SUBCHAPTER B—COMMON CARRIER SERVICES

PART 20—COMMERCIAL MOBILE SERVICES

AUTHORITY: 47 U.S.C. 151, 152(a), 154(i), 157, 160, 201, 214, 222, 251(e), 301, 302, 303, 303(b), 303(r), 307, 307(a), 309, 309(j)(3), 316, 316(a), 332, 615, 615a, 615b, 615c.

SOURCE: 59 FR 18495, Apr. 19, 1994, unless otherwise noted.

§ 20.1 Purpose.

The purpose of these rules is to set forth the requirements and conditions applicable to commercial mobile radio service providers.

§ 20.2 Other applicable rule parts.

Other FCC rule parts applicable to licensees in the commercial mobile radio services include the following:

(a) *Part 1.* This part includes rules of practice and procedure for license applications, adjudicatory proceedings, procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; competitive bidding procedures; and the environmental requirements that, together with the procedures specified in § 17.4(c) of this chapter, if applicable, must be complied with prior to the initiation of construction. Subpart F includes the rules for the Wireless Telecommunications Services and the procedures for filing electronically via the ULS.

(b) *Part 2.* This part contains the Table of Frequency Allocations and special requirements in international regulations, recommendations, agreements, and treaties. This part also contains standards and procedures concerning the marketing and importation of radio frequency devices, and for obtaining equipment authorization.

[78 FR 21559, Apr. 11, 2013]

§ 20.3 Definitions.

Appropriate local emergency authority. An emergency answering point that has not been officially designated as a Public Safety Answering Point (PSAP), but has the capability of receiving 911 calls and either dispatching emergency services personnel or, if necessary, relaying the call to another emergency service provider. An appropriate local emergency authority may include, but is not limited, to an existing local law enforcement authority, such as the police, county sheriff, local emergency medical services provider, or fire department.

Automatic Number Identification (ANI). A system that identifies the billing account for a call. For 911 systems, the ANI identifies the calling party and may be used as a call back number.

Automatic Roaming. With automatic roaming, under a pre-existing contractual agreement between a subscriber's home carrier and a host carrier, a roaming subscriber is able to originate or terminate a call in the host carrier's service area without taking any special actions.

Commercial mobile data service. (1) Any mobile data service that is not interconnected with the public switched network and is:

(i) Provided for profit; and

(ii) Available to the public or to such classes of eligible users as to be effectively available to the public.

(2) Commercial mobile data service includes services provided by Mobile

Satellite Services and Ancillary Terrestrial Component providers to the extent the services provided meet this definition.

Commercial mobile radio service. A mobile service that is:

(a)(1) provided for profit, *i.e.*, with the intent of receiving compensation or monetary gain;

(2) An interconnected service; and

(3) Available to the public, or to such classes of eligible users as to be effectively available to a substantial portion of the public; or

(b) The functional equivalent of such a mobile service described in paragraph (a) of this section, including a mobile broadband Internet access service as defined in §8.2 of this chapter.

Consumer Signal Booster: A bi-directional signal booster that is marketed and sold to the general public for use without modification.

Designated PSAP. The Public Safety Answering Point (PSAP) designated by the local or state entity that has the authority and responsibility to designate the PSAP to receive wireless 911 calls.

Fixed Consumer Signal Booster. A Consumer Signal Booster designed to be operated in a fixed location in a building.

Handset-based location technology. A method of providing the location of wireless 911 callers that requires the use of special location-determining hardware and/or software in a portable or mobile phone. Handset-based location technology may also employ additional location-determining hardware and/or software in the CMRS network and/or another fixed infrastructure.

Host Carrier. For automatic roaming, the host carrier is a facilities-based CMRS carrier on whose system another carrier's subscriber roams. A facilities-based CMRS carrier may, on behalf of its subscribers, request automatic roaming service from a host carrier.

Incumbent Wide Area SMR Licensees. Licensees who have obtained extended implementation authorizations in the 800 MHz or 900 MHz service, either by waiver or under Section 90.629 of these rules, and who offer real-time, two-way voice service that is interconnected with the public switched network.

Industrial Signal Booster: All signal boosters other than Consumer Signal Boosters.

Interconnection or Interconnected. Direct or indirect connection through automatic or manual means (by wire, microwave, or other technologies such as store and forward) to permit the transmission or reception of messages or signals to or from points in the public switched network.

Interconnected Service. A service:

(a) That is interconnected with the public switched network, or interconnected with the public switched network through an interconnected service provider, that gives subscribers the capability to communicate to or receive communication from other users on the public switched network; or

(b) For which a request for such interconnection is pending pursuant to section 332(c)(1)(B) of the Communications Act, 47 U.S.C. 332(c)(1)(B). A mobile service offers interconnected service even if the service allows subscribers to access the public switched network only during specified hours of the day, or if the service provides general access to points on the public switched network but also restricts access in certain limited ways. Interconnected service does not include any interface between a licensee's facilities and the public switched network exclusively for a licensee's internal control purposes.

Location-capable handsets. Portable or mobile phones that contain special location-determining hardware and/or software, which is used by a licensee to locate 911 calls.

Manual Roaming. With manual roaming, a subscriber must establish a relationship with the host carrier on whose system he or she wants to roam in order to make a call. Typically, the roaming subscriber accomplishes this in the course of attempting to originate a call by giving a valid credit card number to the carrier providing the roaming service.

Mobile Consumer Signal Booster. A Consumer Signal Booster designed to operate in a moving vehicle where both uplink and downlink transmitting antennas are at least 20 cm from the user or any other person.

Mobile Service. A radio communication service carried on between mobile stations or receivers and land stations, and by mobile stations communicating among themselves, and includes:

(a) Both one-way and two-way radio communications services;

(b) A mobile service which provides a regularly interacting group of base, mobile, portable, and associated control and relay stations (whether licensed on an individual, cooperative, or multiple basis) for private one-way or two-way land mobile radio communications by eligible users over designated areas of operation; and

(c) Any service for which a license is required in a personal communications service under part 24 of this chapter.

Network-based Location Technology. A method of providing the location of wireless 911 callers that employs hardware and/or software in the CMRS network and/or another fixed infrastructure, and does not require the use of special location-determining hardware and/or software in the caller's portable or mobile phone.

Non-individual. A non-individual is a partnership and each partner is eighteen years of age or older; a corporation; an association; a state, territorial, or local government unit; or a legal entity.

Private Mobile Radio Service. A mobile service that is neither a commercial mobile radio service nor the functional equivalent of a service that meets the definition of commercial mobile radio service. Private mobile radio service includes the following:

(a) Not-for-profit land mobile radio and paging services that serve the licensee's internal communications needs as defined in part 90 of this chapter. Shared-use, cost-sharing, or cooperative arrangements, multiple licensed systems that use third party managers or users combining resources to meet compatible needs for specialized internal communications facilities in compliance with the safeguards of §90.179 of this chapter are presumptively private mobile radio services;

(b) Mobile radio service offered to restricted classes of eligible users. This includes entities eligible in the Public Safety Radio Pool and Radiolocation service.

(c) 220–222 MHz land mobile service and Automatic Vehicle Monitoring systems (part 90 of this chapter) that do not offer interconnected service or that are not-for-profit; and

(d) Personal Radio Services under part 95 of this chapter (General Mobile Services, Radio Control Radio Services, and Citizens Band Radio Services); Maritime Service Stations (excluding Public Coast stations) (part 80 of this chapter); and Aviation Service Stations (part 87 of this chapter).

Provider-Specific Consumer Signal Boosters. Provider-Specific Consumer Signal Boosters may only operate on the frequencies and in the market areas of the specified licensee(s). Provider-Specific Consumer Signal Boosters may only be certificated and operated with the consent of the licensee(s) whose frequencies are being amplified by the device.

Pseudo Automatic Number Identification (Pseudo-ANI). A number, consisting of the same number of digits as ANI, that is not a North American Numbering Plan telephone directory number and may be used in place of an ANI to convey special meaning. The special meaning assigned to the pseudo-ANI is determined by agreements, as necessary, between the system originating the call, intermediate systems handling and routing the call, and the destination system.

Public Safety Answering Point. A point that has been designated to receive 911 calls and route them to emergency service personnel.

Public Switched Network. The network that includes any common carrier switched network, whether by wire or radio, including local exchange carriers, interexchange carriers, and mobile service providers, that uses the North American Numbering Plan, or public IP addresses, in connection with the provision of switched services.

Signal booster. A device that automatically receives, amplifies, and retransmits on a bi- or unidirectional basis, the signals received from base, fixed, mobile, or portable stations, with no change in frequency or authorized bandwidth.

Signal booster operator. The signal booster operator is the person or persons with control over the functioning

of the signal booster, or the person or persons with the ability to deactivate it in the event of technical malfunctioning or harmful interference to a primary radio service.

Statewide default answering point. An emergency answering point designated by the State to receive 911 calls for either the entire State or those portions of the State not otherwise served by a local PSAP.

Wideband Consumer Signal Boosters. Wideband Consumer Signal Boosters may operate on the frequencies and in the market areas of multiple licensees.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 38402, July 24, 1996; 61 FR 40352, Aug. 2, 1996; 62 FR 18843, Apr. 17, 1997; 63 FR 2637, Jan. 16, 1998; 64 FR 60130, Nov. 4, 1999; 67 FR 1648, Jan. 14, 2002; 72 FR 50073, Aug. 30, 2007; 75 FR 22276, Apr. 28, 2010; 76 FR 26220, May 6, 2011; 78 FR 21559, Apr. 11, 2013; 80 FR 19850, Apr. 13, 2015]

§ 20.5 Citizenship.

(a) This rule implements section 310 of the Communications Act, 47 U.S.C. 310, regarding the citizenship of licensees in the commercial mobile radio services. Commercial mobile radio service authorizations may not be granted to or held by:

(1) Any foreign government or any representative thereof;

(2) Any alien or the representative of any alien;

(3) Any corporation organized under the laws of any foreign government;

(4) Any corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country; or

(5) Any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such license.

(b) The limits listed in paragraph (a) of this section may be exceeded by eligible individuals who held ownership interests on May 24, 1993, pursuant to the waiver provisions established in section 332(c)(6) of the Communications Act. Transfers of ownership to any other person in violation of paragraph (a) of this section are prohibited.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 55580, Oct. 28, 1996]

§ 20.6 CMRS spectrum aggregation limit.

(a) *Spectrum limitation.* No licensee in the broadband PCS, cellular, or SMR services (including all parties under common control) regulated as CMRS (*see* 47 CFR 20.9) shall have an attributable interest in a total of more than 55 MHz of licensed broadband PCS, cellular, and SMR spectrum regulated as CMRS with significant overlap in any geographic area.

(b) *SMR spectrum.* To calculate the amount of attributable SMR spectrum for purposes of paragraph (a) of this section, an entity must count all 800 MHz and 900 MHz channels located at any SMR base station inside the geographic area (MTA or BTA) where there is significant overlap. All 800 MHz channels located on at least one of those identified base stations count as 50 kHz (25 kHz paired), and all 900 MHz channels located on at least one of those identified base stations count as 25 kHz (12.5 kHz paired); provided that any discrete 800 or 900 MHz channel shall be counted only once per licensee within the geographic area, even if the licensee in question utilizes the same channel at more than one location within the relevant geographic area. No more than 10 MHz of SMR spectrum in the 800 and 900 MHz SMR services will be attributed to an entity when determining compliance with the cap.

(c) *Significant overlap.* (1) For purposes of paragraph (a) of this section, significant overlap of a PCS licensed service area and CGSA(s) (as defined in § 22.911 of this chapter) or SMR service area(s) occurs when at least 10 percent of the population of the PCS licensed service area for the counties contained therein, as determined by the latest available decennial census figures as complied by the Bureau of the Census, is within the CGSA(s) and/or SMR service area(s).

(2) The Commission shall presume that an SMR service area covers less than 10 percent of the population of a PCS service area if none of the base stations of the SMR licensee are located within the PCS service area. For an SMR licensee's base stations that are located within a PCS service area, the channels licensed at those sites will be presumed to cover 10 percent of the population of the PCS service area, unless the licensee shows that its protected service contour for all of its base stations covers less than 10 percent of the population of the PCS service area.

(d) *Ownership attribution.* For purposes of paragraph (a) of this section, ownership and other interests in broadband PCS licensees, cellular licensees, or SMR licensees will be attributed to their holders pursuant to the following criteria:

(1) Controlling interest shall be attributable. Controlling interest means majority voting equity ownership, any general partnership interest, or any means of actual working control (including negative control) over the operation of the licensee, in whatever manner exercised.

(2) Partnership and other ownership interests and any stock interest amounting to 20 percent or more of the equity, or outstanding stock, or outstanding voting stock of a broadband PCS, cellular or SMR licensee shall be attributed, except that ownership will not be attributed unless the partnership and other ownership interests and any stock interest amount to at least 40 percent of the equity, or outstanding stock, or outstanding voting stock of a broadband PCS, cellular or SMR licensee if the ownership interest is held by a small business or a rural telephone company, as these terms are defined in §1.2110 of this chapter or other related provisions of the Commission's rules, or if the ownership interest is held by an entity with a non-controlling equity interest in a broadband PCS licensee or applicant that is a small business.

(3) Investment companies, as defined in 15 U.S.C. 80a–3, insurance companies and banks holding stock through their trust departments in trust accounts will be considered to have an attributable interest only if they hold 40 percent or more of the outstanding voting stock of a corporate broadband PCS, cellular or SMR licensee, or if any of the officers or directors of the broadband PCS, cellular or SMR licensee are representatives of the investment company, insurance company or bank concerned. Holdings by a bank or insurance company will be aggregated if the bank or insurance company has any right to determine how the stock will be voted. Holdings by investment companies will be aggregated if under common management.

