were obtained by four small businesses.[133] To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-tiered small business size standard in the Narrowband PCS Second Report and Order.[134] A "small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $40 million.[135] A "very small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $15 million.[136] The SBA has approved these small business size standards.[137] A third auction commenced on October 3, 2001 and closed on October 16, 2001. Here, five bidders won 317 (Metropolitan Trading Areas and nationwide) licenses.[138] Three of these claimed status as a small or very small entity and won 311 licenses.

86. **Lower 700 MHz Band Licenses.** We adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.[139] We have defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[140] A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years.[141] Additionally, the lower 700 MHz Service has a third category of small business status that may be claimed for Metropolitan/Rural Service Area (MSA/RSA) licenses. The third category is "entrepreneur," which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years.[142] The SBA has approved these small size standards.[143] An auction of 740 licenses

[133] *See* "Announcing the High Bidders in the Auction of ten Nationwide Narrowband PCS Licenses, Winning Bids Total $617,006,674," *Public Notice*, PNWL 94-004 (released Aug. 2, 1994); "Announcing the High Bidders in the Auction of 30 Regional Narrowband PCS Licenses; Winning Bids Total $490,901,787," *Public Notice*, PNWL 94-27 (released Nov. 9, 1994).

[134] Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 15 FCC Rcd 10456, 10476, para. 40 (2000).

[135] Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 15 FCC Rcd 10456, 10476, para. 40 (2000).

[136] Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 15 FCC Rcd 10456, 10476, para. 40 (2000).

[137] *See* Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

[138] *See* "Narrowband PCS Auction Closes," *Public Notice*, 16 FCC Rcd 18663 (WTB 2001).

[139] *See* Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022 (2002).

[140] *See* Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022, 1087-88, para. 172 (2002).

[141] *See* Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022, 1087-88, para. 172 (2002).

[142] *See* Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022, 1088, para. 173 (2002).

[143] *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999.

(one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses.[144] A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 Cellular Market Area licenses.[145] Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.[146]

87. **Upper 700 MHz Band Licenses**. The Commission released a Report and Order, authorizing service in the upper 700 MHz band.[147] This auction, previously scheduled for January 13, 2003, has been postponed.[148]

88. **700 MHz Guard Band Licenses**. In the 700 MHz Guard Band Order, we adopted size standards for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[149] A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[150] Additionally, a very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years.[151] SBA approval of these definitions is not required.[152] An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000.[153] Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.[154]

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[144] *See* "Lower 700 MHz Band Auction Closes," *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

[145] *See* "Lower 700 MHz Band Auction Closes," *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

[146] *See* "Lower 700 MHz Band Auction Closes," *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

[147] Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Memorandum Opinion and Order*, 16 FCC Rcd 1239 (2001).

[148] *See* "Auction of Licenses for 747-762 and 777-792 MHz Bands (Auction No. 31) Is Rescheduled," *Public Notice*, 16 FCC Rcd 13079 (WTB 2003).

[149] *See* Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000).

[150] *See* Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299, 5343, para. 108 (2000).

[151] *See* Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299, 5343, para. 108 (2000).

[152] *See* Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299, 5343, para. 108 n.246 (for the 746-764 MHz and 776-794 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain SBA approval before adopting small business size standards).

[153] *See* "700 MHz Guard Bands Auction Closes: Winning Bidders Announced," *Public Notice*, 15 FCC Rcd 18026 (2000).

[154] *See* "700 MHz Guard Bands Auction Closes: Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

89. **Specialized Mobile Radio**. The Commission awards "small entity" bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than $15 million in each of the three previous calendar years.[155] The Commission awards "very small entity" bidding credits to firms that had revenues of no more than $3 million in each of the three previous calendar years.[156] The SBA has approved these small business size standards for the 900 MHz Service.[157] The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the $15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the $15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band.[158] A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.[159]

90. The auction of the 1,053 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 2000. Eleven bidders won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band qualified as small businesses under the $15 million size standard.[160] In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were sold.[161] Of the 22 winning bidders, 19 claimed small business status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small business.

91. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. We do not know how many firms provide 800 MHz or 900 MHz geographic area SMR pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than $15 million. One firm has over $15 million in revenues. We assume, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities, as that small business size standard is approved by the SBA.

92. **220 MHz Radio Service – Phase I Licensees**. The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a definition of small entities specifically applicable to such

[155] 47 CFR § 90.814(b)(1).

[156] 47 CFR § 90.814(b)(1).

[157] *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999. We note that, although a request was also sent to the SBA requesting approval for the small business size standard for 800 MHz, approval is still pending.

[158] *See* "Correction to Public Notice DA 96-586 'FCC Announces Winning Bidders in the Auction of 1020 Licenses to Provide 900 MHz SMR in Major Trading Areas,'" *Public Notice*, 18 FCC Rcd 18367 (WTB 1996).

[159] *See* "Multi-Radio Service Auction Closes," *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

[160] *See*, "800 MHz Specialized Mobile Radio (SMR) Service General Category (851-854 MHz) and Upper Band (861-865 MHz) Auction Closes; Winning Bidders Announced," *Public Notice*, 15 FCC Rcd 17162 (2000).

[161] *See*, "800 MHz SMR Service Lower 80 Channels Auction Closes; Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 1736 (2000).

incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, we apply the small business size standard under the SBA rules applicable to "Cellular and Other Wireless Telecommunications" companies. This category provides that a small business is a wireless company employing no more than 1,500 persons.[162] According to the Census Bureau data for 1997, only twelve firms out of a total of 1,238 such firms that operated for the entire year in 1997, had 1,000 or more employees.[163] If this general ratio continues in the context of Phase I 220 MHz licensees, the Commission estimates that nearly all such licensees are small businesses under the SBA's small business standard.

93. **220 MHz Radio Service – Phase II Licensees.** The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is a new service, and is subject to spectrum auctions. In the 220 MHz Third Report and Order, we adopted a small business size standard for defining "small" and "very small" businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[164] This small business standard indicates that a "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years.[165] A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed $3 million for the preceding three years.[166] The SBA has approved these small size standards.[167] Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998.[168] In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold.[169] Thirty-nine small businesses won 373 licenses in the first 220 MHz auction. A second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.[170] A third auction included four licenses: 2 BEA licenses and 2 EAG licenses in the 220 MHz Service. No small or very small business won any of these licenses.[171]

94. **Private Land Mobile Radio (PLMR).** PLMR systems serve an essential role in a range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories, and are often used in support of the licensee's primary (non-telecommunications) business operations. For the purpose of determining whether a licensee of a PLMR system is a small business as defined by the SBA, we could use the definition for "Cellular and Other Wireless Telecommunications." This definition provides that a small entity is any such entity employing no

[162] 13 CFR § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

[163] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 513322 (October 2000).

