is available in wired cable systems, for example. This means that DBS set-top boxes only *receive* video programming and other data from the satellite; they cannot send any information back to DISH or anyone else via the satellite in space. This is a meaningful and fundamental difference between DBS and other MVPD systems.

In order to perform many of the functions provided by the network in a two-way system, DBS operators must support those functions in the set-top box in each subscriber’s home. For satellite carriers, in-home equipment is an extension of the satellite network, with significant processing power and other critical capabilities not needed or found in cable set-top boxes. This unidirectional architecture has significant implications for the rules proposed in this proceeding

¹⁵ See *2015 Video Competition Order*, 30 FCC Rcd. at 3253, ¶ 2 (2015).

and requires a different approach than for other classes of MVPDs' navigation devices. We discuss three examples below. As the discussion below demonstrates, there is no feasible way to provide a DBS operator's entire "Navigable Service" to a subscriber using only third-party navigation devices, such as a gaming console or general set-top box not customized for satellite TV reception. Instead, some sort of satellite "gateway" device in the subscriber home containing the specialized hardware necessary to receive and tune the satellite signal would be needed in order to support a third-party navigation device.

VOD programming. DBS operators must be able to provide VOD programming to subscribers without the capability for the subscriber to send a request back through the satellite network. In order to do so, DBS operators store some of the most popular VOD programming in encrypted form on the hard drive of the set-top box in a consumer's home, where it is available for viewing upon request. As described in the DSTAC Report:

DBS partitions the hard-drive of the provided set-top box and uses that partitioned drive to provide the set-top box with popular titles in advance of any customer order to deliver VOD. It uses the set-top box to render pay per view and the smartcard to record charges for pay-per-view which it reconciles when the set-top is next connected to a return path (e.g., Internet or telephone) or returned to the satellite provider for final billing.¹⁶

This content would qualify as Content Delivery Data, and thus under the rules proposed in the *Notice* presumably would have to be provided by the DBS operator to third-party navigation devices using "at least one content protection system to protect its multichannel video programming that is licensable on reasonable and nondiscriminatory terms by an organization that is not affiliated with MVPDs."¹⁷

¹⁶ DSTAC Report at 37.

¹⁷ *Notice* ¶ 2.

Yet the *Notice* does not propose any rules for implementing a requirement for *satellite carriers* to provide VOD programming to third parties. In the absence of a gateway device, for example, the Commission would have to require all manufacturers to allow DISH to store VOD programming on the hard drive of their devices, and determine the method through which such devices would communicate the transactional information back to the DBS operator. The Commission would also have to identify the technology to be used to encrypt the stored content, including a mechanism for updating that technology as the demands of programmers for protection of high-value content change over time.¹⁸ The *Notice* does not even begin to consider such issues, much less propose resolutions for them.

Dynamic and addressable advertisement insertion. Like many MVPDs, DISH sometimes negotiates the right to insert a specified number of commercials into the linear programming on its satellite MVPD service.¹⁹ Because DISH provides service nationwide, it inserts *national* advertising at the satellite uplink facility before the programming is sent to the satellite for national distribution. In order to insert *local* and *addressable* advertising, however, satellite operators use a more targeted approach. Specifically, DISH “pushes” advertising content to the storage on the subscriber’s set-top box, where it can be recalled and inserted into the programming flow at the appropriate times.²⁰ For example, as described in the DSTAC

¹⁸ In this regard, it is worth noting that Section 629 itself prohibits the Commission from adopting regulations that “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.” 47 U.S.C. § 549(b).

¹⁹ The Commission has long recognized this industry practice. See, e.g., *Implementation of Sections of the Cable Television and Consumer Protection and Competition Act of 1992: Rate Regulation*, 11 FCC Rcd. 785, ¶ 4 n.8 (1995) (discussing the programmer practice of setting aside advertising “availabilities” for sale by distributors).

²⁰ Because terrestrial MVPD systems operate in localized geographic locations, they are able to cache and insert local advertising at the headend level of the network rather than relying on in-home equipment to perform this function.

report, DBS operators were able to use this approach to offer dynamic advertising during the 2014 election cycle that allowed local candidates to target messages to their constituents by seamlessly merging programming received via satellite with advertising stored on the set-top box.²¹

In the absence of an MVPD-controlled device, the Commission would need to require each third-party navigation device to allow DISH to store such advertising content, and include implementing technology used to deliver the dynamic advertising features of the Navigable Service.²² Here again, the *Notice* fails to consider this issue.

