

ATTACHMENT E**Factors, Measurements, and Calculations that go into Determining Station Signal Contours and Associated Population Coverages****AM Stations**

For stations with nondirectional daytime antennas, the theoretical radiation was used at all azimuths. For stations with directional daytime antennas, specific information on each day tower, including field ratio, phasing, spacing and orientation was retrieved, as well as the theoretical pattern root-mean-square of the radiation in all directions in the horizontal plane ("RMS") figure milliVolt per meter (mV/m) @ 1 km) for the antenna system. The standard, or modified standard if pertinent, horizontal plane radiation pattern was calculated using techniques and methods specified in §§73.150 and 73.152 of the Commission's Rules.¹ Radiation values were calculated for each of 360 radials around the transmitter site. Next, estimated soil conductivity data was retrieved from a database representing the information in FCC Figure R3.² Using the calculated horizontal radiation values, and the retrieved soil conductivity data, the distance to the principal community (5 mV/m) contour was predicted for each of the 360 radials. The resulting distance to principal community contours were used to form a geographical polygon. Population counting was accomplished by determining which 2000 block centroids were contained in the polygon. (A block centroid is the center point of a small area containing population as computed by the U.S. Census Bureau.) The sum of the population figures for all enclosed blocks represents the total population for the predicted principal community coverage area.

FM Stations

The greater of the horizontal or vertical effective radiated power ("ERP") (kW) and respective height above average terrain ("HAAT") (m) combination was used. Where the antenna height above mean sea level ("HAMSL") was available, it was used in lieu of the average HAAT figure to calculate specific HAAT figures for each of 360 radials under study. Any available directional pattern information was applied as well, to produce a radial-specific ERP figure. The HAAT and ERP figures were used in conjunction with the Field Strength (50-50) propagation curves specified in 47 C.F.R. §73.313 of the Commission's Rules to predict the distance to the principal community (70 dBu (decibel above 1 microVolt per meter) or 3.17 mV/m) contour for each of the 360 radials.³ The resulting distance to principal community contours were used to form a geographical polygon. Population counting was accomplished by determining which 2000 block centroids were contained in the polygon. The sum of the population figures for all enclosed blocks represents the total population for the predicted principal community coverage area.

ATTACHMENT F

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act (“RFA”),¹ the Commission prepared an Initial Regulatory Flexibility Analysis (“IRFA”) of the possible significant economic impact on small entities by the policies and rules proposed in its *Notice of Proposed Rulemaking*. Written public comments were sought on the FY 2011 fees proposal, including comments on the IRFA. This Final Regulatory Flexibility Analysis (“FRFA”) conforms to the RFA.²

I. Need for, and Objectives of, the Notice:

2. This rulemaking proceeding was initiated for the Commission to amend its Schedule of Regulatory Fees in the amount of \$335,794,000, which is the amount that Congress has required the Commission to recover. The Commission seeks to collect the necessary amount through its revised Schedule of Regulatory Fees in the most efficient manner possible and without undue public burden.

II. Summary of Significant Issues Raised by Public Comments in Response to the IRFA:

3. No parties have raised issues in response to the IRFA.

III. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply:

4. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.³ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁴ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁵ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.⁶

5. **Small Businesses.** Nationwide, there are a total of approximately 29.6 million small businesses, according to the SBA.⁷

¹ 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-612 has been amended by the Contract With America Advancement Act of 1996, Public Law No. 104-121, 110 Stat. 847 (1996) (“CWAAA”). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (“SBREFA”).

² 5 U.S.C. § 604.

³ 5 U.S.C. § 603(b)(3).

⁴ 5 U.S.C. § 601(6).

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

⁶ 15 U.S.C. § 632.

⁷ See SBA, Office of Advocacy, “Frequently Asked Questions,” <http://web.sba.gov/faqs> (accessed Jan. 2009).

6. **Small Organizations.** Nationwide, as of 2002, there are approximately 1.6 million small organizations.⁸ A “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”⁹

7. **Small Governmental Jurisdictions.** The term “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”¹⁰ Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.¹¹ We estimate that, of this total, 84,377 entities were “small governmental jurisdictions.”¹² Thus, we estimate that most governmental jurisdictions are small.

8. We have included small incumbent local exchange carriers in this present RFA analysis. As noted above, a “small business” under the RFA is one that, inter alia, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.”¹³ The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent local exchange carriers are not dominant in their field of operation because any such dominance is not “national” in scope.¹⁴ We have therefore included small incumbent local exchange carriers in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

9. **Incumbent Local Exchange Carriers (“ILECs”).** Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁵ According to Commission data,¹⁶ 1,311 carriers have reported that they are engaged in the provision of incumbent local exchange services. Of these 1,311 carriers, an estimated 1,024 have 1,500 or fewer employees and 287 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by our action.

10. **Competitive Local Exchange Carriers (“CLECs”), Competitive Access Providers (“CAPs”), “Shared-Tenant Service Providers,” and “Other Local Service Providers.”**

⁸ Independent Sector, *The New Nonprofit Almanac & Desk Reference* (2002).

⁹ 5 U.S.C. § 601(4).

¹⁰ 5 U.S.C. § 601(5).

¹¹ U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, Section 8, p. 272, Table 415.

¹² We assume that the villages, school districts, and special districts are small, and total 48,558. See U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, section 8, p. 273, Table 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

¹³ 15 U.S.C. § 632.

¹⁴ Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (May 27, 1999). The Small Business Act contains a definition of “small-business concern,” which the RFA incorporates into its own definition of “small business.” See 15 U.S.C. § 632(a) (“Small Business Act”); 5 U.S.C. § 601(3) (“RFA”). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. See 13 C.F.R. § 121.102(b).

¹⁵ 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517110.

¹⁶ FCC, Wireline Competition Bureau, Industry Analysis and Technology Division, “*Trends in Telephone Service*” at Table 5.3, Page 5-5 (Aug. 2008) (“*Trends in Telephone Service*”). This source uses data that are current as of November 1, 2006.

Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁷ According to Commission data,¹⁸ 1005 carriers have reported that they are engaged in the provision of either competitive access provider services or competitive local exchange carrier services. Of these 1005 carriers, an estimated 918 have 1,500 or fewer employees and 87 have more than 1,500 employees. In addition, 16 carriers have reported that they are "Shared-Tenant Service Providers," and all 16 are estimated to have 1,500 or fewer employees. In addition, 89 carriers have reported that they are "Other Local Service Providers." Of the 89, all have 1,500 or fewer employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, "Shared-Tenant Service Providers," and "Other Local Service Providers" are small entities that may be affected by our action.

11. **Local Resellers.** The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁹ According to Commission data,²⁰ 151 carriers have reported that they are engaged in the provision of local resale services. Of these, an estimated 149 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of local resellers are small entities that may be affected by our action.

12. **Toll Resellers.** The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²¹ According to Commission data,²² 815 carriers have reported that they are engaged in the provision of toll resale services. Of these, an estimated 787 have 1,500 or fewer employees and 28 have more than 1,500 employees. Consequently, the Commission estimates that the majority of toll resellers are small entities that may be affected by our action.

13. **Payphone Service Providers ("PSPs").** Neither the Commission nor the SBA has developed a small business size standard specifically for payphone services providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²³ According to Commission data,²⁴ 526 carriers have reported that they are engaged in the provision of payphone services. Of these, an estimated 524 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of payphone service providers are small entities that may be affected by our action.

14. **Interexchange Carriers ("IXCs").** Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²⁵ According to

¹⁷ 13 C.F.R. § 121.201, NAICS code 517110.

¹⁸ "Trends in Telephone Service" at Table 5.3.

¹⁹ 13 C.F.R. § 121.201, NAICS code 517310.

²⁰ "Trends in Telephone Service" at Table 5.3.

²¹ 13 C.F.R. § 121.201, NAICS code 517310.

²² "Trends in Telephone Service" at Table 5.3.