[164] Amendment of Part 90 of the Commission's Rules to Provide For the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, *Third Report and Order*, 12 FCC Rcd 10943, 11068-70, paras. 291-295 (1997).

[165] *Id.* at 11068, paras. 291.

[166] *Id.*

[167] *See* Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

[168] *See generally* "220 MHz Service Auction Closes," *Public Notice*, 14 FCC Rcd 605 (WTB 1998).

[169] *See* "FCC Announces It is Prepared to Grant 654 Phase II 220 MHz Licenses After Final Payment is Made," *Public Notice*, 14 FCC Rcd 1085 (WTB 1999).

[170] *See* "Phase II 220 MHz Service Spectrum Auction Closes," *Public Notice*, 14 FCC Rcd 11218 (WTB 1999).

[171] *See* "Multi-Radio Service Auction Closes," *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

more than 1,500 persons.[172] The Commission does not require PLMR licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. Moreover, because PMLR licensees generally are not in the business of providing cellular or other wireless telecommunications services but instead use the licensed facilities in support of other business activities, we are not certain that the Cellular and Other Wireless Telecommunications category is appropriate for determining how many PLMR licensees are small entities for this analysis. Rather, it may be more appropriate to assess PLMR licensees under the standards applied to the particular industry subsector to which the licensee belongs.[173]

95. The Commission's 1994 Annual Report on PLMRs[174] indicates that at the end of fiscal year 1994, there were 1,087,267 licensees operating 12,481,989 transmitters in the PLMR bands below 512 MHz. Because any entity engaged in a commercial activity is eligible to hold a PLMR license, the revised rules in this context could potentially impact every small business in the United States.

96. **Fixed Microwave Services.** Fixed microwave services include common carrier,[175] private operational-fixed,[176] and broadcast auxiliary radio services.[177] At present, there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not created a size standard for a small business specifically with respect to fixed microwave services. For purposes of this analysis, the Commission uses the SBA small business size standard for the category "Cellular and Other Telecommunications," which is 1,500 or fewer employees.[178] The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are up to 22,015 common carrier fixed licensees and up to 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies proposed herein. We noted, however, that the common carrier microwave fixed licensee category includes some large entities.

97. **39 GHz Service.** The Commission created a special small business size standard for 39 GHz licenses – an entity that has average gross revenues of $40 million or less in the three previous calendar years.[179] An additional size standard for "very small business" is: an entity that, together with affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.[180] The SBA has

[172] *See* 13 CFR § 121.201, NAICS code 517212.
[173] *See generally* 13 CFR § 121.201.
[174] Federal Communications Commission, 60th Annual Report, Fiscal Year 1994, at ¶ 116.
[175] *See* 47 CFR §§ 101 et seq. (formerly, Part 21 of the Commission's Rules) for common carrier fixed microwave services (except Multipoint Distribution Service).
[176] Persons eligible under parts 80 and 90 of the Commission's Rules can use Private Operational-Fixed Microwave services. *See* 47 CFR Parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee's commercial, industrial, or safety operations.
[177] Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission's Rules. *See* 47 CFR Part 74. This service is available to licensees of broadcast stations and to broadcast and cable network entities. Broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile television pickups, which relay signals from a remote location back to the studio.
[178] 13 CFR § 121.201, NAICS code 513322 (changed to 517212 in October 2002).
[179] *See* Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183, *Report and Order*, 12 FCC Rcd 18600 (1997), 63 Fed.Reg. 6079 (Feb. 6, 1998).
[180] *Id.*

approved these small business size standards.[181] The auction of the 2,173 39 GHz licenses began on April 12, 2000 and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses. Consequently, the Commission estimates that 18 or fewer 39 GHz licensees are small entities that may be affected by the rules and polices herein.

98. **Local Multipoint Distribution Service.** Local Multipoint Distribution Service (LMDS) is a fixed broadband point-to-multipoint microwave service that provides for two-way video telecommunications.[182] .The auction of the 986 Local Multipoint Distribution Service (LMDS) licenses began on February 18, 1998 and closed on March 25, 1998. The Commission established a small business size standard for LMDS licenses as an entity that has average gross revenues of less than $40 million in the three previous calendar years.[183] An additional small business size standard for "very small business" was added as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.[184] The SBA has approved these small business size standards in the context of LMDS auctions.[185] There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 32 small and very small business winning that won 119 licenses.

99. **218-219 MHz Service.** The first auction of 218-219 MHz (previously referred to as the Interactive and Video Data Service or IVDS) spectrum resulted in 178 entities winning licenses for 594 Metropolitan Statistical Areas (MSAs).[186] Of the 594 licenses, 567 were won by 167 entities qualifying as a small business. For that auction, we defined a small business as an entity that, together with its affiliates, has no more than a $6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than $2 million in annual profits each year for the previous two years.[187] In the 218-219 MHz Report and Order and Memorandum Opinion and Order, we defined a small business as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not exceeding $15 million for the preceding three years.[188] A very small business is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its

[181] *See* Letter to Kathleen O'Brien Ham, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Feb. 4, 1998) (VoIP); *See* Letter to Margaret Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Hector Barreto, Administrator, Small Business Administration, dated January 18, 2002 (WTB).

[182] *See* Rulemaking to Amend Parts 1, 2, 21, 25, of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, Reallocate the 29.5-30.5 Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rule Making*, 12 FCC Rcd 12545, 12689-90, para. 348 (1997).

[183] *See* Rulemaking to Amend Parts 1, 2, 21, 25, of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, Reallocate the 29.5-30.5 Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rule Making*, 12 FCC Rcd 12545, 12689-90, para. 348 (1997).

[184] *See* Rulemaking to Amend Parts 1, 2, 21, 25, of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, Reallocate the 29.5-30.5 Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rule Making*, 12 FCC Rcd 12545, 12689-90, para. 348 (1997).

[185] *See* Letter to Dan Phythyon, Chief, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Jan. 6, 1998).

[186] *See* "Interactive Video and Data Service (IVDS) Applications Accepted for Filing," *Public Notice*, 9 FCC Rcd 6227 (1994).

[187] Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Fourth Report and Order*, 9 FCC Rcd 2330 (1994).

[188] Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service, *Report and Order and Memorandum Opinion and Order*, 15 FCC Rcd 1497 (1999).

affiliates, has average annual gross revenues not exceeding $3 million for the preceding three years.[189] The SBA has approved of these definitions.[190] At this time, we cannot estimate the number of licenses that will be won by entities qualifying as small or very small businesses under our rules in future auctions of 218-219 MHz spectrum. Given the success of small businesses in the previous auction, and the prevalence of small businesses in the subscription television services and message communications industries, we assume for purposes of this analysis that in future auctions, many, and perhaps all, of the licenses may be awarded to small businesses.