Channel tuning. Even matters as basic as channel tuning present complications for third-party navigation devices working with DBS systems. DISH provides service using multiple transponders from multiple satellites at multiple orbital locations, which necessitates the use of a “multiswitch” unit to enable the set-top box to select among the multiple input signals received by the low-noise block (“LNB”) downconverter on the antenna at each subscriber’s residence. As explained in the DSTAC Report,

Because LNBs receive signals from multiple satellite transponders, it is necessary to switch the input signal for the requested channel to the requesting set-top tuner. The set-top sends a signal to the Multiswitch unit identifying the desired input and the Multiswitch unit switches the input signal onto the coax cable to the requesting set-top.²³

Notably, the two DBS operators “differ in their implementations of their respective Multiswitch units,” and “[t]he control signaling between the two systems differs.”²⁴ As a result, each DBS

²¹ See DSTAC Report at 154.

²² As noted in the DSTAC Report, the two DBS operators use different proprietary approaches to implementing dynamic ad insertion. See *id.*

²³ *Id.*

²⁴ *Id.*

operator uses its own proprietary technology “to translate the ‘tune’ from a remote control into a series of commands that decode the right frequencies (and the right orbital slots) for the tuned channels.”²⁵

The rules proposed in the *Notice* provide that information about available Navigable Services (such as channels) and any instructions necessary to request a Navigable Service constitute Service Discovery Data and must be provided to third-party navigation devices.²⁶ At present, DISH subscribers must have at least one fully-capable set-top box to perform this function. This can be either a stand-alone device or a master device that serves multiple client devices throughout a subscriber’s home, such as DISH’s Hopper and Joey configuration. In the absence of such a device, all third-party navigation devices would need to incorporate the tuning and demodulating capabilities necessary to operate with DISH’s broadcast system and the multiswitch. Moreover, because DIRECTV uses differing technologies for both its broadcast signal modulation and its multiswitch, a third-party device designed to work with one DBS operator would not work with the other.

In summary, without at least one satellite gateway device in each subscriber’s home to act as a sort of local headend to manage any third-party navigation devices that the subscriber chooses to obtain, satellite MVPD services will be unable to provide full functionality to subscribers. As the proposals now stand, satellite operators simply would not be able to deliver *all of their programming and related data* directly to third-party devices as the rules without an intermediary gateway device.

²⁵ *Id.* at 37.

²⁶ *See* Proposed Rules 76.1200(f) and 76.1211(a).

B. Although the *Notice* Recognizes That Consumers Would Continue to Need a Gateway Device to Fully Access Satellite TV Services, It Makes No Attempt to Propose Appropriate Accommodations and Thus Provides Insufficient Notice for Comment

The need for a satellite TV operator to deploy a gateway device in order to make third-party navigation devices work does not appear to be in dispute, yet the *Notice* failed entirely to propose rules accounting for that requirement. The DSTAC Report, which informed the *Notice*,²⁷ recognized the unique challenges faced by satellite MVPDs, and discussed potential solutions. For example, the Report noted that “one-way systems can make use of a Provider Interface Device or Gateway to provide the same functionality as end-to-end systems on a local network.”²⁸ It concluded that, “in order to provide a uniform mechanism for competitive navigation device integration, some form of gateway device will continue to remain a practical necessity for unidirectional distribution networks under any security scheme suggested that complies with the DSTAC’s charter.”²⁹ The *Notice* also recognizes that DBS systems are different because they “cannot assume that bidirectional communication is available in all cases.”³⁰ As a result, it also recognizes that “DBS providers specifically will be required to have equipment of some kind in the home to deliver the three Information Flows over their one-way network.”³¹

²⁷ See *Notice* ¶ 9.

²⁸ DSTAC Report at 261.

²⁹ *Id.* at 93.

³⁰ *Notice* ¶ 20.

³¹ *Id.* ¶ 65. It is possible to gain limited access to DBS programming without a gateway. DISH offers one basic set-top box, the Wally, which does not include gateway functionality. Although consumers can use a Wally to view streaming video, they cannot access to all functions available to consumers with a gateway device, such as video on demand, place-shifting, recording, or AutoHop.

The *Notice*, in other words, anticipated problems related to DBS in a generic sense. Yet it did not even attempt to discuss or propose solutions. Rather than proposing rules to accommodate the need for an in-home gateway device, the *Notice* merely seeks generic comment on differences in DBS system architecture that should inform the proposed rules, asks how the need for a gateway device should be addressed, and asks whether there are any content protection or other technical issues that a third-party manufacturer would need to take into account.³² The failure to propose rules that solve for the recognized disparities is a significant shortcoming in a rulemaking that contemplates a substantial reorientation of the MVPD and consumer electronics industries.

