In the Matter of

Petition for Rulemaking to Permit MVDDS Use of the 12.2-12.7 GHz Band for Two-Way Mobile Broadband Service

OPPOSITION OF INTELSAT

Intelsat License LLC (“Intelsat”) opposes the MVDDS 5G Coalition’s above-captioned Petition for Rulemaking (the “Petition”).1 The MVDDS 5G Coalition (the “Coalition”) consists of ten local multichannel video distribution and data service (“MVDDS”) licensees plus DISH Network L.L.C., a direct broadcast satellite service (“DBS”) licensee.

The Petition asks the Federal Communications Commission (“FCC” or “Commission”) to re-examine technical limits in the 12.2-12.7 GHz band—currently allocated to the Fixed Service, Broadcast Satellite Service (“BSS”)2 and non-geostationary satellite orbit (“NGSO”) Fixed Satellite Service (“FSS”)—to allow MVDSS licensees to provide, for the first time, two-way mobile broadband services. As a necessary component of the request, the Coalition also requests that the FCC delete, or downgrade to secondary, the NGSO FSS allocation in 12.2-12.7 GHz band.3 As explained below, Intelsat opposes both the proposal to allow mobile services in a DBS band and any degradation of the NGSO FSS allocation.

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2 In the United States, the BSS allocation is used for the provision of DBS.

3 Petition at 7 (“Delete or designate as secondary the existing . . . NGSO fixed-satellite service.”).
Intelsat is concerned with the proposal for a mobile service to share a DBS band. MVDDS is licensed as a one-way service that is inherently different from the mobile service contemplated in the petition. MVDDS is a fixed video programming distribution service, with transmitters pointed close to the horizon. It was established precisely because, with careful power limits, it could share with DBS downlinks. Indeed, those limits were established with the aid of a Congressionally-mandated study by the respected MITRE research and development corporation, which resulted in complex interference-avoidance requirements. At the time, the Commission considered and prohibited MVDDS licenses from providing two-way (i.e., return channel) and terrestrial mobile operations:

Although the Commission has a general policy of flexible spectrum use, the Commission proposed to prohibit mobile and aeronautical operations in the service. The Commission was concerned that DBS would receive interference and the NGSO FSS allocation would be complicated by permitting mobile and aeronautical operations…

We agree that adding a return link in this scenario would unnecessarily complicate the sharing scenario. We believe that sufficient flexibility for two-way service may be afforded to MVDDS licensees whereby the 12 GHz band could be used for a “downstream” path, and the “upstream” (or return) path could be located outside of the 12 GHz band in other available spectrum or over a wireline return path.

The Petition attempts to revisit this decision to allow only one-way terrestrial MVDDS service in the 12.2-12.7 GHz band. However, the Coalition attempts to do it without any

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6 See 47 C.F.R. §§ 101.105(a)(4), 101.1440 (“An MVDDS licensee shall not begin operation unless it can ensure that the EPFD from its transmitting antenna at all DBS customers of record locations is below the values listed for the appropriate region in §101.105(a)(4)(ii).”).

analysis to justify a different conclusion than MITRE already reached—that sharing in the DBS band should be limited to fixed systems with off-axis discrimination to satellite systems. The Petition is thus very similar to a waiver request filed by several MVDDS licensees seeking just a power increase, which even DISH thought required testing and specific technical data. The members of the Coalition acquired their MVDDS licenses knowing these licenses were subject to specific technical limitations. The instant Petition appears to be another attempt by MVDDS licensees to improve the value of these licenses by altering permissible operating parameters at the expense of other licensees in the band.

Moreover, the ITU has not identified the 12.2-12.7 GHz band for “International Mobile Telecommunications” (IMT, the ITU’s term for new mobile spectrum) at WRC-15. And, Intelsat is not aware that any regional body is considering introducing terrestrial mobile use into any of the world’s BSS bands, which are different in Europe and Africa than in the United States for mobile use. Intelsat is concerned about the wider implication of mobile use in BSS bands globally. The BSS bands are filled with literally millions of unregistered receive-only earth terminals that inherently are incompatible with a terrestrial mobile service. Moreover, adding the proposed two-way mobile service to the 12.2-12.7 GHz frequency band may also cause harmful interference to Intelsat’s existing gateway operations. Intelsat has a gateway earth

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11 See supra note 7.
station license operating an uplink in the 12.2-12.5 GHz band on a non-interference basis to the 
DBS downlink. Existing FSS gateway operations that were designed and developed to co-exist 
with existing incumbent uses of the band should not be put at risk by an expansion of incumbent 
use in a manner previously rejected.

Second, Intelsat opposes any degradation of the NGSO FSS primary allocation in the 
12.2-12.7 GHz band. Contrary to the Coalition’s claim, the NGSO FSS allocation will not lie fallow. Intelsat is an investor in WorldVu Satellite Limited d/b/a OneWeb. OneWeb has a pending FCC application seeking access to the U.S. market for its planned NGSO satellite system to use these frequencies.¹³ OneWeb’s low earth orbit satellites will provide affordable broadband connectivity to rural and underserved areas. OneWeb’s innovative technology has been carefully designed—consistent with existing spectrum allocations and service rules—to avoid harmful interference while sharing spectrum with co-frequency geo-stationary satellite operators, including the DBS satellites at 12.2-12.7 GHz band. OneWeb expects to begin constructing its NGSO satellites in 2017.¹⁴

It is simply untrue, therefore, that the 12.2-12.7 GHz band will be unused by NGSO systems.¹⁵ It will be used by OneWeb, and it is likely that other NGSO FSS systems soon will file applications seeking to serve the United States using this spectrum as well. NGSO FSS systems, such as OneWeb, enjoy primary status under Footnote 5.487A to the Table of

¹⁵ Petition at 22.
Allocations. The terrestrial mobile service advocated in the Petition would be fundamentally incompatible with NGSO FSS operations in the 12.2-12.7 GHz band. Accordingly, this is exactly the wrong time to suggest erasing, or downgrading, a long-standing portion of the Ku-band NGSO allocation and, *sub silentio*, Section 25.146 of the Rules.

In conclusion, the Commission should not revisit its decision to prohibit MVDDS from providing two-way, mobile services. Similarly, the FCC should not alter the Table of Frequency allocations, which already facilitates equitable shared use of the 12.2-12.7 GHz band by DBS, NGSO FSS and MVDDS. Intelsat thus opposes the MVDDS Petition.

Respectfully submitted,

/s/ Susan H. Crandall
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16 47 C.F.R. § 2.106.
17 The Coalition admits this. *See* Petition at 8 (“the NGSO FSS co-primary allocation and protection rules will need to be eliminated”).
18 47 C.F.R. § 25.146.