100. **Location and Monitoring Service (LMS)**. Multilateration LMS systems use non-voice radio techniques to determine the location and status of mobile radio units. For purposes of auctioning LMS licenses, the Commission has defined "small business" as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding $15 million.[191] A "very small business" is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding $3 million.[192] These definitions have been approved by the SBA.[193] An auction for LMS licenses commenced on February 23, 1999, and closed on March 5, 1999. Of the 528 licenses auctioned, 289 licenses were sold to four small businesses. We cannot accurately predict the number of remaining licenses that could be awarded to small entities in future LMS auctions.

101. **Rural Radiotelephone Service**. The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.[194] A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System (BETRS).[195] The Commission uses the SBA's small business size standard applicable to "Cellular and Other Wireless Telecommunications," i.e., an entity employing no more than 1,500 persons.[196] There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies proposed herein.

102. **Air-Ground Radiotelephone Service**. The Commission has not adopted a small business size standard specific to the Air-Ground Radiotelephone Service.[197] We will use SBA's small business size standard applicable to "Cellular and Other Wireless Telecommunications," i.e., an entity employing no more than 1,500 persons.[198] There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and we estimate that almost all of them qualify as small under the SBA small business size standard.

103. **Aviation and Marine Radio Services**. Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of

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[189] *Id.*

[190] *See Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.*

[191] Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Second Report and Order*, 13 FCC Rcd 15182, 15192 ¶ 20 (1998); *see also* 47 C.F.R. § 90.1103.

[192] Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Second Report and Order*, 13 FCC Rcd at 15192, para. 20; *see also* 47 C.F.R. § 90.1103.

[193] *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated February 22, 1999.

[194] The service is defined in § 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

[195] BETRS is defined in §§ 22.757 and 22.759 of the Commission's Rules, 47 C.F.R. §§ 22.757 and 22.759.

[196] 13 CFR § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

[197] The service is defined in § 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

[198] 13 CFR § 121.201, NAICS codes 513322 (changed to 517212 in October 2002).

this analysis, the Commission uses the SBA small business size standard for the category "Cellular and Other Telecommunications," which is 1,500 or fewer employees.[199] Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $15 million dollars. In addition, a "very small" business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $3 million dollars.[200] There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as "small" businesses under the above special small business size standards.

104. **Offshore Radiotelephone Service**. This service operates on several ultra high frequencies (UHF) television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico.[201] There are presently approximately 55 licensees in this service. We are unable to estimate at this time the number of licensees that would qualify as small under the SBA's small business size standard for "Cellular and Other Wireless Telecommunications" services.[202] Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.[203]

105. **Multiple Address Systems (MAS)**. Entities using MAS spectrum, in general, fall into two categories: (1) those using the spectrum for profit-based uses, and (2) those using the spectrum for private internal uses. With respect to the first category, the Commission defines "small entity" for MAS licenses as an entity that has average gross revenues of less than $15 million in the three previous calendar years.[204] "Very small business" is defined as an entity that, together with its affiliates, has average gross revenues of not more than $3 million for the preceding three calendar years.[205] The SBA has approved of these definitions.[206] The majority of these entities will most likely be licensed in bands where the Commission has implemented a geographic area licensing approach that would require the use of competitive bidding procedures to resolve mutually exclusive applications. The Commission's licensing database indicates that, as of January 20, 1999, there were a total of 8,670 MAS station authorizations. Of these, 260 authorizations were associated with common carrier service. In addition, an auction for 5,104 MAS licenses in 176 EAs began November 14, 2001, and closed on November 27, 2001.[207] Seven winning bidders claimed status as small or very small businesses and won 611 licenses.

106. With respect to the second category, which consists of entities that use, or seek to use, MAS spectrum to accommodate internal communications needs, we note that MAS serves an essential role in a range of industrial, safety, business, and land transportation activities. MAS radios are used by companies of

[199] 13 CFR § 121.201, NAICS code 513322 (changed to 517212 in October 2002).
[200] Amendment of the Commission's Rules Concerning Maritime Communications, PR Docket No. 92-257, *Third Report and Order and Memorandum Opinion and Order*, 13 FCC Rcd 19853 (1998).
[201] This service is governed by Subpart I of Part 22 of the Commission's Rules. *See* 47 C.F.R. §§ 22.1001-22.1037.
[202] 13 CFR § 121.201, NAICS code 513322 (changed to 517212 in October 2002).
[203] *Id.*
[204] *See* Amendment of the Commission's Rules Regarding Multiple Address Systems, *Report and Order*, 15 FCC Rcd 11956, 12008, para. 123 (2000).
[205] *Id.*
[206] *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated June 4, 1999.
[207] *See* "Multiple Address Systems Spectrum Auction Closes," *Public Notice*, 16 FCC Rcd 21011 (2001).

all sizes, operating in virtually all U.S. business categories, and by all types of public safety entities. For the majority of private internal users, the definitions developed by the SBA would be more appropriate. The applicable definition of small entity in this instance appears to be the "Cellular and Other Wireless Telecommunications" definition under the SBA rules. This definition provides that a small entity is any entity employing no more than 1,500 persons.[208] The Commission's licensing database indicates that, as of January 20, 1999, of the 8,670 total MAS station authorizations, 8,410 authorizations were for private radio service, and of these, 1,433 were for private land mobile radio service.

107. **Incumbent 24 GHz Licensees**. This analysis may affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The applicable SBA small business size standard is that of "Cellular and Other Wireless Telecommunications" companies. This category provides that such a company is small if it employs no more than 1,500 persons.[209] According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year.[210] Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more.[211] Thus, under this size standard, the great majority of firms can be considered small. These broader census data notwithstanding, we believe that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent[212] and TRW, Inc. It is our understanding that Teligent and its related companies have less than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

108. Future 24 GHz Licensees. With respect to new applicants in the 24 GHz band, we have defined "small business" as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not exceeding $15 million.[213] "Very small business" in the 24 GHz band is defined as an entity that, together with controlling interests and affiliates, has average gross revenues not exceeding $3 million for the preceding three years.[214] The SBA has approved these definitions.[215] The Commission will not know how many licensees will be small or very small businesses until the auction, if required, is held.

109. **Multipoint Distribution Service, Multichannel Multipoint Distribution Service, and Instructional Television Fixed Service**. Multichannel Multipoint Distribution Service (MMDS) systems, often referred to as "wireless cable," transmit video programming to subscribers using the microwave frequencies of the Multipoint Distribution Service (MDS) and Instructional Television Fixed Service (ITFS).[216] In connection with the 1996 MDS auction, the Commission defined "small business" as an entity

[208] *See* 13 CFR § 121.201, NAICS code 517212.

[209] 13 CFR § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

[210] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 513322 (issued October 2000).

[211] *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 "Firms with 1,000 employees or more."