In fact, the *Notice* proposes rules for implementation of a regime that the Commission recognizes would *not* be appropriate for DBS systems. From the perspective of DBS operators (such as DISH) and those who supply their equipment (such as EchoStar), the failure to include in the draft rules any accommodations for satellite operations is unworkable. While cable and telco MVPDs may at least have an inkling as to what the Commission has in mind, DBS operators can only point out problems and are left to guess how the Commission might address them. In these circumstances, DBS operators cannot meaningfully comment on the technical details involved in delivering the Navigable Service to third-party devices.

³² *Id.* ¶¶ 20 (“we seek comment on differences in DBS delivery or system architecture that should inform our proposed rules set forth below”), 65 (“How should [the need for a DBS gateway] be addressed by any rule that we adopt? Are there content protection issues that are unique to DBS providers? Are there technical issues that a Navigation Device developer would need to address when developing a solution for a DBS system? We seek comment on whether we need to create a DBS exception to our proposed rule regarding proprietary applications that deliver MVPD content without the use of additional MVPD-specific equipment.”).

With respect to satellite MVPDs, therefore, the Commission has failed to provide the notice and opportunity for comment required under the Administrative Procedure Act (“APA”).³³

As the D.C. Circuit recently summarized the applicable standards:

“[G]eneral notice that a new standard will be adopted affords the parties scant opportunity for comment.” Thus, an agency’s APA “obligation is more demanding.” It must “describe the range of alternatives being considered with reasonable specificity.” “Otherwise, interested parties will not know what to comment on, and notice will not lead to better-informed agency decision-making.”³⁴

Applying these standards, courts have recently vacated Commission rules in which generalized requests for input were found insufficient.³⁵ The few sentences in the *Notice* requesting input on how the differences in satellite delivery and system architecture should inform its proposed rules fall squarely into this category. Indeed, the absence of concrete proposals to tailor the rules appropriately for satellite system implementation is all the more troubling given that the failure to consider the interests of satellite providers was at least partially responsible for the D.C. Circuit’s decision to overturn the CableCARD regime previously adopted by the Commission to implement Section 629.³⁶ The Commission cannot proceed with this new regime – at least with

³³ The APA “requires an agency conducting notice-and-comment rulemaking to publish in its notice of proposed rulemaking ‘either the terms or substance of the proposed rule or a description of the subjects and issues involved.’” *Long Island Care at Home, Ltd. v. Coke*, 551 U.S. 158, 174 (2007) (quoting 5 U.S.C. § 553(b)(3)).

³⁴ *Time Warner Cable Inc. v. FCC*, 729 F.3d 137, 170 (D.C. Cir. 2013) (internal citations omitted).

³⁵ *See, e.g., id.* (assessing an NPRM asking whether the Commission should “adopt rules to address the complaint process itself” and, specifically, whether it “should adopt additional rules to protect [programming networks] from potential retaliation if they file a complaint,” and finding that “those solicitations are too general to provide adequate notice that a standstill rule was under consideration as a means to provide such protection”); *Prometheus Radio Project v. FCC*, 652 F.3d 431, 450 (3d Cir. 2011) (holding notice inadequate where NPRM asked “two general questions” that failed to solicit comment on “overall framework under consideration”). *See also Horsehead Res. Dev. Co. v. Browner*, 16 F.3d 1246, 1268 (D.C. Cir. 1994) (concluding notice inadequate where NPRM failed to indicate form that “ultimate standard” might take).

³⁶ *See EchoStar Invalidation Order*, 704 F.3d at 996-1000 (vacating Commission order adopted to implement a Memorandum of Understanding negotiated among cable operators and consumer electronics manufacturers that did not include satellite MVPDs).

respect to satellite carriers – without issuing a further notice describing alternative approaches for DBS operators with the specificity required by law so that interested parties can submit informed comments. If and when the Commission proposes satellite-specific rules, and if and when it adopts such rules in some future proceeding, it would then have to allow sufficient time for satellite carriers to come into compliance.

