Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
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Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations	)	IB Docket No. 97-95

REPLY COMMENTS OF VIASAT, INC.

ViaSat, Inc. ("ViaSat") hereby replies to the comments filed in this proceeding on January 6, 2011, which address matters raised in the *Notice of Proposed Rulemaking* ("*NPRM*") adopted by the Commission on October 29, 2010.

As ViaSat explained in its initial comments, the V band promises to provide much-needed expansion capacity for the satellite broadband networks that are currently being deployed in the Ka band, and will be well-suited to support the efforts of ViaSat and other fixed-satellite service ("FSS") operators to provide broadband service to the seven million households that the Commission has estimated currently are unserved by terrestrial broadband networks. Therefore, ViaSat continues to support the Commission's efforts to implement sensible rules for the sharing of V-band spectrum and, in particular, the Commission's proposal to facilitate the use of V-band spectrum by creating a new FSS downlink allocation in the 42.0-42.5 GHz band. At the same time, for reasons set forth in its initial comments, ViaSat continues to oppose the imposition of overly broad and restrictive *ex ante* limits on FSS operations in the V band.

The record as a whole, and particularly the comments of the Satellite Industry Association ("SIA"), reflect broad industry support for these positions. Tellingly, only a single commenter, the National Radio Astronomy Observatory ("NRAO"), raises any objection to the proposed FSS allocation—albeit one that fails to offer any basis for denying that allocation and hamstringing the ability of FSS operators to meet the broadband needs of Americans. ViaSat takes this opportunity to address this objection, as well as certain arguments advanced in comments filed by Telesat Canada ("Telesat") and Northrop Grumman Corporation ("Northrop").

I. THE NRAO'S OBJECTION TO THE PROPOSED ALLOCATION FOR FSS DOWNLINKS AT 42.0-42.5 GHZ IS BASELESS

In its comments, the NRAO asserts that it "[i]s not convinced that an allocation to FSS (space-earth) at 42 – 42.5 GHz would be compatible with RAS operations."[1] However, the NRAO identifies no concrete threat to the radioastronomy service ("RAS") that necessarily would flow from FSS operations in the band. Instead, the NRAO appears to object to the proposed allocation simply because that allocation *might* somehow impinge on RAS operations. This position is highly speculative, and wholly ignores the detrimental effects that *certainly* would flow from a decision not to create the proposed allocation. While RAS interests are important, they clearly must be balanced against the interests of FSS operators and the customers they will serve—including the millions of Americans that the Commission has found currently lack access to broadband service. Where, as here, FSS operators can utilize appropriate system design to minimize the potential for harmful interference into RAS operations, and the Commission can ensure as much during the application review process, there simply is no justification for imposing broad *ex ante* restrictions on FSS earth station operations, or declining

[1] NRAO Comments at 4.

to allocate the 42.0-42.5 GHz band for FSS downlinks;[2] even if the NRAO "is not convinced" that FSS operators can afford adequate protection to RAS operations, the Commission should be.

II. CONTRARY TO TELESAT'S SUGGESTION, THE COMMISSION NEED NOT LIMIT THE TYPE OF EARTH STATIONS THAT MAY OPERATE IN THE 42.0-42.5 GHZ BAND IN ORDER TO PROTECT FS OPERATIONS

Telesat notes in its comments that, under the Commission's "soft-segmentation" approach, "the operator of an FSS receive earth station [in the 37.5-40.0 GHz and 42.0-42.5 GHz bands], in order to obtain interference protection, must obtain a Part 101 license or enter into a sharing agreement."[3] Telesat then asserts that "[u]biquitous deployment of receive earth stations is not feasible *under these conditions*, since such stations would be subject to unpredictable interference," and suggests that the Commission therefore should limit licensing of these bands to "large aperture earth stations such as gateways, which do not serve individual consumers."[4]

As ViaSat explained in its comments, though, the 37.5-40.0 GHz and 42.0-42.5 GHz bands are allocated for FSS downlinks, such that FSS earth stations would receive transmissions, but would not transmit, in these bands. Consequently, these earth stations would pose no threat of harmful interference into FS operations. Further, the Commission would have the opportunity to review the FSS space station operator's proposed spot beam plan during the application process to ensure that downlinks from the FSS space station provide adequate protection to FS terminals.[5] That being the case, neither the nature of the FSS earth station deployed (*e.g.*, "gateway" vs. user terminal) nor the ubiquity of such deployment would alter the potential for interference into FS operations.