(4) Non-voting stock shall be attributed as an interest in the issuing entity if in excess of the amounts set forth in paragraph (d)(2) of this section.

(5) Debt and instruments such as warrants, convertible debentures, options, or other interests (except non-voting stock) with rights of conversion to voting interests shall not be attributed unless and until converted, except that this provision does not apply in determining whether an entity is a small business, a rural telephone company, or a business owned by minorities and/or women, as these terms are defined in §1.2110 of this chapter or other related provisions of the Commission's rules.

(6) Limited partnership interests shall be attributed to limited partners and shall be calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses.

(7) Officers and directors of a broadband PCS licensee or applicant, cellular licensee, or SMR licensee shall be considered to have an attributable interest in the entity with which they are so associated. The officers and directors of an entity that controls a broadband PCS licensee or applicant, a cellular licensee, or an SMR licensee shall be considered to have an attributable interest in the broadband PCS licensee or applicant, cellular licensee, or SMR licensee.

(8) Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting

product, except that if the ownership percentage for an interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest. (For example, if A owns 20% of B, and B owns 40% of licensee C, then A's interest in licensee C would be 8%. If A owns 20% of B, and B owns 51% of licensee C, then A's interest in licensee C would be 20% because B's ownership of C exceeds 50%.)

(9) Any person who manages the operations of a broadband PCS, cellular, or SMR licensee pursuant to a management agreement shall be considered to have an attributable interest in such licensee if such person, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence,

(i) The nature or types of services offered by such licensee;

(ii) The terms upon which such services are offered; or

(iii) The prices charged for such services.

(10) Any licensee or its affiliate who enters into a joint marketing arrangements with a broadband PCS, cellular, or SMR licensee, or its affiliate shall be considered to have an attributable interest, if such licensee, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence,

(i) The nature or types of services offered by such licensee;

(ii) The terms upon which such services are offered; or

(iii) The prices charged for such services.

(e) *Divestiture.* (1) Divestiture of interests as a result of a transfer of control or assignment of authorization must occur prior to consummating the transfer or assignment, except that a licensee that meets the requirements set forth in paragraph (e)(2) of this section shall have 90 days from final grant to come into compliance with the spectrum aggregation limit.

(2) An applicant with:

(i) Controlling or attributable ownership interests in broadband PCS, cellular, and/or SMR licenses where the geographic license areas cover 20 percent or less of the applicant's service area population;

(ii) Attributable interests in broadband PCS, cellular, and/or SMR licenses solely due to management agreements or joint marketing agreements; or

(iii) Non-controlling attributable interests in broadband PCS, cellular, and/or SMR licenses, regardless of the degree to which the geographic license areas cover the applicant's service area population, shall be eligible to have its application granted subject to a condition that the licensee shall come into compliance with the spectrum limitation set out in paragraph (a) within ninety (90) days after final grant. For purposes of this paragraph, a ''non-controlling attributable interest'' is one in which the holder has less than a fifty (50) percent voting interest and there is an unaffiliated single holder of a fifty (50) percent or greater voting interest.

(3) The applicant for a license that, if granted, would exceed the spectrum aggregation limitation in paragraph (a) of this section shall certify on its application that it and all parties to the application will come into compliance with this limitation. If such an applicant is a successful bidder in an auction, it must submit with its long-form application a signed statement describing its efforts to date and future plans to come into compliance with the spectrum aggregation limitation. A similar statement must also be included with any application for assignment of licenses or transfer of control that, if granted, would exceed the spectrum aggregation limit.

(4)(i) Parties holding controlling interests in broadband PCS, cellular, and/or SMR licensees that conflict with the attribution threshold or geographic overlap limitations set forth in this section will be considered to have come into compliance if they have submitted to the Commission an application for assignment of license or transfer of control of the conflicting licensee (*see* §1.948 of this chapter; *see also* §24.839 of this chapter (PCS)) by which, if granted, such parties no longer would have an attributable interest in the conflicting license. Divestiture may be to an interim trustee if a buyer has not been secured in the required period of

time, as long as the applicant has no interest in or control of the trustee, and the trustee may dispose of the license as it sees fit. Where parties to broadband PCS, cellular, or SMR applications hold less than controlling (but still attributable) interests in broadband PCS, cellular, or SMR licensee(s), they shall submit a certification that the applicant and all parties to the application have come into compliance with the limitations on spectrum aggregation set forth in this section.

(ii) Applicants that meet the requirements of paragraph (e)(2) of this section must tender to the Commission within ninety (90) days of final grant of the initial license, such an assignment or transfer application or, in the case of less than controlling (but still attributable) interests, a written certification that the applicant and all parties to the application have come into compliance with the limitations on spectrum aggregation set forth in this section. If no such transfer or assignment application or certification is tendered to the Commission within ninety (90) days of final grant of the initial license, the Commission may consider the certification and the divestiture statement to be material, bad faith misrepresentations and shall invoke the condition on the initial license or the assignment or transfer, cancelling or rescinding it automatically, shall retain all monies paid to the Commission, and, based on the facts presented, shall take any other action it may deem appropriate.

(f) *Sunset.* This rule section shall cease to be effective January 1, 2003.

NOTE 1 TO § 20.6: For purposes of the ownership attribution limit, all ownership interests in operations that serve at least 10 percent of the population of the PCS service area should be included in determining the extent of a PCS applicant's cellular or SMR ownership.

NOTE 2 TO § 20.6: When a party owns an attributable interest in more than one cellular or SMR system that overlaps a PCS service area, the total population in the overlap area will apply on a cumulative basis.

NOTE 3 TO § 20.6: Waivers of § 20.6(d) may be granted upon an affirmative showing:

(1) That the interest holder has less than a 50 percent voting interest in the licensee and there is an unaffiliated single holder of a 50 percent or greater voting interest;

(2) That the interest holder is not likely to affect the local market in an anticompetitive manner;

(3) That the interest holder is not involved in the operations of the licensee and does not have the ability to influence the licensee on a regular basis; and

(4) That grant of a waiver is in the public interest because the benefits to the public of common ownership outweigh any potential anticompetitive harm to the market.

[64 FR 54574, Oct. 7, 1999, as amended at 67 FR 1642, Jan. 14, 2002]

§ 20.7 Mobile services.

The following are mobile services within the meaning of sections 3(n) and 332 of the Communications Act, 47 U.S.C. 153(n), 332.

(a) Public mobile services (part 22 of this chapter), including fixed operations that support the mobile systems, but excluding Rural Radio Service and Basic Exchange Telecommunications Radio Service (part 22, subpart H of this chapter);

(b) Private land mobile services (part 90 of this chapter), including secondary fixed operations, but excluding fixed services such as call box operations and meter reading;

(c) Mobile satellite services (part 25 of this chapter) including dual-use equipment, terminals capable of transmitting while a platform is moving, but excluding satellite facilities provided through a transportable platform that cannot move when the communications service is offered;

(d) Marine and aviation services (parts 80 and 87 of this chapter), including fixed operations that support these marine and aviation mobile systems;

(e) Personal radio services (part 95 of this chapter), but excluding 218–219 MHz Service;

(f) Personal communications services (part 24 of this chapter);

(g) Auxiliary services provided by mobile service licensees, and ancillary fixed communications offered by personal communications service providers;

(h) Unlicensed services meeting the definition of commercial mobile radio service in § 20.3, such as the resale of commercial mobile radio services, but excluding unlicensed radio frequency devices under part 15 of this chapter

(including unlicensed personal communications service devices).

[59 FR 18495, Apr. 19, 1994, as amended at 63 FR 54077, Oct. 8, 1998]

§ 20.9 Commercial mobile radio service.

(a) The following mobile services shall be treated as common carriage services and regulated as commercial mobile radio services (including any such service offered as a hybrid service or offered on an excess capacity basis to the extent it meets the definition of commercial mobile radio service, or offered as an auxiliary or ancillary service), pursuant to Section 332 of the Communications Act, 47 U.S.C. 332:

(1) Private Paging (part 90 of this chapter), excluding not-for-profit paging systems that serve only the licensee's own internal communications needs;

(2) Stations that offer Industrial/Business Pool (§ 90.35 of this chapter) eligibles for-profit, interconnected service;

(3) Land Mobile Systems on 220–222 MHz (part 90 of this chapter), except services that are not-for-profit or do not offer interconnected service;

(4) Specialized Mobile Radio services that provide interconnected service (part 90 of this chapter);

(5) Public Coast Stations (part 80, subpart J of this chapter);

(6) Paging and Radiotelephone Service (part 22, subpart E of this chapter).

(7) Cellular Radiotelephone Service (part 22, subpart H of this chapter).

(8) Air-Ground Radiotelephone Service (part 22, subpart G of this chapter).

(9) Offshore Radiotelephone Service (part 22, subpart I of this chapter).

(10) Any mobile satellite service involving the provision of commercial mobile radio service (by licensees or resellers) directly to end users, except that mobile satellite licensees and other entities that sell or lease space segment capacity, to the extent that it does not provide commercial mobile radio service directly to end users, may provide space segment capacity to commercial mobile radio service providers on a non-common carrier basis, if so authorized by the Commission;

(11) Personal Communications Services (part 24 of this chapter), except as provided in paragraph (b) of this section;

(12) Mobile operations in the 218–219 MHz Service (part 95, subpart F of this chapter) that provide for-profit interconnected service to the public;

(13) For-profit subsidiary communications services transmitted on subcarriers within the FM baseband signal, that provide interconnected service (47 CFR 73.295 of this chapter); and

(14) A mobile service that is the functional equivalent of a commercial mobile radio service.

(i) A mobile service that does not meet the definition of commercial mobile radio service is presumed to be a private mobile radio service.

(ii) Any interested party may seek to overcome the presumption that a particular mobile radio service is a private mobile radio service by filing a petition for declaratory ruling challenging a mobile service provider's regulatory treatment as a private mobile radio service.

(A) The petition must show that: (*1*) The mobile service in question meets the definition of commercial mobile radio service; or

(*2*) The mobile service in question is the functional equivalent of a service that meets the definition of a commercial mobile radio service.

(B) A variety of factors will be evaluated to make a determination whether the mobile service in question is the functional equivalent of a commercial mobile radio service, including: consumer demand for the service to determine whether the service is closely substitutable for a commercial mobile radio service; whether changes in price for the service under examination, or for the comparable commercial mobile radio service would prompt customers to change from one service to the other; and market research information identifying the targeted market for the service under review.

(C) The petition must contain specific allegations of fact supported by affidavit(s) of person(s) with personal knowledge. The petition must be served on the mobile service provider against whom it is filed and contain a certificate of service to this effect. The

mobile service provider may file an opposition to the petition and the petitioner may file a reply. The general rules of practice and procedure contained in §§1.1 through 1.52 of this chapter shall apply.

(b) Licensees of a Personal Communications Service or applicants for a Personal Communications Service license, and VHF Public Coast Station geographic area licensees or applicants, and Automated Maritime Telecommunications System (AMTS) licensees or applicants, proposing to use any Personal Communications Service, VHF Public Coast Station, or AMTS spectrum to offer service on a private mobile radio service basis must overcome the presumption that Personal Communications Service, VHF Public Coast, and AMTS Stations are commercial mobile radio services.

(1) The applicant or licensee (who must file an application to modify its authorization) seeking authority to dedicate a portion of the spectrum for private mobile radio service, must include a certification that it will offer Personal Communications Service, VHF Public Coast Station, or AMTS service on a private mobile radio service basis. The certification must include a description of the proposed service sufficient to demonstrate that it is not within the definition of commercial mobile radio service in §20.3. Any application requesting to use any Personal Communications Service, VHF Public Coast Station, or AMTS spectrum to offer service on a private mobile radio service basis will be placed on public notice by the Commission.

(2) Any interested party may file a petition to deny the application within 30 days after the date of public notice announcing the acceptance for filing of the application. The petition shall contain specific allegations of fact supported by affidavit(s) of person(s) with personal knowledge to show that the applicant's request does not rebut the commercial mobile radio service presumption. The petition must be served on the applicant and contain a certificate of service to this effect. The applicant may file an opposition with allegations of fact supported by affidavit. The petitioner may file a reply. No additional pleadings will be allowed. The general rules of practice and procedure contained in §§1.1 through 1.52 of this chapter and §22.30 of this chapter shall apply.

(c) Any provider of private land mobile service before August 10, 1993 (including any system expansions, modifications, or acquisitions of additional licenses in the same service, even if authorized after this date), and any private paging service utilizing frequencies allocated as of January 1, 1993, that meet the definition of commercial mobile radio service, shall, except for purposes of §20.5 (applicable August 10, 1993 for the providers listed in this paragraph), be treated as private mobile radio service until August 10, 1996. After this date, these entities will be treated as commercial mobile radio service providers regulated under this part.

[59 FR 18495, Apr. 19, 1994, as amended at 62 FR 18843, Apr. 17, 1997; 63 FR 40062, July 27, 1998; 64 FR 26887, May 18, 1999; 64 FR 59659, Nov. 3, 1999; 66 FR 10968, Feb. 21, 2001; 72 FR 31194, June 6, 2007]

§20.11 Interconnection to facilities of local exchange carriers.

(a) A local exchange carrier must provide the type of interconnection reasonably requested by a mobile service licensee or carrier, within a reasonable time after the request, unless such interconnection is not technically feasible or economically reasonable. Complaints against carriers under section 208 of the Communications Act, 47 U.S.C. 208, alleging a violation of this section shall follow the requirements of §§1.711–1.734 of this chapter, 47 CFR 1.711–1.734.

