



January 14, 2016

**BY ELECTRONIC FILING**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

Re: *MB Docket No. 15-64*

Dear Ms. Dortch:

On January 12, 2016, EchoStar Technologies Corporation ("EchoStar") and DISH Network Corporation ("DISH") met with Gigi Sohn from the office of Chairman Tom Wheeler together with Bill Lake, Michelle Carey, Nancy Murphy, Susan Singer, Mary Beth Murphy, Brendan Murray, Martha Heller, and Lyle Elder of the Media Bureau, Susan Aaron from the Office of General Counsel, Chief Technologist Scott Jordan, and Antonio Sweet from the Office of Strategic Planning and Policy Analysis ("Media Bureau"). EchoStar was represented by Jennifer Manner, Vice President, Regulatory Affairs; Chris Tirpak, Vice President, Systems Technology; John Card, Director, Engineering; and Deborah Broderon, Director & Communications Regulatory Counsel. DISH was represented by Hadass Kogan, Corporate Counsel.

In the meeting, EchoStar/DISH's presentation followed the attached talking points and discussed the previously-filed EchoStar/DISH ex parte from December 15, 2015. EchoStar/DISH also provided attendees with the attached document discussing the implications of adopting an "All-vid"-like solution.

This letter is submitted consistent with the Commission's ex parte rules. Please direct any questions concerning this filing to the undersigned.

Sincerely,

/s/

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## DISH/EchoStar Talking Points on the DSTAC Recommendations

- DISH/EchoStar do not oppose exploration of the DSTAC's recommendations regarding adoption of competitive navigation devices, but recommend that the Commission avoid adopting overly simplistic solutions that could damage competition and hinder innovation.
  - DBS has served as an important disruptor in the MVPD marketplace and following AT&T's acquisition of DIRECTV, DISH is uniquely positioned to provide competition to terrestrial MVPDs.
  - DISH/EchoStar have led the industry in introducing advanced video devices, including the SlingBox, DTV converter box, MPEG-4 navigation devices, whole home DVRs, and SlingTV.
  - The Commission should structure any AllVid requirements to encourage ongoing, robust MVPD competition and to complement, rather than replace, market forces and industry standards initiatives.
  
- DISH/EchoStar encourage the Commission to consider the following issues should it pursue further action in this area:
  - **Consumer privacy**
    - What obligations do third-party navigation device manufacturers have to protect the privacy of the consumers who utilize their equipment? Federal law requires cable operators to notify subscribers at the time service is initiated and at least once each year about any personally identifiable information (PII) to be collected, and how it will be used, including:
      - The nature, frequency, and purpose of PII collected;
      - The nature, frequency, and purpose of any disclosure of such PII, including an identification of the types of persons to whom the disclosure will be made;
      - The period during which PII will be maintained;
      - The times and places at which the subscriber may access her PII; and
      - Any limitations placed on the cable operator regarding collection and disclosure of PII, as well as subscribers' rights to enforce the limitations.
    - Should a similar obligation apply to consumer electronics manufacturers that create navigation devices?
      - Does the Commission have statutory authority to impose such an obligation?
      - Should MVPD subscribers have a reasonable expectation that the same privacy rules will apply, regardless of whose navigation device they choose to use?

○ **Customer support**

- How should an MVPD handle subscriber calls seeking support for a navigation device built by a third party?
  - MVPDs cannot reasonably be expected to maintain intimate familiarity with all aspects (including proprietary information) of compatible third party devices, especially if such devices proliferate. Unless there is a method to identify the proper avenue for raising such issues directly with the appropriate manufacturer, consumers may not be able to resolve whatever problem is preventing them from fully enjoying their MVPD service.
  - Manufacturers are already required to make contact information available for the receipt and handling of certain accessibility-related complaints, but not for general support-related questions. By contrast, video programming distributors have a broader obligation; they must post contact information for the receipt and handling of consumers' closed captioning concerns on their web sites, in telephone directories, and in billing statements, as well as being required to file such information with the Commission for dissemination.
    - Should the Commission adopt this broader approach for manufacturers in order to enable consumers to identify the proper contact points with the manufacturer of their devices, and also provide MVPDs with the information needed to make quick and accurate referrals when they receive a call related to a third-party device?
    - What permission must an MVPD obtain from a subscriber before sharing information with a third-party manufacturer to help process support calls in a quick and accurate manner?