²³ 3 C.F.R. § 121.201, NAICS code 517110.

²⁴ "Trends in Telephone Service" at Table 5.3.

²⁵ 13 C.F.R. § 121.201, NAICS code 517110.

Commission data,²⁶ 300 carriers have reported that they are engaged in the provision of interexchange service. Of these, an estimated 268 have 1,500 or fewer employees and 32 have more than 1,500 employees. Consequently, the Commission estimates that the majority of IXC's are small entities that may be affected by our action.

15. **Operator Service Providers ("OSPs").** Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²⁷ According to Commission data,²⁸ 28 carriers have reported that they are engaged in the provision of operator services. Of these, an estimated 27 have 1,500 or fewer employees and one has more than 1,500 employees. Consequently, the Commission estimates that the majority of OSPs are small entities that may be affected by our action.

16. **Prepaid Calling Card Providers.** Neither the Commission nor the SBA has developed a small business size standard specifically for prepaid calling card providers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²⁹ According to Commission data,³⁰ 88 carriers have reported that they are engaged in the provision of prepaid calling cards. Of these, an estimated 85 have 1,500 or fewer employees and three have more than 1,500 employees. Consequently, the Commission estimates that the majority of prepaid calling card providers are small entities that may be affected by our action.

17. **800 and 800-Like Service Subscribers.**³¹ Neither the Commission nor the SBA has developed a small business size standard specifically for 800 and 800-like service ("toll free") subscribers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.³² The most reliable source of information regarding the number of these service subscribers appears to be data the Commission receives from Database Service Management on the 800, 866, 877, and 888 numbers in use.³³ According to our data, at the end of December 2007, the number of 800 numbers assigned was 7,860,000; the number of 888 numbers assigned was 5,210,184; the number of 877 numbers assigned was 4,388,682; and the number of 866 numbers assigned was 7,029,116. We do not have data specifying the number of these subscribers that are independently owned and operated or have 1,500 or fewer employees, and thus are unable at this time to estimate with greater precision the number of toll free subscribers that would qualify as small businesses under the SBA size standard. Consequently, we estimate that there are 7,860,000 or fewer small entity 800 subscribers; 5,210,184 or fewer small entity 888 subscribers; 4,388,682 or fewer small entity 877 subscribers, and 7,029,116 or fewer entity 866 subscribers.

18. **Satellite Telecommunications and All Other Telecommunications.** These two economic census categories address the satellite industry. The first category has a small business size

²⁶ "Trends in Telephone Service" at Table 5.3.

²⁷ 13 C.F.R. § 121.201, NAICS code 517110.

²⁸ "Trends in Telephone Service" at Table 5.3.

²⁹ 13 C.F.R. § 121.201, NAICS code 517310.

³⁰ "Trends in Telephone Service" at Table 5.3.

³¹ We include all toll-free number subscribers in this category.

³² 13 C.F.R. § 121.201, NAICS code 517310.

³³ "Trends in Telephone Service" at Tables 18.4, 18.5, 18.6, and 18.7.

standard of \$15 million or less in average annual receipts, under SBA rules.³⁴ The second has a size standard of \$25 million or less in annual receipts.³⁵ The most current Census Bureau data in this context, however, are from the (last) economic census of 2002, and we will use those figures to gauge the prevalence of small businesses in these categories.³⁶

19. The category of Satellite Telecommunications “comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”³⁷ For this category, Census Bureau data for 2002 show that there were a total of 371 firms that operated for the entire year.³⁸ Of this total, 307 firms had annual receipts of under \$10 million, and 26 firms had receipts of \$10 million to \$24,999,999.³⁹ Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

20. The second category of All Other Telecommunications comprises, *inter alia*, “establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.”⁴⁰ For this category, Census Bureau data for 2002 show that there were a total of 332 firms that operated for the entire year.⁴¹ Of this total, 303 firms had annual receipts of under \$10 million and 15 firms had annual receipts of \$10 million to \$24,999,999.⁴² Consequently, we estimate that the majority of All Other Telecommunications firms are small entities that might be affected by our action.

21. **Wireless Telecommunications Carriers (except Satellite).** Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category.⁴³ Prior to that time, such firms were within the now-superseded categories of “Paging” and “Cellular and Other Wireless Telecommunications.”⁴⁴ Under the present and prior categories, the SBA has deemed a wireless

³⁴ 13 C.F.R. § 121.201, NAICS code 517410.

³⁵ 13 C.F.R. § 121.201, NAICS code 517919.

³⁶ 13 C.F.R. § 121.201, NAICS codes 517410 and 517910 (2002).

³⁷ U.S. Census Bureau, 2007 NAICS Definitions, “517410 Satellite Telecommunications”; <http://www.census.gov/naics/2007/def/ND517410.HTM>.

³⁸ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 517410 (issued Nov. 2005).

³⁹ *Id.* An additional 38 firms had annual receipts of \$25 million or more.

⁴⁰ U.S. Census Bureau, 2007 NAICS Definitions, “517919 All Other Telecommunications”; <http://www.census.gov/naics/2007/def/ND517919.HTM#N517919>.

⁴¹ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 517910 (issued Nov. 2005).

⁴² *Id.* An additional 14 firms had annual receipts of \$25 million or more.

⁴³ U.S. Census Bureau, 2007 NAICS Definitions, “517210 Wireless Telecommunications Categories (Except Satellite)”; <http://www.census.gov/naics/2007/def/ND517210.HTM#N517210>.

⁴⁴ U.S. Census Bureau, 2002 NAICS Definitions, “517211 Paging”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>; U.S. Census Bureau, 2002 NAICS Definitions, “517212 Cellular and Other Wireless Telecommunications”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

business to be small if it has 1,500 or fewer employees.⁴⁵ For the category of Wireless Telecommunications Carriers (except Satellite), preliminary data for 2007 show that there was 11,927 firms operating that year.⁴⁶ While the Census Bureau has not released data on the establishments broken down by number of employees, we note that the Census Bureau lists total employment for all firms in that sector at 281,262.⁴⁷ Since all firms with fewer than 1,500 employees are considered small, given the total employment in the sector, we estimate that the vast majority of wireless firms are small.

22. **Auctions.** Initially, we note that, as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated.

23. **Common Carrier Paging.** As noted, the SBA has developed a small business size standard for Wireless Telecommunications Carriers (except Satellite) firms within the broad economic census categories of “Cellular and Other Wireless Telecommunications.”⁴⁸ Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category.⁴⁹ Prior to that time, such firms were within the now-superseded categories of “Paging” and “Cellular and Other Wireless Telecommunications.”⁵⁰ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.⁵¹ Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data. For the category of Paging, data for 2002 show that there were 807 firms that operated for the entire year.⁵² Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.⁵³ For the category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year.⁵⁴ Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of

⁴⁵ 13 C.F.R. § 121.201, NAICS code 517210 (2007 NAICS). The now-superseded, pre-2007 C.F.R. citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

⁴⁶ U.S. Census Bureau, 2007 Economic Census, Sector 51, EC075111 Information: Industry Series: Preliminary Summary Statistics for the United States: 2007, NAICS code 517210 (issued Oct. 20, 2009), factfinder.census.gov/servlet/IBQTable?_fds_name=EC0700A1&-clearIBO=Y&-ds_name=EC075111&-NAICS2007=51721 (visited Mar. 2, 2011).

⁴⁷ *Id.*

⁴⁸ 13 C.F.R. § 121.201, NAICS code 517212.

⁴⁹ U.S. Census Bureau, 2007 NAICS Definitions, “517210 Wireless Telecommunications Categories (Except Satellite)”; <http://www.census.gov/naics/2007/def/ND517210.HTM#N517210>.