(b) Local exchange carriers and commercial mobile radio service providers shall exchange Non-Access Telecommunications Traffic, as defined in §51.701 of this chapter, under a bill-and-keep arrangement, as defined in §51.713 of this chapter, unless they mutually agree otherwise.

(c) Local exchange carriers and commercial mobile radio service providers shall also comply with applicable provisions of part 51 of this chapter.

(d) Local exchange carriers may not impose compensation obligations for traffic not subject to access charges

upon commercial mobile radio service providers pursuant to tariffs.

(e) An incumbent local exchange carrier may request interconnection from a commercial mobile radio service provider and invoke the negotiation and arbitration procedures contained in section 252 of the Act. A commercial mobile radio service provider receiving a request for interconnection must negotiate in good faith and must, if requested, submit to arbitration by the state commission.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 45619, Aug. 29, 1996; 70 FR 16145, Mar. 30, 2005; 76 FR 73852, Nov. 29, 2011; 77 FR 1640, Jan. 11, 2012]

§ 20.12 Resale and roaming.

(a)(1) *Scope of manual roaming and resale.* Paragraph (c) of this section is applicable to providers of Broadband Personal Communications Services (part 24, subpart E of this chapter), Cellular Radio Telephone Service (part 22, subpart H of this chapter), and specialized Mobile Radio Services in the 800 MHz and 900 MHz bands (included in part 90, subpart S of this chapter) if such providers offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the provider to re-use frequencies and accomplish seamless hand-offs of subscriber calls. The scope of paragraph (b) of this section, concerning the resale rule, is further limited so as to exclude from the requirements of that paragraph those Broadband Personal Communications Services C, D, E, and F block licensees that do not own and control and are not owned and controlled by firms also holding cellular A or B block licenses.

(2) *Scope of automatic roaming.* Paragraph (d) of this section is applicable to CMRS carriers if such carriers offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the carrier to re-use frequencies and accomplish seamless hand-offs of subscriber calls. Paragraph (d) of this section is also applicable to the provision of push-to-talk and text-messaging service by CMRS carriers.

(3) *Scope of offering roaming arrangements for commercial mobile data services.* Paragraph (e) of this section is applicable to all facilities-based providers of commercial mobile data services.

(b) *Resale.* The resale rule is applicable as follows:

(1) Each carrier subject to paragraph (b) of this section shall not restrict the resale of its services, unless the carrier demonstrates that the restriction is reasonable.

(2) The resale requirement shall not apply to customer premises equipment, whether or not it is bundled with services subject to the resale requirement in this paragraph.

(3) This paragraph shall cease to be effective five years after the last group of initial licenses for broadband PCS spectrum in the 1850–1910 and the 1930–1990 MHz bands is awarded; *i.e.*, at the close of November 24, 2002.

(c) *Manual roaming.* Each carrier subject to paragraph (a)(1) of this section must provide mobile radio service upon request to all subscribers in good standing to the services of any carrier subject to paragraph (a)(1) of this section, including roamers, while such subscribers are located within any portion of the licensee's licensed service area where facilities have been constructed and service to subscribers has commenced, if such subscribers are using mobile equipment that is technically compatible with the licensee's base stations.

(d) *Automatic roaming.* Upon a reasonable request, it shall be the duty of each host carrier subject to paragraph (a)(2) of this section to provide automatic roaming to any technologically compatible, facilities-based CMRS carrier on reasonable and not unreasonably discriminatory terms and conditions, pursuant to Sections 201 and 202 of the Communications Act, 47 U.S.C. 201 and 202. The Commission shall presume that a request by a technologically compatible CMRS carrier for automatic roaming is reasonable pursuant to Sections 201 and 202 of the Communications Act, 47 U.S.C. 201 and 202. This presumption may be rebutted on a case by case basis. The Commission will resolve automatic roaming disputes on a case-by-case basis, taking

into consideration the totality of the circumstances presented in each case.

(e) *Offering roaming arrangements for commercial mobile data services.* (1) A facilities-based provider of commercial mobile data services is required to offer roaming arrangements to other such providers on commercially reasonable terms and conditions, subject to the following limitations:

(i) Providers may negotiate the terms of their roaming arrangements on an individualized basis;

(ii) It is reasonable for a provider not to offer a data roaming arrangement to a requesting provider that is not technologically compatible;

(iii) It is reasonable for a provider not to offer a data roaming arrangement where it is not technically feasible to provide roaming for the particular data service for which roaming is requested and any changes to the host provider's network necessary to accommodate roaming for such data service are not economically reasonable;

(iv) It is reasonable for a provider to condition the effectiveness of a roaming arrangement on the requesting provider's provision of mobile data service to its own subscribers using a generation of wireless technology comparable to the technology on which the requesting provider seeks to roam.

(2) A party alleging a violation of this section may file a formal or informal complaint pursuant to the procedures in §§ 1.716 through 1.718, 1.720, 1.721, and 1.723 through 1.735 of this chapter, which sections are incorporated herein. For purposes of § 20.12(e), references to a ''carrier'' or ''common carrier'' in the formal and informal complaint procedures incorporated herein will mean a provider of commercial mobile data services. The Commission will resolve such disputes on a case-by-case basis, taking into consideration the totality of the circumstances presented in each case. The remedy of damages shall not be available in connection with any complaint alleging a violation of this section. Whether the appropriate procedural vehicle for a dispute is a complaint under this paragraph or a petition for declaratory ruling under § 1.2 of this chapter may vary depending on the circumstances of each case.

[64 FR 61027, Nov. 9, 1999, as amended at 65 FR 58482, Sept. 29, 2000; 72 FR 50074, Aug. 30, 2007; 75 FR 22276, Apr. 28, 2010; 76 FR 26220, May 6, 2011]

§ 20.13 State petitions for authority to regulate rates.

(a) States may petition for authority to regulate the intrastate rates of any commercial mobile radio service. The petition must include the following:

(1) Demonstrative evidence that market conditions in the state for commercial mobile radio services do not adequately protect subscribers to such services from unjust and unreasonable rates or rates that are unjustly or unreasonably discriminatory. Alternatively, a state's petition may include demonstrative evidence showing that market conditions for commercial mobile radio services do not protect subscribers adequately from unjust and unreasonable rates, or rates that are unjustly or unreasonably discriminatory, and that a substantial portion of the commercial mobile radio service subscribers in the state or a specified geographic area have no alternative means of obtaining basic telephone service. This showing may include evidence of the range of basic telephone service alternatives available to consumers in the state.

(2) The following is a non-exhaustive list of examples of the types of evidence, information, and analysis that may be considered pertinent to determine market conditions and consumer protection by the Commission in reviewing any petition filed by a state under this section:

(i) The number of commercial mobile radio service providers in the state, the types of services offered by commercial mobile radio service providers in the state, and the period of time that these providers have offered service in the state;

(ii) The number of customers of each commercial mobile radio service provider in the state; trends in each provider's customer base during the most recent annual period or other data covering another reasonable period if annual data is unavailable; and annual revenues and rates of return for each

commercial mobile radio service provider;

(iii) Rate information for each commercial mobile radio service provider, including trends in each provider's rates during the most recent annual period or other data covering another reasonable period if annual data is unavailable;

(iv) An assessment of the extent to which services offered by the commercial mobile radio service providers the state proposes to regulate are substitutable for services offered by other carriers in the state;

(v) Opportunities for new providers to enter into the provision of competing services, and an analysis of any barriers to such entry;

(vi) Specific allegations of fact (supported by affidavit of person with personal knowledge) regarding anti-competitive or discriminatory practices or behavior by commercial mobile radio service providers in the state;

(vii) Evidence, information, and analysis demonstrating with particularity instances of systematic unjust and unreasonable rates, or rates that are unjust or unreasonably discriminatory, imposed upon commercial mobile radio service subscribers. Such evidence should include an examination of the relationship between rates and costs. Additionally, evidence of a pattern of such rates, that demonstrates the inability of the commercial mobile radio service marketplace in the state to produce reasonable rates through competitive forces will be considered especially probative; and

(viii) Information regarding customer satisfaction or dissatisfaction with services offered by commercial mobile radio service providers, including statistics and other information about complaints filed with the state regulatory commission.

(3) Petitions must include a certification that the state agency filing the petition is the duly authorized state agency responsible for the regulation of telecommunication services provided in the state.

(4) Petitions must identify and describe in detail the rules the state proposes to establish if the petition is granted.

(5) States have the burden of proof. Interested parties may file comments in support or in opposition to the petition within 30 days after public notice of the filing of a petition by a state under this section. Any interested party may file a reply within 15 days after the expiration of the filing period for comments. No additional pleadings may be filed. Except for §1.45 of this chapter, practice and procedure rules contained in §§1.42–1.52 of this chapter shall apply. The provisions of §§1.771–1.773 of this chapter do not apply.

(6) The Commission shall act upon any petition filed by a state under this paragraph not later than the end of the nine-month period after the filing of the petition.

(7) If the Commission grants the petition, it shall authorize the state to regulate rates for commercial mobile radio services in the state during a reasonable period of time, as specified by the Commission. The period of time specified by the Commission will be that necessary to ensure that rates are just and reasonable, or not unjustly or unreasonably discriminatory.

(b) States that regulated rates for commercial mobile services as of June 1, 1993, may petition the Commission under this section before August 10, 1994, to extend this authority.

(1) The petition will be acted upon by the Commission in accordance with the provisions of paragraphs (a)(1) through (a)(5) of this section.

(2) The Commission shall act upon the petition (including any reconsideration) not later than the end of the 12-month period following the date of the filing of the petition by the state involved. Commercial mobile radio service providers offering such service in the state shall comply with the existing regulations of the state until the petition and any reconsideration of the petition are acted upon by the Commission.

(3) The provisions of paragraph (a)(7) of this section apply to any petition granted by the Commission under this paragraph.

(c) No sooner than 18 months from grant of authority by the Commission under this section for state rate regulations, any interested party may petition the Commission for an order to

discontinue state authority for rate regulation.

(1) Petitions to discontinue state authority for rate regulation must be based on recent empirical data or other significant evidence demonstrating that the exercise of rate authority by a state is no longer necessary to ensure that the rates for commercial mobile are just and reasonable or not unjustly or unreasonably discriminatory.

(2) Any interested party may file comments in support of or in opposition to the petition within 30 days after public notice of the filing of the petition. Any interested party may file a reply within 15 days after the time for filing comments has expired. No additional pleadings may be filed. Except for 1.45 of this chapter, practice and procedure rules contained in §1.42–1.52 of this chapter apply. The provisions of §§1.771–1.773 of this chapter do not apply.

(3) The Commission shall act upon any petition filed by any interested party under this paragraph within nine months after the filing of the petition.

§ 20.15 Requirements under Title II of the Communications Act.

(a) Commercial mobile radio services providers, to the extent applicable, must comply with sections 201, 202, 206, 207, 208, 209, 216, 217, 223, 225, 226, 227, and 228 of the Communications Act, 47 U.S.C. 201, 202, 206, 207, 208, 209, 216, 217, 223, 225, 226, 227, 228; part 68 of this chapter, 47 CFR part 68; and §§1.701–1.748, and 1.815 of this chapter, 47 CFR 1.701–1.748, 1.815.

(b) Commercial mobile radio service providers are not required to:

(1) File with the Commission copies of contracts entered into with other carriers or comply with other reporting requirements, or with §§1.781 through 1.814 and 43.21 of this chapter; except that commercial radio service providers that offer broadband service, as described in §1.7001(a) of this chapter or mobile telephony are required to file reports pursuant to §§1.7000 and 43.11 of this chapter. For purposes of this section, *mobile telephony* is defined as real-time, two-way switched voice service that is interconnected with the public switched network utilizing an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless handoff of subscriber calls.

(2) Seek authority for interlocking directors (section 212 of the Communications Act);

(3) Submit applications for new facilities or discontinuance of existing facilities (section 214 of the Communications Act).

(c) Commercial mobile radio service providers shall not file tariffs for international and interstate service to their customers, interstate access service, or international and interstate operator service. Sections 1.771 through 1.773 and part 61 of this chapter are not applicable to international and interstate services provided by commercial mobile radio service providers. Commercial mobile radio service providers shall cancel tariffs for international and interstate service to their customers, interstate access service, and international and interstate operator service.

(d) Except as specified as in paragraphs (d)(1) and (2), nothing in this section shall be construed to modify the Commission's rules and policies on the provision of international service under part 63 of this chapter.

(1) Notwithstanding the provisions of §63.21(c) of this chapter, a commercial mobile radio service provider is not required to comply with §42.10 of this chapter.

(2) A commercial mobile radio service (CMRS) provider that is classified as dominant under §63.10 of this chapter due to an affiliation with a foreign carrier is required to comply with §42.11 of this chapter if the affiliated foreign carrier collects settlement payments from U.S. carriers for terminating U.S. international switched traffic at the foreign end of the route. Such a CMRS provider is not required to comply with §42.11, however, if it provides service on the affiliated route solely through the resale of an unaffiliated facilities-based provider's international switched services.

(3) For purposes of paragraphs (d)(1) and (2) of this section, *affiliated* and *foreign carrier* are defined in §63.09 of this Chapter.

(e) For obligations of commercial mobile radio service providers to provide local number portability, see § 52.1 of this chapter.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 38637, July 25, 1996; 63 FR 43040, Aug. 11, 1998; 65 FR 19685, Apr. 12, 2000; 65 FR 24654, Apr. 27, 2000; 66 FR 16879, Mar. 28, 2001; 69 FR 77938, Dec. 29, 2004]

§ 20.18 911 Service.

