

Microwave services include common carrier,¹⁶ private-operational fixed,¹⁷ and broadcast auxiliary radio services.¹⁸ At present, there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not yet defined a small business with respect to microwave services. For purposes of this FRFA, we will use the SBA's definition applicable to wireless and other telecommunications companies—i.e., an entity with no more than 1,500 persons.¹⁹ According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year.²⁰ Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more.²¹ Thus, under this size standard, the great majority of firms can be considered small.

7. We note that the number of firms does not necessarily track the number of licensees. We estimate that all of the Fixed Microwave licensees (excluding broadcast auxiliary licensees) would qualify as small entities under the SBA definition. Of these licenses, approximately 890 are issued for

frequencies in the Emerging Technology bands affected by this proceeding. In addition, the band contains approximately 13 licenses in the paging and radiotelephone service and 40 Local Television Transmission Service licenses. Thus, assuming that these entities also qualify as small businesses, as many as 943 small business licensees could be affected by the rules we adopt. We note that these entities have been subject to relocation under rules originally adopted in the Commission's *Emerging Technologies* proceeding. The *Third NPRM* anticipates that these general relocation rules will continue to apply to FS microwave licensees and does not propose to modify the class of licensees that are subject to these relocation provisions.

Multipoint Distribution Service (MDS). The *Third NPRM* proposes to reallocate spectrum for MDS licensees that currently operate in the 2155–2160 MHz band (and the 2155–2162 MHz band in some cases). This service has historically provided primarily point-to-multipoint, one-way video services to subscribers.²² The Commission recently amended its rules to allow MDS licensees in the 2500–2690 MHz band to provide a wide range of high-speed, two-way services to a variety of users.²³ In connection with the 1996 MDS auction, the Commission defined small businesses as entities that had annual average gross revenues for the three preceding years not in excess of \$40 million.²⁴ The Commission established this small business definition in the context of this particular service and with the approval of the SBA.²⁵ The MDS auction resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs).²⁶ Of the 67 auction winners, 61 met the definition of a small

business. At this time, we estimate that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent MDS licensees that are considered small entities.²⁷ After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 MDS licensees that are defined as small businesses under either the SBA or the Commission's rules. Because the Commission's action only affects MDS operations in the 2155–2160 MHz band (and 2155–2162 MHz band in some cases), the actual number of MDS providers who will be affected by the proposed reallocation will only represent a small fraction of those 440 small business licensees.

Unlicensed Personal Communications Service (UPCS). As its name indicates, UPCS is not a licensed service. UPCS consists of intentional radiators operating in the frequency bands 1910–1930 MHz and 2390–2400 MHz, that provide a wide array of mobile and ancillary fixed communication services to individuals and businesses. The *Third NPRM* affects UPCS operations in the 1910–1920 MHz band; operations in those frequencies are limited to asynchronous (generally data) applications. There is no accurate source for the number of operators in the UPCS. The Commission has not developed a definition of small entities applicable to UPCS equipment manufacturers. However, the SBA has developed a small business size standard, Cellular and Other Wireless Carriers, which consists of all such companies having 1500 or fewer employees.²⁸ According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year.²⁹ Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more.³⁰ Thus, under this

Order, 8 FCC Rcd 6589 (1993), 58 FR 46547, October 4, 1993; Memorandum Opinion and Order, 9 FCC Rcd 1943 (1994), 59 FR 19642, April 25, 1994; Second Memorandum Opinion and Order, 9 FCC Rcd 7797 (1994), 59 FR 65501, December 20, 1994, aff'd, Association of Public Safety Communications Officials-International, Inc. v. FCC, 76 F.3d 395 (D.C. Cir. 1996) (collectively, "Emerging Technologies proceeding").

¹⁶ 47 CFR 101 *et seq.* (formerly, part 21 of the Commission's Rules).

¹⁷ Persons eligible under parts 80 and 90 of the Commission's rules can use Private Operational-Fixed Microwave services. See 47 CFR parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee's commercial, industrial, or safety operations.

¹⁸ Auxiliary Microwave Service is governed by part 74 of title 47 of the Commission's rules. See 47 CFR part 74 *et seq.* 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 TV pickups, which relay signals from a remote location back to the studio.

¹⁹ 13 CFR 121.201, NAICS code 517212 (formerly 513322).

²⁰ U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 517212 (issued Oct. 2000).

²¹ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

²² For purposes of this item, MDS includes single channel Multipoint Distribution Service (MDS) and the Multichannel Multipoint Distribution Service (MMDS). See 66 FR 36177.

²³ Amendment of parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, MM Docket No. 97–217, Report and Order, 13 FCC Rcd 19112 (1998), 63 FR 65087, November 25, 1998, recon., 14 FCC Rcd 12764 (1999), 64 FR 63727, November 22, 1999, further recon., 15 FCC Rcd 14566 (2000).

²⁴ 47 CFR 21.961 and 1.2110.

²⁵ 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, Report and Order, 10 FCC Rcd 9589, 9670 (1995), 60 FR 36524 (July 17, 1995).

²⁶ Basic Trading Areas (BTAs) were designed by Rand McNally and are the geographic areas by which MDS was auctioned and authorized. See *id.* at 9608.

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

²⁸ 13 CFR 121.201, North American Industry Classification System (NAICS) code 517212.

²⁹ U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 517212 (issued Oct. 2000).

³⁰ *Id.* The census data do not provide a more precise estimate of the number of firms that have