

developed one or more definitions that are appropriate for its activities.³⁵¹ Under the Small Business Act, a “small business concern” is one that: (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).³⁵²

A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”³⁵³ Nationwide, as of 1992, there were approximately 275,801 small organizations.³⁵⁴ The definition of “small governmental jurisdiction” is one with populations of fewer than 50,000.³⁵⁵ There are 85,006 governmental jurisdictions in the nation.³⁵⁶ This number includes such entities as states, counties, cities, utility districts and school districts. There are no figures available on what portion of this number has populations of fewer than 50,000. However, this number includes 38,978 counties, cities and towns, and of those, 37,556, or 96 percent, have populations of fewer than 50,000.³⁵⁷ The Census Bureau estimates that this ratio is approximately accurate for all government entities. Thus, of the 85,006 governmental entities, we estimate that 96 percent, or about 81,600, are small entities that may be affected by our rules. Nationwide, there are 4.44 million small business firms, according to SBA reporting data.³⁵⁸

The Commission has not developed a definition of small entities applicable to fixed satellite service licensees. Therefore, the applicable definition of small entity is the definition under the SBA rules applicable to Communications Services, Not Elsewhere Classified. This definition provides that a small entity is one with no more than \$11.0 million in annual receipts.³⁵⁹ According to Census Bureau data, there are 848 firms that fall under the category of Communications Services, Not Elsewhere Classified. Of those, approximately 775 reported annual receipts of \$11 million or less and qualify as small entities.³⁶⁰

Because we are substituting the 3650-3700 MHz band for 15 megahertz of spectrum in the 1990-2110 MHz band, we must assign licenses for this spectrum by competitive bidding to satisfy the requirements

³⁵¹ *Id.* § 601(3).

³⁵² *Id.* § 632.

³⁵³ *Id.* § 601(4).

³⁵⁴ Department of Commerce, U.S. Bureau of the Census, 1992 Economic Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

³⁵⁵ 5 U.S.C. § 601(5).

³⁵⁶ 1992 Census of Governments, U.S. Bureau of the Census, U.S. Department of Commerce.

³⁵⁷ *Id.*

³⁵⁸ See 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to the Office of Advocacy of the U.S. Small Business Administration).

³⁵⁹ See 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4899.

³⁶⁰ See U.S. Bureau of the Census, U.S. Department of Commerce, 1992 Census of Transportation, Communications, and Utilities, UC92-S-1, Subject Series, Establishment and Firm Size, Table 2D, Employment Size of Firms, 1992, SIC Code 4899 (issued May 1995).

of the Balanced Budget Act of 1997.³⁶¹ The Commission has not yet determined how many licenses will be awarded. Moreover, the Commission does not know how many licensees will partition their license areas or disaggregate their spectrum blocks, if partitioning and disaggregation are allowed. We therefore assume that, for purposes of our evaluations and conclusions in the IRFA, all prospective licensees are small entities, as that term is defined by the SBA or our proposed small business definitions for terrestrial fixed and mobile services in the 3650-3700 MHz band, which are discussed below in Section E.

We invite comment on this analysis.

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

Applicants for licenses to provide terrestrial fixed and mobile services in the 3650-3700 MHz band will be required to submit short-form applications using FCC Form 175. In addition, winning bidders must submit long-form license applications through the Universal Licensing System using FCC Form 601, and other appropriate forms. We invite comment on how these filing requirements can be modified to reduce the burden on small entities.

As discussed in paragraph 45 of the *Second Notice*, all services, other than fixed satellite service earth stations, in the 3650-3700 MHz band would be governed by Part 27 of the Commission's Rules, and, in certain instances, as discussed in paragraph 46, Part 20 if the proposals are adopted. The proposals under consideration in this item include requiring commercial licensees to make showings that they are in compliance with construction requirements,³⁶² file applications for license renewals³⁶³ and make certain other filings as required by the Communications Act.³⁶⁴ We request comment on how these requirements can be modified to reduce the burden on small entities and still meet the objectives of the proceeding.