(a) *Scope of section.* The following requirements are only applicable to CMRS providers, excluding mobile satellite service (MSS) operators, to the extent that they:

(1) Offer real-time, two way switched voice service that is interconnected with the public switched network; and

(2) Utilize an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls. These requirements are applicable to entities that offer voice service to consumers by purchasing airtime or capacity at wholesale rates from CMRS licensees.

(b) *Basic 911 Service.* CMRS providers subject to this section must transmit all wireless 911 calls without respect to their call validation process to a Public Safety Answering Point, or, where no Public Safety Answering Point has been designated, to a designated statewide default answering point or appropriate local emergency authority pursuant to § 64.3001 of this chapter, provided that ''all wireless 911 calls'' is defined as ''any call initiated by a wireless user dialing 911 on a phone using a compliant radio frequency protocol of the serving carrier.''

(c) *TTY Access to 911 Services.* CMRS providers subject to this section must be capable of transmitting 911 calls from individuals with speech or hearing disabilities through means other than mobile radio handsets, *e.g.*, through the use of Text Telephone Devices (TTY).

(d) *Phase I enhanced 911 services.* (1) As of April 1, 1998, or within six months of a request by the designated Public Safety Answering Point as set forth in paragraph (j) of this section, whichever is later, licensees subject to this section must provide the telephone number of the originator of a 911 call and the location of the cell site or base station receiving a 911 call from any mobile handset accessing their systems to the designated Public Safety Answering Point through the use of ANI and Pseudo-ANI.

(2) When the directory number of the handset used to originate a 911 call is not available to the serving carrier, such carrier's obligations under the paragraph (d)(1) of this section extend only to delivering 911 calls and available call party information, including that prescribed in paragraph (l) of this section, to the designated Public Safety Answering Point.

NOTE TO PARAGRAPH (d): With respect to 911 calls accessing their systems through the use of TTYs, licensees subject to this section must comply with the requirements in paragraphs (d)(1) and (d)(2) of this section, as to calls made using a digital wireless system, as of October 1, 1998.

(e) *Phase II enhanced 911 service.* Licensees subject to this section must provide to the designated Public Safety Answering Point Phase II enhanced 911 service, *i.e.*, the location of all 911 calls by longitude and latitude in conformance with Phase II accuracy requirements (*see* paragraph (h) of this section).

(f) *Phase-in for network-based location technologies.* Licensees subject to this section who employ a network-based location technology shall provide Phase II 911 enhanced service to at least 50 percent of their coverage area or 50 percent of their population beginning October 1, 2001, or within 6 months of a PSAP request, whichever is later; and to 100 percent of their coverage area or 100 percent of their population within 18 months of such a request or by October 1, 2002, whichever is later.

(g) *Phase-in for handset-based location technologies.* Licensees subject to this section who employ a handset-based location technology may phase in deployment of Phase II enhanced 911 service, subject to the following requirements:

(1) Without respect to any PSAP request for deployment of Phase II 911 enhanced service, the licensee shall:

(i) Begin selling and activating location-capable handsets no later than October 1, 2001;

(ii) Ensure that at least 25 percent of all new handsets activated are location-capable no later than December 31, 2001;

(iii) Ensure that at least 50 percent of all new handsets activated are location-capable no later than June 30, 2002; and

(iv) Ensure that 100 percent of all new digital handsets activated are location-capable no later than December 31, 2002, and thereafter.

(v) By December 31, 2005, achieve 95 percent penetration of location-capable handsets among its subscribers.

(vi) Licensees that meet the enhanced 911 compliance obligations through GPS-enabled handsets and have commercial agreements with resellers will not be required to include the resellers' handset counts in their compliance percentages.

(2) Once a PSAP request is received, the licensee shall, in the area served by the PSAP, within six months or by October 1, 2001, whichever is later:

(i) Install any hardware and/or software in the CMRS network and/or other fixed infrastructure, as needed, to enable the provision of Phase II enhanced 911 service; and

(ii) Begin delivering Phase II enhanced 911 service to the PSAP.

(3) For all 911 calls from portable or mobile phones that do not contain the hardware and/or software needed to enable the licensee to provide Phase II enhanced 911 service, the licensee shall, after a PSAP request is received, support, in the area served by the PSAP, Phase I location for 911 calls or other available best practice method of providing the location of the portable or mobile phone to the PSAP.

(4) Licensees employing handset-based location technologies shall ensure that location-capable portable or mobile phones shall conform to industry interoperability standards designed to enable the location of such phones by multiple licensees.

(h) *Phase II accuracy*. Licensees subject to this section shall comply with the following standards for Phase II location accuracy and reliability, to be tested and measured either at the county or at the PSAP service area geographic level, based on outdoor measurements only:

(1) *Network-based technologies:*

(i) 100 meters for 67 percent of calls, consistent with the following benchmarks:

(A) One year from January 18, 2011, carriers shall comply with this standard in 60 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 70 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(B) Three years from January 18, 2011, carriers shall comply with this standard in 70 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 80 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(C) Five years from January 18, 2011, carriers shall comply with this standard in 100% of counties or PSAP service areas covered by the carrier. Compliance will be measured on a per-county or per-PSAP basis, using, at the carrier's election, either

(*1*) Network-based accuracy data,

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section, or

(*3*) Handset-based accuracy data as provided in paragraph (h)(1)(v) of this section.

(ii) 300 meters for 90 percent of calls, consistent with the following benchmarks:

(A) Three years from January 18, 2011, carriers shall comply with this standard in 60 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 70 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(B) Five years from January 18, 2011, carriers shall comply in 70 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 80 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(C) Eight years from January 18, 2011, carriers shall comply in 85 percent of counties or PSAP service areas. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data,

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section, or

(*3*) Handset-based accuracy data as provided in paragraph (h)(1)(v) of this section.

(iii) County-level or PSAP-level location accuracy standards for network-based technologies will be applicable to those counties or PSAP service areas, on an individual basis, in which a network-based carrier has deployed Phase II in at least one cell site located within a county's or PSAP service area's boundary. Compliance with the requirements of paragraph (h)(1)(i) and paragraph (h)(1)(ii) of this section shall be measured and reported independently.

(iv) Accuracy data from both network-based solutions and handset-based solutions may be blended to measure compliance with the accuracy requirements of paragraph (h)(1)(i)(A) through (C) and paragraph (h)(1)(ii)(A) through (C) of this section. Such blending shall be based on weighting accuracy data in the ratio of assisted GPS (''A–GPS'') handsets to non-A–GPS handsets in the carrier's subscriber base. The weighting ratio shall be applied to the accuracy data from each solution and measured against the network-based accuracy requirements of paragraph (h)(1) of this section.

(v) A carrier may rely solely on handset-based accuracy data in any county or PSAP service area if at least 85 percent of its subscribers, networkwide, use A–GPS handsets, or if it offers A–GPS handsets to subscribers in that county or PSAP service area at no cost to the subscriber.

(vi) A carrier may exclude from compliance particular counties, or portions of counties, where triangulation is not technically possible, such as locations where at least three cell sites are not sufficiently visible to a handset. Carriers must file a list of the specific counties or portions of counties where they are utilizing this exclusion within 90 days following approval from the Office of Management and Budget for the related information collection. This list must be submitted electronically into PS Docket No. 07–114, and copies must be sent to the National Emergency Number Association, the Association of Public-Safety Communications Officials-International, and the National Association of State 9–1–1 Administrators. Further, carriers must submit in the same manner any changes to their exclusion lists within thirty days of discovering such changes. This exclusion will sunset on [8 years after effective date].

(2) *Handset-based technologies:*

(i) Two years from January 18, 2011, 50 meters for 67 percent of calls, and 150 meters for 80 percent of calls, on a per-county or per-PSAP basis. However, a carrier may exclude up to 15 percent of counties or PSAP service areas from the 150 meter requirement based upon heavy forestation that limits handset-based technology accuracy in those counties or PSAP service areas.

(ii) Eight years from January 18, 2011, 50 meters for 67 percent of calls, and 150 meters for 90 percent of calls, on a per-county or per-PSAP basis. However, a carrier may exclude up to 15 percent of counties or PSAP service areas from the 150 meter requirement based upon heavy forestation that limits handset-based technology accuracy in those counties or PSAP service areas.

(iii) Carriers must file a list of the specific counties or PSAP service areas where they are utilizing the exclusion for heavy forestation within 90 days following approval from the Office of Management and Budget for the related information collection. This list must be submitted electronically into PS Docket No. 07–114, and copies must be sent to the National Emergency

Number Association, the Association of Public-Safety Communications Officials-International, and the National Association of State 9–1–1 Administrators. Further, carriers must submit in the same manner any changes to their exclusion lists within thirty days of discovering such changes.

(iv) Providers of new CMRS networks that meet the definition of covered CMRS providers under paragraph (a) of this section must comply with the requirements of paragraphs (h)(2)(i) through (iii) of this section. For this purpose, a ''new CMRS network'' is a CMRS network that is newly deployed subsequent to the effective date of the Third Report and Order in PS Docket No. 07–114 and that is not an expansion or upgrade of an existing CMRS network.

(3) *Latency (Time to First Fix).* For purposes of measuring compliance with the location accuracy standards of this paragraph, a call will be deemed to satisfy the standard only if it provides the specified degree of location accuracy within a maximum latency period of 30 seconds, as measured from the time the user initiates the 911 call to the time the location fix appears at the location information center: Provided, however, that the CMRS provider may elect not to include for purposes of measuring compliance therewith any calls lasting less than 30 seconds.

(i) *Indoor location accuracy for 911 and testing requirements*—(1) *Definitions:* The terms as used in this section have the following meaning:

(i) *Dispatchable location:* A location delivered to the PSAP by the CMRS provider with a 911 call that consists of the street address of the calling party, plus additional information such as suite, apartment or similar information necessary to adequately identify the location of the calling party. The street address of the calling party must be validated and, to the extent possible, corroborated against other location information prior to delivery of dispatchable location information by the CMRS provider to the PSAP.

(ii) *Media Access Control (MAC) Address.* A location identifier of a Wi-Fi access point.

(iii) *National Emergency Address Database (NEAD).* A database that utilizes MAC address information to identify a dispatchable location for nearby wireless devices within the CMRS provider's coverage footprint.

(iv) *Nationwide CMRS provider:* A CMRS provider whose service extends to a majority of the population and land area of the United States.

(v) *Non-nationwide CMRS provider:* Any CMRS provider other than a nationwide CMRS provider.

(vi) *Test Cities.* The six cities (San Francisco, Chicago, Atlanta, Denver/Front Range, Philadelphia, and Manhattan Borough) and surrounding geographic areas that correspond to the six geographic regions specified by the February 7, 2014 ATIS Document, ''Considerations in Selecting Indoor Test Regions,'' for testing of indoor location technologies.

(2) *Indoor location accuracy standards:* CMRS providers subject to this section shall meet the following requirements:

(i) *Horizontal location.* (A) Nationwide CMRS providers shall provide; dispatchable location, or ; x/y location within 50 meters, for the following percentages of wireless 911 calls within the following timeframes, measured from the effective date of the adoption of this rule:

(*1*) Within 2 years: 40 percent of all wireless 911 calls.

(*2*) Within 3 years: 50 percent of all wireless 911 calls.

(*3*) Within 5 years: 70 percent of all wireless 911 calls.

(*4*) Within 6 years: 80 percent of all wireless 911 calls.

(B) Non-nationwide CMRS providers shall provide; dispatchable location or; x/y location within 50 meters, for the following percentages of wireless 911 calls within the following timeframes, measured from the effective date of the adoption of this rule:

(*1*) Within 2 years: 40 percent of all wireless 911 calls.

(*2*) Within 3 years: 50 percent of all wireless 911 calls.

(*3*) Within 5 years or within six months of deploying a commercially-operating VoLTE platform in their network, whichever is later: 70 percent of all wireless 911 calls.

(*4*) Within 6 years or within one year of deploying a commercially-operating VoLTE platform in their network,

whichever is later: 80 percent of all wireless 911 calls.

(ii) *Vertical location.* CMRS providers shall provide vertical location information with wireless 911 calls as described in this section within the following timeframes measured from the effective date of the adoption of this rule:

(A) *Within 3 years:* All CMRS providers shall make uncompensated barometric data available to PSAPs with respect to any 911 call placed from any handset that has the capability to deliver barometric sensor information.

(B) *Within 3 years:* Nationwide CMRS providers shall develop one or more z-axis accuracy metrics validated by an independently administered and transparent test bed process as described in paragraph (i)(3)(i) of this section, and shall submit the proposed metric or metrics, supported by a report of the results of such development and testing, to the Commission for approval.

(C) Within 6 years: In each of the top 25 CMAs, nationwide CMRS providers shall deploy either;) dispatchable location, or ; z-axis technology in compliance with any z-axis accuracy metric that has been approved by the Commission,

(*1*) In each CMA where dispatchable location is used: nationwide CMRS providers must ensure that the NEAD is populated with a sufficient number of total dispatchable location reference points to equal 25 percent of the CMA population.

(*2*) In each CMA where z-axis technology is used: nationwide CMRS providers must deploy z-axis technology to cover 80 percent of the CMA population.

(D) Within 8 years: In each of the top 50 CMAs, nationwide CMRS providers shall deploy either

(*1*) Dispatchable location or;

(*2*) Such z-axis technology in compliance with any z-axis accuracy metric that has been approved by the Commission.

(E) Non-nationwide CMRS providers that serve any of the top 25 or 50 CMAs will have an additional year to meet each of the benchmarks in paragraphs (i)(2)(ii)(C) and (D) of this section.