C. Allowing the Use of DBS Gateways Is No Panacea

Given that the *Notice* recognized the use of a DBS gateway as a requirement and the DSTAC Report characterized it as a “practical necessity,” the Commission should have included provisions for use of such a gateway device in each subscriber’s home to provide the required Information Flows to third-party devices. Yet merely authorizing the use of such devices would not resolve all of the implementation issues associated with their use. To take just two examples:

Resource management. The *Notice* contemplates a world in which consumers may choose to continue using navigation devices provided by their MVPD or may choose to purchase equipment from a third-party manufacturer.³⁷ It is also conceivable that some consumers would do both – and in the context of a DBS gateway, there would be no other way for third-party devices to operate. As discussed above, DISH has developed a whole-home architecture in which a single master device (the Hopper) performs many core functions on behalf of smaller client devices (the Joeys) deployed throughout the consumer’s home. This architecture has distinct advantages, given that the client devices are smaller and use less energy than a fully-capable navigation device. However, it also imposes certain practical limitations on network configuration that must be considered.

³⁷ See, e.g., *Notice* ¶ 26.

For example, unlike a cable or Internet protocol television system, the number of tuners built into a DBS master device presents a real physical limit on the number of live channels that can be requested by the client devices it serves. In the simple case, for example, a satellite master device with four tuners cannot simultaneously serve client devices at five televisions, or record two shows while providing three live feeds.³⁸ In the Hopper/Joey context, DISH has established systems to manage potential conflicts in resource allocation, typically by asking the consumer to make decisions. If one or more third-party devices are introduced into the home, however, there would need to be a way to manage tuner allocation demands from all of the client devices (both DISH and third-party). This would require an interface that manages a fourth flow of information *and control* – one that allows third-party devices to coordinate, allocate, and reserve the limited number of tuner resources on the DBS gateway.³⁹ If the Commission is to proceed along the path it has currently proposed, it must establish the parameters for this interface.

Channel identification information. In addition, the *Notice* apparently expects that all MVPDs will pass along identifying codes to enable third-party navigation devices to convey to consumers the programming that is available. Such identifiers are needed to manage both content items (*e.g.*, individual movie titles) as well as content channels (*e.g.*, to distinguish among the various channels that HBO offers). In particular, the *Notice* contemplates the use of

³⁸ In reality, DISH's system is more complicated than the simple case. By artful management of DISH's broadcast system, DISH enables simultaneous recordings of more than one channel by a single tuner for certain combinations of channels. This feature is well understood by EchoStar device designers and software developers.

³⁹ There was no need for a similar requirement under the CableCARD regime because each third-party device provisioned its own tuners, and could manage resource contention internally. This requirement also does not necessarily exist for MVPD or OTT providers that deliver content over IP interfaces provisioned from a two-way system connected outside the home.

an “Entertainment Identifier Register ID” (“EIDR”), which it characterizes as “a universal unique identifier system for movie and television assets.”⁴⁰

Yet, according to the Entertainment Identifier Registry’s web site, only five U.S. MVPDs are members – and neither DISH nor DIRECTV is among them.⁴¹ As far as EchoStar and DISH are aware, no such “universal” identifier exists, nor is there a credible regime in place to manage one.⁴² DISH has its own identifier system, but its usefulness is limited to devices that understand the entire satellite system. Timers and recordings created by DISH subscribers use metadata that is generated for and referenced to DISH’s own system. The unique identifiers that distinguish the channels (*e.g.*, “HBO” from “HBO Zone” from “HBO Comedy”) have meaning only within DISH’s system, and only to DISH’s receiving equipment. Similarly, the unique identifier for a particular episode of a television series has context only when compared to other events on DISH’s system, and nowhere else. In other words, DISH would not be in a position to comply with a mandate to pass along EIDR data and would have to re-engineer its system before it could make use of such data in the first place.

Thus, allowing DBS operators to deploy a gateway device in each subscriber’s home may be necessary for consumers to receive all programming to which they are entitled, but it is by no means sufficient to address the full range of challenges they would face under the regime proposed in the *Notice*. Moreover, it would undercut the Commission’s statement that “our

⁴⁰ See *Notice* ¶ 38 and n.105.

⁴¹ See “About EIDR,” available at <http://eidr.org/about-us/#about> (listing Bright House Networks, Comcast, Google, Time Warner Cable, and Verizon Digital Media Services as Members).

⁴² In fact, there is another leading provider of channel metadata used by many MVPDs – Gracenote – which is not a member of EIDR and uses an entirely different technology. As the Commission recognizes, PSIP data exists for broadcast channels (*see Notice* ¶ 38 and n.107), but there is no parallel regime for cable channels (much less VOD and PPV content) and no apparent authority for the Commission to force programmers to create such identifying data in a single format.

proposal does not require most MVPDs to develop or deploy new equipment, nor would it require subscribers to obtain additional or new equipment.”⁴³ As previously explained in the DSTAC process, existing master devices cannot serve as “interim gateways” for third-party devices – entirely new interfaces will have to be invented, standardized, and implemented in a certification program before a suitable gateway device would be ready for deployment.⁴⁴ The process would take years of effort and require a substantial investment of effort and funding by DBS operators to bring to fruition – an investment that could more wisely be made by innovating in today’s marketplace without government mandates.