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

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives: (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 or 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.³⁶⁵

The *Second Notice* proposes the following small business definitions for bidders in auctions of licenses in the 3650-3700 MHz band: an "entrepreneur" would be defined as an entity with average annual gross revenues for the three preceding years not exceeding \$40 million, a "small business" would be defined as an entity with average annual gross revenues for the three preceding years not exceeding

³⁶¹ See *The Balanced Budget Act of 1997*, Section 3002(c)(4), Pub. L. 105-33, 111 Stat. 251-258 (1997) ("BBA"). See also NTIA Special Publication 98-39.

³⁶² See ¶¶ 82-88, *supra*.

³⁶³ See ¶¶ 72-74, *supra*.

³⁶⁴ See ¶¶ 87-88, *supra*.

³⁶⁵ See 5 U.S.C. § 603(c).

\$15 million, and a “very small business” would be defined as an entity with average annual gross revenues for the three preceding years not exceeding \$3 million. These definitions are consistent with the definitions the Commission applied to the 2.3 GHz WCS, but include an additional third category of entities with average annual gross revenues for the three preceding years not exceeding \$3 million. In developing these definitions, we considered the alternative of using only two small business definitions, as we have done in the 2.3 GHz WCS, 39 GHz, and broadband PCS contexts, among others. Here, however, we believe that an additional third category of small businesses may be appropriate because the deployment of fixed wireless equipment in nearby spectrum bands suggests that entry costs may be lower than was the case for the 2.3 GHz WCS when it was licensed in 1997. Thus, very small businesses may now be better able to take advantage of bidding credits to acquire licenses and provide communications services.

As indicated in paragraphs 50-53, the Commission, while proposing a requirement that fixed and mobile services applicants identify whether or not they seek to provide common carrier services, also proposes to allow these applicants to request common carrier status as well as non-common carrier status for authorization in a single license, rather than require these applicants to choose between common carrier and non-common carrier services. The Commission also proposes that fixed and mobile applicants and licensees in the 3650-3700 MHz band not be required to describe their proposed services, but be required to indicate a regulatory status based on any services they choose to provide. As detailed in paragraphs 54-56, the Commission favors this type of flexible approach for regulating the 3650-3700 MHz for a variety of reasons. The Commission, however, particularly seeks comment on the effect of this flexible approach on possible investment in communications services and systems and more generally on technology development.

As discussed in paragraphs 57-63, the Commission proposes that there be no restrictions on eligibility for fixed and mobile services licensees in the 3650-3700 MHz and 4.9 GHz bands other than the alien ownership restrictions set forth in Section 310 of the Communications Act. In order to supervise effectively the compliance of these licensees with regard to our alien ownership restrictions, we propose that both common carrier and non-common carrier licensees in the 3650-3700 MHz band provide the alien ownership information requested in FCC Form 601, as well as amendments to FCC Form 602 to reflect any changes in foreign ownership information. This proposed enforcement is a mutual benefit to all licensees and a minimal reporting burden.

We have reduced burdens wherever possible. To minimize any negative impact, however, we propose certain incentives for small entities which will redound to their benefit. These special provisions include partitioning and spectrum disaggregation.³⁶⁶ These provisions will allow smaller entities to overcome entry barriers. In addition, we seek comment on whether it would be appropriate to license the 3650-3700 MHz band for fixed and mobile services using smaller geographical licensing areas. The use of smaller licensing areas could benefit small entities by reducing costs and build-out expenses. We have also sought comment on different approaches to minimizing the burdens of interference management.³⁶⁷

The regulatory burdens we have retained, such as filing applications on appropriate forms, are necessary in order to ensure that the public receives the benefits of innovative new services in a prompt and efficient manner. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities. We seek comment on significant alternatives commenters believe we should adopt.

³⁶⁶ See ¶¶ 75-80, *supra*.

³⁶⁷ See ¶¶ 93-116, *supra*.

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

None.

APPENDIX D: FINAL RULES

Parts 2 and 90 of title 47 of the Code of Federal Regulations are amended as follows:

PART 2 – FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for Part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended as follows:
 - a. Page 54 is revised.
 - b. Footnote US110 is revised and footnotes US348 and US349 are added.
 - c. Footnotes NG169 and NG170 are added.
 - d. Footnotes G59 and G110 are revised.

