APPENDIX C

TECHNICAL CHARACTERISTICS OF RADIOLOCATION SYSTEMS IN THE 15.7-17.3 GHZ BAND

Table C-1 shows technical characteristics of radar systems that will likely impact the 17/24 GHz BSS earth station receivers, namely, the airborne ground-mapping radars. The lower power radars of "System 1" are included because of wider antenna beamwidths (e.g., mainbeam and sidelobe), which could increase the potential for interference. These systems currently tend to operate in the sub-band 16.2-17.3 GHz by provision of National Telecommunications and Information Administration Manual of Regulations and Procedures for Federal Radio Frequency Management Section 8.2.46, but this could change at any time to also allow ground-based radars. The airborne radar systems tend to have antenna pointing capabilities such that mainbeam-to-mainbeam coupling can occur with BSS subscriber earth station antennas. The information provided in Table C-1 should be sufficient for general calculation to assess the compatibility between these radars and BSS systems.

Table C-1. Characteristics of Radar Systems Operating in the 16.2-17.3 GHz Frequency Range

Characteristics	System 1	System 2
Function	Search, track and ground-mapping radar (multi-function)	Search, track and ground-mapping radar (multi-function)
Platform type	Airborne, low power	Airborne, high power
Tuning range (GHz)	16.2-17.3	16.29-17.21
Modulation	Linear FM pulse	Linear and non-Linear FM pulse
Transmit peak power (W)	< 80	< 3260
Pulse width (μs)	18.2; 49	120-443
Pulse rise/fall time (ns)	20	4
Pulse repetition rate (pps)	2041; 5495	900-1600
Duty Cycle	4-25%	< 50%
Output device	Travelling wave tube	Travelling wave tube
Antenna pattern type	Fan/pencil	Fan
Antenna type	Slotted waveguide	Phased array
Antenna polarization	Linear vertical	Linear vertical
Mainbeam Antenna gain (dBi)	25.6	38.0
Antenna elevation beamwidth (deg)	9.7	2.5

Characteristics	System 1	System 2
Antenna azimuthal beamwidth (deg)	6.2	2.2
Antenna horizontal scan rate	0-30 deg/s	0-5 deg/s
Antenna horizontal scan type (continuous, random, sector, etc.)	±45 deg to ±135 deg (mechanical)	±30 deg (electronic, conical)
Antenna vertical scan rate	0-30 deg/s	0-5 deg/s
Antenna vertical scan type.(*)	–10 to –50 deg (mechanical)	0 to –90 deg (electronic, conical)
Antenna 1st side-lobe gain level	10 dBi @ 31 deg	18 dBi @ 1.7 deg
Antenna height	Aircraft altitude	Aircraft altitude
Chirp bandwidth (MHz)	< 640	< 1200
Transmitter RF emission bandwidth (MHz).(**) –3 dB –20 dB -40 dB -60 dB	 < 622 < 725 < 868 < 1040	 < 1200 < 1220 < 1300 < 1400

(*) 0 degrees represents a horizontal orientation. Angles below horizontal are negative.

(**) The radar center frequency is lowered if necessary to ensure that the -20 dB bandwidth is contained below 17.3 GHz. This may cause radar emissions to fall below 16.2 GHz, but they will still be within the allocated band.

APPENDIX D
LIST OF PARTIES

Parties Filing Comments

Government of Bermuda, Department of Telecommunications
DIRECTV, INC.
EchoStar Satellite L.L.C.
FiberTower Corporation
Intelsat North America LLC
National Association of Broadcasters
Media Access Project, on behalf of The National Hispanic Media Coalition, The New America Foundation, Hawaii Consumers, Prometheus Radio Project, Media Alliance, the Benton Foundation and U.S. PRIG (collectively, NHMC, *et al.*)
SES Americom, Inc.

Parties Filing Reply Comments

DIRECTV, Inc.
EchoStar Satellite L.L.C.
FiberTower Corporation
Fixed Wireless Communications Coalition
Intelsat North America LLC
SES Americom, Inc.