II. THE PROPOSALS MADE IN THE *NOTICE* ALSO INCLUDE FUNDAMENTAL FLAWS THAT WOULD AFFECT ALL MVPDS

As demonstrated above, the regime proposed in the *Notice* is particularly flawed and underdeveloped with respect to DBS providers. Yet even if the Commission were someday to adopt rules to accommodate the recognized challenges that satellite systems present, its proposals would still include many fundamental flaws that extend to all MVPDs. We discuss two of the most significant concerns below.

A. The Notice Ignores the Potential for Contract Violations

Throughout the DSTAC process, participants pointed out that third-party navigation devices could violate obligations in any number of ways. For example, a group of major

⁴³ *Notice* ¶ 46.

⁴⁴ See Letter from Rick Chessen to Marlene H. Dortch, MB Docket No. 15-64, at 4 (Jan. 15, 2016); Letter from Alex Starr to Marlene H. Dortch, MB Docket No. 15-64, at 4 (Jan. 13, 2016); DSTAC Report at 287 (“the Device Proposal states that because many MVPDs already have deployed equipment in the home, they ‘may be convertible to an interim gateway by enabling the Ethernet interface already on the device.’ This optimistic theory is unsupported by any analysis, even a cursory one, and runs counter to the decades of experience of MVPDs who continually deploy new generations of in-home hardware after previous generations are found to lack the ability to accept new, more complex and larger software downloads that expand capabilities and provide new features. . . . It is no trivial task to create and utilize an interface different than the one that has been optimized for the MVPD’s specific network.”).

programmers submitted an *ex parte* filing that discussed several ways in which their copyrights could be compromised by a regime that “would allow third parties, with no ownership rights in the programmers’ content, to divorce that content from critical, interdependent, negotiated-for elements such as branding, channel assignment, or advertising.”⁴⁵ Third-party manufacturers, for their part, made clear that they do not feel bound by any limitations imposed in the contracts through which content providers authorize MVPDs to distribute their programming.⁴⁶

A typical MVPD contract with a content owner generally permits the MVPD to deliver the content only to its end-user subscriber, not to a third party. To the extent any new rules could be viewed as requiring the MVPD to send programming streams to a third party, it could be construed as a violation of its contract. In addition, MVPDs deliver broadcast programming pursuant to statutory copyright licenses that specifically prohibit willful alteration “through changes, deletions, or additions” to the content of the signal.⁴⁷ By its terms, this prohibition applies to MVPDs. It is not clear whether alterations by third-party devices would trigger liability for MVPDs or manufacturers.

⁴⁵ Letter from A&E Networks, LLC, *et al.* to Marlene H. Dortch, MB Docket No. 15-64, at 5 (Jan. 14, 2016).

⁴⁶ *See, e.g.*, Letter from Devendra T. Kumar, Counsel for TiVo, to Marlene H. Dortch, MB Docket No. 15-64, at 1 (Jan. 13, 2016) (“The TiVo Representatives made clear that competitive device providers are not and should not have to be bound to programming contracts entered into by MVPDs to which they were not party.”). *See also* Comments of the Electronic Frontier Foundation, MB Docket No. 15-64, at 2 (Oct. 9, 2015) (“the Commission should avoid making mandatory any post-receipt usage controls on audiovisual content” imposed by “rights holders or intermediaries”); Comments of Computer & Communications Industry Association, MB Docket No. 15-64, at 10 (Oct. 8, 2015) (“Device manufacturers, of course, cannot violate contracts to which they are not a party.”).

⁴⁷ *See* 17 U.S.C. §§ 111(c)(3) (cable license), 122(e) (satellite license).

The DSTAC Report reflects the concerns raised by programmers and MVPDs alike.⁴⁸

The *Notice* identifies as one of its paramount objectives that unaffiliated equipment vendors “must respect licensing terms regarding copyright.”⁴⁹ Yet it dismisses the copyright-related concerns raised to date in a manner that can only be described as blithe:

We do not currently have evidence that regulations are needed to address concerns raised by MVPDs and content providers that competitive navigation solutions will disrupt elements of service presentation (such as agreed-upon channel lineups and neighborhoods), replace or alter advertising, or improperly manipulate content. We have not seen evidence of any such problems in the CableCARD regime, and based on the current record, do not believe it is necessary for us to propose any rules to address these issues.⁵⁰

The basis for this conclusion in the face of the voluminous evidence on this point in the record of the DSTAC proceeding and elsewhere is unclear.