(iii) *Compliance.* Within 60 days after each benchmark date specified in paragraphs (i)(2)(i) and (ii) of this section, CMRS providers must certify that they are in compliance with the location accuracy requirements applicable to them as of that date. CMRS providers shall be presumed to be in compliance by certifying that they have complied with the test bed and live call data provisions described in paragraph (i)(3) of this section.

(A) All CMRS providers must certify that the indoor location technology (or technologies) used in their networks are deployed consistently with the manner in which they have been tested in the test bed. A CMRS provider must update certification whenever it introduces a new technology into its network or otherwise modifies its network, such that previous performance in the test bed would no longer be consistent with the technology's modified deployment.

(B) CMRS providers that provide quarterly reports of live call data in one or more of the six test cities specified in paragraph (i)(1)(vi) of this section must certify that their deployment of location technologies throughout their coverage area is consistent with their deployment of the same technologies in the areas that are used for live call data reporting.

(C) Non-nationwide CMRS providers that do not provide service or report quarterly live call data in any of the six test cities specified in paragraph (i)(1)(vi) of this section must certify that they have verified based on their own live call data that they are in compliance with the requirements of paragraphs (i)(2)(i)(B) and (ii) of this section.

(iv) *Enforcement.* PSAPs may seek Commission enforcement within their geographic service area of the requirements of paragraphs (i)(2)(i) and (ii) of this section, but only so long as they have implemented policies that are designed to obtain all location information made available by CMRS providers when initiating and delivering 911 calls to the PSAP. Prior to seeking Commission enforcement, a PSAP must provide the CMRS provider with [30] days written notice, and the CMRS provider shall have an opportunity to address the issue informally. If the issue has

not been addressed to the PSAP's satisfaction within 90 days, the PSAP may seek enforcement relief.

(3) *Indoor location accuracy testing and live call data reporting*—(i) *Indoor location accuracy test bed.* CMRS providers must establish the test bed described in this section within 12 months of the effective date of this rule. CMRS providers must validate technologies intended for indoor location, including dispatchable location technologies and technologies that deliver horizontal and/or vertical coordinates, through an independently administered and transparent test bed process, in order for such technologies to be presumed to comply with the location accuracy requirements of this paragraph. The test bed shall meet the following minimal requirements in order for the test results to be considered valid for compliance purposes:

(A) Include testing in representative indoor environments, including dense urban, urban, suburban and rural morphologies;

(B) Test for performance attributes including location accuracy (ground truth as measured in the test bed), latency (Time to First Fix), and reliability (yield); and

(C) Each test call (or equivalent) shall be independent from prior calls and accuracy will be based on the first location delivered after the call is initiated.

(D) In complying with paragraph (i)(3)(i)(B) of this section, CMRS providers shall measure yield separately for each individual indoor location morphology (dense urban, urban, suburban, and rural) in the test bed, and based upon the specific type of location technology that the provider intends to deploy in real-world areas represented by that particular morphology. CMRS providers must base the yield percentage based on the number of test calls that deliver a location in compliance with any applicable indoor location accuracy requirements, compared to the total number of calls that successfully connect to the testing network. CMRS providers may exclude test calls that are dropped or otherwise disconnected in 10 seconds or less from calculation of the yield percentage (both the denominator and numerator).

(ii) *Collection and reporting of aggregate live 911 call location data.* CMRS providers providing service in any of the Test Cities or portions thereof must collect and report aggregate data on the location technologies used for live 911 calls in those areas.

(A) CMRS providers subject to this section shall identify and collect information regarding the location technology or technologies used for each 911 call in the reporting area during the calling period.

(B) CMRS providers subject to this section shall report Test City call location data on a quarterly basis to the Commission, the National Emergency Number Association, the Association of Public Safety Communications Officials, and the National Association of State 911 Administrators, with the first report due 18 months from the effective date of rules adopted in this proceeding.

(C) CMRS providers subject to this section shall also provide quarterly live call data on a more granular basis that allows evaluation of the performance of individual location technologies within different morphologies (*e.g.*, dense urban, urban, suburban, rural). To the extent available, live call data for all CMRS providers shall delineate based on a per technology basis accumulated and so identified for:

(*1*) Each of the ATIS ESIF morphologies;

(*2*) On a reasonable community level basis; or

(*3*) By census block. This more granular data will be used for evaluation and not for compliance purposes.

(D) Non-nationwide CMRS providers that operate in a single Test City need only report live 911 call data from that city or portion thereof that they cover. Non-nationwide CMRS providers that operate in more than one Test City must report live 911 call data only in half of the regions (as selected by the provider). In the event a non-nationwide CMRS provider begins coverage in a Test City it previously did not serve, it must update its certification pursuant to paragraph (i)(2)(iii)(C) of this section to reflect this change in its network and begin reporting data from

the appropriate areas. All non-nationwide CMRS providers must report their Test City live call data every 6 months, beginning 18 months from the effective date of rules adopted in this proceeding.

(E) Non-nationwide CMRS providers that do not provide coverage in any of the Test Cities can satisfy the requirement of paragraph (i)(3)(ii) of this section by collecting and reporting data based on the largest county within its footprint. In addition, where a non-nationwide CMRS provider serves more than one of the ATIS ESIF morphologies, it must include a sufficient number of representative counties to cover each morphology.

(iii) *Data retention.* CMRS providers shall retain testing and live call data gathered pursuant to this section for a period of 2 years.

(4) *Submission of plans and reports.* The following reporting and certification obligations apply to all CMRS providers subject to this section, which may be filed electronically in PS Docket No. 07–114:

(i) *Initial implementation plan.* No later than 18 months from the effective date of the adoption of this rule, nationwide CMRS providers shall report to the Commission on their plans for meeting the indoor location accuracy requirements of paragraph (i)(2) of this section. Non-nationwide CMRS providers will have an additional 6 months to submit their implementation plans.

(ii) *Progress reports.* No later than 18 months from the effective date of the adoption of this rule, each CMRS provider shall file a progress report on implementation of indoor location accuracy requirements. Non-nationwide CMRS providers will have an additional 6 months to submit their progress reports. All CMRS providers shall provide an additional progress report no later than 36 months from the effective date of the adoption of this rule. The 36-month reports shall indicate what progress the provider has made consistent with its implementation plan, and the nationwide CMRS providers shall include an assessment of their deployment of dispatchable location solutions. For any CMRS provider participating in the development of the NEAD database, this progress report must include detail as to the implementation of the NEAD database described in paragraphs (i)(4)(iii) and (iv) of this section.

(iii) *NEAD privacy and security plan.* Prior to activation of the NEAD but no later than 18 months from the effective date of the adoption of this rule, the nationwide CMRS providers shall file with the Commission and request approval for a security and privacy plan for the administration and operation of the NEAD. The plan must include the identity of an administrator for the NEAD, who will serve as a point of contact for the Commission and shall be accountable for the effectiveness of the security, privacy, and resiliency measures.

(iv) *NEAD use certification.* Prior to use of the NEAD or any information contained therein to meet such requirements, CMRS providers must certify that they will not use the NEAD or associated data for any non-911 purpose, except as otherwise required by law.

(j) *Confidence and uncertainty data.* (1) Except as provided in paragraphs (j)(2)–(3) of this section, CMRS providers subject to this section shall provide for all wireless 911 calls, whether from outdoor or indoor locations, x- and y-axis (latitude, longitude) confidence and uncertainty information (C/U data) on a per-call basis upon the request of a PSAP. The data shall specify

(i) The caller's location with a uniform confidence level of 90 percent, and;

(ii) The radius in meters from the reported position at that same confidence level. All entities responsible for transporting confidence and uncertainty between CMRS providers and PSAPs, including LECs, CLECs, owners of E911 networks, and emergency service providers, must enable the transmission of confidence and uncertainty data provided by CMRS providers to the requesting PSAP.

(2) Upon meeting the 3-year timeframe pursuant to paragraph (i)(2)(i) of this section, CMRS providers shall provide with wireless 911 calls that have a dispatchable location the C/U data for the x- and y-axis (latitude, longitude) required under paragraph (j)(1) of this section.

(3) Upon meeting the 6-year timeframe pursuant to paragraph (i)(2)(i) of this section, CMRS providers shall provide with wireless 911 calls that have a dispatchable location the C/U data for the x- and y-axis (latitude, longitude) required under paragraph (j)(1) of this section.

(k) *Provision of live 911 call data for PSAPs.* Notwithstanding other 911 call data collection and reporting requirements in paragraph (i) of this section, CMRS providers must record information on all live 911 calls, including, but not limited to, the positioning source method used to provide a location fix associated with the call. CMRS providers must also record the confidence and uncertainty data that they provide pursuant to paragraphs (j)(1) through (3) of this section. This information must be made available to PSAPs upon request, and shall be retained for a period of two years.

(l) *Reports on Phase II plans.* Licensees subject to this section shall report to the Commission their plans for implementing Phase II enhanced 911 service, including the location-determination technology they plan to employ and the procedure they intend to use to verify conformance with the Phase II accuracy requirements by November 9, 2000. Licensees are required to update these plans within thirty days of the adoption of any change. These reports and updates may be filed electronically in a manner to be designated by the Commission.

(m) *Conditions for enhanced 911 services*—(1) *Generally.* The requirements set forth in paragraphs (d) through (h)(2) and in paragraph (j) of this section shall be applicable only to the extent that the administrator of the applicable designated PSAP has requested the services required under those paragraphs and such PSAP is capable of receiving and utilizing the requested data elements and has a mechanism for recovering the PSAP's costs associated with them.

(2) *Commencement of six-month period.* (i) Except as provided in paragraph (ii) of this section, for purposes of commencing the six-month period for carrier implementation specified in paragraphs (d), (f) and (g) of this section, a PSAP will be deemed capable of receiving and utilizing the data elements associated with the service requested, if it can demonstrate that it has:

(A) Ordered the necessary equipment and has commitments from suppliers to have it installed and operational within such six-month period; and

(B) Made a timely request to the appropriate local exchange carrier for the necessary trunking, upgrades, and other facilities.

(ii) For purposes of commencing the six-month period for carrier implementation specified in paragraphs (f) and (g) of this section, a PSAP that is Phase I-capable using a Non-Call Path Associated Signaling (NCAS) technology will be deemed capable of receiving and utilizing the data elements associated with Phase II service if it can demonstrate that it has made a timely request to the appropriate local exchange carrier for the ALI database upgrade necessary to receive the Phase II information.

(3) *Tolling of six-month period.* Where a wireless carrier has served a written request for documentation on the PSAP within 15 days of receiving the PSAP's request for Phase I or Phase II enhanced 911 service, and the PSAP fails to respond to such request within 15 days of such service, the six-month period for carrier implementation specified in paragraphs (d), (f), and (g) of this section will be tolled until the PSAP provides the carrier with such documentation.

(4) *Carrier certification regarding PSAP readiness issues.* At the end of the six-month period for carrier implementation specified in paragraphs (d), (f) and (g) of this section, a wireless carrier that believes that the PSAP is not capable of receiving and utilizing the data elements associated with the service requested may file a certification with the Commission. Upon filing and service of such certification, the carrier may suspend further implementation efforts, except as provided in paragraph (j)(4)(x) of this section.

(i) As a prerequisite to filing such certification, no later than 21 days prior to such filing, the wireless carrier must notify the affected PSAP, in writing, of its intent to file such certification. Any response that the carrier

receives from the PSAP must be included with the carrier's certification filing.

(ii) The certification process shall be subject to the procedural requirements set forth in sections 1.45 and 1.47 of this chapter.

(iii) The certification must be in the form of an affidavit signed by a director or officer of the carrier, documenting:

(A) The basis for the carrier's determination that the PSAP will not be ready;

(B) Each of the specific steps the carrier has taken to provide the E911 service requested;

(C) The reasons why further implementation efforts cannot be made until the PSAP becomes capable of receiving and utilizing the data elements associated with the E911 service requested; and

(D) The specific steps that remain to be completed by the wireless carrier and, to the extent known, the PSAP or other parties before the carrier can provide the E911 service requested.

(iv) All affidavits must be correct. The carrier must ensure that its affidavit is correct, and the certifying director or officer has the duty to personally determine that the affidavit is correct.

(v) A carrier may not engage in a practice of filing inadequate or incomplete certifications for the purpose of delaying its responsibilities.

(vi) To be eligible to make a certification, the wireless carrier must have completed all necessary steps toward E911 implementation that are not dependent on PSAP readiness.

(vii) A copy of the certification must be served on the PSAP in accordance with §1.47 of this chapter. The PSAP may challenge in writing the accuracy of the carrier's certification and shall serve a copy of such challenge on the carrier. *See* §§1.45 and 1.47 and §§1.720 through 1.736 of this chapter.

(viii) If a wireless carrier's certification is facially inadequate, the six-month implementation period specified in paragraphs (d), (f) and (g) of this section will not be suspended as provided for in paragraph (j)(4) of this section.

(ix) If a wireless carrier's certification is inaccurate, the wireless carrier will be liable for noncompliance as if the certification had not been filed.

(x) A carrier that files a certification under paragraph (j)(4) of this section shall have 90 days from receipt of the PSAP's written notice that it is capable of receiving and utilizing the data elements associated with the service requested to provide such service in accordance with the requirements of paragraphs (d) through (h) of this section.

(5) *Modification of deadlines by agreement.* Nothing in this section shall prevent Public Safety Answering Points and carriers from establishing, by mutual consent, deadlines different from those imposed for carrier and PSAP compliance in paragraphs (d), (f), and (g)(2) of this section.

