



September 4, 2001

Magalie R. Salas
Secretary
Federal Communications Commission
445 Twelfth Street, S.W., Room TW-A325
Washington, D.C. 20554

Re: Further Notice of Proposed Rulemaking in IB Docket No. 97-95

Dear Ms. Salas:

The Satellite Industry Association (“SIA”)¹ hereby offers its comments on the proposals advanced by the Commission in the above-referenced Further Notice of Proposed Rulemaking (“*FNPRM*”) concerning the domestic implementation of global EHF spectrum sharing arrangements agreed to at the 2000 World Radiocommunication Conference (“WRC-2000”). Specifically, SIA strongly supports Commission adoption of rules consistent with the agreements and determinations reached at WRC-2000. The “soft segmentation” approach that emerged from last year’s meetings in Istanbul is in large part due to U.S. leadership in the difficult process of reaching a balance between satellite and terrestrial spectrum uses that should be further reinforced in this proceeding.

SIA notes that the Commission’s proposals in the *FNPRM* are, for the most part, consistent with the actions undertaken at WRC-2000, and supported by the United States. Fundamentally, the spectrum use plan adopted last year provided that Fixed-Satellite Service (“FSS”) and terrestrial fixed service operators could each use the 37.5-42.5 GHz band on a co-primary basis. At the same time, it established “soft segmentation” of the band through the application of distinct power flux density (“PFD”) limits for FSS systems operating in particular parts of the band. In the 37.5-40 GHz and 42.0-42.5 GHz

¹ SIA is a national trade association representing the leading U.S. satellite manufacturers, service providers, and launch service companies. SIA serves as an advocate for the U.S. commercial satellite industry on regulatory and policy issues common to its members. With member companies providing a broad range of products and services, SIA represents the unified voice of the U.S. commercial satellite industry. SIA’s members include: ASTROLINK International LLC; The Boeing Company; GE American Communications, Inc.; Globalstar, L.P.; Hughes Electronics Corp.; Lockheed Martin Corp.; Loral Space & Communications Ltd.; Motient Corp.; PanAmSat Corporation; Teledesic Corporation; and TRW Inc.

portions of the band, FSS systems would be subject to more restrictive PFD limitations to encourage the development of high density applications in the fixed service, while in the two gigahertz of spectrum at 40.0-42.0 GHz, FSS operators would be allowed to produce higher PFD and restrictions would be placed on fixed service transmitters to protect FSS earth terminals from interference, thereby facilitating the introduction of high density FSS (“HDFSS”) operations in this band.

In adopting additional rules pursuant to the *FNPRM*, the Commission’s goal should be to implement fairly the compromises made at WRC-2000, thereby promoting the development of both FSS and fixed service operations in the affected bands. The FCC and other U.S. Government agencies worked long and hard to craft the compromises achieved at WRC-2000 concerning 40/50 GHz band (“V-band”) spectrum use. The Commission should therefore adopt proposals that facilitate the soft-segmentation model that was agreed to, and reject those proposals that would serve to upset the balance of spectrum use that is embodied in this compromise and thereby potentially re-open a difficult domestic debate.

Consistent with this plan, the Commission should provide for the allocation of two gigahertz of contiguous satellite spectrum by adding a non-government FSS allocation at 41.0-42.0 GHz to go along with the 40.0-41.0 GHz allocation it made in 1998. *See FNPRM* at 8 (¶ 15). Such a step will promote the development of global HDFSS systems.

In its consideration of the band 47.2-48.2 GHz, the Commission expresses the view that there is no longer a need to accommodate High Altitude Platform Stations (“HAPS”), which were to use 300 MHz of spectrum at either end of the band. *See FNPRM* at 13 (¶ 30). In light of the Commission’s view that there no longer is an interest in the development of HAPS at 47 GHz, the absence of other fixed service interest in the band, and in recognition of the fact that the 47.2-48.2 GHz band is already allocated to the FSS in the Earth-to-space direction (including feeder links in the broadcasting-satellite service), SIA encourages the Commission to make the 47.2-48.2 GHz band available for non-government FSS uplink use.

The Commission should also act favorably on its proposal to allocate 100 MHz for non-government FSS at 37.5-37.6 GHz. *See FNPRM* at 9-10 (¶¶ 19-21). There is no need, however, for this availability to be limited to GSO FSS systems, as suggested by NTIA. *See* Letter from William T. Hatch, Office of Spectrum Management, NTIA, to Bruce Franca, Office of Engineering and Technology, FCC (dated March 2, 2001). While NTIA has indicated that the space research service may more easily share with GSO FSS systems than non-geostationary satellite orbit (“NGSO”) FSS systems, NTIA has not identified any specific NGSO uses that would pose special problems for government spectrum users. Under these circumstances, SIA suggests that there is no basis in the record upon which the Commission could conclude that NGSO FSS systems should be specifically disallowed from operating in the 37.5-37.6 GHz band.