The revisions and additions read as follows:

§ 2.106 Table of Frequency Allocations.

* * * * *

2900-3100 RADIONAVIGATION S5.426 Radiolocation			2900-3100 MARITIME RADIONAVIGATION Radiolocation G56	2900-3100 MARITIME RADIONAVIGATION Radiolocation US44	Maritime (80) Private Land Mobile (90)
S5.425 S5.427			S5.427 US44 US316	S5.5427 US316	
3100-3300 RADIOLOCATION Earth exploration-satellite (active) Space research (active)			3100-3300 RADIOLOCATION S5.333 US110 G59	3100-3300 Radiolocation S5.333 US110	Private Land Mobile (90)
S5.149 S5.428			S5.149	S5.149	
3300-3400 RADIOLOCATION	3300-3400 RADIOLOCATION Amateur Fixed Mobile	3300-3400 RADIOLOCATION Amateur	3300-3500 RADIOLOCATION US108 G31	3300-3500 Amateur Radiolocation US108	Private Land Mobile (90) Amateur (97)
S5.149 S5.429 S5.430	S5.149 S5.430	S5.149 S5.429			
3400-3600 FIXED FIXED-SATELLITE (space-to-Earth) Mobile Radiolocation	3400-3500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile Radiolocation S5.433		S5.149	S5.149 S5.282	
S5.431	S5.282 S5.432				
3600-4200 FIXED FIXED-SATELLITE (space-to-Earth) Mobile	3500-3700 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Radiolocation S5.433		3500-3650 RADIOLOCATION US110 G59 AERONAUTICAL RADIONAVIGATION (ground-based) G110 US245	3500-3600 Radiolocation US110	Private Land Mobile (90)
	S5.435		3650-3700	3600-3650 FIXED-SATELLITE (space-to-Earth) US245 Radiolocation US110	
	See next page for 3700-4200 MHz		US245 US348 US349	3650-3700 FIXED FIXED-SATELLITE (space-to-Earth) NG169 MOBILE except aeronautical mobile NG170	
			See next page for 3700-4200 MHz	US245 US348 US349	See next page for 3700-4200 MHz

* * * * *

UNITED STATES (US) FOOTNOTES

* * * * *

US110 In the bands 3100-3300 MHz, 3500-3650 MHz, 5250-5350 MHz, 8500-9000 MHz, 9200-9300 MHz, 9500-10000 MHz, 13.4-14.0 GHz, 15.7-17.3 GHz, 24.05-24.25 GHz and 33.4-36.0 GHz, the non-Government radiolocation service shall be secondary to the Government radiolocation service and to airborne doppler radars at 8800 MHz, and shall provide protection to airport surface detection equipment (ASDE) operating between 15.7-16.2 GHz.

* * * * *

US348 The band 3650-3700 MHz is also allocated to the Government radiolocation service on a primary basis at the following sites: St. Inigoes, MD (38° 10' N, 76° 23' W); Pascagoula, MS (30° 22' N, 88° 29' W); and Pensacola, FL (30° 21' 28" N, 87° 16' 26" W). All fixed and fixed satellite operations within 80 kilometers of these sites shall be coordinated through the Frequency Assignment Subcommittee of the Interdepartmental Radio Advisory Committee on a case-by-case basis.

US349 The band 3650-3700 MHz is also allocated to the Government radiolocation service on a non-interference basis for use by ship stations located at least 44 nautical miles in off-shore ocean areas on the condition that harmful interference is not caused to non-Government operations.