[212] Teligent acquired the DEMS licenses of FirstMark, the only licensee other than TRW in the 24 GHz band whose license has been modified to require relocation to the 24 GHz band.

[213] Amendments to Parts 1, 2, 87 and 101 of the Commission's Rules To License Fixed Services at 24 GHz, *Report and Order*, 15 FCC Rcd 16934, 16967, para. 77 (2000) (24 GHz Report and Order); *see also* 47 CFR § 101.538(a)(2).

[214] 24 GHz Report and Order, 15 FCC Rcd at 16967, para. 77; *see also* 47 CFR § 101.538(a)(1).

[215] *See* Letter to Margaret W. Wiener, Deputy Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Gary M. Jackson, Assistant Administrator, Small Business Administration, dated July 28, 2000.

[216] Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Report and Order*, 10 FCC Rcd 9589, 9593, para. 7 (1995) (MDS Auction R&O).

that, together with its affiliates, has average gross annual revenues that are not more than $40 million for the preceding three calendar years.[217] The SBA has approved of this standard.[218] The MDS auction resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs).[219] Of the 67 auction winners, 61 claimed status as a small business. At this time, we estimate that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent MDS licensees that have gross revenues that are not more than $40 million and are thus considered small entities.[220]

110. In addition, the SBA has developed a small business size standard for Cable and Other Program Distribution,[221] which includes all such companies generating $12.5 million or less in annual receipts.[222] According to Census Bureau data for 1997, there were a total of 1,311 firms in this category, total, that had operated for the entire year.[223] Of this total, 1,180 firms had annual receipts of under $10 million, and an additional 52 firms had receipts of $10 million or more but less than $25 million.[224] Consequently, we estimate that the majority of providers in this service category are small businesses that may be affected by the proposed rules and policies.

111. Finally, while SBA approval for a Commission-defined small business size standard applicable to ITFS is pending, educational institutions are included in this analysis as small entities.[225] There are currently 2,032 ITFS licensees, and all but 100 of these licenses are held by educational institutions. Thus, we tentatively conclude that at least 1,932 ITFS licensees are small businesses.

112. **Television Broadcasting**. The Small Business Administration defines a television broadcasting station that has no more than $12 million in annual receipts as a small business.[226] Business concerns included in this industry are those "primarily engaged in broadcasting images together with sound."[227] According to Commission staff review of the BIA Publications, Inc. Master Access Television

[217] 47 CFR § 21.961(b)(1).

[218] *See* Letter to Margaret Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Bureau, from Gary Jackson, Assistant Administrator for Size Standards, Small Business Administration, dated March 20, 2003 (noting approval of $40 million size standard for MDS auction).

[219] Basic Trading Areas (BTAs) were designed by Rand McNally and are the geographic areas by which MDS was auctioned and authorized. *See* MDS Auction R&O, 10 FCC Rcd at 9608, paragraph 34.

[220] 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard for "other telecommunications" (annual receipts of $12.5 million or less). *See* 13 CFR § 121.201, NAICS code 517910.

[221] 13 CFR § 121.201, NAICS code 517510.

[222] *Id.*

[223] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4 (issued October 2000).

[224] *Id.*

[225] In addition, the term "small entity" under SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6). We do not collect annual revenue data on ITFS licensees.

[226] See OMB, North American Industry Classification System: United States, 1997 at 509 (1997) (NAICS code 513120, which was changed to code 515120 in October 2002)

[227] OMB, North American Industry Classification System: United States, 1997, at 509 (1997) (NAICS code 513120, which was changed to code 51520 in October 2002). This category description continues, "These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public. These establishments also produce or transmit visual programming to affiliated broadcast television stations, which in turn broadcast the programs to the public on a predetermined schedule. Programming may originate in their own studios, from an affiliated network, or from external sources." Separate census categories pertain to businesses primarily engaged in producing programming. See id. at 502-05, NAICS code 51210. Motion Picture and Video Production:

Analyzer Database as of May 16, 2003, about 814 of the 1,220 commercial television stations in the United States have revenues of $12 million or less. We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[228] must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. There are also 2,053 low power television stations (LPTV).[229] Given the nature of this service, we will presume that all LPTV licensees qualify as small entities under the SBA definition.

113. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any television station from the definition of a small business on this basis and are therefore over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent.

114. **Radio Broadcasting**. The SBA defines a radio broadcast entity that has $6 million or less in annual receipts as a small business.[230] Business concerns included in this industry are those "primarily engaged in broadcasting aural programs by radio to the public.[231] According to Commission staff review of the BIA Publications, Inc., Master Access Radio Analyzer Database, as of May 16, 2003, about 10,427 of the 10,945 commercial radio stations in the United States have revenue of $6 million or less. We note, however, that many radio stations are affiliated with much larger corporations with much higher revenue, and that in assessing whether a business concern qualifies as small under the above definition, such business (control) affiliations[232] are included.[233] Our estimate, therefore likely overstates the number of small businesses that might be affected by our action.

115. **Auxiliary, Special Broadcast and Other Program Distribution Services.** This service involves a variety of transmitters, generally used to relay broadcast programming to the public (through translator and booster stations) or within the program distribution chain (from a remote news gathering unit back to the station). The Commission has not developed a definition of small entities applicable to broadcast auxiliary licensees. The applicable definitions of small entities are those, noted previously, under the SBA rules applicable to radio broadcasting stations and television broadcasting stations.[234]

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code 512120, Motion Picture and Video Distribution, code 512191, Teleproduction and Other Post-Production Services, and code 512199, Other Motion Picture and Video Industries.

[228] "Concerns are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 CFR § 121.103(a)(1).

[229] FCC News Release, "Broadcast Station Totals as of September 30, 2004."

[230] See OMB, North American Industry Classification System: United States, 1997, at 509 (1997) (Radio Stations) (NAICS code 513111, which was changed to code 515112 in October 2002).

[231] Id.

[232] "Concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both." 13 CFR § 121.103(a)(1).

[233] "SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern's size." 13 CFR § 121(a)(4).

[234] 13 CFR 121.201, NAICS codes 513111 and 513112.

116. The Commission estimates that there are approximately 3,868 FM translators and boosters.[235] The Commission does not collect financial information on any broadcast facility, and the Department of Commerce does not collect financial information on these auxiliary broadcast facilities. We believe that most, if not all, of these auxiliary facilities could be classified as small businesses by themselves. We also recognize that most commercial translators and boosters are owned by a parent station which, in some cases, would be covered by the revenue definition of small business entity discussed above. These stations would likely have annual revenues that exceed the SBA maximum to be designated as a small business ($5 million for a radio station or $10.5 million for a TV station). Furthermore, they do not meet the Small Business Act's definition of a "small business concern" because they are not independently owned and operated. [236]

117. **Cable and Other Program Distribution.** This category includes cable systems operators, closed circuit television services, direct broadcast satellite services, multipoint distribution systems, satellite master antenna systems, and subscription television services. The SBA has developed small business size standard for this census category, which includes all such companies generating $12.5 million or less in revenue annually.[237] According to Census Bureau data for 1997, there were a total of 1,311 firms in this category, total, that had operated for the entire year.[238] Of this total, 1,180 firms had annual receipts of under $10 million and an additional 52 firms had receipts of $10 million or more but less than $25 million. Consequently, the Commission estimates that the majority of providers in this service category are small businesses that may be affected by the rules and policies herein.

