EX PARTE

August 7, 2003

Mr. James Ball – International Bureau, Policy Division
Mr. Ronald Netro –Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: In the Matter of 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

Dear Messrs. Netro and Ball,

On March 11, 2003, representatives of Winstar Communications, LLC, an IDT Company, met with staff members of the International and Wireless Telecommunications Bureaus[1] regarding the Further Notice of Proposed Rulemaking (FNPRM) adopted on May 24, 2001, associated with IB Docket 97-95.

The FCC meeting attendees asked the Winstar representatives several questions regarding the Winstar network that we needed to discuss with our engineering department and with our Network Operations Center. We have consulted with both and hereby provide answers to the questions generated during the March 11 meeting.

Questions and Answers

1) What percentage of links deployed by Winstar in the 38.6-40.0 GHz band are at various path lengths?

Path Distance Range (mile)	**%**
0 to 0.15	16.96
0.15 to 0.25	14.08

[1] FCC attendees included Messrs., Jacobs, Locke, Netro, Pollak and Strickland. Attendees from Winstar included Gene Rappoport, Vishnu Sahay, Joseph M. Sandri, Jr. and Lynne Hewitt Engledow.

0.25 to 0.5	28.60
0.5 to 0.75	15.59
0.75 to 1.00	10.13
1.00 to 1.25	5.69
1.25 to 1.5	2.75
1.5 to 2	2.94
2 to 3	1.98
3 to 5	1.02
> 5	0.26
Total	100

2) Is there any correlation between path length and elevation angle?

Typically, a correlation exists. Generally, the shorter the path the higher the chance of steep elevation angles. However, building elevation data currently available in our database is not sufficient to produce the statistics that will reflect a characterization of the entire network.

3) Does Winstar use power control to overcome fading? If so, what is the form of power control?

We currently do not have our links equipped with automatic power control in the 39 GHz band.

4) What network information does Winstar's Network Operations Center monitor? What conditions cause action by the Network Operations Center? What are those actions?

See Attachment 1 being submitted separately under FCC confidentiality protocols.

In addition, per your request, Winstar has provided print outs of screen displays from the Network Operations Center. (Attachment 2 being submitted separately under FCC confidentiality protocols.)

5) What is Winstar's view on the FCC's channel plan proposal for the 37.0-38.6 GHz band? The current proposal is for 14 paired 50 MHz channels with 4 unpaired channels in the top 200 MHz. Doesn't it make more sense if the unpaired channels are at the bottom rather than at the top of the band?

We suggest that to the extent possible, the paired channels should have the same 700 MHz transmit/return separation as in the already planned band. This would facilitate equipment design and system implementation for expansion of existing links. Having the four unpaired channels contiguous, either below or above the paired channels, limits their usefulness. We believe that four contiguous channels could then only be used individually for resolving

interference problems. It would not be possible to pair them or concatenate them in any way, because there would be virtually no separation between go and return channels. This may lead to spectrum inefficiency. A more useful method would be to split the unpaired channels into two banks, one at the upper end of the spectrum and the other at the lower end of the spectrum with sufficient separation for go/return pairing on a case-by-case basis.

6) What is Winstar's current fade margin? What will Winstar's future fade margins need to be?

Reducing RF power output to the point that the far end has a 5-10 dB receive level above threshold (fade margin) is currently ideal (but that may change over time) for spectrum conservation and frequency reuse in this band, but, without ATPC, performance degradation risk increases unacceptably as distance increases. Current radio receivers will deliver error-free performance if presented with a signal in this range and absent any spurious signals. Maintaining network performance meeting an annual target of 99.999% with a fixed power output radio limits the effective range at which we can operate. As an example, in the D2 Rain Region (as defined by Robert K. Crane) using P-COM DS3 radio equipment, attenuating the RF output so that the far end receives –61dBm (8dB above its' threshold of –69dBm) will operate up to a maximum distance of 0.2 miles and meet 99.999% availability. As can be seen in the table responding to question #1, approximately 30% of our links are within the .2 mile range and can be provided with a fade margin of 10 dB or less, while maintaining 99.999% availability. As distance increases fade margin must also increase in order to maintain our required level of service. No plans exist at this time to implement ATPC on our links. We hope that future RF developments result in affordable, widely available equipment that allows for increased distances with lower required input power into the antenna, thereby improving frequency re-use, without reducing our performance objectives. We possess no timeline or certainty about those developments.

Conclusion

Winstar requests that the Commission carefully consider the potential effect of FSS power increases, within the total spot beam area on FS stations where uncorrelated fading between the FSS Earth Station and FS receiver locations causes an unacceptable increase in interference to the FS receivers. With continuing FS growth in the band coupled with the imminent release of the Secondary Markets Order we anticipate a surge in terrestrial 39GHz deployments requiring protection.[2] Additionally, Winstar asks the FCC to consider the possibilities for deployment of gateway stations in the band 38.6-40.0 GHz in a manner to eliminate any service quality deterioration to the Fixed Service, including a requirement that the FCC operator attain a commercial agreement with the existing terrestrial licensee and a requirement that the FSS operators utilize geographically diverse redundant gateways, and other methods, in order to remove the need for FSS Systems to increase power to harmful levels.[3]

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[2] *See FCC Adopts Spectrum Leasing Rules and Streamlined Processing for License Transfer and Assignment Applications, and Proposes Further Steps to Increase Access to Spectrum Through Secondary Markets*, FCC 03-113 News, May 15, 2003.

[3] Please refer to the prior letter sent from Winstar Communications, LLC regarding this proceeding. In particular, please note the following portions of the cited letter.

If you have any remaining or additional questions please contact Gene Rappoport at (202) 367-7603 / grappoport@winstar.com or Joe Sandri at (202) 367-7600 / jsandri@winstar.com.

Very Truly Yours,

Joseph M. Sandri, Jr.
Winstar Communications, LLC
SVP, Regulatory Counsel

cc: Edward Jacobs
Paul Locke
Mike Pollak
David Strickland

Attachments

> "Winstar agrees with the Commission that FSS gateway Earth stations require deployment in a manner that minimizes their effect, including during fade conditions, to the High Density Fixed Service, in the band 38.6-40.0 GHz. The most desirable deployment methods include using geographic diversity in gateway Earth station locations to minimize using automatic transmit power control to overcome fade conditions caused by rain attenuation. Another deployment option siting the gateway stations in dry climate areas to again minimize fade condition occurrence and duration, thus removing or decreasing the need to increase power. A third option includes siting the gateway stations in unpopulated or sparsely populated areas, thus reducing spot beam overlap into a HDFS service area.
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> The Commission may also wish to consider the use of coding related fade compensation methods. These methods are discussed in annex 2 of the ITU-R working document towards a draft new recommendation (4-9/S/DFC-40 GHz). (See attachment 3.) In this approach an adjustable data rate strategy is adopted whereby either the coding, the modulation or both would be adjusted to provide the necessary performance in the event of varying rain rates, without increasing the power level.
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> Winstar requests that the Commission carefully consider the potential effect of FSS power increases, within the total spot beam area on the high density FS stations within the spot beam and outside the faded area. Additionally, Winstar asks the FCC to consider the possibilities for siting gateway stations in the band 38.6-40.0 GHz in a manner to minimize the effect on the Fixed Service."

Letter from Joseph M. Sandri, Jr. SVP & Regulatory Counsel, Winstar Communications, LLC to Messrs. Ronald Repasi and Ronald Netro, Federal Communications Commission (March 4, 2003) (in the IB Docket No. 97-95).