* * * * *

NON-FEDERAL GOVERNMENT (NG) FOOTNOTES

* * * * *

NG169 After December 1, 2000, operations on a primary basis by the fixed-satellite service (space-to-Earth) in the band 3650-3700 MHz shall be limited to grandfathered earth stations. All other fixed-satellite service earth station operations in the band 3650-3700 MHz shall be on a secondary basis. Grandfathered earth stations are those authorized prior to December 1, 2000, or granted as a result of an application filed prior to December 1, 2000, and constructed within 12 months of initial authorization. License applications for primary operations for new earth stations, major amendments to pending earth station applications, or applications for major modifications to earth station facilities filed on or after December 18, 1998, and prior to December 1, 2000, shall not be accepted unless the proposed facilities are in the vicinity (*i.e.* within 10 miles) of an authorized primary earth station operating in the band 3650-3700 MHz. License applications for primary operations by new earth stations, major amendments to pending earth station applications, and applications for major modifications to earth station facilities, filed after December 1, 2000, shall not be accepted, except for changes in polarization, antenna orientation or ownership of a grandfathered earth station.

NG170 In the band 3650-3700 MHz, the mobile except aeronautical mobile service is limited to base station operations. These base stations are subject to the same coordination procedures as fixed service operations in the band 3650-3700 MHz.

* * * * *

FEDERAL GOVERNMENT (G) FOOTNOTES

* * * * *

G59 In the bands 902-928 MHz, 3100-3300 MHz, 3500-3650 MHz, 5250-5350 MHz, 8500-9000 MHz, 9200-9300 MHz, 13.4-14.0 GHz, 15.7-17.7 GHz and 24.05-24.25 GHz, all Government non-military radiolocation shall be secondary to military radiolocation, except in the sub-band 15.7-16.2 GHz airport surface detection equipment (ASDE) is permitted on a co-equal basis subject to coordination with the military departments.

* * * * *

G110 Government ground-based stations in the aeronautical radionavigation service may be authorized between 3500-3650 MHz when accommodation in the band 2700-2900 MHz is not technically and/or economically feasible.

* * * * *

PART 90 – PRIVATE LAND MOBILE RADIO SERVICES

3. The authority citation for Part 90 continues to read as follows:

AUTHORITY: Secs. 4(i), 11, 303(g), 303(r) and 332(c)(7) of the Communications Act of 1934 as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7), unless otherwise noted.

4. Section 90.103(b) is amended by replacing the table entry 3500-3700 under the heading "megahertz" with the following entry:

§ 90.103 Radiolocation Service

* * * * *

3500-3650| do| 12

* * * * *

APPENDIX E: PROPOSED RULES

For those reasons discussed in the accompanying Second Notice of Proposed Rulemaking, parts 2, 25 and 27 of Title 47 of the Code of Federal Regulations are proposed to be amended as follows:

PART 2 – FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for Part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302, 303, 307, 336, and 337, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended by adding the following non-Government footnote:

NGXXX Fixed-satellite service systems that operate primarily outside the 3650-3700 MHz band may be authorized to perform space operations, such as, telemetry, tracking and telecommand operations in the band 3650-3700 MHz, provided the requirement in §25.202(g)(1) of this chapter is satisfied.

PART 25 – SATELLITE COMMUNICATIONS

3. The authority citation for Part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 701-744. Interprets or applies sec. 303, 47 U.S.C. 303. 47 U.S.C. sections 154, 301, 302, 303, 307, 309 and 322, unless otherwise noted.

4. Section 25.202 is modified in paragraph (g) by adding a new paragraph (g)(1) to read as follows:

§ 25.202 Frequencies, frequency tolerance and emission limitations.

* * * * *

(g) * * * * *

(1) Telemetry, tracking and telecommand functions for satellite service systems operating outside of the band 3650-3700 MHz may be authorized on a secondary basis in the 3650-3700 MHz band upon a particularized showing of need.

PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

5. The authority citation for Part 27 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337, unless otherwise noted.

6. Section 27.1 is modified by adding a new paragraph (b)(3) to read as follows:

§ 27.1 Basis and purpose.

* * * * *

(b) * * * * *

(3) 3650-3700 MHz band.

* * * * *

7. Section 27.4 is modified by adding the following definition

Grandfathered fixed satellite service earth station. An earth station in the 3650-3700 MHz band is an earth station that is authorized prior to December 1, 2000, or granted as a result of an application filed prior to December 1, 2000.

8. Section 27.5 is modified by adding a new paragraph (c) to read as follows:

§ 27.5 Frequencies.

* * * * *

(c) 3650-3700 MHz band. The 3650-3700 MHz band is available for licensing pursuant to this part.