⁵⁰ U.S. Census Bureau, 2002 NAICS Definitions, “517211 Paging”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>; U.S. Census Bureau, 2002 NAICS Definitions, “517212 Cellular and Other Wireless Telecommunications”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

⁵¹ 13 C.F.R. § 121.201, NAICS code 517210 (2007 NAICS). The now-superseded, pre-2007 C.F.R. citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

⁵² U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517211 (issued Nov. 2005).

⁵³ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

⁵⁴ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

1,000 employees or more.⁵⁵ Thus, we estimate that the majority of wireless firms are small.

24. In addition, in the *Paging Second Report and Order*, the Commission adopted a size standard for “small businesses” for purposes of determining their eligibility for special provisions such as bidding credits.⁵⁶ 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.⁵⁷ The SBA has approved this definition.⁵⁸ An initial auction of Metropolitan Economic Area (“MEA”) licenses was conducted in the year 2000. Of the 2,499 licenses auctioned, 985 were sold.⁵⁹ Fifty-seven companies claiming small business status won 440 licenses.⁶⁰ A subsequent auction of MEA and Economic Area (“EA”) licenses was held in the year 2001. Of the 15,514 licenses auctioned, 5,323 were sold.⁶¹ One hundred thirty-two companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs, was held in 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses.⁶²

25. Currently, there are approximately 74,000 Common Carrier Paging licenses. According to the most recent *Trends in Telephone Service*, 281 carriers reported that they were engaged in the provision of “paging and messaging” services.⁶³ Of these, an estimated 279 have 1,500 or fewer employees and two have more than 1,500 employees.⁶⁴ We estimate that the majority of common carrier paging providers would qualify as small entities under the SBA definition.

26. **2.3 GHz Wireless Communications Services.** This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services (“WCS”) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years.⁶⁵ The SBA

⁵⁵ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

⁵⁶ *Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, Second Report and Order*, 12 FCC Rcd 2732, 2811-2812, paras. 178-181 (“*Paging Second Report and Order*”); see also *Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, Memorandum Opinion and Order on Reconsideration*, 14 FCC Rcd 10030, 10085-10088, ¶¶ 98-107 (1999).

⁵⁷ *Paging Second Report and Order*, 12 FCC Rcd at 2811, ¶ 179.

⁵⁸ See Letter from Aida Alvarez, Administrator, SBA, to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau (“WTB”), FCC (Dec. 2, 1998) (“*Alvarez Letter 1998*”).

⁵⁹ See “*929 and 931 MHz Paging Auction Closes*,” Public Notice, 15 FCC Rcd 4858 (WTB 2000).

⁶⁰ See *id.*

⁶¹ See “*Lower and Upper Paging Band Auction Closes*,” Public Notice, 16 FCC Rcd 21821 (WTB 2002).

⁶² See “*Lower and Upper Paging Bands Auction Closes*,” Public Notice, 18 FCC Rcd 11154 (WTB 2003). The current number of small or very small business entities that hold wireless licenses may differ significantly from the number of such entities that won in spectrum auctions due to assignments and transfers of licenses in the secondary market over time. In addition, some of the same small business entities may have won licenses in more than one auction.

⁶³ “*Trends in Telephone Service*” at Table 5.3.

⁶⁴ *Id.*

⁶⁵ *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS), Report and Order*, 12 FCC Rcd 10785, 10879, para. 194 (1997).

approved these definitions.⁶⁶ The Commission conducted an auction of geographic area licenses in the WCS service in 1997. In the auction, seven bidders that qualified as very small business entities won licenses, and one bidder that qualified as a small business entity won a license.

27. **1670-1675 MHz Services.** This service can be used for fixed and mobile uses, except aeronautical mobile.⁶⁷ An auction for one license in the 1670-1675 MHz band was conducted in 2003. The winning bidder was not a small entity.

28. **Wireless Telephony.** Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. As noted, the SBA has developed a small business size standard for Wireless Telecommunications Carriers (except Satellite).⁶⁸ Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees.⁶⁹ According to *Trends in Telephone Service* data, 413 carriers reported that they were engaged in wireless telephony.⁷⁰ Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees.⁷¹ Therefore, more than half of these entities can be considered small.

29. **Broadband Personal Communications Service.** The broadband personal communications services (“PCS”) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission initially defined a “small business” for C- and F-Block licenses as an entity that has average gross revenues of \$40 million or less in the three previous years.⁷² For Block F licenses, an additional small business size standard for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three years.⁷³ These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.⁷⁴ No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C Block auctions.⁷⁵ A total of 93 bidders that claimed “small” and “very small” business status won licenses in the first auction of the D, E, and F Blocks.⁷⁶ In 1999, the Commission completed a subsequent auction of C, D, E, and F Block licenses.⁷⁷ Of the 57 winning bidders in that auction, 48 claimed small business status

⁶⁶ See *Alvarez Letter 1998*.

⁶⁷ 47 C.F.R. § 2.106; see generally 47 C.F.R. §§ 27.1–70.

⁶⁸ 13 C.F.R. § 121.201, NAICS code 517210.

⁶⁹ *Id.*

⁷⁰ “Trends in Telephone Service” at Table 5.3.

⁷¹ *Id.*

⁷² See Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap et al., *Report and Order*, 11 FCC Rcd 7824, 7850–52, ¶¶ 57–60 (1996) (“*PCS Report and Order*”); see also 47 C.F.R. § 24.720(b).

⁷³ See *PCS Report and Order*, 11 FCC Rcd at 7852, para. 60.

⁷⁴ See *Alvarez Letter 1998*.

⁷⁵ See *Entrepreneurs’ C Block Auction Closes*, *Public Notice*, DA 96-716 (1996); *Entrepreneurs C Block Reauction Closes*, *Public Notice*, DA 96-1153 (1996).

⁷⁶ See *Broadband PCS, D, E and F Block Auction Closes*, *Public Notice*, Doc. No. 89838 (rel. Jan. 14, 1997).

⁷⁷ See *C, D, E, and F Block Broadband PCS Auction Closes*, *Public Notice*, 14 FCC Rcd 6688 (1999). Before Auction No. 22, the Commission established a very small standard for the C Block to match the standard used for F Block. Amendment of the Commission’s Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, WT Docket No. 97-82, *Fourth Report and Order*, 13 FCC Rcd 15,743, 15,768 ¶ 46 (1998).

and won 277 licenses.⁷⁸

30. In 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses (Auction 35). Of the 35 winning bidders in that auction, 29 claimed small or very small businesses status.⁷⁹ Subsequent events concerning that Auction, including judicial and agency determinations, resulted in only a portion of those C and F Block licenses being available for grant. The Commission completed an auction of 188 C Block licenses and 21 F Block licenses in 2005. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses.⁸⁰ In 2007, the Commission completed an auction of licenses in the A, C, and F Blocks.⁸¹ Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses.⁸² Most recently, in 2008, the Commission completed the auction of C, D, E, and F Block Broadband PCS licenses.⁸³ Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.⁸⁴

31. **Advanced Wireless Services.** In 2006, the Commission conducted its first auction of Advanced Wireless Services licenses in the 1710-1755 MHz and 2110-2155 MHz bands ("AWS-1"), designated as Auction 66.⁸⁵ For the AWS-1 bands, the Commission has defined a "small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a "very small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million.⁸⁶ In Auction 66, 31 winning bidders identified themselves as very small businesses and won 142 licenses.⁸⁷ Twenty-six of the winning bidders identified themselves as small businesses and won 73 licenses.⁸⁸ In a subsequent 2008 auction, the Commission offered 35 AWS-1 licenses.⁸⁹ Four winning bidders identifying themselves as very small businesses won 17 licenses, and

⁷⁸ See C, D, E, and F Block Broadband PCS Auction Closes, *Public Notice*, 14 FCC Rcd 6688 (1999).

⁷⁹ See "C and F Block Broadband PCS Auction Closes; Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 2339 (2001).

⁸⁰ See "Broadband PCS Spectrum Auction Closes; Winning Bidders Announced for Auction No. 58," *Public Notice*, 20 FCC Rcd 3703 (2005).

