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January 28, 2008

Notice of Oral *Ex Parte* Communication

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W. Room TW-A325
Washington, DC 20554

Re: *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands*, IB Docket No. 07-253

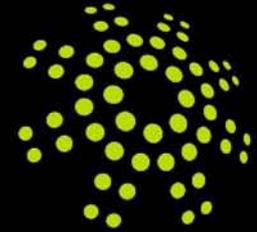
Dear Ms. Dortch:

On behalf of Sprint Nextel Corporation (Sprint Nextel), Harry Perlow and I met Friday, January 25, 2008 with Howard Griboff, Robert Nelson, Sean O'More, and Paul Locke of the International Bureau; Geraldine Matisse and Jamison Prime of the Office of Engineering Technology; and Stephen Zak and John Schauble of the Wireless Telecommunications Bureau. We were joined by Paul J. Sinderbrand, who appeared on behalf of the Wireless Communications Association, Inc. (WCA). Sprint Nextel and WCA discussed the attached presentation. If any questions arise concerning this filing, please contact me.

Sincerely,

Trey Hanbury, Esq.
Director, Sprint Nextel Corporation

CC: Howard Griboff, Robert Nelson, Sean O'More, Paul Locke, Geraldine Matisse, Jamison Prime, Stephen Zak, John Schauble



XOHM

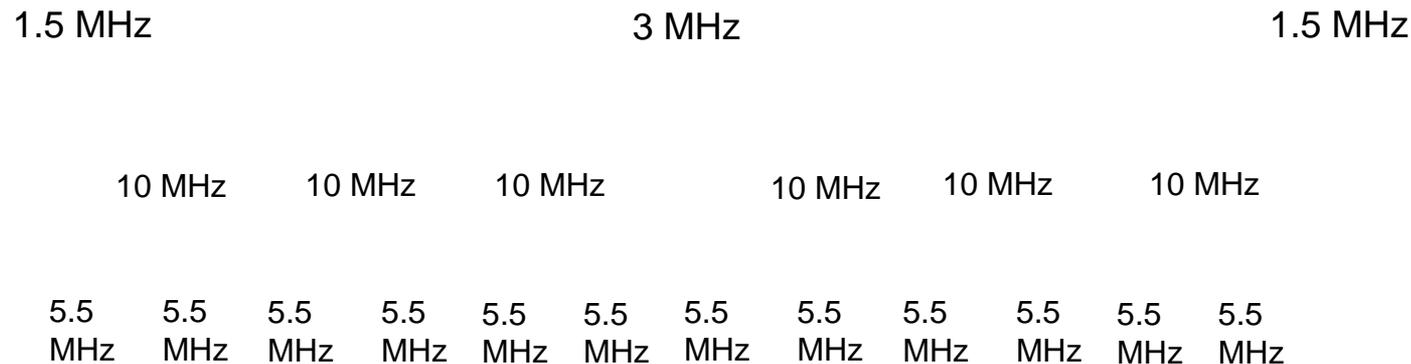
WiMAX from Sprint

MSS ATC Interference into the Broadband Radio Service

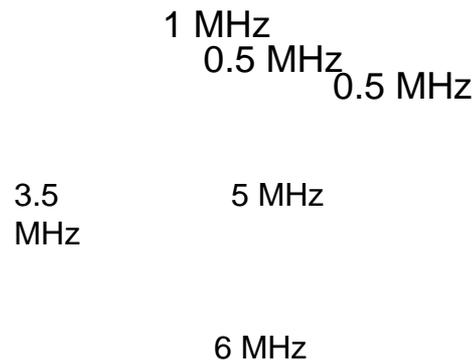
Sprint Nextel Corporation

MSS ATC Interference to BRS-1

BRS-EBS WiMAX Channelization Scheme – 3 MHz Separation



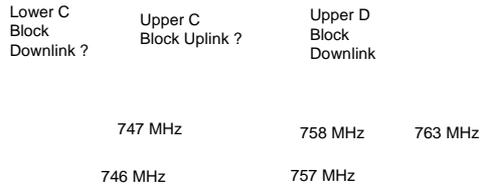
BRS-1 WiMAX Channelization Scheme – 1.5 MHz Separation



State of the Art Frequency Separation – 3 MHz

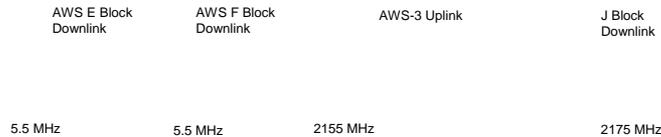
Upper 700 MHz Uplink/Downlink Separation – 3 MHz Equivalent

Optional Internal Upper C Block
1 MHz Separation



Proposed AWS-1 Uplink/Downlink Separation – 3 MHz Equivalent

2.5 MHz (AWS-3 Licensee Internalizes Frequency Separations Inside AWS-3 Band)



BRS-1 Uplink/Downlink Separation – 3 MHz



Once adjusted for frequency, uplink and downlink adjacencies in multiple bands all require at least three-megahertz of frequency separation, according to numerous vendors, operators, manufacturers, and trade associations



