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Ms. Magalie R. Salas
Office of the Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Twelfth Street Lobby, TW-A325
Washington, DC 20554

March 6, 2000

RE: Docket No. IB 98-172 - Redesignation of the 17.7—19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5—30.0 GHz Frequency Bands.

Dear Ms. Salas:

On March 3, 2000, the undersigned and Cliff Fox of Blonder Tongue Laboratories communicated by telephone with Mr. Rick Engleman and Mr. John Wong of the FCC. The following is a summary of the points Mr. Fox and I communicated:

Situational Overview:

It has been proposed that the Private Cable Operator (PCO) use of 18 GHz point-to-point microwave transmission be co-primary with the satellite down link in the 18.142—18.58 GHz band. The satellite community is especially concerned about co-primary status with PCOs in the 18.55—18.58 GHz band. The PCOs are very concerned about being co-primary with satellite because without special FCC rules that protect growth, the result will be catastrophic to the PCO industry.

Although the term co-primary sounds benign, “even handed” or equal, in this context it is not. As was proven at 4 GHz, co-primary status between terrestrial point-to-point and satellite service effectively kills the growth of the terrestrial service at the point in time when satellite receive sites are deployed. The large number of proposed satellite service receive sites will create large exclusion zones that will terminate the growth opportunities for terrestrial service, including PCOs.

Grandfathering the existing systems is helpful. However, in addition, the PCO community needs to be allowed to grow.

PCO Proposals:

Over the course of recent discussions with the satellite industry, the PCO community has offered several ideas and compromise alternatives that have been rejected by the satellite community. The latest proposal, a four point compromise, follows:

1. PCOs accept secondary status in the 18.55—18.58 GHz band, following an appropriate phase out period.

   Effectively, PCOs would abandon the use this 30 MHz of spectrum.

2. PCOs gain sole primary status in the 18.142—18.55 GHz band and satellite use would be secondary.

   This preserves the ability for the number of PCO links to grow.

3. PCOs gain access to the 11.7—12.2 GHz band on the same basis as franchise operators.

   To utilize this spectrum space, the PCO implementation costs will be high and the ability to use the spectrum will be difficult, at best. Regardless, access will allow PCOs to recoup a portion of their ability to compete otherwise lost due to the loss of the 30 MHz of spectrum in the 18 GHz band.

4. PCOs receive relocation costs, or payment in kind, for the use of the 12 GHz band for the recovery of lost spectrum in the 18 GHz band.

Other Relevant Comments:

As has already been established in other bands, outright co-primary status for both satellite and terrestrial use kills the growth opportunities for terrestrial point-to-point services.

Although both the satellite and terrestrial representatives have been meeting often, the discussions tend to stall because there has not been an adequate technical dialog. Without a detailed technical dialog it will not be possible to develop a reasonable compromise that will work for both parties. On the other hand, a technical dialog coupled with a workmanlike effort should enable the parties to produce a compromise that will ensure that each industry can accomplish its respective goals and objectives.

The installed base of 18 GHz terrestrial systems establishes a defacto secondary status for any new satellite receiver sites. Therefore, in order to make the 18.142—18.58 GHz spectrum useful for satellite downlinking, the satellite systems[1] must deploy receivers that inherently can co-exist with existing terrestrial point-to-point systems. That being the case, being able to co-exist with any new terrestrial transmit locations should be relatively easy. Frequency and space diversity[2], combined with database agility as part of the satellite system can easily and seamlessly satisfy this requirement. It is not an unreasonable expectation that the satellite systems employ this capability. We would be surprised if the satellite systems did not already intend to use this or other similar methods for the purpose of traffic throughput optimization and balancing among the respective downlink system beams. Therefore, we are optimistic that a reasonable and workable solution can be formulated that includes secondary status for satellite downlink operation in the 18.142—18.58 GHz band (or co-primary status with special FCC rules that ensure PCO growth in any and all

geographic locations). The scenario in the following paragraphs describes by example why we are so optimistic and, what we mean by frequency and space diversity coupled with database agility.

A prospective satellite subscriber resides where intolerable interference[3] is present and originating from an existing "grandfathered" terrestrial transmitter operating as contemplated in the R & O in the 18.142—18.58 GHz band that makes that particular satellite subscriber's location unusable when the receiver is operated in that band. The presumption cannot be that satellite service will not be available to that prospective subscriber. The only reasonable presumption is that the satellite database control system will ensure that certain receivers such as the one in this example will only be operated on one of the other bands that are not shared with the terrestrial users in the 18.142—18.58 GHz band.

Furthermore, it is a business reality that of the millions of users contemplated, we do not know who the high traffic users will be or where they will be located. Traffic balancing among the downlink beams we presume will not be left to chance. Frequency and space diversity coupled with database agility seem to be the only reasonable methods that address the common data traffic optimization and service reliability challenges. Therefore, if these (or other methods that achieve the same result) are utilized, it should be relatively easy for the satellite systems to seamlessly manage secondary status (defacto or otherwise) for the satellite receivers in the 18.142—18.58 GHz band only.

Special Co-Primary Rules

The possibility was raised that we might be able to fashion special FCC rules within the context of co-primary status that will both ensure PCO growth and accommodate satellite downlink use. This alternative may be feasible. However, outright co-primary status for both without adequate special rules is not the answer.

"Gateway" Receiver Based Systems

It is possible that exclusive, prescribed geographic zones dedicated for gateway satellite receive site operation could be coordinated with the terrestrial users on a co-primary basis if (a) this was the only satellite use of the affected band, and (b) the rules were carefully construed. This presumes that the satellite downlinks would be used for gateway services only and that the total quantity of receive sites would be modest.

[1] Similar to that described in the Hughes Communications Galaxy, Inc application dated September 29,1995.

[2] The notion of the use of space diversity is substantiated in the Hughes Communications Galaxy, Inc application in figures C-14a & figures C-15a (spot beam laydowns) on pages C-28 & C-30 respectively. Frequency diversity, although not specifically set forth in the text of the application, is strongly inferred and briefly claimed in the body of the application, Item C, System Description, Section 1, paragraph 7 on page 16. The application indicates there will be 33 narrow spot beams served from 2 satellites with 24 beams each (48 total). The inference can be made that the remaining 15 beams will be employed for the purpose of frequency diversity. Furthermore, the planned North American Ka downlink frequencies set forth in the application do not use the 18.142—18.58 band, figure D-1 page 46.

[3] This is where a typical subscriber resides in proximity to an existing 18 GHz transmitter or desires to set up service in an

otherwise geographically adverse location. (e.g.: azimuth of the satellite receive antenna is 180º from the azimuth of an existing 18 GHz transmitter and the satellite receiving station is located north of the 18 GHz transmitter).

I hope this helps. Please do not hesitate to contact me if have any questions.

Sincerely,

Bob Pallé
Executive Vice President, Chief Operating Officer
Blonder Tongue Laboratories, Inc.

CC: Rick Engleman, FCC, IB
John Wong, FCC, CSB Engineering