(n) *Dispatch service.* A service provider covered by this section who offers dispatch service to customers may meet the requirements of this section with respect to customers who utilize dispatch service either by complying with the requirements set forth in paragraphs (b) through (e) of this section, or by routing the customer's emergency calls through a dispatcher. If the service provider chooses the latter alternative, it must make every reasonable effort to explicitly notify its current and potential dispatch customers and their users that they are not able to directly reach a PSAP by calling 911 and that, in the event of an emergency, the dispatcher should be contacted.

(o) *Non-service-initialized handsets.* (1) Licensees subject to this section that donate a non-service-initialized handset for purposes of providing access to 911 services are required to:

(i) Program each handset with 911 plus the decimal representation of the seven least significant digits of the Electronic Serial Number, International Mobile Equipment Identifier, or any other identifier unique to that handset;

(ii) Affix to each handset a label which is designed to withstand the length of service expected for a non-service-initialized phone, and which notifies the user that the handset can only be used to dial 911, that the 911 operator will not be able to call the user back, and that the user should convey

the exact location of the emergency as soon as possible; and

(iii) Institute a public education program to provide the users of such handsets with information regarding the limitations of non-service-initialized handsets.

(2) Manufacturers of 911-only handsets that are manufactured on or after May 3, 2004, are required to:

(i) Program each handset with 911 plus the decimal representation of the seven least significant digits of the Electronic Serial Number, International Mobile Equipment Identifier, or any other identifier unique to that handset;

(ii) Affix to each handset a label which is designed to withstand the length of service expected for a non-service-initialized phone, and which notifies the user that the handset can only be used to dial 911, that the 911 operator will not be able to call the user back, and that the user should convey the exact location of the emergency as soon as possible; and

(iii) Institute a public education program to provide the users of such handsets with information regarding the limitations of 911-only handsets.

(3) *Definitions.* The following definitions apply for purposes of this paragraph.

(i) *Non-service-initialized handset.* A handset for which there is no valid service contract with a provider of the services enumerated in paragraph (a) of this section.

(ii) *911-only handset.* A non-service-initialized handset that is manufactured with the capability of dialing 911 only and that cannot receive incoming calls.

(p) *Reseller obligation.* (1) Beginning December 31, 2006, resellers have an obligation, independent of the underlying licensee, to provide access to basic and enhanced 911 service to the extent that the underlying licensee of the facilities the reseller uses to provide access to the public switched network complies with sections 20.18(d)–(g).

(2) Resellers have an independent obligation to ensure that all handsets or other devices offered to their customers for voice communications and sold after December 31, 2006 are capable of transmitting enhanced 911 information to the appropriate PSAP, in accordance with the accuracy requirements of section 20.18(i).

(q) *Text-to-911 Requirements*—(1) *Covered Text Provider:* Notwithstanding any other provisions in this section, for purposes of this paragraph (n) of this section, a ''covered text provider'' includes all CMRS providers as well as all providers of interconnected text messaging services that enable consumers to send text messages to and receive text messages from all or substantially all text-capable U.S. telephone numbers, including through the use of applications downloaded or otherwise installed on mobile phones.

(2) *Automatic Bounce-back Message:* an automatic text message delivered to a consumer by a covered text provider in response to the consumer's attempt to send a text message to 911 when the consumer is located in an area where text-to-911 service is unavailable or the covered text provider does not support text-to-911 service generally or in the area where the consumer is located at the time.

(3) No later than September 30, 2013, all covered text providers shall provide an automatic bounce-back message under the following circumstances:

(i) A consumer attempts to send a text message to a Public Safety Answering Point (PSAP) by means of the three-digit short code ''911''; and

(ii) The covered text provider cannot deliver the text because the consumer is located in an area where:

(A) Text-to-911 service is unavailable; or

(B) The covered text provider does not support text-to-911 service at the time.

(4)(i) A covered text provider is not required to provide an automatic bounce-back message when:

(A) Transmission of the text message is not controlled by the provider;

(B) A consumer is attempting to text 911, through a text messaging application that requires CMRS service, from a non-service initialized handset;

(C) When the text-to-911 message cannot be delivered to a PSAP due to failure in the PSAP network that has not been reported to the provider; or

(D) A consumer is attempting to text 911 through a device that is incapable

of sending texts via three digit short codes, provided the software for the device cannot be upgraded over the air to allow text-to-911.

(ii) The provider of a preinstalled or downloadable interconnected text application is considered to have ''control'' over transmission of text messages for purposes of paragraph (n)(4)(i)(A) of this section. However, if a user or a third party modifies or manipulates the application after it is installed or downloaded so that it no longer supports bounce-back messaging, the application provider will be presumed not to have control.

(5) The automatic bounce-back message shall, at a minimum, inform the consumer that text-to-911 service is not available and advise the consumer or texting program user to use another means to contact emergency services.

(6) Covered text providers that support text-to-911 must provide a mechanism to allow PSAPs that accept text-to-911 to request temporary suspension of text-to-911 service for any reason, including, but not limited to, network congestion, call taker overload, PSAP failure, or security breach, and to request resumption of text-to-911 service after such temporary suspension. During any period of suspension of text-to-911 service, the covered text provider must provide an automatic bounce-back message to any consumer attempting to text to 911 in the area subject to the temporary suspension.

(7) Notwithstanding any other provisions in this section, when a consumer is roaming on a covered text provider's host network pursuant to §20.12, the covered text provider operating the consumer's home network shall have the obligation to originate an automatic bounce-back message to such consumer when the consumer is located in an area where text-to-911 service is unavailable, or the home provider does not support text-to-911 service in that area at the time. The host provider shall not impede the consumer's 911 text message to the home provider and/or any automatic bounce-back message originated by the home provider to the consumer roaming on the host network.

(8) A software application provider that transmits text messages directly into the SMS network of the consumer's underlying CMRS provider satisfies the obligations of paragraph (n)(3) of this section provided it does not prevent or inhibit delivery of the CMRS provider's automatic bounce-back message to the consumer.

(9) *911 text message.* A 911 text message is a message, consisting of text characters, sent to the short code ''911'' and intended to be delivered to a PSAP by a covered text provider, regardless of the text messaging platform used.

(10) *Delivery of 911 text messages.* (i) No later than December 31, 2014, all covered text providers must have the capability to route a 911 text message to a PSAP. In complying with this requirement, covered text providers must obtain location information sufficient to route text messages to the same PSAP to which a 911 voice call would be routed, unless the responsible local or state entity designates a different PSAP to receive 911 text messages and informs the covered text provider of that change. All covered text providers using device-based location information that requires consumer activation must clearly inform consumers that they must grant permission for the text messaging application to access the wireless device's location information in order to enable text-to-911. If a consumer does not permit this access, the covered text provider's text application must provide an automated bounce-back message as set forth in paragraph (n)(3) of this section.

(ii) Covered text providers must begin routing all 911 text messages to a PSAP by June 30, 2015, or within six months of the PSAP's valid request for text-to-911 service, whichever is later, unless an alternate timeframe is agreed to by both the PSAP and the covered text provider. The covered text provider must notify the Commission of the dates and terms of the alternate timeframe within 30 days of the parties' agreement.

(iii) *Valid Request* means that:

(A) The requesting PSAP is, and certifies that it is, technically ready to receive 911 text messages in the format requested;

(B) The appropriate local or state 911 service governing authority has specifically authorized the PSAP to accept and, by extension, the covered text provider to provide, text-to-911 service; and

(C) The requesting PSAP has provided notification to the covered text provider that it meets the foregoing requirements. Registration by the PSAP in a database made available by the Commission in accordance with requirements established in connection therewith, or any other written notification reasonably acceptable to the covered text provider, shall constitute sufficient notification for purposes of this paragraph.

(iv) The requirements set forth in paragraphs (n)(10)(i) through (iii) of this section do not apply to in-flight text messaging providers, MSS providers, or IP Relay service providers, or to 911 text messages that originate from Wi-Fi only locations or that are transmitted from devices that cannot access the CMRS network.

(11) *Access to SMS networks for 911 text messages.* To the extent that CMRS providers offer Short Message Service (SMS), they shall allow access by any other covered text provider to the capabilities necessary for transmission of 911 text messages originating on such other covered text providers' application services. Covered text providers using the CMRS network to deliver 911 text messages must clearly inform consumers that, absent an SMS plan with the consumer's underlying CMRS provider, the covered text provider may be unable to deliver 911 text messages. CMRS providers may migrate to other technologies and need not retain SMS networks solely for other covered text providers' 911 use, but must notify the affected covered text providers not less than 90 days before the migration is to occur.

[63 FR 2637, Jan. 16, 1998]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 20.18, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

EFFECTIVE DATE NOTES: 1. At 68 FR 2918, Jan. 22, 2003, in § 20.18, paragraph (j) was revised. Paragraphs (j)(4) and (5) contain information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

2. At 72 FR 27708, May 16, 2007, in § 20.18, paragraph (a) was revised. The paragraph contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 20.19 Hearing aid-compatible mobile handsets.

(a) Scope of section; definitions. (1) The hearing aid compatibility requirements of this section apply to providers of digital CMRS in the United States to the extent that they offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls, and such service is provided over frequencies in the 698 MHz to 6 GHz bands.

(2) The requirements of this section also apply to the manufacturers of the wireless handsets that are used in delivery of the services specified in paragraph (a)(1) of this section.

(3) *Definitions.* For purposes of this section:

(i) *Handset* refers to a device used in delivery of the services specified in paragraph (a)(1) of this section that contains a built-in speaker and is typically held to the ear in any of its ordinary uses.

(ii) *Manufacturer* refers to a wireless handset manufacturer to which the requirements of this section apply.

(iii) *Model* refers to a wireless handset device that a manufacturer has designated as a distinct device model, consistent with its own marketing practices. However, if a manufacturer assigns different model device designations solely to distinguish units sold to different carriers, or to signify other distinctions that do not relate to either form, features, or capabilities, such designations shall not count as distinct models for purposes of this section.

(iv) *Service provider* refers to a provider of digital CMRS to which the requirements of this section apply.

(v) *Tier I carrier* refers to a CMRS provider that offers such service nationwide.

(b) *Hearing aid compatibility; technical standards*—(1) *For radio frequency interference.* A wireless handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility must meet, at a minimum, the M3 rating associated with the technical standard set forth in either the standard document ''American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids,'' ANSI C63.19–2007 or ANSI C63.19–2011. Any grants of certification issued before January 1, 2010, under previous versions of ANSI C63.19 remain valid for hearing aid compatibility purposes.

(2) *For inductive coupling.* A wireless handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility must meet, at a minimum, the T3 rating associated with the technical standard set forth in either the standard document ''American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids,'' ANSI C63.19–2007 or ANSI C63.19–2011. Any grants of certification issued before January 1, 2010, under previous versions of ANSI C63.19 remain valid for hearing aid compatibility purposes.

(3) *Handsets operating over multiple frequency bands or air interfaces.* (i) Except as provided in paragraph (b)(3)(ii) of this section, a wireless handset used for digital CMRS only over the 698 MHz to 6 GHz frequency bands is hearing aid-compatible with regard to radio frequency interference or inductive coupling if it meets the applicable technical standard set forth in paragraph (b)(1) or (b)(2) of this section for all frequency bands and air interfaces over which it operates, and the handset has been certified as compliant with the test requirements for the applicable standard pursuant to §2.1033(d) of this chapter. A wireless handset that incorporates operations outside the 698 MHz to 6 GHz frequency bands is hearing aid-compatible if the handset otherwise satisfies the requirements of this paragraph.

(ii) A handset that is introduced by the manufacturer prior to July 17, 2013, and that does not meet the requirements for hearing aid compatibility under paragraph (b)(3)(i) of this section, is hearing aid-compatible for radio frequency interference or inductive coupling only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19–2007 if it meets, at a minimum, an M3 rating (for radio frequency interference) or a T3 rating (for inductive coupling) under ANSI C63.19–2007 for all such frequency bands and air interfaces over which it operates, and the handset has been certified as compliant with the test requirements for the applicable standard pursuant to §2.1033(d) of this chapter.

(4) All factual questions of whether a wireless handset meets the technical standard(s) of this paragraph shall be referred for resolution to the Chief, Office of Engineering and Technology, Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554.

(c) Phase-in of requirements relating to radio frequency interference. The following applies to each manufacturer and service provider that offers wireless handsets used in the delivery of the services specified in paragraph (a) of this section and that does not fall within the *de minimis* exception set forth in paragraph (e) of this section. However, prior to July 17, 2014 for manufacturers and Tier I carriers and October 17, 2014 for service providers other than Tier I carriers, the requirements of this section do not apply to handset operations over frequency bands and air interfaces for which technical standards are not stated in ANSI C63.19–2007.

(1) *Manufacturers*—(i) *Number of hearing aid-compatible handset models offered.* For each digital air interface for which it offers wireless handsets in the United States or imported for use in the United States, each manufacturer of wireless handsets must offer handset models that comply with paragraph (b)(1) of this section. Prior to September 8, 2011, handset models for purposes of this paragraph include only models offered to service providers in the United States.

(A) If it offers four to six models, at least two of those handset models must comply with the requirements set forth in paragraph (b)(1) of this section.

(B) If it offers more than six models, at least one-third of those handset models (rounded down to the nearest whole number) must comply with the requirements set forth in paragraph (b)(1) of this section.

(ii) *Refresh requirement.* Beginning in calendar year 2009, and for each year thereafter that it elects to produce a new model, each manufacturer that offers any new model for a particular air interface during the calendar year must ''refresh'' its offerings of hearing aid-compatible handset models by offering a mix of new and existing models that comply with paragraph (b)(1) of this section according to the following requirements:

(A) For manufacturers that offer three models per air interface, at least one new model rated M3 or higher shall be introduced every other calendar year.