SIA is supportive of the use of the band 40.5-41.0 GHz by the mobile-satellite service ("MSS") on a strictly secondary basis. However, because two gigahertz of contiguous satellite spectrum is required for the FSS under the plan that the U.S. Government successfully supported at WRC-2000, the Commission should not undermine this allocation by adopting an overlapping primary allocation for government MSS use at 40.5-41.0 GHz. See *FNPRM* at 10 (¶ 22). Carving up to 1000 megahertz of spectrum (the 500 MHz at 40.5-41.0 GHz as well as the extant 500 MHz at 40.0-40.5 GHz) out of the limited bandwidth available for V-band FSS in order to accommodate government MSS on a co-primary basis would risk the efficacy of the FSS allocation. Establishment of new primary government MSS spectrum in this band would also be contrary to the U.S. position at WRC-2000, where only a secondary MSS allocation at 40.5-41.0 GHz was proposed. There is, however, no reason to preclude MSS systems from operating in the 40.0-41.0 GHz band on a secondary basis subject to appropriate regulatory conditions.

Similarly, shifting the long-standing primary MSS allocation from the 39.5-40.0 GHz band to the middle of the band destined for high-density FSS operations would unreasonably disadvantage satellite providers and unreasonably advantage terrestrial wireless users. FSS operations under the arrangement adopted at WRC-2000 would be constrained by an obligation to protect co-frequency MSS operations, while at the same time, fixed service users would gain an additional 500 megahertz of spectrum free of the current need to share with MSS. Such a change would serve to upset the balance of spectrum use that is embodied in this compromise and thereby upset the carefully balanced and equitable global compromise that was reached last year, spearheaded by the United States and re-open old domestic disputes. Any primary MSS allocation should retain this careful balance.

Next, SIA urges the Commission to accept the PFD limits that were adopted by WRC-2000 for the 38.6-40 GHz portion of the band, and decline to adopt the *FNPRM* retreat to the more restrictive approach that was proposed by the CITEL countries (including the U.S.) but soundly rejected by WRC-2000. As the Commission rightly notes, both approaches achieve the same objective of protecting already-deployed high-density fixed service systems. SIA believes that a reversal of position at this point could jeopardize the prospects of success for the full soft segmentation plan at WRC-2003.

In recognition, however, of the fact that the 37.5-38.6 GHz band is completely undeveloped for fixed service use in the United States, SIA urges the Commission to adopt the WRC-2000 PFD values for this band without restrictive power control. With the exception of the 37.5-37.6 GHz segment, this band is not currently identified for fixed service use in the United States. Studies in the ITU-R have shown that high density fixed service systems can operate successfully at the WRC-2000 PFD levels, and prospective fixed service operators in the 37.5-38.6 GHz band would have the opportunity to design their systems to operate in this environment. Equitable sharing can best be achieved

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through the adoption of higher clear-sky PFD limits for the 37.5-38.6 GHz band than were imposed for Region 2 by WRC-2000 in the 38.6-40 GHz band to protect older high density fixed service systems already deployed in that band.

Finally, SIA wishes to express its concern about the Commission's proposal to significantly constrain FSS services in bands below 42.5 GHz in order to "fully protect" radioastronomy operations in the adjacent 42.5-43.5 GHz band. It is unreasonable for the Commission to accept without question the protection criteria put forth by the radioastronomy community in situations where, as here, meeting those criteria would have a palpable negative impact on adjacent band services, and there is good technical reason to believe that the criteria themselves are overly conservative and therefore inappropriate for use in compatibility determinations.

In sum, the SIA urges the Commission to adopt in this proceeding revised spectrum allocations and associated PFD regulations that are fundamentally consistent with the soft segmentation approach developed through CITELE and successfully promoted by the United States and others at WRC-2000. As was determined at that time, this method of dividing spectrum among various satellite and terrestrial uses is the best means of ensuring the development of a wide variety of beneficial applications in these bands. SIA strongly supports the adoption of final rules that are consistent with these pro-competitive and technologically neutral principles. The Commission should not take any actions in this *FNPRM* that would upset the balance that was achieved at WRC-2000. SIA encourages the Commission to act quickly so that the long process of finalizing next generation satellite system designs can be concluded with V-band licensing.

Respectfully submitted,

/s/ Richard DalBello

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