118. **Cable System Operators (Rate Regulation Standard).** The Commission has developed its own small business size standard for cable system operators, for purposes of rate regulation. Under the Commission's rules, a "small cable company" is one serving fewer than 400,000 subscribers nationwide.[239] The most recent estimates indicate that there were 1,439 cable operators who qualified as small cable system operators at the end of 1995.[240] Since then, some of those companies may have grown to serve over 400,000 subscribers, and others may have been involved in transactions that caused them to be combined with other cable operators. Consequently, the Commission estimates that there are now fewer than 1,439 small entity cable system operators that may be affected by the rules and policies herein.

119. **Cable System Operators (Telecom Act Standard).** The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed $250,000,000."[241] The Commission has determined that there are 65,000,000 subscribers in the United States.[242] Therefore, an operator serving fewer than 650,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed $250 million in the aggregate.[243] Based on available data, the Commission estimates that the number of cable

[235] FCC News Release, "Broadcast Station Totals as of September 30, 2004."

[236] 15 U.S.C. 632.

[237] 13 CFR § 121.201, NAICS code 513220 (changed to 517510 in October 2002).

[238] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)", Table 4, NAICS code 513220 (issued October 2000).

[239] 47 CFR § 76.901(e). The Commission developed this definition based on its determination that a small cable system operator is one with annual revenues of $100 million or less. Implementation of Sections of the 1992 Cable Act: Rate Regulation, *Sixth Report and Order and Eleventh Order on Reconsideration*, 10 FCC Rcd 7393 (1995), 60 FR 10534 (February 27, 1995).

[240] Paul Kagan Associates, Inc., Cable TV Investor, February 29, 1996 (based on figures for December 30, 1995).

[241] 47 U.S.C. § 543(m)(2).

[242] *See* FCC Announces New Subscriber Count for the Definition of Small Cable Operator, *Public Notice*, DA 01-158 (January 24, 2001).

[243] 47 CFR § 76.901(f).

operators serving 650,000 subscribers or fewer, totals 1,450.[244] The Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed $250 million,[245] and therefore are unable, at this time, to estimate more accurately the number of cable system operators that would qualify as small cable operators under the size standard contained in the Communications Act of 1934.

120. **Open Video Services**. Open Video Service (OVS) systems provide subscription services.[246] The SBA has created a small business size standard for Cable and Other Program Distribution.[247] This standard provides that a small entity is one with $12.5 million or less in annual receipts. The Commission has certified approximately 25 OVS operators to serve 75 areas, and some of these are currently providing service.[248] Affiliates of Residential Communications Network, Inc. (RCN) received approval to operate OVS systems in New York City, Boston, Washington, D.C., and other areas. RCN has sufficient revenues to assure that they do not qualify as a small business entity. Little financial information is available for the other entities that are authorized to provide OVS and are not yet operational. Given that some entities authorized to provide OVS service have not yet begun to generate revenues, the Commission concludes that up to 24 OVS operators (those remaining) might qualify as small businesses that may be affected by the rules and policies herein.

121. **Cable Television Relay Service**. This service includes transmitters generally used to relay cable programming within cable television system distribution systems. The SBA has defined a small business size standard for Cable and other Program Distribution, consisting of all such companies having annual receipts of no more than $12.5 million.[249] According to Census Bureau data for 1997, there were 1,311 firms in the industry category Cable and Other Program Distribution, total, that operated for the entire year.[250] Of this total, 1,180 firms had annual receipts of $10 million or less, and an additional 52 firms had receipts of $10 million or more but less than $25 million.[251] Thus, under this standard, we estimate that the majority of providers in this service category are small businesses that may be affected by the rules and policies herein.

122. **Multichannel Video Distribution and Data Service**. MVDDS is a terrestrial fixed microwave service operating in the 12.2-12.7 GHz band. No auction has yet been held in this service, although an action has been scheduled for January 14, 2004.[252] Accordingly, there are no licensees in this service.

123. **Amateur Radio Service**. These licensees are believed to be individuals, and therefore are not small entities.

124. **Aviation and Marine Services**. Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-

[244] *See* FCC Announces New Subscriber Count for the Definition of Small Cable Operators, Public Notice, DA-01-0158 (released January 24, 2001).
[245] The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. *See* 47 CFR § 76.909(b).
[246] *See* 47 U.S.C. § 573.
[247] 13 CFR § 121.201, NAICS code 513220 (changed to 517510 in October 2002).
[248] *See* http://www.fcc.gov/csb/ovs/csovscer.html (current as of March 2002).
[249] 13 CFR § 121.201, NAICS code 517510.
[250] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4 (issued October 2000).
[251] *Id.*
[252] "Auctions of Licenses in the Multichannel Video Distribution and Data Service Rescheduled for January 14, 2004," *Public Notice*, DA 03-2354 (August 28, 2003).

indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category "Cellular and Other Telecommunications," which is 1,500 or fewer employees.[253] Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $15 million dollars. In addition, a "very small" business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $3 million dollars.[254] There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as "small" businesses under the above special small business size standards.

125. **Personal Radio Services**. Personal radio services provide short-range, low power radio for personal communications, radio signaling, and business communications not provided for in other services. The Personal Radio Services include spectrum licensed under Part 95 of our rules.[255] These services include Citizen Band Radio Service (CB), General Mobile Radio Service (GMRS), Radio Control Radio Service (R/C), Family Radio Service (FRS), Wireless Medical Telemetry Service (WMTS), Medical Implant Communications Service (MICS), Low Power Radio Service (LPRS), and Multi-Use Radio Service (MURS).[256] There are a variety of methods used to license the spectrum in these rule parts, from licensing by rule, to conditioning operation on successful completion of a required test, to site-based licensing, to geographic area licensing. Under the RFA, the Commission is required to make a determination of which small entities are directly affected by these rules. Since all such entities are wireless, we apply the definition of cellular and other wireless telecommunications, pursuant to which a small entity is defined as employing 1,500 or fewer persons.[257] Many of the licensees in these services are individuals, and thus are not small entities. In addition, due to the mostly unlicensed and shared nature of the spectrum utilized in many of these services, the Commission lacks direct information upon which to base an estimation of the number of small entities under an SBA definition that might be directly affected by these rules.