○ **Accessibility compliance**

- The Commission's rules impose a host of accessibility requirements upon MVPDs. Many of those provisions place responsibility for compliance on both MVPDs and their consumer-electronics-manufacturer business partners.
- How should MVPDs and third party consumer electronics companies work together to ensure compliance with accessibility requirements?
  - For example, if an MVPD develops and implements a new stream of data to enhance accessibility that a legacy third-party navigation device cannot support, what obligation does the manufacturer have to the consumer to incorporate that information?

- **Repair/replacement**
  - If a third-party navigation device has “bugs” or other technical errors that render parts of one or more MVPD’s service unusable, what duty does the manufacturer have to fix those errors or replace the defective navigation device so that the consumer can enjoy the entire service she is paying for an entitled to?
  - If an MVPD either adds new services or delivers existing services in a way that requires a hardware or software upgrade, what obligation does a consumer electronics manufacturer have to offer upgraded equipment or provide software updates to older devices?
  
- **Contract compliance**
  - MVPDs enter into license agreements with content suppliers in order to establish the terms and conditions under which the MVPD may carry copyrighted programming. Manufacturers of third-party navigation devices are not parties to those agreements, yet their devices may display programming in ways that violate the terms of the MVPDs’ carriage agreements and are not covered by any compulsory license.
  - What, if any, avenues do content suppliers have to ensure that their content is not being exhibited by a third party consumer electronics navigation device in a way that violates their copyright or the terms of their carriage agreements?
  
- **Interference**
  - Section 76.613 of the Commission’s rules provides that “[a]n MVPD that causes harmful interference shall promptly take appropriate measures to eliminate the harmful interference,” which may include suspension of service in certain situations.
  - If a consumer’s use of a third-party navigation device causes such interference, who is responsible for taking appropriate measures to eliminate it?
    - Moreover, if features of one consumer’s third-party navigation device interfere with another consumer’s reception of MVPD service, what party or parties bear responsibility for correcting the problem?
    - How should a consumer respond if she believes a neighbor’s device is causing such harm? Is there a complaint procedure available?
  
- **Channel placement**
  - MVPDs are required to give local broadcasters specific channel placement on their systems. In addition, cable operators are required to notify their subscribers before changing the channel placement of local broadcast stations.
  - Should the manufacturers of third-party navigation devices be obligated to observe those same requirements, or should they be permitted to re-map channels at their own discretion?

- ***Unidirectional service***
  - Will all third-party navigation devices be required to operate with MVPD services (such as satellite video) that use unidirectional technology but do not offer a return path for communications over their own systems?
    - If not, how must a manufacturer label navigation devices that require a broadband connection in order to operate?
  - Is there a minimum feature set that must be supported by unidirectional-capable navigation devices, and a corresponding obligation to alert consumers to device or service features that are not supported?
  
- ***Security of programming and services***
  - The same federal statute that directs the Commission to adopt regulations to assure the commercial availability of navigation devices from providers other than MVPDs also 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.”
  - What constraints should be placed on consumer electronics manufacturers to help ensure that third-party navigation devices do not jeopardize these important interests? Many program carriage agreements include provisions that require MVPDs to take certain actions in case of a security breach, which may include removing the content from the MVPD’s service to a compromised device until the breach has been corrected.
  - When an MVPD reasonably believes that a third-party navigation device jeopardizes its security, does it have the right to prevent theft of service by, for example, limiting or shutting off service to those devices?
    - If so, who is responsible for any revenue the MVPD loses as a result of the diminished service?
    - If not, what liability does the manufacturer of the third-party navigation device have to the programmer whose content is compromised?
  - What expectations should the owners of those devices have that the manufacturer will provide replacement devices or software to restore service?



December 15, 2015

**BY ELECTRONIC FILING**

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

Re: *MB Docket No. 15-64*

Dear Ms. Dortch:

The record in this proceeding and the proceedings of the Downloadable Security Technical Advisory Committee (“DSTAC”) that led to it demonstrate that any effort to design a “not unduly burdensome, uniform, and technology- and platform-neutral software-based downloadable security system designed to promote the competitive availability of navigation devices”<sup>1</sup> faces a myriad of technical issues. Should the Commission choose to initiate a rulemaking to pursue this system design concept further, it would also have to consider the associated practical issues. Below, EchoStar Technologies Corporation (“EchoStar”) and DISH Network Corporation (“DISH”) describe some of the many critical issues that the Commission must address in any reasonable effort to implement a downloadable security solution. EchoStar and DISH urge that the Commission consider these issues should it pursue further action in this area.