(B) For manufacturers that offer four or more models operating over a particular air interface, the number of models rated M3 or higher that must be new models introduced during that calendar year is equal to one-half of the minimum number of models rated M3 or higher required for that air interface (rounded up to the nearest whole number).

(C) Beginning September 10, 2012, for manufacturers that together with their parent, subsidiary, or affiliate companies under common ownership or control, have had more than 750 employees for at least two years and that offer two models over an air interface for which they have been offering handsets for at least two years, at least one new model rated M3 or higher shall be introduced every other calendar year.

(2) *Tier I carriers.* For each digital air interface for which it offers wireless handsets to customers, each Tier I carrier must either:

(i) Ensure that at least fifty (50) percent of the handset models it offers comply with paragraph (b)(1) of this section, calculated based on the total number of unique digital wireless handset models the carrier offers nationwide; or

(ii) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(1) of this section:

(A) Prior to February 15, 2009, at least eight (8) handset models;

(B) Beginning February 15, 2009, at least nine (9) handset models; and

(C) Beginning February 15, 2010, at least ten (10) handset models.

(3) *Service providers other than Tier I carriers.* For each digital air interface for which it offers wireless handsets to customers, each service provider other than a Tier I carrier must:

(i) Prior to September 7, 2008, include in the handset models it offers at least two handset models that comply with paragraph (b)(1) of this section;

(ii) Beginning September 7, 2008, either:

(A) Ensure that at least fifty (50) percent of the handset models it offers comply with paragraph (b)(1) of this section, calculated based on the total number of unique digital wireless handset models the service provider offers nationwide; or

(B) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(1) of this section:

(*1*) Until May 15, 2009, at least eight (8) handset models;

(*2*) Beginning May 15, 2009, at least nine (9) handset models; and

(*3*) Beginning May 15, 2010, at least ten (10) handset models.

(4) *All service providers.* The following requirements apply to Tier I carriers and all other service providers.

(i) *In-store testing.* Each service provider must make available for consumers to test, in each retail store owned or operated by the provider, all of its handset models that comply with paragraph (b)(1) of this section.

(ii) *Offering models with differing levels of functionality.* Each service provider must offer its customers a range of hearing aid-compatible models with differing levels of functionality (*e.g.*, operating capabilities, features offered, prices). Each provider may determine the criteria for determining these differing levels of functionality, and must disclose its methodology to the Commission pursuant to paragraph (i)(3)(vii) of this section.

(d) Phase-in of requirements relating to inductive coupling capability. The following applies to each manufacturer and service provider that offers wireless handsets used in the delivery of the services specified in paragraph (a) of this section and that does not fall within the *de minimis* exception set forth in paragraph (e) of this section. However, prior to July 17, 2014 for manufacturers and Tier I carriers and October 17, 2014 for service providers other than Tier I carriers, the requirements of this section do not apply to handset operations over frequency bands and air interfaces for which technical standards are not stated in ANSI C63.19–2007.

(1) *Manufacturers.* Each manufacturer offering to service providers four or more handset models, and beginning September 8, 2011, each manufacturer offering four or more handset models, in a digital air interface for use in the United States or imported for use in the United States must ensure that it offers to service providers, and beginning September 8, 2011, must ensurel that it offers, at a minimum, the following number of handset models that comply with the requirements set forth in paragraph (b)(2) of this section, whichever number is greater in any given year.

(i) At least two (2) handset models in that air interface; or

(ii) At least the following percentage of handset models (rounded down to the nearest whole number):

(A) Beginning February 15, 2009, at least twenty (20) percent of its handset models in that air interface, provided that, of any such models introduced during calendar year 2009, one model may be rated using ANSI C63.19–2006 (June 12, 2006), and all other models introduced during that year or subsequent years shall be rated using ANSI C63.19–2007 (June 8, 2007) or subsequently adopted version as may be approved pursuant to paragraph (k);

(B) Beginning February 15, 2010, at least twenty-five (25) percent of its handset models in that air interface; and

(C) Beginning February 15, 2011, at least one-third of its handset models in that air interface.

(2) *Tier I carriers.* For each digital air interface for which it offers wireless handsets to service providers, each Tier I carrier must:

(i) Ensure that at least one-third of the handset models it offers comply with paragraph (b)(2) of this section, calculated based on the total number of unique digital wireless handset models the carrier offers nationwide; or

(ii) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(2) of this section:

(A) Prior to February 15, 2009, at least three (3) handset models;

(B) Beginning February 15, 2009, at least five (5) handset models;

(C) Beginning February 15, 2010, at least seven (7) handset models; and

(D) Beginning February 15, 2011, at least ten (10) handset models.

(3) *Service providers other than Tier I carriers.* For each digital air interface for which it offers wireless handsets to customers, each service provider other than a Tier I carrier must:

(i) Prior to September 7, 2008, include in the handset models it offers at least two handset models that comply with paragraph (b)(2) of this section;

(ii) Beginning September 7, 2008, either:

(A) Ensure that at least one-third of the handset models it offers comply with paragraph (b)(2) of this section, calculated based on the total number of unique digital wireless handset models the carrier offers nationwide; or

(B) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(2) of this section:

(*1*) Until May 15, 2009, at least three (3) handset models;

(*2*) Beginning May 15, 2009, at least five (5) handset models;

(*3*) Beginning May 15, 2010, at least seven (7) handset models; and

(*4*) Beginning May 15, 2011, at least ten (10) handset models.

(4) *All service providers.* The following requirements apply to Tier I carriers and all other service providers.

(i) *In-store testing.* Each service provider must make available for consumers to test, in each retail store owned or operated by the provider, all

of its handset models that comply with paragraph (b)(2) of this section.

(ii) *Offering models with differing levels of functionality*. Each service provider must offer its customers a range of hearing aid-compatible models with differing levels of functionality (*e.g.*, operating capabilities, features offered, prices). Each provider may determine the criteria for determining these differing levels of functionality, and must disclose its methodology to the Commission pursuant to paragraph (i)(3)(vii) of this section.

(e) *De minimis exception*. (1)(i) Manufacturers or service providers that offer two or fewer digital wireless handsets in an air interface in the United States are exempt from the requirements of this section in connection with that air interface, except with regard to the reporting requirements in paragraph (i) of this section. Service providers that obtain handsets only from manufacturers that offer two or fewer digital wireless handset models in an air interface in the United States are likewise exempt from the requirements of this section other than paragraph (i) of this section in connection with that air interface.

(ii) Notwithstanding paragraph (e)(1)(i) of this section, beginning September 10, 2012, manufacturers that have had more than 750 employees for at least two years and service providers that have had more than 1500 employees for at least two years, and that have been offering handsets over an air interface for at least two years, that offer one or two digital wireless handsets in that air interface in the United States must offer at least one handset model compliant with paragraphs (b)(1) and (b)(2) of this section in that air interface, except as provided in paragraph (e)(1)(iii) of this section. Service providers that obtain handsets only from manufacturers that offer one or two digital wireless handset models in an air interface in the United States, and that have had more than 750 employees for at least two years and have offered handsets over that air interface for at least two years, are required to offer at least one handset model in that air interface compliant with paragraphs (b)(1) and (b)(2) of this section, except as provided in paragraph (e)(1)(iii) of this section. For purposes of this paragraph, employees of a parent, subsidiary, or affiliate company under common ownership or control with a manufacturer or service provider are considered employees of the manufacturer or service provider. Manufacturers and service providers covered by this paragraph must also comply with all other requirements of this section.

(iii) Manufacturers and service providers that offer one or two digital handset models that operate over the GSM air interface in the 1900 MHz band may satisfy the requirements of paragraph (e)(1)(ii) of this section by offering at least one handset model that complies with paragraph (b)(2) of this section and that either complies with paragraph (b)(1) of this section or meets the following conditions:

(A) The handset enables the user optionally to reduce the maximum power at which the handset will operate by no more than 2.5 decibels, except for emergency calls to 911, only for GSM operations in the 1900 MHz band;

(B) The handset would comply with paragraph (b)(1) of this section if the power as so reduced were the maximum power at which the handset could operate; and

(C) Customers are informed of the power reduction mode as provided in paragraph (f)(3) of this section. Manufacturers and service providers covered by this paragraph must also comply with all other requirements of this section.

(2) Manufacturers or service providers that offer three digital wireless handset models in an air interface must offer at least one handset model compliant with paragraphs (b)(1) and (b)(2) of this section in that air interface. Service providers that obtain handsets only from manufacturers that offer three digital wireless handset models in an air interface in the United States are required to offer at least one handset model in that air interface compliant with paragraphs (b)(1) and (b)(2) of this section.

(f) *Labeling and disclosure requirements*—(1) *Labeling requirements*. Manufacturers and service providers shall ensure that handsets that are hearing aid-compatible, as defined in paragraph

(b) of this section, clearly display the rating, as defined in paragraphs (b)(1) and (b)(2) of this section, on the packaging material of the handset. In the event that a hearing aid-compatible handset achieves different radio interference or inductive coupling ratings over different air interfaces or different frequency bands, the RF interference reduction and inductive coupling capability ratings displayed shall be the lowest rating assigned to that handset for any air interface or frequency band. An explanation of the ANSI C63.19 rating system must also be included in the device's user's manual or as an insert in the packaging material for the handset.

(2) Disclosure requirements relating to handsets treated as hearing aid-compatible over fewer than all their operations.

(i) Each manufacturer and service provider shall ensure that, wherever it provides hearing aid compatibility ratings for a handset that is considered hearing aid-compatible under paragraph (b)(3)(ii) of this section only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19–2007 and that has not been tested for hearing aid compatibility under ANSI C63.19–2011, or any handset that operates over frequencies outside of the 698 MHz to 6 GHz bands, it discloses to consumers, by clear and effective means (e.g., inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that the handset has not been rated for hearing aid compatibility with respect to some of its operation(s). This disclosure shall include the following language:

> This phone has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service provider or phone retailer.

(ii) However, service providers are not required to include this language in the packaging material for handsets that incorporate a Wi-Fi air interface and that were obtained by the service provider before March 8, 2011, provided that the service provider otherwise discloses by clear and effective means that the handset has not been rated for hearing aid compatibility with respect to Wi-Fi operation.

(iii) Each manufacturer and service provider shall ensure that, wherever it provides hearing aid compatibility ratings for a handset that is considered hearing aid-compatible under paragraph (b)(3)(ii) of this section only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19–2007, and that the manufacturer has tested and found not to meet hearing aid compatibility requirements under ANSI C63.19–2011 for operations over one or more air interfaces or frequency bands for which technical standards are not stated in ANSI C63.19–2007, it discloses to consumers, by clear and effective means (e.g., inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that the handset does not meet the relevant rating or ratings with respect to such operation(s).

(3) *Disclosure requirement relating to handsets that allow the user to reduce the maximum power for GSM operation in the 1900 MHz band.* Handsets offered to satisfy paragraph (e)(1)(iii) of this section shall be labeled as meeting an M3 rating. Each manufacturer and service provider shall ensure that, wherever this rating is displayed, it discloses to consumers, by clear and effective means (*e.g.*, inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that user activation of a special mode is necessary to meet the hearing aid compatibility standard. In addition, each manufacturer or service provider shall ensure that the device manual or a product insert explains how to activate the special mode and that doing so may result in a reduction of coverage.

(g) *Model designation requirements.* Where a manufacturer has made physical changes to a handset that result in a change in the hearing aid compatibility rating under paragraph (b)(1) or (b)(2) of this section, the altered handset must be given a model designation distinct from that of the handset prior to its alteration.

(h) *Web site requirements.* Beginning January 15, 2009, each manufacturer and service provider subject to this section that operates a publicly-accessible Web site must make available on its Web site a list of all hearing aid-compatible models currently offered, the ratings of those models, and an explanation of the rating system. Each service provider must also specify on its Web site, based on the levels of functionality that the service provider has defined, the level that each hearing aid-compatible model falls under as well as an explanation of how the functionality of the handsets varies at the different levels.

(i) *Reporting requirements*—(1) *Reporting dates.* Manufacturers shall submit reports on efforts toward compliance with the requirements of this section on January 15, 2009 and on July 15, 2009, and on an annual basis on July 15 thereafter. Service providers shall submit reports on efforts toward compliance with the requirements of this section on January 15, 2009, and annually thereafter. Information in the reports must be up-to-date as of the last day of the calendar month preceding the due date of the report.

(2) *Content of manufacturer reports.* Reports filed by manufacturers must include:

(i) Digital wireless handset models tested, since the most recent report, for compliance with the applicable hearing aid compatibility technical ratings;

(ii) Compliant handset models offered to service providers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(iii) For each compliant model, the air interface(s) and frequency band(s) over which it operates, the hearing aid compatibility ratings for each frequency band and air interface under ANSI Standard C63.19, the ANSI Standard C63.19 version used, and the months in which the model was available to service providers since the most recent report;

(iv) Non-compliant models offered to service providers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(v) For each non-compliant model, the air interface(s) over which it operates and the months in which the model was available to service providers since the most recent report;

(vi) Total numbers of compliant and non-compliant models offered to service providers for each air interface as of the time of the report;

(vii) Any instance, as of the date of the report or since the most recent report, in which multiple compliant or non-compliant devices were marketed under separate model name/numbers but constitute a single model for purposes of the hearing aid compatibility rules, identifying each device by marketing model name/number and FCC ID number;

(viii) Status of product labeling;

(ix) Outreach efforts; and

(x) If the manufacturer maintains a public Web site, the Web site address of the page(s) containing the information regarding hearing aid-compatible handset models required by paragraph (h) of this section.