126. **Public Safety Radio Services**. Public Safety radio services include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.[258] There are a

[253] 13 CFR § 121.201, NAICS code 513322 (changed to 517212in October 2002).

[254] Amendment of the Commission's Rules Concerning Maritime Communications, *Third Report and Order and Memorandum Opinion and Order*, 13 FCC Rcd 19853 (1998).

[255] 47 CFR Part 90.

[256] The Citizens Band Radio Service, General Mobile Radio Service, Radio Control Radio Service, Family Radio Service, Wireless Medical Telemetry Service, Medical Implant Communications Service, Low Power Radio Service, and Multi-Use Radio Service are governed by Subpart D, Subpart A, Subpart C, Subpart B, Subpart H, Subpart I, Subpart G, and Subpart J, respectively, of Part 95 of the Commission's rules. *See generally* 47 CFR Part 95.

[257] 13 CFR § 121.201, NAICS Code 517212.

[258] With the exception of the special emergency service, these services are governed by Subpart B of part 90 of the Commission's Rules, 47 CFR §§ 90.15-90.27. The police service includes approximately 27,000 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code) and teletype and facsimile (printed material). The fire radio service includes approximately 23,000 licensees comprised of private volunteer or professional fire companies as well as units under governmental control. The local government service that is presently comprised of approximately 41,000 licensees that are state, county, or municipal entities that use the radio for official purposes not covered by other public safety services. There are approximately 7,000 licensees within the forestry service

total of approximately 127,540 licensees in these services. Governmental entities[259] as well as private businesses comprise the licensees for these services. All governmental entities with populations of less than 50,000 fall within the definition of a small entity.[260]

IV. DESCRIPTION OF PROJECTED REPORTING, RECORDKEEPING AND OTHER COMPLIANCE REQUIREMENTS:

127. With certain exceptions, the Commission's Schedule of Regulatory Fees applies to all Commission licensees and regulatees. Most licensees will be required to count the number of licenses or call signs authorized, complete and submit an FCC Form 159 ("FCC Remittance Advice"), and pay a regulatory fee based on the number of licenses or call signs.[261] Interstate telephone service providers must compute their annual regulatory fee based on their interstate and international end-user revenue using information they already supply to the Commission in compliance with the Form 499-A, Telecommunications Reporting Worksheet, and they must complete and submit the FCC Form 159. Compliance with the fee schedule will require some licensees to tabulate the number of units (e.g., cellular telephones, pagers, cable TV subscribers) they have in service, and complete and submit an FCC Form 159. Licensees ordinarily will keep a list of the number of units they have in service as part of their normal business practices. No additional outside professional skills are required to complete the FCC Form 159, and it can be completed by the employees responsible for an entity's business records.

128. Each licensee must submit the FCC Form 159 to the Commission's lockbox bank after computing the number of units subject to the fee. Licensees may also file electronically to minimize the burden of submitting multiple copies of the FCC Form 159. Applicants who pay small fees in advance and provide fee information as part of their application must use FCC Form 159.

129. Licensees and regulatees are advised that failure to submit the required regulatory fee in a timely manner will subject the licensee or regulatee to a late payment penalty of 25 percent in addition to the

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which is comprised of licensees from state departments of conservation and private forest organizations who set up communications networks among fire lookout towers and ground crews. The approximately 9,000 state and local governments are licensed to highway maintenance service provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. The approximately 1,000 licensees in the Emergency Medical Radio Service (EMRS) use the 39 channels allocated to this service for emergency medical service communications related to the delivery of emergency medical treatment. 47 CFR §§ 90.15-90.27. The approximately 20,000 licensees in the special emergency service include medical services, rescue organizations, veterinarians, handicapped persons, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities. 47 CFR §§ 90.33-90.55.

[259] 47 CFR § 1.1162.

[260] 5 U.S.C. § 601(5).

[261] The following categories are exempt from the Commission's Schedule of Regulatory Fees: Amateur radio licensees (except applicants for vanity call signs) and operators in other non-licensed services (e.g., Personal Radio, part 15, ship and aircraft). Governments and non-profit (exempt under section 501(c) of the Internal Revenue Code) entities are exempt from payment of regulatory fees and need not submit payment. Non-commercial educational broadcast licensees are exempt from regulatory fees as are licensees of auxiliary broadcast services such as low power auxiliary stations, television auxiliary service stations, remote pickup stations and aural broadcast auxiliary stations where such licenses are used in conjunction with commonly owned non-commercial educational stations. Emergency Alert System licenses for auxiliary service facilities are also exempt as are instructional television fixed service licensees. Regulatory fees are automatically waived for the licensee of any translator station that: (1) is not licensed to, in whole or in part, and does not have common ownership with, the licensee of a commercial broadcast station; (2) does not derive income from advertising; and (3) is dependent on subscriptions or contributions from members of the community served for support. Receive only earth station permittees are exempt from payment of regulatory fees. A regulatee will be relieved of its fee payment requirement if its total fee due, including all categories of fees for which payment is due by the entity, amounts to less than $10.

required fee.[262] If payment is not received, new or pending applications may be dismissed, and existing authorizations may be subject to rescission.[263] Further, in accordance with the Debt Collection Improvement Act of 1996, federal agencies may bar a person or entity from obtaining a federal loan or loan insurance guarantee if that person or entity fails to pay a delinquent debt owed to any federal agency.[264] Nonpayment of regulatory fees is a debt owed the United States pursuant to 31 U.S.C. 3711 et seq., and the Debt Collection Improvement Act of 1996, Public Law 194-134. Appropriate enforcement measures as well as administrative and judicial remedies, may be exercised by the Commission. Debts owed to the Commission may result in a person or entity being denied a federal loan or loan guarantee pending before another federal agency until such obligations are paid.[265]

130. The Commission's rules currently provide for relief in exceptional circumstances. Persons or entities may request a waiver, reduction or deferment of payment of the regulatory fee.[266] However, timely submission of the required regulatory fee must accompany requests for waivers or reductions. This will avoid any late payment penalty if the request is denied. The fee will be refunded if the request is granted. In exceptional and compelling instances (where payment of the regulatory fee along with the waiver or reduction request could result in reduction of service to a community or other financial hardship to the licensee), the Commission will defer payment in response to a request filed with the appropriate supporting documentation.

V. STEPS TAKEN TO MINIMIZE SIGNIFICANT ECONOMIC IMPACT ON SMALL ENTITIES, AND SIGNIFICANT ALTERNATIVES CONSIDERED:

131. 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. As described in Section III of this FRFA, supra, we have created procedures in which all fee-filing licensees and regulatees use a single form, FCC Form 159, and have described in plain language the general filing requirements. We have sought comment on other alternatives that might simplify our fee procedures or otherwise benefit small entities, while remaining consistent with our statutory responsibilities in this proceeding.