Indeed, the Commission need look no further than TiVo – one of the most ardent supporters of the Commission’s proposed approach – for the evidence it claims is lacking. Over the last several years, TiVo has begun to embed advertising through its DVR, including through the use of “[f]ast-forward billboards” and “[i]n program placements – before, during and after.”⁵¹ For example, TiVo offers a “Pause Menu” option that enables advertisers to insert commercials into live and time-shifted programming. As described by TiVo: “When viewers hit pause, additional ad messaging appears in a screen overlay, making it easy and convenient

⁴⁸ See, e.g., DSTAC Report at 295 (“The Device Proposal does not permit MVPDs to offer their services consistent with the content licenses and retransmission consent requirements under which they acquire distribution rights.”), 296 (“The Device Proposal fails to support the intellectual property rights underlying copyright licenses and that provide the incentives for content providers to produce great content, for inventors to create new methods of distribution and new applications, and for licensed distributors to compete as differentiated retailers, all to the benefit of consumers.”).

⁴⁹ *Notice* ¶ 29.

⁵⁰ *Id.* ¶ 80.

⁵¹ See TiVo advertising sales, available at <https://www.tivo.com/ad-sales>.

for them to access your ad content.”⁵² Moreover, in its latest annual report, TiVo states that “our long-term success will depend on securing additional revenue from such areas as . . . advertising”⁵³ – even while recognizing that its strategies for making money using MVPD services and programming may violate copyright law.⁵⁴

OTT video providers have implemented similar strategies. For example, YouTube (owned by Google, another supporter of the Commission’s approach) offers advertisers an array of choices for their commercials. These include: (1) video ads, which “can appear when a user initiates video play either in the beginning (pre-roll), at points in between (mid-roll), or after (post-roll);”⁵⁵ (2) TrueView in-stream ads, which “run on videos served on YouTube” and “may also run on YouTube videos that are embedded on other sites or apps;”⁵⁶ and (3) in-video overlay ads, which are “ads that appear overlaid on the bottom of the YouTube video player on the YouTube watch pages” and “appear[] when user initiates video play.”⁵⁷

Even if such behavior had not already been observed, the Commission cannot simply assume that it will not manifest itself going forward in the context of a regime that strives to divorce content from MVPD control to a much greater extent. Many companies today offer products or services at a discount if the consumer is willing to accept more commercials in the

⁵² See TiVo Advertising – Pause Menu, available at <https://www.tivo.com/tivoadvertising/pausemenu.html>.

⁵³ See TiVo Inc., Form 10-K for the fiscal year ended January 31, 2016, at 28, available at <http://investor.tivo.com/phoenix.zhtml?c=106292&p=irol-sec>.

⁵⁴ *Id.* at 31 (“Entertainment companies, networks, or video distributors may claim that our advertising products or features may unintentionally violate copyright or trademark laws.”).

⁵⁵ “How Video Ads work,” available at <https://support.google.com/displayspecs/answer/6244557>.

⁵⁶ “How True-View in-stream ads work,” available at https://support.google.com/displayspecs/answer/6055025?hl=en&ref_topic=4588474.

⁵⁷ “In-video Overlay Ads,” available at https://support.google.com/displayspecs/answer/187095?hl=en&ref_topic=4588474.

feed. For example, YouTube offers free access to its videos that include advertising (such as that discussed above), while charging a fee for “YouTube Red” service with limited commercials.⁵⁸ Amazon offers various Kindle devices at a discounted price for those purchasers willing to accept advertising in banners and screen savers (referred to as “Special Offers”).⁵⁹ Hulu offers its OTT video service at a \$4.00 per month discount for those subscribers willing to accept commercials.⁶⁰ Similarly, Spotify offers free access to music with accompanying advertising, while charging a fee for its advertising-free Premium service.⁶¹ In addition, technology has been used in the past to speed up programming in order to create room for additional commercials between shows.⁶² The Commission cannot ignore the possibility that a third-party manufacturer would apply similar strategies to its navigation devices – especially since some of the parties doing so in other markets are the ones who would hope to benefit from the Commission’s proposals.