9. Section 27.14 is modified by redesignating paragraph (d) as paragraph (e) and adding a new paragraph (d) to read as follows:

§ 27.14 Construction requirements; criteria for comparative renewal proceedings.

* * * * *

(d) 3650-3700 MHz band.

(1) For a WCS licensee that offers fixed, point-to-point service, the construction of four permanent links per one million people in its licensed service area within the prescribed license term set forth in § 27.13 of this part would constitute substantial service.

(2) For a WCS licensee that offers fixed, point-to-multipoint service, a demonstration of coverage of 20 percent of the population of its licensed service area within the prescribed license term set forth in § 27.13 of this part would constitute substantial service.

(3) For a licensee that offers fixed satellite service, the construction of one earth station per licensed service area within the prescribed license term set forth in § 27.13 of this part would constitute substantial service.

* * * * *

10. Section 27.50 is modified by redesignating paragraph (c) as paragraph (d) and adding a new paragraph (c) to read as follows:

§ 27.50 Power limits.

* * * * *

(c) The following power and antenna height limits apply to base and fixed stations operating in the 3650-3700 MHz band: Base and fixed stations must not exceed an effective radiated power of 1640 watts and

an antenna height of 300 m height above average terrain, or its equivalent.

11. Section 27.53 is modified by redesignating paragraph (f) as paragraph (g) and adding a new paragraph (f) to read as follows:

§ 27.53 Emission limits.

* * * * *

(f) Base and fixed service operations in the 3650-3700 MHz band are subject to the emission limits set forth in § 101.111 of this chapter.

* * * * *

12. Section 27.55 is modified by adding a new paragraph (c) to read as follows:

§ 27.55 Field strength limits.

* * * * *

(c) 3650-3700 MHz band: 54 dB μ V/m

13. Section 27.57 is revised to read as follows:

§ 27.57 International coordination.

WCS licensees shall comply with the appropriate coordination agreements between the United States and Canada and the United States and Mexico concerning cross-border sharing and use of WCS bands. Operations in the border areas shall be subject to coordination with bordering countries and provide protection to non-U.S. operations in the appropriate frequency bands. In addition, satellite operations in WCS spectrum shall be subject to international satellite coordination procedures.

14. Section 27.58 is revised by inserting introductory text before paragraph (a) to read as follows:

§ 27.58 Interference to MDS/ITFS receivers.

The following rules concerning interference to Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") receivers apply only to WCS licensees in the 2305-2320 and 2345-2360 MHz bands.

* * * * *

15. Section 27.61 is added to read as follows.

§ 27.61 FS/FSS Coordination Procedure.

Base and fixed service transmitters in the 3650-3700 MHz band that are located within 200 kilometers of

a grandfathered fixed satellite service earth station must be coordinated prior to construction to reduce the potential for interference. The fixed station licensee must use the coordination procedures specified in § 101.21 of this chapter.

16. A new Subpart H is added to read as follows.

**Subpart H – Competitive Bidding Procedures for the
3650-3700 MHz Band**

§ 27.701 3650-3700 MHz band subject to competitive bidding.

Mutually exclusive initial applications for terrestrial service licenses in the 3650-3700 MHz band are subject to competitive bidding procedures. The procedures set forth in part 1, subpart Q, of this chapter will apply unless otherwise provided in this part.

§ 27.702 Designated entities.

(a) Eligibility for small business provisions.

(1) A very small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$3 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$15 million for the preceding three years.

(3) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$40 million for the preceding three years.

(4) For purposes of determining whether an entity meets any of the definitions set forth in paragraphs (a)(1), (a)(2), or (a)(3) of this section, the gross revenues of the entity, its controlling interests and affiliates shall be considered in the manner set forth in § 1.2110(b) and (c) of this chapter.

(5) A consortium of very small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(1) of this section. A consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(2) of this section. A consortium of entrepreneurs is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(3) of this section. Where an applicant or licensee is a consortium of small businesses (or very small businesses or entrepreneurs), the gross revenues of each small business (or very small business or entrepreneur) shall not be aggregated.