***Consumer privacy.*** What obligations do third-party navigation device manufacturers have to protect the privacy of the consumers who utilize their equipment? Federal law requires cable operators to notify subscribers at the time service is initiated and at least once each year about any personally identifiable information (“PII”) to be collected, and how it will be used, including:

- the nature, frequency, and purpose of PII collected;
- the nature, frequency, and purpose of any disclosure of such PII, including an identification of the types of persons to whom the disclosure will be made;
- the period during which PII will be maintained;

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<sup>1</sup> Pub. L. No. 113-200, 128 Stat 2059, § 106(d) (2014).

- the times and places at which the subscriber may access her PII; and
- any limitations placed on the cable operator regarding collection and disclosure of PII, as well as subscribers' rights to enforce the limitations.<sup>2</sup>

Should a similar obligation apply to consumer electronics manufacturers that create navigation devices? Does the Commission have statutory authority to impose such an obligation? Should MVPD subscribers have a reasonable expectation that the same privacy rules will apply, regardless of whose navigation device they choose to use?

**Customer support.** How should an MVPD handle subscriber calls seeking support for a navigation device built by a third party? MVPDs cannot reasonably be expected to maintain intimate familiarity with all aspects (including proprietary information) of compatible third party devices, especially if such devices proliferate. Unless there is a method to identify the proper avenue for raising such issues directly with the appropriate manufacturer, consumers may not be able to resolve whatever problem is preventing them from fully enjoying their MVPD service. Manufacturers are already required to make contact information available for the receipt and handling of certain accessibility-related complaints,<sup>3</sup> but not for general support-related questions. By contrast, video programming distributors have a broader obligation; they must post contact information for the receipt and handling of consumers' closed captioning concerns on their web sites, in telephone directories, and in billing statements, as well as being required to file such information with the Commission for dissemination.<sup>4</sup> Should the Commission adopt this broader approach for manufacturers in order to enable consumers to identify the proper contact points with the manufacturer of their devices, and also provide MVPDs with the information needed to make quick and accurate referrals when they receive a call related to a third-party device? What permission must an MVPD obtain from a subscriber before sharing information with a third-party manufacturer to help process support calls in a quick and accurate manner?

**Accessibility compliance.** The Commission's rules impose a host of accessibility requirements upon MVPDs. Many of those provisions place responsibility for compliance on both MVPDs and their consumer-electronics-manufacturer business partners.<sup>5</sup> How should consumer electronics companies ensure compliance with accessibility requirements for navigation devices that receive programming from MVPDs? For example, if an MVPD develops and implements a new stream of data to enhance accessibility that a legacy third-party navigation

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<sup>2</sup> See 47 U.S.C. § 551(a).

<sup>3</sup> See 47 C.F.R. § 79.110(b).

<sup>4</sup> See 47 C.F.R. § 79.1(i).

<sup>5</sup> See, e.g., *id.* at § 79.108(a)(1)(requiring that on-screen text menus and guides be audibly accessible in real time).

device cannot support, what obligation does the manufacturer have to the consumer to incorporate that information?

**Repair/replacement.** If a third-party navigation device has “bugs” or other technical errors that render parts of one or more MVPD’s service unusable, what duty does the manufacturer have to fix those errors or replace the defective navigation device so that the consumer can enjoy the entire service she is paying for and entitled to? If an MVPD either adds new services or delivers existing services in a way that requires a hardware or software upgrade, what obligation does a consumer electronics manufacturer have to offer upgraded equipment or provide software updates to older devices?

**Contract compliance.** MVPDs enter into license agreements with content suppliers in order to establish the terms and conditions under which the MVPD may carry copyrighted programming. Manufacturers of third-party navigation devices are not parties to those agreements, yet their devices may display programming in ways that violate the terms of the MVPDs’ carriage agreements and are not covered by any compulsory license. What, if any, avenues do content suppliers have to ensure that their content is not being exhibited by a third party consumer electronics navigation device in a way that infringes their copyright or violates the terms of their carriage agreements?

**Interference.** Section 76.613 of the Commission’s rules provides that “[a]n MVPD that causes harmful interference shall promptly take appropriate measures to eliminate the harmful interference,” which may include suspension of service in certain situations.<sup>6</sup> If a consumer’s use of a third-party navigation device causes such interference, who is responsible for taking appropriate measures to eliminate it? Moreover, if features of one consumer’s third-party navigation device interfere with another consumer’s reception of MVPD service, what party or parties bear responsibility for correcting the problem? How should a consumer respond if she believes a neighbor’s device is causing such harm? Is there a complaint procedure available?