The proposals in the *Notice* would affect the copyrights of MVPDs themselves. Because most of the video programming that MVPDs provide is available across multiple platforms, MVPDs compete in substantial part on the basis of the “look and feel” of their services. This typically includes a unique user interface and visual display, extensive search capabilities, and

⁵⁸ See Sarah Mitroff, “Everything You Need to Know About YouTube Red,” CNET (Feb. 17, 2016), *available at* <http://www.cnet.com/how-to/youtube-red-details/>.

⁵⁹ See Rick Broida, “Why I’m choosing the Kindle with Special Offers,” CNET (Sep. 14, 2012), *available at* <http://www.cnet.com/news/why-im-choosing-the-kindle-with-special-offers/>.

⁶⁰ See “About Hulu,” *available at* <http://www.hulu.com/press/about> (offering services “with limited commercials for \$7.99 per month or with no commercials for \$11.99 per month”).

⁶¹ Spotify Premium, *available at* <https://www.spotify.com/us/premium/>.

⁶² See Joe Flint, “Cable TV Shows Are Sped Up to Squeeze in More Ads,” WALL STREET JOURNAL (Feb. 18, 2015), *available at* <http://www.wsj.com/articles/cable-tv-shows-are-sped-up-to-squeeze-in-more-ads-1424301320>.

distinctive features (such as DISH’s Hopper interface, PrimeTime Anytime, and Sports Bar Mode).⁶³ Forcing MVPDs to pass along their service to be sliced and diced by third-party navigation devices as envisioned by the *Notice* would undermine basic copyright protections.

When Congress authorizes the abrogation of traditional copyright protections, such as through the creation of a statutory license, it does so specifically.⁶⁴ Yet Congress did not mention copyright when it promulgated the navigation device provisions of Section 629, much less express an intent to override established safeguards and rules. Nor can the Commission conclude that abrogation of copyright is “ancillary” to its statutory mandate with respect to navigation devices, in light of the D.C. Circuit’s admonition that there is no such authority for “regulations that significantly implicate program content.”⁶⁵ When the Commission adopted the CableCARD regime, it wrestled with the interplay between the Communications Act and the Copyright Act, and stated that it would “continue to be sensitive to this intricate and complex issue as we implement Section 629.”⁶⁶ The Commission cannot now simply turn a blind eye to the copyright implications of its proposed rules and its lack of authority in this area.

B. The Proposed Rules Could Dramatically Degrade Customer Service and Cause Consumer Confusion

The rules proposed in the *Notice* are intended to enable multiple third-party manufacturers to build and sell to consumers navigation devices capable of operating with the full spectrum of MVPD systems. Yet the significance for a consumer of purchasing a piece of

⁶³ See, e.g., Jeff Baumgartner, “Dish Launches ‘Sports Bar Mode,’” Multichannel News (Mar. 17, 2016), available at <http://www.multichannel.com/news/content/dish-launches-sports-bar-mode/403398>.

⁶⁴ See, e.g., 17 U.S.C. § 111 (statutory license for cable operators to retransmit broadcast programming).

⁶⁵ *Motion Picture Ass’n of America v. FCC*, 309 F.3d 796, 799 (D.C. Cir. 2002).

⁶⁶ *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 18 FCC Rcd. 20885, ¶ 54 (2003).

equipment is very different from that of subscribing to a service. The purchase of a set-top box is a one-time transaction, with all monetary consideration changing hands at the point of sale and the parties generally going their separate ways after it is concluded. An *MVPD subscriber*, by contrast, has an ongoing relationship with her MVPD that ideally can last for years, and the profitability of that subscriber to the MVPD depends upon the longevity of that relationship. MVPDs thus have very strong incentives to offer a compelling product and to provide customer support should anything arise that might reduce subscriber satisfaction.

In the context of navigation devices, these differing relationships have real implications. When a subscriber has a problem with her MVPD service, it is often not entirely clear whether the problem originates in the network transmission, the navigation device, the in-home network, the remote control, or somewhere else entirely. She could call the manufacturer of her third-party navigation device, but: (1) that might not be the complete source of the problem; and (2) the manufacturer has little incentive to devote resources to customer support given that it has already completed its transaction with the consumer.

Instead, the subscriber will inevitably call her MVPD, the party with which she has an ongoing relationship and the one ultimately responsible for providing her service. In order to troubleshoot the issue and resolve the problem, she expects that the MVPD's customer service representatives will be sufficiently familiar with all aspects of the service, including the navigation devices in her home. At present, the MVPD has comprehensive knowledge of the range of different models it provides and the technologies available in each one, which greatly streamlines the education process for customer service representatives and enhances their ability to resolve issues quickly. The MVPD cannot support a proliferating range of navigation devices from manufacturers that, by definition, have no relationship with the MVPD.