(b) Bidding credits. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(i) of this chapter. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as an entrepreneur or a consortium of entrepreneurs as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

APPENDIX F

PRELIMINARY LISTS OF GRANDFATHERED FSS EARTH STATIONS³⁶⁸

NOTE: A FINAL LIST WILL BE ISSUED IN A FUTURE PUBLIC NOTICE

Table 1: Authorized Extended C-Band Earth Stations (Receive at 3625-3700 MHz and Transmit at 5850-5925 MHz) ³⁶⁹				
State	City	North Latitude	West Longitude	License
California	Carmel Valley	36° 24' 10"	121° 38' 48"	KA23
	Culver City	34° 01' 06"	118° 24' 13"	KA298
	Livermore	37° 45' 40"	121° 47' 53"	KA232
	Los Angeles	34° 01' 53"	118° 27' 18"	KA382
		34° 01' 54"	118° 27' 15"	KA383
	Malibu	34° 04' 49.7"	118° 53' 44"	KA91
		34° 04' 50.3"	118° 53' 46"	KA273
		34° 4' 51"	118° 53' 44"	KB32
	Mountain House	37° 45' 01"	121° 35' 34"	KA206
		37° 45' 02"	121° 35' 35"	KA86
	Niles Canyon	37° 35' 56"	121° 56' 32"	KA93
		37° 36' 00"	121° 56' 35"	KA82
	Salt Creek	38° 56' 20.2"	122° 08' 48"	KA371
		38° 56' 21"	122° 08' 49"	KA372
		38° 56' 22.3"	122° 08' 50"	KA373
	Somis	34° 19' 31"	118° 59' 41"	KA318
	Sylmar	34° 19' 04"	118° 29' 00"	KA274

³⁶⁸ See n.5, *supra*.³⁶⁹ Most of these earth stations are authorized to make use of both C-band (3700-4200 MHz for downlinks and 5925-6425 MHz band for uplinks) and extended C-band frequencies (3625-3700 MHz for downlinks and 5850-5925 MHz for uplinks).

Table 1 continued: Authorized Extended C-Band Earth Stations

State	City	North Latitude	West Longitude	License
Florida	Medley	25° 50' 26"	80° 19' 03"	E960406
		25° 51' 19"	80° 19' 52"	E960068
	Melbourne	28° 02' 25"	80° 35' 48"	KA354
		28° 05' 10"	80° 38' 10"	E950276
	Miami	25° 48' 34"	80° 21' 11"	E940470
		25° 48' 35"	80° 21' 10"	KA407
		25° 48' 35"	80° 21' 11"	KA412
	Miramar	25° 58' 32"	80° 17' 00"	E960105
	Orlando	28° 25' 29"	81° 07' 21"	KA280
Palm Bay	28° 02' 28"	80° 35' 42"	KA400	
Guam	Pulantat	13° 25' 00"	144° 44' 57" ³⁷⁰	KA28 KA326
Hawaii	Paumalu	21° 40' 26"	158° 2' 13"	KA25
		21° 40' 27"	158° 2' 16"	KA265
		21° 40' 27"	158° 2' 16"	KA266
		21° 40' 25.5"	158° 2' 16"	KA267
		21° 40' 25"	158° 2' 16"	KA268
		21° 40' 24"	158° 2' 16"	KA269
		21° 40' 24"	158° 2' 16"	KA270
Maine	Andover	44° 37' 57"	70° 42' 01"	KA276
		44° 37' 58"	70° 41' 54"	KA349
West Virginia	Etam	39° 16' 48"	79° 44' 14"	WA21
		39° 16' 50"	79° 44' 13"	KA378
Maryland	Clarksburg	39° 13' 5.6"	77° 16' 12"	KA259
		39° 13' 07"	77° 16' 12"	KA275
		39° 13' 5"	77° 16' 12"	KA260
		39° 13' 2.2"	77° 16' 12"	KA261
		39° 13' 1.4"	77° 16' 13"	KA262
		39° 13' 4.8"	77° 16' 15"	KA263
		39° 13' 4.8"	77° 16' 15"	KA264

³⁷⁰ Guam's longitude coordinate is East, not West.