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2 *See* ViaSat Comments at 10-11.

3 Telesat Comments at 4.

4 *Id.* (emphasis added).

5 *See* ViaSat Comments at 7.

Moreover, as explained in ViaSat's comments, the deployment of ubiquitous FSS earth stations could limit the deployment of FS terminals only to the extent that FSS earth station licensees claim interference protection from FS operations. Rather than having an *ex ante* restriction on the deployment of user terminals, the Commission should allow FSS earth station operators to determine whether interference from FS operations is truly a threat, and to decide how best to manage that threat if it exists. There is no reason to limit the deployment of user terminals in the 37.5-40.0 GHz and 42.0-42.5 GHz bands where the FSS earth station licensee is willing to forego interference protection for its receive operations.[6]

III. EXPANDING THE GOVERNMENTAL FSS V-BAND ALLOCATION TO MAKE IT COEXTENSIVE WITH THE COMMERCIAL FSS V-BAND ALLOCATION WOULD HARM BOTH GOVERNMENTAL AND COMMERCIAL OPERATORS AND USERS

In its comments, Northrop notes that "[t]he Federal satellite allocation only extends from 39.5-41.0 GHz, while the non-Federal allocation . . . would cover 37.5-42.5 GHz."[7] While Northrop does not advance any specific proposal, it does request that the Commission "more closely align the Federal and non-Federal satellite allocations and establish more streamlined coordination processes that encourage sharing on an equal footing."[8] Northrop asserts, without any foundation or evidence, that this would "maximize the utility of the

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[6] As ViaSat noted in its comments, the Commission previously has recognized that it need not preclude the licensing of FSS earth stations that (i) would only receive transmissions in the relevant band, and thus not be capable of causing interference into FS operations and (ii) are licensed to entities that agree to accept any level of interference from FS operations. ViaSat Comments at 7; *see also, e.g, PanAmSat Licensee Corp.*,Order and Authorization, 20 FCC Rcd 14642, at ¶ 9 (2005) (granting waiver of NG104 to permit provision of domestic service in the extended Ku band receive bands used by terrestrial microwave links); *EchoStar KuX Corporation*, Order and Authorization, 20 FCC Rcd 919, at ¶ 9 (2004); *EchoStar Satellite LLC*, Order and Authorization, 20 FCC Rcd. 930 (2004); *EchoStar KuX Corporation*, Order and Authorization, 20 FCC Rcd 942 (2004).

[7] Northrop Comments at 2 n.2.

[8] *Id.* at 2.

spectrum to both the Federal Government and commercial operators, and would promote equipment development and sales."[9]

Contrary to Northrop's suggestion, expanding the governmental FSS allocation to cover all of the commercial FSS allocation actually would increase the coordination burden placed on FSS operators. For obvious reasons, such expansion would require commercial operators to coordinate with governmental systems across a wider range of scenarios. Historically, such coordination has been a lengthy process, and often has resulted in unnecessary delay and the imposition of undue constraints on commercial operations, including reduced access to limited orbital resources. Thus, expanding the governmental allocation could undermine the efforts of the Commission, and FSS operators, to make broadband and advanced telecommunications services available to all Americans in a timely manner. In short, Northrop's naked assertion that expanding the governmental FSS allocation would "streamline" the process is misplaced.

On the other hand, expanding the governmental FSS allocation is not necessary to enable U.S. Government users to access FSS capacity. Notably, such users increasingly are purchasing service and capacity from commercial FSS operators. Indeed, the *U.S. Commercial Space Policy Guidelines* provide that "U.S. Government agencies *shall* utilize commercially available space products and services to the fullest extent feasible."[10] Because expanding the governmental FSS allocation would disrupt the efforts of commercial FSS operators to implement their systems, it necessarily also would undermine the ability of government users to access critical capacity and services. In fact, contrary to Northrop's suggestion, such expansion

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[9] *Id.*

[10] *U.S. Commercial Space Policy Guidelines*, NSPD-3 (Feb. 11, 1991) (emphasis supplied).

would serve to "maximize the utility" of the V-band only for government contractors (like Northrop) with a pronounced interest in selling *governmental* FSS systems and services to government users.

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For the reasons set forth herein, ViaSat urges the Commission to adopt V band service rules consistent with the comments and reply comments filed by ViaSat and SIA in this proceeding.

Respectfully submitted,

ViaSat, Inc.

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