Parties Making Ex Parte Filings
DIRECTV, Inc., EchoStar Satellite L.L.C.,
and Intelsat North America LLC – Joint Proposal (March 14, 2007)
Pegasus Development DBS Corporation (March 26, 2007)
FiberTower Corporation (April 3, 2007)
DIRECTV, Inc. (April 26, 2007)
EchoStar Satellite L.L.C. (April 26, 2007)

APPENDIX E

17/24 GHz BSS Applications and Amendments Pending before the Commission.

Filings (Earliest to Most Recent)	Call Sign	Applicant	Orbital Location (all W.L.)
SAT-LOA-19970605-00049	S2242	DIRECTV Enterprises, LLC	96.5°
SAT-AMD-20051118-00226			
SAT-LOA-19970605-00050	S2243	DIRECTV Enterprises, LLC	101°
SAT-AMD-20051118-00225			
SAT-LOA-19970605-00051	S2244	DIRECTV Enterprises, LLC	105.5°
SAT-AMD-20051118-00224			
SAT-LOA-20020328-00050	S2440	EchoStar Satellite Operating Corporation	119°
SAT-AMD-20051118-00247			
SAT-LOA-20020328-00051	S2441	EchoStar Satellite Operating Corporation	114.5°
SAT-AMD-20051118-00246			
SAT-LOA-20020328-00052	S2442	EchoStar Satellite Operating Corporation	110°
SAT-AMD-20051118-00245			
SAT-LOA-20050210-00028	S2659	Intelsat North America LLC	67.5°
SAT-AMD-20051118-00241			
SAT-LOA-20050210-00029	S2660	Intelsat North America LLC	121°
SAT-AMD-20051118-00240			
SAT-LOA-20050210-00030	S2661	Intelsat North America LLC	97°
SAT-AMD-20051118-00239			
SAT-LOA-20050210-00031	S2662	Intelsat North America LLC	89°
SAT-AMD-20051118-00238			
SAT-LOA-20060412-00042	S2698	Pegasus Development DBS Corporation	91°
SAT-LOA-20060412-00043	S2699	Pegasus Development DBS Corporation	101°
SAT-LOA-20060412-00044	S2700	Pegasus Development DBS Corporation	110°
SAT-LOA-20060908-00099	S2711	DIRECTV Enterprises, LLC	99°
SAT-LOA-20060908-00100	S2712	DIRECTV Enterprises, LLC	103°
SAT-LOA-20070105-00001	S2723	EchoStar Satellite Operating Corporation	61.9°
SAT-LOA-20070105-00002	S2724	EchoStar Satellite Operating Corporation	67°
SAT-LOA-20070105-00003	S2725	EchoStar Satellite Operating Corporation	77.2°
SAT-LOA-20070105-00004	S2726	EchoStar Satellite Operating Corporation	86.3°
SAT-LOA-20070105-00005	S2727	EchoStar Satellite Operating Corporation	124°
SAT-LOA-20070105-00006	S2728	EchoStar Satellite Operating Corporation	128.6°
SAT-LOA-20070105-00007	S2729	EchoStar Satellite Operating Corporation	147.6°

APPENDIX F

ORBITAL ASSIGNMENTS – All W.L.

43.00°	63.00°	83.00°	103.00°	123.00°	143.00°	163.00°
47.00°	67.00°	87.00°	107.00°	127.00°	147.00°	167.00°
51.00°	71.00°	91.00°	111.00°	131.00°	151.00°	171.00°
55.00°	75.00°	95.00°	115.00°	135.00°	155.00°	175.00°
59.00°	79.00°	99.00°	119.00°	139.00°	159.00°	179.00°

APPENDIX G

Currently Authorized Earth Stations Operating in the 17.3-17.7 GHz band.