Table 1 continued: Authorized Extended C-Band Earth Stations

State	City	North Latitude	West Longitude	License
Massachusetts	Whitinsville	42° 07' 01"	71° 38' 11"	E980517
Midway Atoll	Midway Atoll	28° 13' 11"	177° 22' 5"	E960325
New Jersey	Franklin	41° 07' 04"	74° 34' 33"	E6777 KA231
New York	Hauppauge	40° 49' 15"	73° 15' 50"	E950436
	Staten Island	40° 36' 13"	74° 10' 39"	KA308
North Carolina	West Jefferson	36° 25' 50"	81° 23' 45"	E970334
Oregon	Moores Valley	45° 20' 33"	123° 17' 15"	CSG-90-101-P/L
Pennsylvania	Roaring Creek	40° 53' 35.9"	76° 26' 23"	KA444
		40° 53' 37.5"	76° 26' 22"	WA33
Puerto Rico	Carolina	18° 26' 00"	65° 59' 35"	KA377
	Cayey	18° 08' 00"	66° 07' 57"	KA320
	Humacao	18° 09' 05"	65° 47' 20"	E872647
	Rio Piedras	18° 14' 30"	66° 01' 50"	KA403
Tennessee	Nashville	36° 14' 6.2"	86° 45' 20"	E970010
		36° 14' 5.7"	86° 45' 19"	E960073
		36° 14' 5.7"	86° 45' 21"	E960050
Texas	Desoto	32° 37' 48"	96° 50' 32"	KA306
Virginia	Alexandria	38° 47' 36"	77° 09' 59"	KA81
	Reston	38° 57' 00"	77° 22' 40"	E950406
	Shenandoah	38° 43' 45"	78° 39' 26"	KA255
Washington	Brewster	48° 08' 51"	119° 41' 29"	KA294
		48° 08' 51"	119° 41' 29"	E960222
West Virginia	Albright	39° 34' 07"	79° 34' 45"	KA413
	Rowlesburg	39° 16' 52.1"	79° 44' 11"	KA351

Table 2: Sites Authorized for Less than the Entire 3650-3700 MHz C-Band

Band	City, State	Latitude	Longitude	License
3685-3700 MHz	Miami, Florida	25° 28' 48"	80° 10' 48"	E970362
	Atlanta, Georgia	33° 52' 38.2"	84° 27' 58"	E970197
	Marietta, Georgia	33° 55' 41"	84° 29' 45"	E970364
	Guaynabo, Puerto Rico	18° 34' 10"	66° 23' 00"	E970195
	San Juan, Puerto Rico	18° 22' 00"	66° 07' 00"	E970196
3698.7-3698.7 MHz	Rio Piedras, Puerto Rico	18° 22' 59"	66° 04' 09"	KA426
	Caguas, Puerto Rico	18° 17' 53"	66° 03' 14"	E950405

Table 3: Authorized TT&C Sites
(Receive at 3698.5-3699.5 MHz and Transmit at 5923.5-5924.5 MHz)

City, State	Latitude	Longitude	License
Three Peaks, California	38° 8' 51.9"	122° 47' 38"	E950208
Hawley, Pennsylvania	41° 27' 51"	75° 7' 48"	E950209

Table 4: Authorized TT&C Sites
(Receive at 3698.3-3699.7 MHz and Transmit at 5923-5924 MHz)