132. The Omnibus Appropriations Act for FY 2005, Public Law 108-447, requires the Commission to revise its Schedule of Regulatory Fees in order to recover the amount of regulatory fees that Congress, pursuant to Section 9(a) of the Communications Act, as amended, has required the Commission to collect for Fiscal Year (FY) 2005.[267] As noted, we sought comment on the proposed methodology for implementing these statutory requirements and any other potential impact of these proposals on small entities.

133. We have previously used cost accounting data for computation of regulatory fees, but found that some fees which were very small in previous years would have increased dramatically and would have a disproportionate impact on smaller entities. The methodology we are using in this Report and Order minimizes this impact by limiting the amount of increase and shifting costs to other services which, for the most part, are larger entities.

[262] 47 CFR § 1.1164.
[263] 47 CFR § 1.1164(c).
[264] Public Law 104-134, 110 Stat. 1321 (1996).
[265] 31 U.S.C. § 7701(c)(2)(B).
[266] 47 CFR § 1.1166.
[267] 47 U.S.C. § 159(a).

134. Several categories of licensees and regulatees are exempt from payment of regulatory fees. See, e.g., footnote 261, supra.

135. Report to Small Business Administration: The Commission will send a copy of this Report and Order, including a copy of the FRFA to the Chief Counsel for Advocacy of the Small Business Administration. The Report and Order and FRFA (or summaries thereof) will also be published in the Federal Register.

136. Report to Congress: The Commission will send a copy of this Final Regulatory Flexibility Analysis (FRFA), along with this Report and Order, in a report to Congress pursuant to the Congressional Review Act, 5 U.S.C. 801(a)(1)(A).

ATTACHMENT B

SOURCES OF PAYMENT UNIT ESTIMATES FOR FY 2005

In order to calculate individual service fees for FY 2005, we adjusted FY 2004 payment units for each service to more accurately reflect expected FY 2005 payment liabilities. We obtained our updated estimates through a variety of means. For example, we used Commission licensee data bases, actual prior year payment records and industry and trade association projections when available. The databases we consulted include the Commission's Universal Licensing System (ULS), International Bureau Filing System (IBFS), and Consolidated Database System (CDBS). The industry sources we consulted include, but are not limited to, *Television & Cable Factbook* by Warren Publishing, Inc. and the *Broadcasting and Cable Yearbook* by Reed Elsevier, Inc, as well as reports generated within the Commission such as the Wireline Competition Bureau's *Trends in Telephone Service* and the Wireless Telecommunications Bureau's *Numbering Resource Utilization Forecast*.

We tried to obtain verification for these estimates from multiple sources and, in all cases, we compared FY 2005 estimates with actual FY 2004 payment units to ensure that our revised estimates were reasonable. Where appropriate, we adjusted and/or rounded our final estimates to take into consideration the fact that certain variables that impact on the number of payment units cannot yet be estimated exactly. These include an unknown number of waivers and/or exemptions that may occur in FY 2005 and the fact that, in many services, the number of actual licensees or station operators fluctuates from time to time due to economic, technical or other reasons. Therefore, when we note, for example, that our estimated FY 2005 payment units are based on FY 2004 actual payment units, it does not necessarily mean that our FY 2005 projection is exactly the same number as FY 2004. It means that we have either rounded the FY 2005 number or adjusted it slightly to account for these variables.

FEE CATEGORY	SOURCES OF PAYMENT UNIT ESTIMATES
Land Mobile (All), Microwave, 218-219 MHz, Marine (Ship & Coast), Aviation (Aircraft & Ground), GMRS, Amateur Vanity Call Signs, Domestic Public Fixed	Based on Wireless Telecommunications Bureau (WTB) projections of new applications and renewals taking into consideration existing Commission licensee data bases. Aviation (Aircraft) and Marine (Ship) estimates have been adjusted to take into consideration the licensing of portions of these services on a voluntary basis.
CMRS Cellular/Mobile Services	Based on Wireless Telecommunications Bureau estimates.
CMRS Messaging Services	Based on Wireless Telecommunications Bureau Competition Report estimates.
AM/FM Radio Stations	Based on estimates from Media Services Bureau estimates, adjusted for exemptions, and actual FY 2004 payment units.
UHF/VHF Television Stations	Based on Media Services Bureau estimates and actual FY 2004 payment units.
AM/FM/TV Construction Permits	Based on Media Services Bureau estimates and actual FY 2004 payment units.
LPTV, Translators and Boosters	Based on actual FY 2004 payment units.
Broadcast Auxiliaries	Based on actual FY 2004 payment units.
BRS (formerly MDS/MMDS)	Based on Wireless Telecommunications Bureau estimates and actual FY 2004 payment units.
Cable Television Relay Service (CARS) Stations	Based on actual FY 2004 payment units.
Cable Television System	Based on Media Services Bureau industry estimates of

Subscribers	subscribership, and actual FY 2004 payment units.
Interstate Telecommunication Service Providers	Based on actual FY 2004 interstate revenues reported on Telecommunications Reporting Worksheet, adjusted for FY 2005 revenue growth/decline for industry, and projections by the Wireline Competition Bureau.
Earth Stations	Based on actual FY 2004 payment estimates and projected FY 2005 units.
Space Stations (GSOs & NGSOs)	Based on International Bureau licensee data base estimates.
International Bearer Circuits	Based on FY 2004 actual paid units, and adjusted for growth.
International HF Broadcast Stations, International Public Fixed Radio Service	Based on International Bureau estimates.

ATTACHMENT C
CALCULATION OF FY 2005 REVENUE REQUIREMENTS AND PRO-RATA FEES

Regulatory fees for the categories shaded in gray are collected by the Commission in advance to cover the term of the license and are submitted along with the application at the time the application is filed.

Fee Category	FY 2005 Payment Units	Years	FY 2004 Revenue Estimate	Pro-Rated FY 2005 Revenue Require-ment*	Computed New FY 2005 Regulatory Fee	Rounded New FY 2005 Regula-tory Fee	Expected FY 2005 Revenue
PLMRS (Exclusive Use)	3,700	10	340,000	349,068	9	10	370,000
PLMRS (Shared use)	46,000	10	2,300,000	2,361,342	5	5	2,300,000
Microwave	2,600	10	1,500,000	1,540,006	59	60	1,560,000
218-219 MHz (Formerly IVDS)	3	10	1,500	1,540	51	50	1,500
Marine (Ship)	7,000	10	585,000	600,602	9	10	700,000
GMRS	21,000	5	375,000	385,001	4	5	525,000
Aviation (Aircraft)	7,400	10	155,000	159,134	2	5	370,000
Marine (Coast)	1,000	10	96,200	98,766	10	10	100,000
Aviation (Ground)	1,600	5	120,000	123,200	15	15	120,000
Amateur Vanity Call Signs	7,600	10	162,119	166,443	2.19	2.19	166,443
AM Class A	66	1	198,375	203,666	3,086	3,075	202,950
AM Class B	1,592	1	2,421,075	2,485,646	1,561	1,550	2,467,600
AM Class C	956	1	841,500	863,943	904	900	860,400
AM Class D	1,769	1	2,784,800	2,859,072	1,616	1,625	2,874,625
FM Classes A, B1 & C3	3,045	1	5,715,500	5,980,390	1,964	1,975	6,013,875
FM Classes B, C, C0, C1 & C2	2,963	1	7,026,150	7,321,585	2,471	2,475	7,333,425
AM Construction Permits	113	1	33,945	34,850	308	310	35,030
FM Construction Permits[1]	98	1	267,300	53,929	550	550	53,900
Satellite TV	123	1	128,100	131,516	1,069	1,075	132,225
Satellite TV Construction Permit	3	1	1,560	1,602	534	535	1,605
VHF Markets	43	1	2,596,125	2,665,365	61,985	61,975	2,664,925