Call Sign	Licensee	Coordinates	NAD	Location
E060003	EchoStar Satellite Operating Corp	33°21'53.6"N 111°48'53.6"W	83	Gilbert, AZ
E980174	EchoStar Satellite Operating Corp	33°21'55.3"N 111°48'48.2"W		Gilbert, AZ
E970394	EchoStar Satellite Operating Corp	33°21'55.3"N 111°48'49.7"W	27	Gilbert, AZ
E020307	EchoStar Satellite Operating Corp	33°21'55.3"N 111°48'51.4"W	83	Gilbert, AZ
E050017	EchoStar Satellite Operating Corp	33°21'55.9"N 111°48'50"W	83	Gilbert, AZ
E010241	EchoStar Satellite Operating Corp	33°21'56.1"N 111°48'50.7"W	83	Gilbert, AZ
E980180	EchoStar Satellite Operating Corp	33°21'56.5"N 111°48'48.2"W		Gilbert, AZ
E980178	EchoStar Satellite Operating Corp	33°21'56.5"N 111°48'49.7"W	27	Gilbert, AZ
E020306	EchoStar Satellite Operating Corp	33°21'59.8"N 111°48'52.3"W	83	Gilbert, AZ
E010242	EchoStar Satellite Operating Corp	33°21'59.9"N 111°48'51.6"W	83	Gilbert, AZ
E070014	EchoStar Satellite Operating Corp	33°22'0.8"N 111°48'54.7"W	83	Gilbert, AZ
E050340	DIRECTV Enterprises, LLC	39°33'36"N 104°51'50"W	83	Englewood, CA
E980285	DIRECTV Enterprises, LLC	33°58'56.5"N 118°25'31.2"W	83	Los Angeles, CA
E990159	DIRECTV Enterprises, LLC	33°58'56"N 118°25'28.5"W	27	Los Angeles, CA
E980338	DIRECTV Enterprises, LLC	33°59'0"N 118°25'27"W	27	Los Angeles, CA
E980340	DIRECTV Enterprises, LLC	33°59'0"N 118°25'29"W	83	Los Angeles, CA
E010129	DIRECTV Enterprises, LLC	33°59'1"N 118°25'27"W	83	Los Angeles, CA
E970336	SES Americom, Inc.	34°19'31"N 118°59'41"W	27	Moorpark, CA
E990323	PanAmSat Licensee Corp	39°16'35"N 104°48'23.9"W	83	Castle Rock, CO
E010130	DIRECTV Enterprises, LLC	39°16'37"N 104°48'24"W	83	Castle Rock, CO
E930304	DIRECTV Enterprises, LLC	39°16'37"N 104°48'29"W	83	Castle Rock, CO
E930191	DIRECTV Enterprises, LLC	39°16'38"N 104°48'18.5"W	83	Castle Rock, CO
E020172	DIRECTV Enterprises, Inc	39°16'38"N 104°48'20.5"W	83	Castle Rock, CO
E030105	DIRECTV Enterprises, LLC	39°16'38"N 104°48'26.5"W	83	Castle Rock, CO
E930229	DIRECTV Enterprises, LLC	33°39'50"N 84°16'24"W	83	Ellenwood, GA
E010112	PanAmSat Licensee Corp.	33°39'53"N 84°16'19"W	83	Ellenwood, GA
E930485	DIRECTV Enterprises, LLC	44°59'36"N 92°58'43"W	83	Oakdale, MN
E030102	Rainbow DBS Company LLC	40°44'39"N 73°29'39.3"W	83	Bethpage, NY
E010320	Pegasus Development Corporation	42°47'52"N 73°43'40"W	83	Cohoes, NY
E980195[1]	Loral Skynet Corporation	41°27'50"N 75°7'44"W		Hawley, PA
E980196[2]	Loral Skynet Corporation	41°27'51"N 75°7'45"W		Hawley, PA
E020248[3]	EchoStar Satellite LLC	44°11'14.2"N 103°20'7.5"W	83	Rapid City, SD
E060004	EchoStar Satellite Operating Corp	29°45'35.9"N 98°3'48.1"W	83	
E050373	EchoStar Satellite Operating Corp	38°43'22.4"N 78°39'58.5"W	83	Quicksburg, VA
E030117	DIRECTV Enterprises, LLC	39°7'55.4"N 78°12'5.5"W	83	Winchester, VA
E050374	EchoStar Satellite Operating Corp	47°35'31.8"N 117°33'2.5"W	83	Spokane, WA

[1] Uses the 17301.02-17301.98 MHz band only.

[2] Uses the 17307.52-17308.48 MHz band only.

[3] Uses the 17303.25-17303.25 MHz band only.