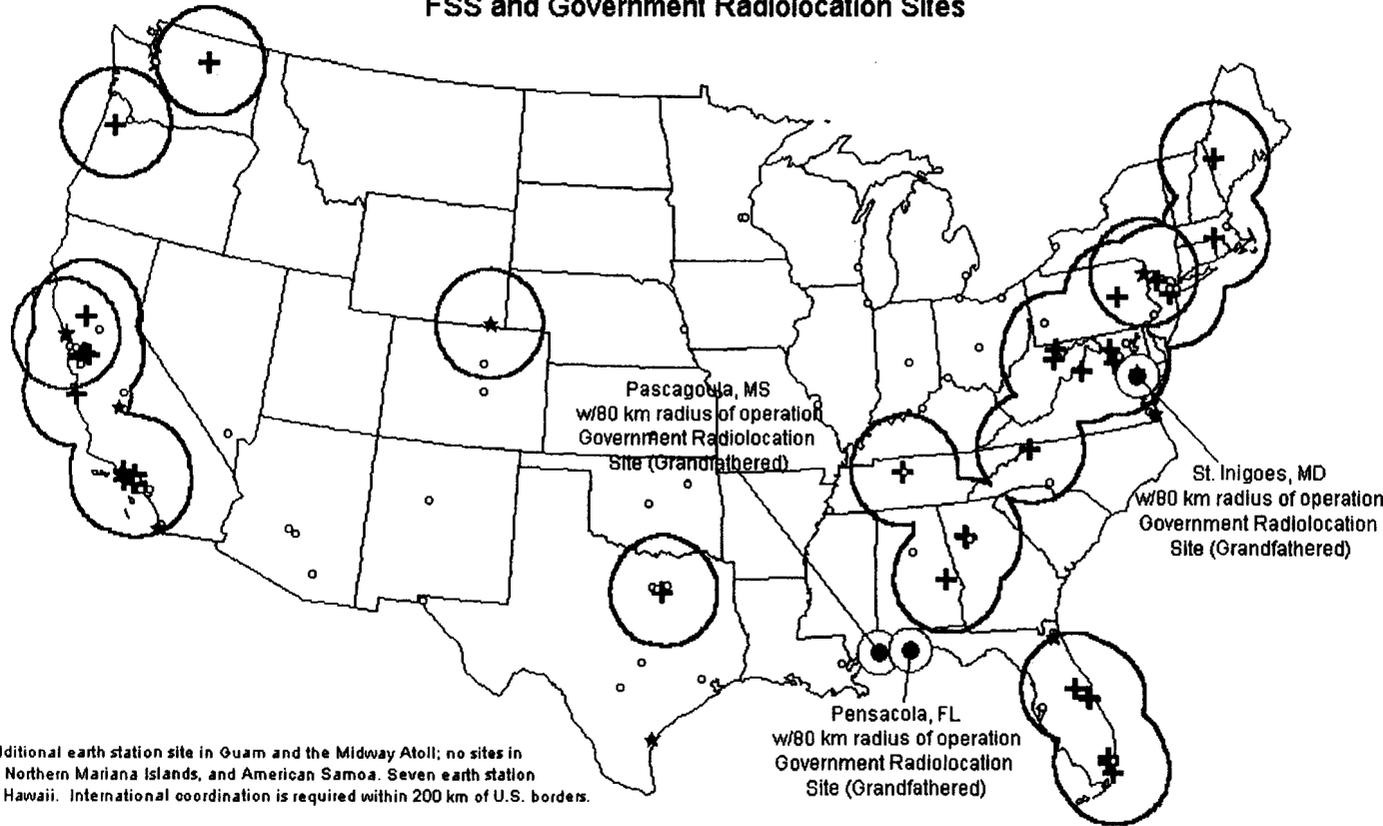
City, State	Latitude	Longitude	License
CHEYENNE, WY	41° 7' 56"	104° 44' 11"	E950253
CHEYENNE, WY	41° 7' 55.7"	104° 44' 12"	E980118

APPENDIX G:

**MAP OF COORDINATION ZONES AROUND GRANDFATHERED FSS EARTH STATIONS
AND GRANDFATHERED GOVERNMENT RADIOLOCATION STATIONS**

Appendix G

Grandfathered Operations in the 3650-3700 MHz Band
FSS and Government Radiolocation Sites



Notes:

One additional earth station site in Guam and the Midway Atoll; no sites in Alaska, Northern Mariana Islands, and American Samoa. Seven earth station sites in Hawaii. International coordination is required within 200 km of U.S. borders.

200 km coordination zone shown for FSS Sites

80 km protection zone shown for Government radiolocation sites

⊕ 82 Earth Stations at 40 sites

★ 4 Earth Stations at 3 sites for TT&C

○ Cities with a population of more than 250,000



Federal Communications Commission
Office of Engineering and Technology

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