**Channel placement.** MVPDs are required to give local broadcasters specific channel placement on their systems.<sup>7</sup> In addition, cable operators are required to notify their subscribers before changing the channel placement of local broadcast stations.<sup>8</sup> Should the manufacturers of third-party navigation devices be obligated to observe those same requirements, or should they be permitted to re-map channels at their own discretion?

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<sup>6</sup> See *id.* § 76.613.

<sup>7</sup> See 47 U.S.C. § 534(b)(6) (channel placement requirement for cable operators); 47 C.F.R. § 76.66(i)(1) (containing “neighboring” requirement for satellite carriers).

<sup>8</sup> 47 U.S.C. § 534(b)(9).

**Unidirectional service.** Will all third-party navigation devices be required to operate with MVPD services (such as satellite video) that use unidirectional technology but do not offer a return path for communications over their own systems? If not, how must a manufacturer label navigation devices that require a broadband connection in order to operate? Is there a minimum feature set that must be supported by unidirectional-capable navigation devices, and a corresponding obligation to alert consumers to device or service features that are not supported?

**Security of programming and services.** The same federal statute that directs the Commission to adopt regulations to assure the commercial availability of navigation devices from providers other than MVPDs also 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.”<sup>9</sup> What constraints should be placed on consumer electronics manufacturers to help ensure that third-party navigation devices do not jeopardize these important interests? Many program carriage agreements include provisions that require MVPDs to take certain actions in case of a security breach, which may include removing the content from the MVPD’s service to a compromised device until the breach has been corrected. When an MVPD reasonably believes that a third-party navigation device jeopardizes its security, does it have the right to prevent theft of service by, for example, limiting or shutting off service to those devices? If so, who is responsible for any revenue the MVPD loses as a result of the diminished service? If not, what liability does the manufacturer of the third-party navigation device have to the programmer whose content is compromised? What expectations should the owners of those devices have that the manufacturer will provide replacement devices or software to restore service?

\* \* \*

Although the focus in this proceeding to date has been on technical issues, the Commission cannot afford to overlook the practical issues that would be involved in any attempt to implement a downloadable security system for use by all MVPDs. We urge the Commission to consider all aspects of this challenge, including those matters discussed above, as it reviews its options in this proceeding.

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<sup>9</sup> 47 U.S.C. § 549(b).

Respectfully submitted,

/s/

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## Implications of All-Vid

- The 1996 Cable Act brought innovation to the MVPD marketplace.
- MVPDs, led by DISH, have brought to market numerous products and services, including:
  - Launch of local channels on DBS,
  - HD programming,
  - MPEG-4 video encoding,
  - Integrated VOD delivered over satellite and public IP networks,
  - Widespread interactive services,
  - Whole-home DVR,
  - Portable consumer recordings, and
  - Enhanced EPG information.
- DISH and EchoStar continue to innovate to bring to U.S. consumers the most advanced, reliable and cost-effective services, products and technology.
- **Mandating Competitive Navigation Devices Could Contravene Existing Licensing Agreements Between MVPDs and Programmers**
  - Existing FCC rules require and constrain channel placement for broadcast stations.
    - Similar terms exist in negotiated licensing agreements between DISH and its programmers and other MVPDs and their programmers.
    - These terms are reached through a commercial negotiation involving a variety of factors and trades.
- **Existing FCC Rules Are Sufficient to Protect Networks and Services from Harm from Third Party Devices**
  - The current FCC rules governing navigation devices provide sufficient protections for the network and for customers, including preventing physical harm to the network and disruption of service, security and protection of legal rights.
  - Marketplace and consumer demands require DISH/EchoStar to ensure that navigation devices provide high quality service.

- **There is Insufficient Evidence to Support Mandating Identical Entitlement Encoding for Competitive Navigation and MVPD-provided Navigation**
  - DISH/EchoStar do not believe a mandate for identical entitlement for competitive navigation devices is warranted at this time, given the rapid pace of innovation and the robust competition in the video marketplace.
    - If the FCC considered such a mandate, however, it would need to require that all third-party navigation devices accurately and completely present all entitlement options.
    - For this requirement to be successful, the FCC would have to require that all navigation devices be updated concurrent with new entitlement options.
  
- **Third Party Navigation Devices Should Be Bound by Strict Privacy Requirements**
  - MVPDs are required by the 1996 Cable Act to abide by strict privacy requirements.
    - Under an “AllVid”-like proposal there are no such requirements placed on providers of competitive navigation devices.
    - To provide consumers with strong privacy protections, the FCC would need to adopt and implement equivalent privacy protections.
  