E990138	*EchoStar Satellite Operating Corp*	*41°38'52"N 72°54'8"W*	27	Cheyenne, WY
E990139	EchoStar Satellite Operating Corp	41°38'52"N 72°54'8"W	27	Cheyenne, WY
E980005	EchoStar Satellite Operating Corp	41°7'56.4"N 104°44'10.4"W	27	Cheyenne, WY
E980142	EchoStar Satellite Operating Corp	41°7'56.6"N 104°44'15.6"W	83	Cheyenne, WY
E990309	EchoStar Satellite Operating Corp	41°7'56.8"N 104°44'11.2"W	27	Cheyenne, WY
E950287	EchoStar Satellite Operating Corp	41°7'56"N 104°44'7"W	27	Cheyenne, WY
E950288	EchoStar Satellite Operating Corp	41°7'56"N 104°44'9"W	27	Cheyenne, WY
E990310	EchoStar North America Corp	41°7'56.8"N 104°44'11.2"W	27	Cheyenne, WY
E980143	EchoStar Satellite Operating Corp	41°7'57.5"N 104°44'14.3"W	27	Cheyenne, WY
E980081[4]	EchoStar Satellite Operating Corp	41°7'58.3"N 104°44'9.1"W		Cheyenne, WY
E980082[5]	EchoStar Satellite Operating Corp	41°7'58.3"N 104°44'9.1"W		Cheyenne, WY

[4] Uses the 17301.00-17302.00 MHz band only.

[5] Uses the 17301.00-17302.00 MHz band only.

APPENDIX H

INITIAL REGULATORY FLEXIBILITY ANALYSIS

As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this item, the Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Broadcasting Satellite Service Operating Bi-Directionally in the 17.3-17.8 GHz Frequency Band, Report and Order and Further Notice of Proposed Rulemaking (*R&O and FNPRM*).[2] Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *FNPRM* provided in paragraph 194 of this *NPRM*. The Commission will send a copy of the *FNPRM*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[3] In addition, the *FNPRM* and IRFA (or summaries thereof) will be published in the Federal Register.[4]

A. Need for, and Objectives of, the Proposed Rules

The objective of the proposed rules is to address potential interference scenarios which arise in the reverse band operating environment. In the *NPRM,* we sought comment on what measures were needed to address issues concerning reverse band operations. These included measures to mitigate against space-path interference between DBS and 17/24 GHz BSS satellites (space-path interference) and to protect 17/24 GHz BSS subscribers from DBS feeder links (ground-path interference). The record on these issues is insufficient to develop requirements. While most commenters advocate certain general approaches, we need more information to build on the generalities and derive specific requirements. Thus, we seek further comment on the issues concerning reverse band operations.

The two types of interference which might occur in the reverse band operating environment are ground path interference space path interference. Ground path interference will occur when the signals from transmitting DBS feeder link earth stations operating the 17.3-17.7 GHz band are detected at the receiving earth stations of 17/24 GHz BSS subscribers. This interference will be the most severe in areas surrounding the DBS feeder uplink stations. Space path interference will occur when the transmitted signals from 17/24 GHz BSS satellites are received by the feeder link receivers on satellites operating in the DBS service.

In order to mitigate against ground path and space path interference, we are proposing a variety of measures, such as the establishment of protection zones, coordination zones, power level limits,

[1] *See* 5 U.S.C. § 603. The RFA (*see* 5 U.S.C. § 601 – 612), has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] *See* The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-Directionally in the 17.3-17.8 GHz Frequency Band, *Report and Order and Further Notice of Proposed Rulemaking,* IB Docket No. 06-123 (2007).

[3] *See* 5 U.S.C. § 603(a).

[4] *See* 5 U.S.C. § 603(a).

geographic restrictions of earth stations, informational requirements for coordination, and required technical showings.

B. Legal Basis

This *NPRM* is adopted pursuant to Sections 1, 4(i), 7(a), 301, 303(c), 303(f), 303(g), 303(r), 303(y), and 308 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 151, 154(i), 154(j), 157(a), 301, 303(c), 303(f), 303(g), 303(r), 303(y), 308.

C. Description and Estimate of the Number of Small Entities to Which the Proposals Will Apply

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the rules adopted herein.[5] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[6] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[7] A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).[8] Below, we further describe and estimate the number of small entity licensees that may be affected by the adopted rules.