⁸¹ See "Auction of Broadband PCS Spectrum Licenses Closes; Winning Bidders Announced for Auction No. 71," *Public Notice*, 22 FCC Rcd 9247 (2007).

⁸² *Id.*

⁸³ See Auction of AWS-1 and Broadband PCS Licenses Closes; Winning Bidders Announced for Auction 78, *Public Notice*, 23 FCC Rcd 12,749 (2008).

⁸⁴ *Id.*

⁸⁵ See Auction of Advanced Wireless Services Licenses Scheduled for June 29, 2006; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction No. 66, AU Docket No. 06-30, *Public Notice*, 21 FCC Rcd 4562 (2006) ("*Auction 66 Procedures Public Notice*");

⁸⁶ See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, *Report and Order*, 18 FCC Rcd 25,162, App. B (2003), *modified by* Service Rules for Advanced Wireless Services In the 1.7 GHz and 2.1 GHz Bands, *Order on Reconsideration*, 20 FCC Rcd 14,058, App. C (2005).

⁸⁷ See Auction of Advanced Wireless Services Licenses Closes; Winning Bidders Announced for Auction No. 66, *Public Notice*, 21 FCC Rcd 10,521 (2006) ("*Auction 66 Closing Public Notice*")

⁸⁸ *See id.*

⁸⁹ See *AWS-1 and Broadband PCS Procedures Public Notice*, 23 FCC Rcd at 7499. Auction 78 also included an auction of broadband PCS licenses.

three winning bidders identifying themselves as a small business won five AWS-1 licenses.⁹⁰

32. **Narrowband Personal Communications Services.** In 1994, the Commission conducted two auctions of Narrowband PCS licenses. For these auctions, the Commission defined a “small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million.⁹¹ Through these auctions, the Commission awarded a total of 41 licenses, 11 of which were obtained by four small businesses.⁹² 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*.⁹³ 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.⁹⁴ 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.⁹⁵ The SBA has approved these small business size standards.⁹⁶ A third auction of Narrowband PCS licenses was conducted in 2001. In that auction, five bidders won 317 (Metropolitan Trading Areas and nationwide) licenses.⁹⁷ Three of the winning bidders claimed status as a small or very small entity and won 311 licenses.

33. **Lower 700 MHz Band Licenses.** The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.⁹⁸ The Commission 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.⁹⁹ 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.¹⁰⁰ Additionally, the Lower 700 MHz Service had a third category of small business status for Metropolitan/Rural Service Area (“MSA/RSA”) licenses —“entrepreneur”— which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues

⁹⁰ See “Auction of AWS-1 and Broadband PCS Licenses Closes, Winning Bidders Announced for Auction 78, Down Payments Due September 9, 2008, FCC Forms 601 and 602 Due September 9, 2008, Final Payments Due September 23, 2008, Ten-Day Petition to Deny Period”, *Public Notice*, 23 FCC Rcd 12749-65 (2008).

⁹¹ *Implementation of Section 309(j) of the Communications Act – Competitive Bidding Narrowband PCS*, Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 10 FCC Rcd 175, 196, para. 46 (1994).

⁹² 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 (rel. 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 (rel. Nov. 9, 1994).

⁹³ *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) (“*Narrowband PCS Second Report and Order*”).

⁹⁴ *Narrowband PCS Second Report and Order*, 15 FCC Rcd at 10476, para. 40.

⁹⁵ *Id.*

⁹⁶ See *Alvarez Letter 1998*.

⁹⁷ See “Narrowband PCS Auction Closes,” *Public Notice*, 16 FCC Rcd 18663 (WTB 2001).

⁹⁸ See *Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59)*, Report and Order, 17 FCC Rcd 1022 (2002) (“*Channels 52-59 Report and Order*”).

⁹⁹ See *Channels 52-59 Report and Order*, 17 FCC Rcd at 1087-88, ¶ 172.

¹⁰⁰ See *id.*

that are not more than \$3 million for the preceding three years.¹⁰¹ The SBA approved these small size standards.¹⁰² An auction of 740 licenses was conducted in 2002 (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)). Of the 740 licenses available for auction, 484 licenses were won by 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.¹⁰³ A second auction commenced on May 28, 2003, closed on June 13, 2003, and included 256 licenses.¹⁰⁴ 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.¹⁰⁵ In 2005, the Commission completed an auction of 5 licenses in the lower 700 MHz band (Auction 60). All three winning bidders claimed small business status.

34. In 2007, the Commission reexamined its rules governing the 700 MHz band in the *700 MHz Second Report and Order*.¹⁰⁶ An auction of A, B and E block licenses in the Lower 700 MHz band was held in 2008.¹⁰⁷ Twenty winning bidders claimed small business status (those with attributable average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years). Thirty three winning bidders claimed very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years).

35. **Upper 700 MHz Band Licenses.** In the *700 MHz Second Report and Order*, the Commission revised its rules regarding Upper 700 MHz band licenses.¹⁰⁸ In 2008, the Commission conducted Auction 73 in which C and D block licenses in the Upper 700 MHz band were available.¹⁰⁹ Three winning bidders claimed very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years).

36. **700 MHz Guard Band Licenses.** In 2000, the Commission adopted the *700 MHz Guard Band Report and Order*, in which it established rules for the A and B block licenses in the Upper 700 MHz band, including size standards for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits.¹¹⁰ A small business in this

¹⁰¹ See *id.*, 17 FCC Rcd at 1088, ¶ 173.

¹⁰² See Letter from Aida Alvarez, Administrator, SBA, to Thomas Sugrue, Chief, WTB, FCC (Aug. 10, 1999) (“*Alvarez Letter 1999*”).

¹⁰³ See “Lower 700 MHz Band Auction Closes,” *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

¹⁰⁴ See Lower 700 MHz Band Auction Closes, *Public Notice*, 18 FCC Rcd 11,873 (WTB 2003).

¹⁰⁵ See *id.*

¹⁰⁶ Service Rules for the 698-746, 747-762 and 777-792 MHz Band, WT Docket No. 06-150, *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephone, WT Docket No. 01-309, *Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services*, WT Docket No. 03-264, *Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules*, WT Docket No. 06-169, *Implementing a Nationwide, Broadband Interoperable Public Safety Network in the 700 MHz Band*, PS Docket No. 06-229, *Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State, and Local Public Safety Communications Requirements Through the Year 2010*, WT Docket No. 96-86, *Second Report and Order*, 22 FCC Rcd 15289 (2007) (“*700 MHz Second Report and Order*”).

¹⁰⁷ See Auction of 700 MHz Band Licenses Closes, *Public Notice*, 23 FCC Rcd 4572 (WTB 2008).

¹⁰⁸ 700 MHz Second Report and Order, 22 FCC Rcd 15,289.

¹⁰⁹ See Auction of 700 MHz Band Licenses Closes, *Public Notice*, 23 FCC Rcd 4572 (2008).

¹¹⁰ 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) (“*700 MHz Guard Band Report and Order*”).

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.¹¹¹ 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.¹¹² SBA approval of these definitions is not required.¹¹³ An auction of these licenses was conducted in 2000.¹¹⁴ Of the 104 licenses auctioned, 96 licenses were won by 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 was held in 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business.¹¹⁵

37. **Specialized Mobile Radio.** The Commission adopted small business size standards for the purpose of determining eligibility for bidding credits in auctions of Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands. The Commission defined a “small business” as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.¹¹⁶ The Commission defined a “very small business” as an entity that together with its affiliates and controlling principals, has average gross revenues not exceeding \$3 million for the preceding three years.¹¹⁷ The SBA has approved these small business size standards for both the 800 MHz and 900 MHz SMR Service.¹¹⁸ The first 900 MHz SMR auction was completed in 1996. Sixty bidders claiming that they qualified as small businesses under the \$15 million size standard won 263 licenses in the 900 MHz SMR band. In 2004, the Commission held a second auction of 900 MHz SMR licenses and three winning bidders identifying themselves as very small businesses won 7 licenses.¹¹⁹ The auction of 800 MHz SMR licenses for the upper 200 channels was conducted in 1997. Ten bidders claiming that they qualified as small or very small businesses under the \$15 million size standard won 38 licenses for the upper 200 channels.¹²⁰ A second auction of 800 MHz SMR licenses was conducted in 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.¹²¹

38. The auction of the 1,053 800 MHz SMR licenses for the General Category channels was conducted in 2000. Eleven bidders who won 108 licenses for the General Category

¹¹¹ See *700 MHz Guard Band Report and Order*, 15 FCC Rcd at 5343, para. 108.