- **Adopting AllVid Requirements Could Increase Administrative Burdens and Impede Innovation**
  - An “AllVid”-like proposal would allow navigation systems to pick and choose which features of an MVPD’s service to support.
    - MVPD customers could be deprived of access to attractive and innovative MVPD features.
    - MVPDs and programmers would be blocked from providing innovative and cost-saving features unless the navigation system manufacturers agreed to support such features.
  - Allowing navigation systems discretion to choose which MVPD service features to support would:
    - Create an unnecessary administrative and cost burden, and
    - Deprive consumers of new offerings.
  
- **DBS Is Unlikely to Be Able to Support a Cloud-Only Competitive Navigation Device**
  - For DISH to support a cloud-only competitive navigation device, there would need to be universal access to broadband without the imposition of any data caps or usage charge differentials.
    - It is unlikely that DISH’s unidirectional DBS distribution system will ever migrate to IP technologies, and DISH already has deployed IP systems for VOD content that its Internet-based customers can access.
      - No further migrations or adoptions of IP are currently planned or needed.

- “Simple changes to the license agreements” would not be enough to enable DTCP-IP support for competitive navigation devices from the cloud.
    - Assuming access to DISH content that is already available from the cloud to a competitive navigation device in the home acting as a DTCP sink (i.e. no extra DISH-provided hardware in the customer’s home), the FCC would need to update the technical specifications for DTCP and DTCP-IP.
  - A sampling of changes to existing specifications that would be needed to enable DTCP-IP for cloud usage include:
    - Increasing by several orders of magnitude the constraint that restricts a single source device to 34 sink devices.
    - Relaxing the technical constraint that requires transmitting DTCP devices to set TTL to no greater than 3.
    - Increasing by several orders of magnitude the limit of 20 managed sink devices in a source device’s Remote Sink Registry.
    - For devices using a DTLA-provided 40-bit Device ID, requiring DTLA-managed ID to provide a unique ID for a particular sink device.
    - For devices with a common device certificate, the IDU managed by the Remote Sink Registry will need to be generated in a manner that is guaranteed to be unique across all possible sink devices connected to an MVPD’s cloud service.
      - Alternately, the specifications could be updated with flows that guarantee uniqueness, but that may create a legacy device compatibility problem.
    - Updating key expiration procedures of the DTCP-IP specification.
    - Updating revocation procedures for DTLA-provided certificates.
  - DISH/EchoStar could submit detailed technical recommendations regarding DLNA and DTCP-IP standards.
- **DTCP-IP Does Not Offer Sufficient Protection for Content**
    - DTCP-IP is inadequate in two major respects:
      - First, DTCP-IP is expressly dis-allowed in any programming contracts for content higher definition than HD (e.g., 4K/UHD).
        - Content providers are concerned that DTCP-IP is no longer sufficiently robust to protect high-value content.
        - DTCP-IP only continues in existing contracts because it is so prevalent that removing it would obsolete existing CE.
      - Second, adopting DTCP-IP would make valuable compressed content more vulnerable to piracy.
        - DTCP-IP is an increasingly vulnerable 15 year old protocol; using DTCP-IP to protect compressed content valued by pirates will increase incentives to break this protocol.

- DBS providers are uniquely vulnerable to piracy because unlike cable providers we are unable to see unauthorized physical connections to our system.
  - Content protection must be able to evolve based on market forces; regulation will stifle innovation.
- **Three Interface and Content Protection to Enable Competitive Navigation Devices Would Require Changes in Network Architecture and Services**
  - The three interfaces proposition was presented to DSTAC WG4, but WG4 ran out of time to analyze it before Congressionally mandated deadlines required the DSTAC report to be completed.
  - Neither of DISH's deployed DBS broadcast and IP VOD systems employ the three interfaces and it would take significant effort to reconfigure existing systems or create adaptation layers from those systems to meet the proposed abstraction.
- **DBS Requires System-Specific Equipment**
  - DBS requires in-home system-specific reception equipment because of the unique characteristics of each satellite system.
    - DBS providers have specific installation requirements for in-home reception equipment that minimizes disruption of service caused by unique, in-home environmental factors (other services provided to the house; specific physical characteristics of a home).
  - All-Vid proponents appear to expect an asymmetric deployment of support.
    - This highlights one of the challenges of All-Vid; proponents are willing and eager to absorb and disaggregate IP-carried services, but expect DBS providers to continue to provide equipment and design new hardware that fits their mutable needs.