Satellite Telecommunications. The SBA has developed a small business size standard for the two broad census categories of "Satellite Telecommunications" and "Other Telecommunications." Under both categories, a business is considered small if it has $13.5 million or less in annual receipts.[9] The category of Satellite Telecommunications "comprises establishments primarily engaged in providing point-to-point telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications."[10] For this category, Census Bureau data for 2002 show that there were a total of 371 firms that operated for the entire year.[11] Of this total, 307 firms had annual receipts of under $10 million, and 26 firms had receipts of $10 million to $24,999,999.[12] Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

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[5] 5 U.S.C. § 604(a)(3).

[6] 5 U.S.C. § 601(6).

[7] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after the opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

[8] Small Business Act, 15 U.S.C. § 632 (1996).

[9] 13 C.F.R. § 121.201, NAICS code 517410.

[10] U.S. Census Bureau, 2002 NAICS Definitions, "517410 Satellite Telecommunications"; http://www.census.gov/epcd/naics02/def/NDEF517.HTM.

[11] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 517410 (issued Nov. 2005).

[12] *Id.* An additional 38 firms had annual receipts of $25 million or more.

The category of Other Telecommunications "comprises establishments primarily engaged in (1) providing specialized telecommunications applications, such as satellite tracking, communications telemetry, and radar station operations; or (2) providing satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems."[13] For this category, Census Bureau data for 2002 show that there were a total of 332 firms that operated for the entire year.[14] Of this total, 259 firms had annual receipts of under $10 million and 15 firms had annual receipts of $10 million to $24,999,999.[15] Consequently, we estimate that the majority of Other Telecommunications firms are small entities that might be affected by our action.

Space Stations (Geostationary). Commission records reveal that there are 44 space station licensees. We do not request nor collect annual revenue information concerning such licensees, and thus are unable to estimate the number of geostationary space station licensees that would constitute a small business under the SBA definition cited above, or apply any rules providing special consideration for geostationary space station licensees that are small businesses.

17 GHz Transmitting Earth Stations. Currently there are approximately 47 operational earth stations in the 17.3-17.7 GHz bands. The Commission does not request or collect annual revenue information, and thus is unable to estimate the number of earth stations that would constitute a small business under the SBA definition.[16]

Cellular and Other Wireless Telecommunications. The SBA has developed a small business size standard for Cellular and Other Wireless Telecommunications, which consists of all such firms having 1,500 or fewer employees.[17] According to Census Bureau data for 2002, in this category there were 1,397 firms that operated for the entire year.[18] Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.[19] Thus, under this category and size standard, the majority of firms can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

In this Further Notice of Proposed Rulemaking, the Commission invites comment on various

[13] U.S. Census Bureau, 2002 NAICS Definitions, "517910 Other Telecommunications"; http://www.census.gov/epcd/naics02/def/NDEF517.HTM.

[14] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 517910 (issued Nov. 2005).

[15] *Id.* An additional 14 firms had annual receipts of $25 million or more.

[16] The SBA has developed a small business size standard for Satellite Telecommunications, which consists of all such companies having $13.5 million or less in annual receipts. 13 C.F.R. § 121.201, NAICS code 517410.

[17] 13 C.F.R. § 121.201, NAICS code 517212.

[18] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization," Table 5, NAICS code 517212 (issued Nov. 2005).

[19] *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

issues related to the mitigation of harmful interference in the reverse band operating environment, which is unique to operation in the 17/24 GHz BSS. *None of the proposed methods are intended to increase the* projected reporting, recordkeeping, and other compliance requirements.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The RFA requires that, to the extent consistent with the objectives of applicable statutes, the analysis shall discuss significant alternatives such as: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.[20]

The measures proposed are necessary to mitigate against space-path interference between DBS and 17/24 GHz BSS satellites (space-path interference) and to protect 17/24 GHz BSS subscribers from DBS feeder links (ground-path interference). The measures include the establishment of protection zones, coordination zones, power level limits, geographic restrictions of earth stations, and technical showings. We believe that these proposals are the most equitable solutions to the potential interference problems posed by operation in the 17/24 GHz BSS. We seek comment on viable alternatives to these rules or their reporting requirements that would lessen the economic impact on small entities. We also seek comment on the establishment of differing compliance or reporting requirements that take into account the resources available to small entities.

F. Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rules

None.

[20] 5 U.S.C. § 603(c)(1), (c)(4).

STATEMENT OF COMMISSIONER ROBERT M. McDOWELL

RE: The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band, IB Docket No. 06-123, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 07-76

Today, the Commission takes a constructive step forward to open a new window of opportunity for more competition in the satellite industry. The services offered in the 17/24 GHz band will include standard-definition and high-definition formats, and will provide a mix of advanced, multi-media services to residential and business subscribers located not only in the continental United States, but in Alaska and Hawaii as well. I am particularly pleased that our new rules require operators to construct each satellite to accommodate the provision of service to Alaska and Hawaii in the event the satellite reaches, or is moved to, an orbital location that would provide this coverage.

In addition, our order adopts a four-degree orbital spacing plan and associated technical rules to implement the plan, while also permitting flexibility to the extent that proposed offset locations do not increase the potential for interference to other systems. We also adopt technical rules to protect receive-only consumer antennas, which would shield incumbents and their customers from harmful interference, while creating a means for roll-out of new, innovative products and facilities. Finally, we are proceeding mindful of the need to protect the operations of terrestrial systems that have co-primary rights in certain of the bands at issue here.

Because we implement a light regulatory touch, our action will ease the ability of diverse entrants to introduce exciting new services to American consumers living in urban, rural and insular areas. This is precisely the type of action the Commission must continuously take to provide the certainty necessary for America's entrepreneurs to forge ahead with advanced broadband offerings. Our work will result in more choices for consumers and more competition among different broadband platforms. This should, in turn, result in lower prices for consumers and a corresponding increase in delivery to consumers living and working in *all* areas of our country.

Finally, I thank the International Bureau for its comprehensive, thoughtful work.

STATEMENT OF
COMMISSIONER JONATHAN S. ADELSTEIN
APPROVING IN PART, DISSENTING IN PART

Re: *The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band; IB Docket No. 06-123; Report and Order and Further Notice of Proposed Rulemaking,* FCC-07-76

I support the vast bulk of this decision. In particular, I am very pleased that we have concluded a large portion of this proceeding in a relatively short time frame given that the 17/24 GHz BSS allocation became effective on April 1, 2007. I want to ensure that our satellite services have prompt access to this new allocation, and I appreciate very much the work of the International Bureau in bringing this item forward on a timely basis.

The 17/24 GHz BSS band holds great promise for operators to introduce a new generation of innovative satellite services to American consumers – providing a mix of video, audio, data, and multimedia services to residential and business subscribers. Indeed, the spectrum already is in high demand with over 20 applications on file for a variety of orbital locations. Because we adopt an orbital spacing requirement of four degrees, the item allows these applicants an opportunity to amend their applications to conform to the new orbital spacing framework and new technical rules. Our decision puts in place a freeze on the filing of new 17/24 GHz BSS applications until some time after the pending applications are amended.

It is the keen interest in the 17/24 GHz BSS allocation and our somewhat unique application situation that gives me some pause in this proceeding. I believe that our experience with the existing bond requirements and the Commission's already dubious track record of bond enforcement warrant for a far more aggressive approach with respect to the 17/24 GHz BSS band to ensure that the spectrum is promptly put to use.[1] This is a new allocation of a large swath of free spectrum that counsels for a higher bond obligation and a commitment from this Commission that it will hold 17/24 GHz BSS applicants accountable for their bond requirements. This spectrum is far too valuable to have it fall in the hands of speculators or those with anti-competitive interests. Like others, I am unsure that our existing safeguards against speculation are sufficient.

Finally, I am concerned that we have not considered more seriously the argument to increase the amount of programming that service providers in the 17/24 GHz BSS band are required to reserve for non-commercial programming of an educational or informational nature. Given the additional spectrum capacity being offered service providers by this new allocation, I believe we should have taken a harder look at the merits of increasing public interest programming to the maximum of seven percent.

For all of these reasons, I must approve in part, dissent in part.

[1] *See* Comments of Echostar at 18. "Such additional protection is needed because even the FSS bond and milestone requirements would not be enough to protect against speculation in the RBW [reverse band working] band with its relatively limited number of slots."