Moreover, because third-party manufacturers typically have no ongoing relationship with purchasers of their equipment (beyond a patchwork of fairly minimal state-by-state warranty requirements), they have no incentive to update devices as necessary to keep up with new features and functions introduced by MVPDs. Indeed, it is in the manufacturer's interest for the product to become obsolescent "just fast enough" so that the consumer will have to purchase another device. Consumers could end up having to buy a new set-top box every time an MVPD deploys new delivery technology or adds new features.

This concern is not theoretical. For example, when first DBS and then cable operators transitioned from MPEG-2 to the highly-efficient MPEG-4 compression technology for the delivery of high definition programming, subscribers who had purchased certain legacy TiVo equipment could no longer use it to receive the HD service.⁶⁷ Thus, in connection with Comcast's transition to MPEG-4, TiVo posted information on its website telling owners of TiVo Series3 HD devices that "[t]hese DVRs will lose all HD cable channels" and warning "IMMEDIATE ACTION REQUIRED," while advising owners of TiVo Series 1 and 2 devices that they should "replace your existing cable box with an updated cable box from Comcast to continue to receive content."⁶⁸ Citing this advisory, one contemporaneous article described the disparate impact of the transition on subscribers with TiVo equipment versus those with equipment from their MVPD.

For customers running newer cable boxes and DVRs, the transition should be seamless. However, folks on older hardware will need to swap boxes. Those with Comcast gear need merely walk into the store to receive new Xfinity

⁶⁷ See, e.g., Annual Report of TiVo Inc. for the fiscal year ended January 31, 2008, at 9 (noting that DIRECTV "has begun to add high definition programming in a format that is not compatible with the existing TiVo-enabled high definition DVRs"), available at <http://investor.tivo.com/phoenix.zhtml?c=106292&p=irol-sec>.

⁶⁸ See TiVo Customer Support, "Comcast Transitioning to MPEG4 in Select Markets," available at https://support.tivo.com/SupportPortalArticleViewPage?artURL=/articles/Features_Use/Comcast-Transitioning-to-MPEG4-in-Select-Markets.

equipment or even arrange it online. But for TiVo owners, the inherent risk in *purchasing* retail cable hardware manifests . . .⁶⁹

Subscribers with MVPD-provided equipment were seamlessly upgraded, but those with legacy TiVo devices had to either purchase new equipment to continue receiving the high definition programming they had paid for or switch to the MVPD's equipment in order to avoid similar issues in the future. Imposing such disruption every time an MVPD upgrades its service to add a significant new feature or function will breed consumer dissatisfaction and confusion.

In addition, it will be important for consumers to be able to determine exactly what features and functions a particular third-party navigation device will support with each MVPD. One could imagine, for example, that some manufacturers might decide not to incorporate the hardware and software necessary to accommodate operations with a satellite MVPD, given the challenges presented by support of a unidirectional service discussed above. Alternatively, a manufacturer might decide to offer a less expensive device that can only support certain MVPD features and functions but not others. The resulting confusion would only compound consumer dissatisfaction while creating disincentives for MVPD innovations that might not be supported by third-party devices. In such a regime, an announcement that DISH's Hopper 3 device supports the delivery of Ultra HD programming, multiple feeds on a single screen, and integrated apps (including Netflix, YouTube, Pandora, and The Weather Channel)⁷⁰ might perversely result in customer dissatisfaction – or it might not happen at all.

⁶⁹ D. Zatz, "How Many Customers Will TiVo Lose As Comcast Goes MPEG-4?" (Aug. 5, 2015) (emphasis in original; web links omitted), available at <http://zatznotfunny.com/2015-08/tivo-comcast-mpeg4/>.

⁷⁰ See "Compare within DISH," available at <http://www.dish.com/compare/?vals=technology2&scrollTo=offers-services>.

CONCLUSION

As the Commission itself recognizes, DBS operators could not comply with the regime proposed in the *Notice*. Yet even looking beyond that significant legal infirmity, the proposals are highly problematic in a number of ways applicable to all MVPDs that are inherent in the regime and cannot be remedied. Accordingly, and especially in light of market developments that are making more content available in more ways on more consumer-chosen devices than ever, EchoStar and DISH urge the Commission not to proceed with these proposals.

Respectfully submitted,

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April 22, 2016