Fee Category	FY 2005 Payment Units	Years	FY 2004 Revenue Estimate	Pro-Rated FY 2005 Revenue Require-ment*	Computed New FY 2005 Regulatory Fee	Rounded New FY 2005 Regula-tory Fee	Expected FY 2005 Revenue
1-10							
VHF Markets 11-25	61	1	2,654,400	2,725,194	44,675	44,675	2,725,175
VHF Markets 26-50	72	1	2,246,475	2,306,389	32,033	32,025	2,305,800
VHF Markets 51-100	118	1	2,161,725	2,219,379	18,808	18,800	2,218,400
VHF Remaining Markets	211	1	951,750	977,134	4,631	4,625	975,875
VHF Construction Permits	9	1	27,900	28,644	3,183	3,175	28,575
UHF Markets 1-10	84	1	1,599,750	1,682,187	20,026	20,025	1,682,100
UHF Markets 11-25	79	1	1,310,175	1,384,889	17,530	17,525	1,384,475
UHF Markets 26-50	115	1	1,088,100	1,156,891	10,060	10,050	1,155,750
UHF Markets 51-100	162	1	943,500	993,971	6,136	6,125	992,250
UHF Remaining Markets	181	1	301,950	310,003	1,713	1,725	312,225
UHF Construction Permits[1]	31	1	192,950	53,475	1,725	1,725	53,475
Broadcast Auxiliaries	25,000	1	250,000	256,668	10	10	250,000
LPTV/Trans-lators/Boosters	2,900	1	1,116,500	1,146,277	395	395	1,145,500
CARS Stations	900	1	135,000	138,601	154	155	139,500
Cable TV Systems	65,000,000	1	45,500,000	46,713,502	0.719	0.72	46,800,000
Interstate Tele-communication Service Providers	54,000,000,000	1	127,530,000	130,931,273	0.002425	0.00243	131,220,000
CMRS Mobile Services (Cellular/Public Mobile)	179,000,000	1	38,250,000	39,565,080	0.221	0.22	39,380,000
CMRS Messaging	11,200,000	1	1,160,000	896,000	0.08	0.08	896,000

Fee Category	FY 2005 Payment Units	Years	FY 2004 Revenue Estimate	Pro-Rated FY 2005 Revenue Require-ment*	Computed New FY 2005 Regulatory Fee	Rounded New FY 2005 Regula-tory Fee	Expected FY 2005 Revenue
Services							
BRS[2]	1,800	1	432,000	455,400	253	255	459,000
LMDS[3]	330	1	91,800	83,490	253	255	84,150
International Bearer Circuits	5,300,000	1	7,056,000	7,244,186	1.37	1.37	7,261,000
International Public Fixed	1	1	1,750	1,797	1,797	1,800	1,800
Earth Stations	3,400	1	680,000	698,136	205	205	697,000
International HF Broadcast	5	1	3,725	3,824	765	765	3,825
Space Stations (Geostationary)	81	1	8,829,975	9,065,474	111,919	111,925	9,065,925
Space Stations (Non-Geostationary	6	1	657,000	674,522	112,420	112,425	674,550
****** Total Estimated Revenue to be Collected			272,821,674	280,099,050			280,765,853
****** Total Revenue Requirement			272,958,000	280,098,000			280,098,000
Difference			(136,326)	1,050			667,853

* 1.02615787 factor applied based on the amount Congress designated for recovery through regulatory fees (Public Law 108-7 and 47 U.S.C. § 159(a)(2)).

[1] The FM Construction Permit and UHF Construction Permit revenues were adjusted so that the construction permit fee is no higher than the level of the lowest licensed fee for that class of service.

[2] MDS/MMDS category was renamed Broadband Radio Service (BRS). *See* Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands et al, *Report & Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 14165 (2004).

[3] Although we are tracking BRS (formerly MDS/MMDS) and LMDS separately in terms of payment units, the FY 2005 regulatory fee for BRS and LMDS is calculated by combining the units and the "Pro-Rated Revenue Requirements" of both BRS and LMDS.

ATTACHMENT D

FY 2005 SCHEDULE OF REGULATORY FEES

Regulatory fees for the categories shaded in gray are collected by the Commission in advance to cover the term of the license and are submitted along with the application at the time the application is filed.

Fee Category	Annual Regulatory Fee (U.S. $'s)
PLMRS (per license) (Exclusive Use) (47 CFR part 90)	10
Microwave (per license) (47 CFR part 101)	60
218-219 MHz (Formerly Interactive Video Data Service) (per license) (47 CFR part 95)	50
Marine (Ship) (per station) (47 CFR part 80)	10
Marine (Coast) (per license) (47 CFR part 80)	10
General Mobile Radio Service (per license) (47 CFR part 95)	5
Rural Radio (47 CFR part 22) (previously listed under the Land Mobile category)	5
PLMRS (Shared Use) (per license) (47 CFR part 90)	5
Aviation (Aircraft) (per station) (47 CFR part 87)	5
Aviation (Ground) (per license) (47 CFR part 87)	15
Amateur Vanity Call Signs (per call sign) (47 CFR part 97)	2.19
CMRS Mobile/Cellular Services (per unit) (47 CFR parts 20, 22, 24, 27, 80 and 90)	.22
CMRS Messaging Services (per unit) (47 CFR parts 20, 22, 24 and 90)	.08
Broadband Radio Service (formerly MMDS/ MDS) (per license) (47 CFR part 21)	255
Local Multipoint Distribution Service (47 CFR, part 101)	255
AM Radio Construction Permits	310
FM Radio Construction Permits	550
TV (47 CFR part 73) VHF Commercial	
Markets 1-10	61,975
Markets 11-25	44,675
Markets 26-50	32,025
Markets 51-100	18,800
Remaining Markets	4,625