¹¹² See *id.*

¹¹³ See *id.*, 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).

¹¹⁴ See “700 MHz Guard Bands Auction Closes: Winning Bidders Announced,” *Public Notice*, 15 FCC Rcd 18026 (2000).

¹¹⁵ See “700 MHz Guard Bands Auction Closes: Winning Bidders Announced,” *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

¹¹⁶ 47 C.F.R. §§ 90.810, 90.814(b), 90.912.

¹¹⁷ 47 C.F.R. §§ 90.810, 90.814(b), 90.912.

¹¹⁸ See *Alvarez Letter 1999*.

¹¹⁹ See 900 MHz Specialized Mobile Radio Service Spectrum Auction Closes: *Winning Bidders Announced*,” *Public Notice*, 19 FCC Rcd. 3921 (WTB 2004).

¹²⁰ 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).

¹²¹ See “Multi-Radio Service Auction Closes,” *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

channels in the 800 MHz SMR band qualified as small or very small businesses.¹²² In an auction completed in 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were awarded.¹²³ Of the 22 winning bidders, 19 claimed small or very small business status and won 129 licenses. Thus, combining all three auctions, 41 winning bidders for geographic licenses in the 800 MHz SMR band claimed to be small businesses.

39. 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 not exceeding \$15 million. One firm has over \$15 million in revenues. In addition, we do not know how many of these firms have 1500 or fewer employees.¹²⁴ 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.

40. **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 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 Wireless Telecommunications Carriers (except Satellite).¹²⁵ This category provides that a small business is a wireless company employing no more than 1,500 persons.¹²⁶ The Commission estimates that most such licensees are small businesses under the SBA's small business standard.

41. **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 licenses are assigned by auction, where mutually exclusive applications are accepted. In the *220 MHz Third Report and Order*, the Commission adopted small business size standards for defining "small" and "very small" businesses for the purpose of determining their eligibility for special provisions such as bidding credits, which are discounts on a winning bids.¹²⁷ that the Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.¹²⁸ The Commission defined a "very small business" 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.¹²⁹ The SBA has approved these small size standards.¹³⁰ The first auction of

¹²² 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).

¹²³ See, "800 MHz SMR Service Lower 80 Channels Auction Closes; Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 1736 (2000).

¹²⁴ See generally 13 C.F.R. § 121.201, NAICS code 517210.

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *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).

¹²⁸ *Id.* at 11068, para. 291.

¹²⁹ *Id.*

¹³⁰ See Letter from Aida Alvarez, Administrator, SBA, to Daniel Phythyon, Chief, WTB, FCC (Jan. 6, 1998) ("*Alvarez to Phythyon Letter 1998*").

Phase II licenses was conducted in 1998.¹³¹ In that auction, 908 licenses were offered 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.¹³² Thirty-nine small or very small businesses won 373 licenses in the first 220 MHz auction. A second auction in 1999 offered 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming very small business status won 158 licenses.¹³³ 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.¹³⁴ In 2007, the Commission conducted a fourth auction of the 220 MHz licenses, designated as Auction 72.¹³⁵ Auction 72 offered 94 Phase II 220 MHz Service licenses.¹³⁶ In this auction, five winning bidders won a total of 76 licenses.¹³⁷ Two winning bidders that identified themselves as very small businesses won 56 of the 76 licenses. One winning bidder that identified itself as a small business won 5 licenses.

42. **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 use the broad census category, Wireless Telecommunications Carriers (except Satellite). This definition provides that a small entity is any such entity employing no more than 1,500 persons.¹³⁸ 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. We note that PLMR licensees generally use the licensed facilities in support of other business activities, and therefore, it would also be helpful to assess PLMR licensees under the standards applied to the particular industry subsector to which the licensee belongs.¹³⁹

43. As of March 2010, there were 424,162 PLMR licensees operating 921,909 transmitters in the PLMR bands below 512 MHz. We note that any entity engaged in a commercial activity is eligible to hold a PLMR license, and that any revised rules in this context could therefore potentially impact small entities covering a great variety of industries.

44. **Fixed Microwave Services.** Fixed microwave services include common carrier,¹⁴⁰ private operational-fixed,¹⁴¹ and broadcast auxiliary radio services.¹⁴² At present, there are

¹³¹ See generally “220 MHz Service Auction Closes,” *Public Notice*, 14 FCC Rcd 605 (1998).

¹³² 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 (1999).

¹³³ See “Phase II 220 MHz Service Spectrum Auction Closes,” *Public Notice*, 14 FCC Rcd 11218 (1999).

¹³⁴ See “Multi-Radio Service Auction Closes,” *Public Notice*, 17 FCC Rcd 1446 (2002).

¹³⁵ See “Auction of Phase II 220 MHz Service Spectrum Scheduled for June 20, 2007, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction 72,” *Public Notice*, 22 FCC Rcd 3404 (2007).

¹³⁶ *Id.*

¹³⁷ See “Auction of Phase II 220 MHz Service Spectrum Licenses Closes, Winning Bidders Announced for Auction 72, Down Payments due July 18, 2007, FCC Forms 601 and 602 due July 18, 2007, Final Payments due August 1, 2007, Ten-Day Petition to Deny Period,” *Public Notice*, 22 FCC Rcd 11573 (2007).

¹³⁸ See 13 C.F.R. § 121.201, NAICS code 517210.

¹³⁹ See generally 13 C.F.R. § 121.201.

¹⁴⁰ See 47 C.F.R. §§ 101 *et seq.* for common carrier fixed microwave services (except Multipoint Distribution Service).

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 Wireless Telecommunications Carriers (except Satellite), which is 1,500 or fewer employees.¹⁴³ The Commission does not have data specifying the number of these licensees that have no 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 22,015 or fewer common carrier fixed licensees and 61,670 or fewer 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 note, however, that the common carrier microwave fixed licensee category includes some large entities.

45. **39 GHz Service.** The Commission adopted small business size standards for 39 GHz licenses. A "small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million in the preceding three years.¹⁴⁴ A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues of not more than \$15 million for the preceding three years.¹⁴⁵ The SBA has approved these small business size standards.¹⁴⁶ In 2000, the Commission conducted an auction of 2,173, 39 GHz licenses. A total of 18 bidders who claimed small or very small business status won 849 licenses.

46. **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.¹⁴⁷ The Commission established small business size standards for LMDS licenses. It defined a "small business" as an entity that has average gross revenues of not more than \$40 million in the three preceding years and defined a "very small business" as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the three preceding years.¹⁴⁸ The SBA

(Continued from previous page)

¹⁴¹ Persons eligible under parts 80 and 90 of the Commission's Rules can use Private Operational-Fixed Microwave services. See 47 C.F.R. 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.

¹⁴² Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission's Rules. See 47 C.F.R. 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.

¹⁴³ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁴⁴ 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).

¹⁴⁵ *Id.*

¹⁴⁶ See Letter from Aida Alvarez, Administrator, SBA, to Kathleen O'Brien Ham, Chief, Auctions and Industry Analysis Division, WTB, FCC (Feb. 4, 1998); see Letter from Hector Barreto, Administrator, SBA, to Margaret Wiener, Chief, Auctions and Industry Analysis Division, WTB, FCC (Jan. 18, 2002).