Less Stringent OOB Limits Apply to ATC

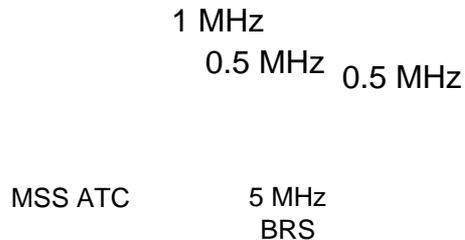
- BRS emissions limits are more stringent than MSS/ATC limits.
- Unlike the emissions limits that apply to ATC, those that apply to BRS continue to become more stringent as signals move away from the band edge.

At band edge	-44.1 dBW/ 30 kHz	-88.9 dBW/Hz	-43 dBW/ 1% of bandwidth (50 kHz, assuming a 5 MHz channel)	-90.0 dBW/Hz
1 megahertz from band edge	-44.1 dBW/ 30 kHz	-88.9 dBW/Hz	-43 dBW/1 MHz	-103.0 dBW/Hz
3 megahertz from band edge, if complaint and stations at least 1.5 kilometers apart	-44.1 dBW/ 30 kHz	-88.9 dBW/Hz	-67 dBW/1 MHz	-127.0 dBW/Hz

- If MSS ATC rule is based on EIRP, as assumed by Globalstar, limits would be approximately 15 dB more stringent, but still less than BRS at 3 MHz from band edge
- MSS ATC should attenuate its out-of-band emissions by at least $43 + 10 \log P$ at the ATC band edge, $67 + 10 \log P$ at 3 MHz from the ATC band edge if a complaint is received involving a BRS base station at least 1.5 kilometers away, and by tighter levels if the complaining BRS base station is closer, as required for BRS licensees.

BRS Emissions Limits Should Apply to ATC

More Stringent MSS ATC Emissions Limits Only Apply 3 MHz Away



Even assuming the Commission adopts a $43 + 10 \log P$ emissions limit for MSS ATC, then . . .

6 MHz

the more stringent $67 + 10 \log P$ 1.5 MHz emissions limit would only apply once ATC emissions were well into an assumed five megahertz BRS-1 channel operation, which will not protect BRS-1 licensees against harmful interference

Harmful Interference

Adjacent Channel Selectivity

Rep. ITU-R M.2116

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TABLE 1 (end)

Parameter	IEEE 802.16e ⁽¹⁾		HC-SDMA ⁽²⁾		Next-generation PHS ⁽³⁾		T1.716/717 ⁽⁴⁾		ATIS.0700001.2004 ⁽⁵⁾		T1.723 ⁽⁶⁾	
	BS	MS	BS	MS	BS	MS	BS	MS	BS	MS	BS	MS
Thermal noise density (dBm/Hz)	-174		-174		-174		-174		-174		-174	
Adjacent Channel Selectivity (ACS) (dB)	{14a}				{14b}							
ACS_1 (dB)	70	40	46	47	42	30	46	33	46	33	46	33
ACS_2 (dB)	70	59	46	60	42	30	56	43	56	43	56	43
Interference criterion, I/N (dB) {15}	-6 or -10	-6 or -10	{15a}	{15a}	-6 or -10	-6 or -10	-6 or -10	-6 or -10	-6 or -10	-6 or -10	-6 or -10	-6 or -10
Required SINR (dB) {16}	{16a}	{16a}	1-17	0-14	{16a}	{16a}	{16a}	{16a}	{16a}	{16a}	{16a}	{16a}
Max. tolerable interference power (dBm) {17}	-110 or -114	-108 or -112	{17a}	Not applicable	-105 or -109	-103 or -107	-108 or -112	-105 or -109	-108 or -112 {17b}	-105 or -109 {17b}	-108 or -112 {17b}	-105 or -109 {17b}
Nominal reference sensitivity (dBm)	Not applicable	Not applicable	-109.8 {18a}	-108.5 {18b}	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

NOTE 1 – Numbers in {} refer to the Notes below.

⁽¹⁾ IEEE 802.16e, an amendment to IEEE 802.16-2004, forms the basis of WiMAX™ for mobile applications. Note that the ACLR and ACS values used for the IEEE 802.16e system in this report are intended only for coexistence studies and apply to channels close to a FDD/TDD boundary. These values are not minimum performance requirements, which have not yet been specified.

{14a} The IEEE 802.16e standard does not specify ACS information. The values shown were submitted by the WiMAX Forum specifically with regard to the 2 500-2 690 MHz frequency band. The ACS values are based on anticipated performance by some of the industry, as provided by the WiMAX Forum. A number of other BWA technologies have considerably lower ACS values.