¹⁴⁷ 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 GHz 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, ¶ 348 (1997) ("*LMDS Second Report and Order*").

¹⁴⁸ See *LMDS Second Report and Order*, 12 FCC Rcd at 12689-90, ¶ 348.

approved these small business size standards for auctions of LMDS licenses.¹⁴⁹ In 1998, an auction of 986 LMDS licenses was conducted. A total of 93 winning bidders that qualified as small or very small businesses won approximately 664 licenses. In 1999, the Commission conducted an auction of 161 LMDS licenses, and in this auction, 32 small and very small businesses won 119 licenses.

47. **218-219 MHz Service.** The first auction of 218-219 MHz Service (previously referred to as the Interactive and Video Data Service or IVDS) licenses resulted in 178 entities winning licenses for 594 Metropolitan Statistical Areas (“MSAs”).¹⁵⁰ Of the 594 licenses, 567 were won by 167 entities qualifying as a small business. For that auction, the Commission 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.¹⁵¹ In the *218-219 MHz Report and Order and Memorandum Opinion and Order*, the Commission revised its small business size standards for the 218-219 MHz Service and 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.¹⁵² The Commission defined a very small business as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not exceeding \$3 million for the preceding three years.¹⁵³ The SBA has approved these definitions.¹⁵⁴

48. **Location and Monitoring Service (“LMS”).** Multilateration LMS systems use non-voice radio techniques to determine the location and status of mobile radio units. For auctions of LMS licenses, the Commission has defined a “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.¹⁵⁵ 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.¹⁵⁶ These definitions have been approved by the SBA.¹⁵⁷ An auction of LMS licenses was conducted in 1999. Of the 528 licenses auctioned, 289 licenses were sold to four small businesses.

49. **Rural Radiotelephone Service.** The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.¹⁵⁸ A significant subset of the Rural

¹⁴⁹ See *Alvarez to Phythyon Letter 1998*.

¹⁵⁰ See “*Interactive Video and Data Service (IVDS) Applications Accepted for Filing*,” Public Notice, 9 FCC Rcd 6227 (1994).

¹⁵¹ *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Fourth Report and Order, 9 FCC Rcd 2330 (1994).

¹⁵² *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).

¹⁵³ *Id.*

¹⁵⁴ See *Alvarez to Phythyon Letter 1998*.

¹⁵⁵ *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) (“*Automatic Vehicle Monitoring Systems Second Report and Order*”); see also 47 C.F.R. § 90.1103.

¹⁵⁶ *Automatic Vehicle Monitoring Systems Second Report and Order*, 13 FCC Rcd at 15192, para. 20; see also 47 C.F.R. § 90.1103.

¹⁵⁷ See *Alvarez Letter 1998*.

¹⁵⁸ The service is defined in § 22.99 of the Commission’s Rules, 47 C.F.R. § 22.99.

Radiotelephone Service is the Basic Exchange Telephone Radio System (“BETRS”).¹⁵⁹ In the present context, we will use the SBA’s small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), *i.e.*, an entity employing no more than 1,500 persons.¹⁶⁰ 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 our action.

50. **Air-Ground Radiotelephone Service.**¹⁶¹ The Commission has previously used the SBA’s small business definition applicable to Wireless Telecommunications Carriers (except Satellite), *i.e.*, an entity employing no more than 1,500 persons.¹⁶² There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and under that definition, we estimate that almost all of them qualify as small entities under the SBA definition. For purposes of assigning Air-Ground Radiotelephone Service licenses through competitive bidding, 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 \$40 million.¹⁶³ 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 \$15 million.¹⁶⁴ These definitions were approved by the SBA.¹⁶⁵ In 2006, the Commission completed an auction of nationwide commercial Air-Ground Radiotelephone Service licenses in the 800 MHz band (Auction 65). The auction closed with two winning bidders winning two Air-Ground Radiotelephone Services licenses. Neither of the winning bidders claimed small business status.

51. **Aviation and Marine Radio Services.** There are approximately 26,162 aviation, 34,555 marine (ship), and 3,296 marine (coast) licensees.¹⁶⁶ The Commission has not developed a small business size standard specifically applicable to all licensees. For purposes of this analysis, we will use the SBA small business size standard for the category Wireless Telecommunications Carriers (except Satellite), which is 1,500 or fewer employees.¹⁶⁷ We are unable to determine how many of those licensed fall under this standard. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 62,969 licensees that are small businesses under the SBA standard.¹⁶⁸ In 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship

¹⁵⁹ BETRS is defined in §§ 22.757 and 22.759 of the Commission’s Rules, 47 C.F.R. §§ 22.757 and 22.759.

¹⁶⁰ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁶¹ The service is defined in § 22.99 of the Commission’s Rules, 47 C.F.R. § 22.99.

¹⁶² 13 C.F.R. § 121.201, NAICS codes 517210.

¹⁶³ *Amendment of Part 22 of the Commission’s Rules to Benefit the Consumers of Air-Ground Telecommunications Services, Biennial Regulatory Review – Amendment of Parts 1, 22, and 90 of the Commission’s Rules, Amendment of Parts 1 and 22 of the Commission’s Rules to Adopt Competitive Bidding Rules for Commercial and General Aviation Air-Ground Radiotelephone Service*, WT Docket Nos. 03-103 and 05-42, Order on Reconsideration and Report and Order, 20 FCC Rcd 19663, ¶¶ 28-42 (2005).

¹⁶⁴ *Id.*

¹⁶⁵ See Letter from Hector V. Barreto, Administrator, SBA, to Gary D. Michaels, Deputy Chief, Auctions and Spectrum Access Division, WTB, FCC (Sept. 19, 2005).

¹⁶⁶ Vessels that are not required by law to carry a radio and do not make international voyages or communications are not required to obtain an individual license. See Amendment of Parts 80 and 87 of the Commission’s Rules to Permit Operation of Certain Domestic Ship and Aircraft Radio Stations Without Individual Licenses, *Report and Order*, WT Docket No. 96-82, 11 FCC Rcd 14849 (1996).

¹⁶⁷ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁶⁸ A licensee may have a license in more than one category.

transmit) and 161.775-162.0125 MHz (coast transmit) bands. For VHF Public Coast licenses, 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 exceeding \$15 million dollars. In addition, it defined a “very small” business as one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not exceeding \$3 million dollars.¹⁶⁹ The Commission also made available Automated Maritime Telecommunications System (“AMTS”) licenses in Auctions 57 and 61.¹⁷⁰ Winning bidders could claim status as a very small business or a very small business. For AMTS, the Commission defined a very small business as an entity with attributed average annual gross revenues that do not exceed \$3 million for the preceding three years, and defined a small business as an entity with attributed average annual gross revenues not exceeding \$15 million for the preceding three years.¹⁷¹ Three of the winning bidders in Auction 57 qualified as small or very small businesses, and three winning bidders in Auction 61 qualified as very small businesses.

52. **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.¹⁷² There is presently 1 licensee in this service. We do not have information whether that licensee would qualify as small under the SBA’s small business size standard for Wireless Telecommunications Carriers (except Satellite) services.¹⁷³ Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.¹⁷⁴

53. **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. The Commission defines a small business for MAS licenses as an entity that has average gross revenues of less than \$15 million in the preceding three calendar years.¹⁷⁵ A 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.¹⁷⁶ The SBA has approved these definitions.¹⁷⁷ 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 March 5, 2010, there were over 11,500 MAS station authorizations. In 2001, an auction of 5,104 MAS licenses in 176 EAs was conducted in 2001.¹⁷⁸ Seven winning bidders claimed status as

¹⁶⁹ *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).

¹⁷⁰ See “*Automated Maritime Telecommunications System Spectrum Auction Scheduled for September 15, 2004, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Auction Procedures*,” Public Notice, 19 FCC Rcd 9518 (WTB 2004); “*Auction of Automated Maritime Telecommunications System Licenses Scheduled for August 3, 2005, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Auction Procedures for Auction No. 61*,” Public Notice, 20 FCC Rcd 7811 (WTB 2005).

¹⁷¹ 47 C.F.R. § 80.1252.

¹⁷² This service is governed by Subpart I of Part 22 of the Commission’s Rules. See 47 C.F.R. §§ 22.1001-22.1037.

¹⁷³ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁷⁴ *Id.*

¹⁷⁵ See *Amendment of the Commission’s Rules Regarding Multiple Address Systems*, Report and Order, 15 FCC Rcd 11956, 12008, ¶ 123 (2000).

¹⁷⁶ *Id.*

¹⁷⁷ See *Alvarez Letter 1999*.

¹⁷⁸ See “*Multiple Address Systems Spectrum Auction Closes*,” Public Notice, 16 FCC Rcd 21011 (2001).

small or very small businesses and won 611 licenses. In 2005, the Commission completed an auction (Auction 59) of 4,226 MAS licenses in the Fixed Microwave Services from the 928/959 and 932/941 MHz bands. Twenty-six winning bidders won a total of 2,323 licenses. Of the 26 winning bidders in this auction, five claimed small business status and won 1,891 licenses.

54. With respect to 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 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 small business size standard developed by the SBA would be more appropriate. The applicable size standard in this instance appears to be that of Wireless Telecommunications Carriers (except Satellite). This definition provides that a small entity is any such entity employing no more than 1,500 persons.¹⁷⁹ 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.

55. **1.4 GHz Band Licensees.** The Commission conducted an auction of 64 1.4 GHz band licenses in the paired 1392-1395 MHz and 1432-1435 MHz bands, and in the unpaired 1390-1392 MHz band in 2007.¹⁸⁰ For these licenses, the Commission defined "small business" as an entity that, together with its affiliates and controlling interests, had average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.¹⁸¹ Neither of the two winning bidders claimed small business status.¹⁸²

56. **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 Wireless Telecommunications Carriers (except Satellite). This category provides that such a company is small if it employs no more than 1,500 persons.¹⁸³ The 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, Teligent¹⁸⁴ and TRW, Inc. It is our understanding that Teligent and its related companies have fewer than 1,500 employees, though this may change in the future. TRW is not a small entity.

57. **Future 24 GHz Licensees.** With respect to new applicants for licenses in the 24 GHz band, for the purpose of determining eligibility for bidding credits, the Commission established three small business definitions. An "entrepreneur" is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not exceeding \$40 million.¹⁸⁵ A "small business" is defined as an entity that, together with controlling interests and

¹⁷⁹ See 13 C.F.R. § 121.201, NAICS code 517210.

¹⁸⁰ See "Auction of 1.4 GHz Bands Licenses Scheduled for February 7, 2007," Public Notice, 21 FCC Rcd 12393 (WTB 2006); "Auction of 1.4 GHz Band Licenses Closes; Winning Bidders Announced for Auction No. 69," Public Notice, 22 FCC Rcd 4714 (2007) ("Auction No. 69 Closing PN").

¹⁸¹ Auction No. 69 Closing PN, Attachment C.

¹⁸² See Auction No. 69 Closing PN.

¹⁸³ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁸⁴ 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.

¹⁸⁵ 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 ¶ 77 (2000) ("24 GHz Report and Order"); see also 47 C.F.R. § 101.538(a)(3).

affiliates, has average annual gross revenues for the three preceding years not exceeding \$15 million.¹⁸⁶ A “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.¹⁸⁷ The SBA has approved these definitions.¹⁸⁸ In a 2004 auction of 24 GHz licenses, three winning bidders won seven licenses. Two of the winning bidders were very small businesses that won five licenses.

58. **Broadband Radio Service and Educational Broadband Service.** Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (“MDS”) and Multichannel Multipoint Distribution Service (“MMDS”) systems, and “wireless cable,” transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (“BRS”) and Educational Broadband Service (“EBS”) (previously referred to as the Instructional Television Fixed Service (“ITFS”)).¹⁸⁹ In connection with the 1996 BRS auction, the Commission established a size standard that defined a “small business” as an entity that had annual average gross revenues of no more than \$40 million in the preceding three years.¹⁹⁰ The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (“BTAs”). Of the 67 winning bidders, 61 met the definition of a small business. At this time, we estimate that of the 61 small businesses that won BRS licenses in the 1996 auction, 48 remain small business licensees. BRS also includes licensees of stations authorized prior to the 1996 auction. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities.¹⁹¹ In 2008, the Commission adopted three small business definitions for BRS, for the purpose of determining eligibility for bidding credits. A “small business” is defined as an entity with attributed average annual gross revenues that do not exceed \$40 million for the preceding three years. A “very small business” is defined as an entity with attributed average annual gross revenues that do not exceed \$15 million for the preceding three years. An “entrepreneur” is defined as an entity with attributed average annual gross revenues that do not exceed \$3 million for the preceding three years.¹⁹² In 2009, the Commission conducted Auction 86, which offered 78 BRS licenses.¹⁹³ Auction 86 concluded with the sale of 61 licenses.¹⁹⁴ Of the ten winning bidders,

¹⁸⁶ 24 GHz Report and Order, 15 FCC Rcd at 16967 ¶ 77; see also 47 C.F.R. § 101.538(a)(2).

¹⁸⁷ 24 GHz Report and Order, 15 FCC Rcd at 16967 ¶ 77; see also 47 C.F.R. § 101.538(a)(1).

¹⁸⁸ See Letter from Gary M. Jackson, Assistant Administrator, SBA, to Margaret W. Wiener, Deputy Chief, Auctions and Industry Analysis Division, WTB, FCC (July 28, 2000).

¹⁸⁹ 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, MM Docket No. 94-131 and PP Docket No. 93-253, Report and Order, 10 FCC Rcd 9589, 9593, ¶ 7 (1995) (“MDS Auction R&O”).

¹⁹⁰ 47 C.F.R. § 21.961(b)(1).

¹⁹¹ 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.

¹⁹² 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, WT Docket No. 03-66, Fourth Memorandum Opinion and Order and Second Further Notice of Proposed Rulemaking, 23 FCC Rcd 5992, 6007 ¶ 28 (2008) (“BRS/EBS 4th MO&O & 2nd FNPRM”).

¹⁹³ Auction of Broadband Radio Service (BRS) Licenses, Scheduled for October 27, 2009, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 86, Public Notice, 24 FCC Rcd 8277 (2009).

three bidders that claimed small business status won 7 licenses, and two bidders that claimed entrepreneur status won six licenses. After adding the number of small businesses that won licenses in the Commission's BRS auctions to the approximately 392 incumbent BRS licensees who are considered small entities, we estimate that there are currently approximately 445 BRS licensees that are defined as small businesses under either the SBA or the Commission's rules.

59. In addition, the SBA's Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,032 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities.¹⁹⁵ Thus, we estimate that at least 1,932 licensees are small businesses. Since 2007, Cable Television Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies."¹⁹⁶ The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services we must, however, use current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard; that size standard was: all such firms having \$13.5 million or less in annual receipts.¹⁹⁷ According to Census Bureau data for 2002, there were a total of 1,191 firms in this previous category that operated for the entire year.¹⁹⁸ Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.¹⁹⁹ Thus, the majority of these firms can be considered small.

60. **Television Broadcasting.** This Economic Census category "comprises establishments primarily engaged in broadcasting images together with sound. These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public."²⁰⁰ The SBA has created the following small business size standard for Television Broadcasting firms: those having \$14 million or less in annual receipts.²⁰¹ The Commission has estimated the number of licensed commercial television stations to be 1,392.²⁰² In addition, according to

(Continued from previous page) _____

¹⁹⁴ Auction of Broadband Radio Service Licenses Closes, Winning Bidders Announced for Auction 86, Down Payments Due November 23, 2009, Final Payments Due December 8, 2009, Ten-Day Petition to Deny Period, *Public Notice*, 24 FCC Rcd 13572 (2009).

¹⁹⁵ The term "small entity" within 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 EBS licensees.

¹⁹⁶ U.S. Census Bureau, 2007 NAICS Definitions, "517110 Wired Telecommunications Carriers" (partial definition); <http://www.census.gov/naics/2007/def/ND517110.HTM#N517110>.

¹⁹⁷ 13 C.F.R. § 121.201, NAICS code 517110.

¹⁹⁸ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

¹⁹⁹ *Id.* An additional 61 firms had annual receipts of \$25 million or more.

²⁰⁰ U.S. Census Bureau, 2007 NAICS Definitions, "515120 Television Broadcasting" (partial definition); <http://www.census.gov/naics/2007/def/ND515120.HTM#N515120>.

²⁰¹ 13 C.F.R. § 121.201, NAICS code 515120 (updated for inflation in 2008).

²⁰² See *FCC News Release*, "Broadcast Station Totals as of September 30, 2010," dated October 22, 2010; http://www.fcc.gov/Daily_Releases/Daily_Business/2008/db0318/DOC-280836A1.pdf.

Commission staff review of the BIA Publications, Inc., Master Access Television Analyzer Database (BIA) on March 30, 2007, about 986 of an estimated 1,395 commercial television stations (or approximately 72 percent) had revenues of \$13 million or less.²⁰³ We therefore estimate that the majority of commercial television broadcasters are small entities.

61. We note, however, that in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations²⁰⁴ 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. 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 does not exclude any television station from the definition of a small business on this basis and is therefore possibly over-inclusive to that extent.

62. In addition, the Commission has estimated the number of licensed noncommercial educational (NCE) television stations to be 391.²⁰⁵ These stations are non-profit, and therefore considered to be small entities.²⁰⁶

63. In addition, there are also 2,387 low power television stations (LPTV).²⁰⁷ Given the nature of this service, we will presume that all LPTV licensees qualify as small entities under the above SBA small business size standard.

64. **Radio Broadcasting.** This Economic Census category “comprises establishments primarily engaged in broadcasting aural programs by radio to the public. Programming may originate in their own studio, from an affiliated network, or from external sources.”²⁰⁸ The SBA has established a small business size standard for this category, which is: such firms having \$7 million or less in annual receipts.²⁰⁹ According to Commission staff review of BIA Publications, Inc.’s *Master Access Radio Analyzer Database* on March 31, 2005, about 10,840 (95%) of 11,410 commercial radio stations had revenues of \$6 million or less. Therefore, the majority of such entities are small entities.

65. We note, however, that in assessing whether a business concern qualifies as small under the above size standard, business affiliations must be included.²¹⁰ In addition, to be determined to be a “small business,” the entity may not be dominant in its field of operation.²¹¹ We note that it is

²⁰³ We recognize that BIA’s estimate differs slightly from the FCC total given *supra*.

²⁰⁴ “[Business 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 C.F.R. § 21.103(a)(1).

²⁰⁵ See *FCC News Release*, “Broadcast Station Totals as of September 30, 2010,” dated October 22, 2010; http://www.fcc.gov/Daily_Releases/Daily_Business/2008/db0318/DOC-280836A1.pdf.

²⁰⁶ See generally 5 U.S.C. §§ 601(4), (6).

²⁰⁷ See *FCC News Release*, “Broadcast Station Totals as of September 30, 2010,” dated October 22, 2010; http://www.fcc.gov/Daily_Releases/Daily_Business/2008/db0318/DOC-280836A1.pdf.

²⁰⁸ U.S. Census Bureau, 2007 NAICS Definitions, “515112 Radio Stations”; <http://www.census.gov/naics/2007/def/ND515112.HTM#N515112>.

²⁰⁹ 13 C.F.R. § 121.201, NAICS code 515112 (updated for inflation in 2008).

²¹⁰ “Concerns and entities are affiliates of each other when one controls or has the power to control the other, or a third party or parties controls or has the power to control both. It does not matter whether control is exercised, so long as the power to control exists.” 13 C.F.R. § 121.103(a)(1) (an SBA regulation).

²¹¹ 13 C.F.R. § 121.102(b) (an SBA regulation).

difficult at times to assess these criteria in the context of media entities, and our estimate of small businesses may therefore be over-inclusive.

66. **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.²¹²

67. The Commission estimates that there are approximately 5,618 FM translators and boosters.²¹³ 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 (\$7.0 million for a radio station or \$14.0 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.²¹⁴

68. **Cable Television Distribution Services.** Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies."²¹⁵ The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services we must, however, use current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard; that size standard was: all such firms having \$13.5 million or less in annual receipts.²¹⁶ According to Census Bureau data for 2002, there were a total of 1,191 firms in this previous category that operated for the entire year.²¹⁷ Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.²¹⁸ Thus, the majority of these firms can be considered small.

69. **Cable Companies and Systems.** The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission's rules, a

²¹² 13 C.F.R. 121.201, NAICS codes 515112 and 515120.

²¹³ See *supra* note 294.

²¹⁴ See 15 U.S.C. § 632.

²¹⁵ U.S. Census Bureau, 2007 NAICS Definitions, "517110 Wired Telecommunications Carriers" (partial definition); <http://www.census.gov/naics/2007/def/ND517110.HTM#N517110>.

²¹⁶ 13 C.F.R. § 121.201, NAICS code 517110.

²¹⁷ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

²¹⁸ *Id.* An additional 61 firms had annual receipts of \$25 million or more.

“small cable company” is one serving 400,000 or fewer subscribers, nationwide.²¹⁹ Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard.²²⁰ In addition, under the Commission’s rules, a “small system” is a cable system serving 15,000 or fewer subscribers.²²¹ Industry data indicate that, of 6,635 systems nationwide, 5,802 systems have under 10,000 subscribers, and an additional 302 systems have 10,000-19,999 subscribers.²²² Thus, under this second size standard, most cable systems are small.

70. **Cable System Operators.** 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.”²²³ The Commission has determined that an operator serving fewer than 677,000 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.²²⁴ Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.²²⁵ We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,²²⁶ and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

71. **Open Video Systems.** The open video system (“OVS”) framework was established in 1996, and is one of four statutorily recognized options for the provision of video programming services by local exchange carriers.²²⁷ The OVS framework provides opportunities for the distribution of video programming other than through cable systems. Because OVS operators provide subscription services,²²⁸ OVS falls within the SBA small business size standard covering cable services,

²¹⁹ 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

²²⁰ These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, “Top 25 Cable/Satellite Operators,” pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, “Ownership of Cable Systems in the United States,” pages D-1805 to D-1857.

²²¹ 47 C.F.R. § 76.901(c).

²²² Warren Communications News, *Television & Cable Factbook 2008*, “U.S. Cable Systems by Subscriber Size,” page F-2 (data current as of Oct. 2007). The data do not include 851 systems for which classifying data were not available.

²²³ 47 U.S.C. § 543(m)(2); see 47 C.F.R. § 76.901(f) & nn. 1-3.

²²⁴ 47 C.F.R. § 76.901(f); see Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

²²⁵ These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, “Top 25 Cable/Satellite Operators,” pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, “Ownership of Cable Systems in the United States,” pages D-1805 to D-1857.

²²⁶ 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 C.F.R. § 76.909(b).

²²⁷ 47 U.S.C. § 571(a)(3)-(4). See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Thirteenth Annual Report*, 24 FCC Rcd 542, 606 ¶ 135 (2009) (“*Thirteenth Annual Cable Competition Report*”).

²²⁸ See 47 U.S.C. § 573.