NOTE TO PARAGRAPH (i)(2): For reports due on January 15, 2009, information provided with respect to paragraphs (i)(2)(ii) through(i)(2)(v) and (i)(2)(vii) and (i)(2)(viii) need be provided only for the six-month period from July 1 to December 31, 2008.

(3) *Content of service provider reports.* Reports filed by service providers must include:

(i) Compliant handset models offered to customers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(ii) For each compliant model, the air interface(s) and frequency band(s) over which it operates, the hearing aid compatibility ratings for each frequency band and air interface under ANSI Standard C63.19, and the months in which the model was available since the most recent report;

(iii) Non-compliant models offered since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(iv) For each non-compliant model, the air interface(s) over which it operates and the months in which the model was available since the most recent report;

(v) Total numbers of compliant and non-compliant models offered to customers for each air interface over which the service provider offers service as of the time of the report;

(vi) Information related to the retail availability of compliant handset models;

(vii) The levels of functionality into which the compliant handsets fall and an explanation of the service provider's methodology for determining levels of functionality;

(viii) Status of product labeling;

(ix) Outreach efforts; and

(x) If the service provider maintains a public Web site, the Web site address of the page(s) containing the information regarding hearing aid-compatible handset models required by paragraph (h) of this section.

NOTE TO PARAGRAPH (i)(3): For reports due on January 15, 2009, information provided with respect to paragraphs (i)(3)(i) through (i)(3)(iv) and (i)(3)(vi) through (i)(3)(viii) need be provided only for the six-month period from July 1 to December 31, 2008.

(4) *Format.* The Wireless Telecommunications Bureau is delegated authority to approve or prescribe formats and methods for submission of these reports. Any format that the Bureau may approve or prescribe shall be made available on the Bureau's Web site.

(j) *Enforcement.* Enforcement of this section is hereby delegated to those states that adopt this section and provide for enforcement. The procedures followed by a state to enforce this section shall provide a 30-day period after a complaint is filed, during which time state personnel shall attempt to resolve a dispute on an informal basis. If a state has not adopted or incorporated this section, or failed to act within six (6) months from the filing of a complaint with the state public utility commission, the Commission will accept such complaints. A written notification to the complainant that the state believes action is unwarranted is not a failure to act. The procedures set forth in part 68, subpart E of this chapter are to be followed.

(k) *Delegation of rulemaking authority.* (1) The Chief of the Wireless Telecommunications Bureau and the Chief of the Office of Engineering and Technology are delegated authority, by notice-and-comment rulemaking, to issue an order amending this section to the extent necessary to adopt technical standards for additional frequency bands and/or air interfaces upon the establishment of such standards by ANSI Accredited Standards Committee C63™, provided that the standards do not impose with respect to such frequency bands or air interfaces materially greater obligations than those imposed on other services subject to this section. Any new obligations on manufacturers and Tier I carriers pursuant to paragraphs (c) through (i) of this section as a result of such standards shall become effective no less than one year after release of the order adopting such standards and any new obligations on other service providers shall become effective no less than 15 months after the release of such order, except that any new obligations on manufacturers and service providers subject to paragraph (e)(1)(ii) of this section shall become effective no less than two years after the release of such order.

(2) The Chief of the Wireless Telecommunications Bureau and the Chief of the Office of Engineering and Technology are delegated authority, by notice-and-comment rulemaking if required by statute or otherwise in the public interest, to issue an order amending this section to the extent necessary to approve any version of the technical standards for radio frequency interference or inductive coupling adopted subsequently to ANSI C63.19–2007 for use in determining whether a wireless handset meets the appropriate rating over frequency bands and air interfaces for which technical standards have previously been adopted either by the Commission or pursuant to paragraph (k)(1) of this section. This delegation is limited to the approval of changes to the technical standard that

do not raise major compliance issues. Further, by such approvals, the Chiefs may only permit, and not require, the use of such subsequent versions of standard document ANSI C63.19 to establish hearing aid compatibility.

(l) The standards required in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than those specified in this section, the FCC must publish notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the Federal Communications Commission (FCC), 445 12th St. SW., Reference Information Center, Room CY–A257, Washington, DC 20554 and is available from the sources indicated below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(1) IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08854–4141, (732) 981–0060, *http://www.ieee.org/portal/site*.

(i) ANSI C63.19–2007, American National Standard Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids, June 8, 2007

(ii) ANSI C63.19–2011, American National Standard Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids, May 27, 2011

(2) [Reserved]

[73 FR 25587, May 7, 2008, as amended at 75 FR 54522, Sept. 8, 2010; 77 FR 41928, July 17, 2012]

§ 20.20 Conditions applicable to provision of CMRS service by incumbent Local Exchange Carriers.

(a) *Separate affiliate.* An incumbent LEC providing in-region broadband CMRS shall provide such services through an affiliate that satisfies the following requirements:

(1) The affiliate shall maintain separate books of account from its affiliated incumbent LEC. Nothing in this section requires the affiliate to maintain separate books of account that comply with part 32 of this chapter;

(2) The affiliate shall not jointly own transmission or switching facilities with its affiliated incumbent LEC that the affiliated incumbent LEC uses for the provision of local exchange service in the same in-region market. Nothing in this section prohibits the affiliate from sharing personnel or other resources or assets with its affiliated incumbent LEC; and

(3) The affiliate shall acquire any services from its affiliated incumbent LEC for which the affiliated incumbent LEC is required to file a tariff at tariffed rates, terms, and conditions. Other transactions between the affiliate and the incumbent LEC for services that are not acquired pursuant to tariff must be reduced to writing and must be made on a compensatory, arm's length basis. All transactions between the incumbent LEC and the affiliate are subject to part 32 of this chapter, including the affiliate transaction rules. Nothing in this section shall prohibit the affiliate from acquiring any unbundled network elements or exchange services for the provision of a telecommunications service from its affiliated incumbent LEC, subject to the same terms and conditions as provided in an agreement approved under section 252 of the Communications Act of 1934, as amended.

(b) *Independence.* The affiliate required in paragraph (a) of this section shall be a separate legal entity from its affiliated incumbent LEC. The affiliate may be staffed by personnel of its affiliated incumbent LEC, housed in existing offices of its affiliated incumbent LEC, and use its affiliated incumbent LEC's marketing and other services, subject to paragraphs (a)(3) and (c) of this section.

(c) *Joint marketing.* Joint marketing of local exchange and exchange access service and CMRS services by an incumbent LEC shall be subject to part 32 of this chapter. In addition, such agreements between the affiliate and the incumbent LEC must be reduced to writing and made available for public inspection upon request at the principle place of business of the affiliate

and the incumbent LEC. The documentation must include a certification statement identical to the certification statement currently required to be included with all Automated Reporting and Management Information Systems (ARMIS) reports. The affiliate must also provide a detailed written description of the terms and conditions of the transaction on the Internet within 10 days of the transaction through the affiliate's home page.

(d) *Exceptions*—(1) *Rural telephone companies.* Rural telephone companies are exempted from the requirements set forth in paragraphs (a), (b) and (c) of this section. A competing telecommunications carrier, interconnected with the rural telephone company, however, may petition the FCC to remove the exemption, or the FCC may do so on its own motion, where the rural telephone company has engaged in anticompetitive conduct.

(2) *Incumbent LECs with fewer than 2 percent of subscriber lines.* Incumbent LECs with fewer than 2 percent of the nation's subscriber lines installed in the aggregate nationwide may petition the FCC for suspension or modification of the requirements set forth in paragraphs (a), (b) and (c) of this section. The FCC will grant such a petition where the incumbent LEC demonstrates that suspension or modification of the separate affiliate requirement is

(i) Necessary to avoid a significant adverse economic impact on users of telecommunications services generally or to avoid a requirement that would be unduly economically burdensome, and

(ii) Consistent with the public interest, convenience, and necessity.

(e) *Definitions.* Terms used in this section have the following meanings:

Affiliate. ''Affiliate'' means a person that (directly or indirectly) owns or controls, is owned or controlled by, or is under common ownership with, another person. For purposes of this section, the term ''own'' means to own an equity interest (or the equivalent thereof) of more than 10 percent.

Broadband Commercial Mobile Radio Service (Broadband CMRS). For the purposes of this section, ''broadband CMRS'' means Cellular Radiotelephone Service (part 22, subpart H of this chapter), Specialized Mobile Radio (part 90, subpart S of this chapter), and broadband Personal Communications Services (part 24, subpart E of this chapter).

Incumbent Local Exchange Carrier (Incumbent LEC). ''Incumbent LEC'' has the same meaning as that term is defined in § 51.5 of this chapter.

In-region. For the purposes of this section, an incumbent LEC's broadband CMRS service is considered ''in-region'' when 10 percent or more of the population covered by the CMRS affiliate's authorized service area, as determined by the 1990 census figures, is within the affiliated incumbent LEC's wireline service area.

Rural Telephone Company. ''Rural Telephone Company'' has the same meaning as that term is defined in § 51.5 of this chapter.

(f) *Sunset.* This section will no longer be effective after January 1, 2002.

[62 FR 63871, Dec. 3, 1997, as amended at 66 FR 10968, Feb. 21, 2001]

§ 20.21 Signal boosters.

(a) *Operation of Consumer Signal Boosters.* A subscriber in good standing of a commercial mobile radio service system may operate a Consumer Signal Booster for personal use under the authorization held by the licensee providing service to the subscriber provided that the subscriber complies with paragraphs (a)(1) through (6). Failure to comply with all applicable rules in this section and all applicable technical rules for the frequency band(s) of operation voids the authority to operate the Consumer Signal Booster.

(1) Prior to operation, the subscriber obtains the consent of the licensee providing service to the subscriber;

(2) Prior to operation, the subscriber registers the Consumer Signal Booster with the licensee providing service to the subscriber;

(3) The subscriber only operates the Consumer Signal Booster with approved antennas, cables, and/or coupling devices as specified by the manufacturer of the Consumer Signal Booster;

(4) The subscriber operates the Consumer Signal Booster on frequencies used for the provision of subscriber-

based services under parts 22 (Cellular), 24 (Broadband PCS), 27 (AWS–1, 700 MHz Lower A–E Blocks, and 700 MHz Upper C Block), and 90 (Specialized Mobile Radio) of this chapter. Operation on part 90 (Specialized Mobile Radio) frequencies is permitted upon the Commission's release of a public notice announcing the date Consumer Signal Boosters may be used in the band;

(5) The Consumer Signal Booster complies with paragraphs (e), (f), (g), and (h) of this section and § 2.907 of this chapter; and

(6) The subscriber may not deactivate any features of the Consumer Signal Booster which are designed to prevent harmful interference to wireless networks. These features must be enabled and operating at all times the signal booster is in use.

(b) *De minimis operation of Consumer Signal Boosters.* A third party's incidental use of a subscriber's Consumer Signal Booster operated under this paragraph is *de minimis* and shall be authorized under the authorization held by the licensee providing service to the third party.

(c) *Operation of Industrial Signal Boosters.* An individual or non-individual, other than a representative of a foreign government, may operate an Industrial Signal Booster provided that the individual or non-individual:

(1) Has an FCC license or obtains the express consent of the licensee(s) whose frequencies are being retransmitted by the device on a regular basis, and

(2) Uses an Industrial Signal Booster which complies with paragraph (f) of this section.

(d) *Operation on a secondary, non-interference basis.* Operation of signal boosters under this section is on a secondary, non-interference basis to primary services licensed for the frequency bands on which they transmit, and to primary services licensed for the adjacent frequency bands that might be affected by their transmissions.

(1) The operation of signal boosters must not cause harmful interference to the communications of any primary licensed service.

(2) Upon request of an FCC representative or a licensee experiencing harmful interference, a signal booster operator must:

(i) Cooperate in determining the source of the interference, and

(ii) If necessary, deactivate the signal booster immediately, or as soon as practicable, if immediate deactivation is not possible.

(e) *Consumer Signal Booster Network Protection Standard.* (1) All Consumer Signal Boosters must incorporate features to prevent harmful interference to wireless networks including but not limited to those enumerated in this section.

(2) *Certification requirements.* (i) A Consumer Signal Booster can only be certificated and operated if it complies with all applicable rules in this subpart and all applicable technical rules for the frequency band(s) of operation including, but not limited to: § 22.355 of this chapter, Public Mobile Services, frequency tolerance; § 22.913 of this chapter, Cellular Radiotelephone Service effective radiated power limits; § 22.917 of this chapter, Cellular Radiotelephone Service, emission limitations for cellular equipment; § 24.232 of this chapter, Broadband Personal Communications Service, power and antenna height limits; § 24.238 of this chapter, Broadband Personal Communications Service, emission limitations for Broadband PCS equipment; § 27.50 of this chapter, Miscellaneous Wireless Communications Services, power and antenna height limits; § 27.53 of this chapter, Miscellaneous Wireless Communications Services, emission limits; § 90.205 of this chapter, Private Land Mobile Radio Services, power and antenna height limits; § 90.210 of this chapter, Private Land Mobile Radio Services, emission masks; and § 90.247 of this chapter, Private Land Mobile Radio Services, mobile repeater stations.

(ii) In case of any conflict between the rules set forth in this section and the rules set forth in parts 22, 24, 27, and 90 of title 47, chapter I of the Code of Federal Regulations, the rules in this section shall govern.

(iii) The application for certification must satisfy the Commission that the Consumer Signal Boosters' features designed to prevent harmful interference and protect wireless networks cannot be easily defeated and must be enabled at all times.

(3) *Frequency Bands.* Consumer Signal Boosters must be designed and manufactured such that they only operate on the frequencies used for the provision of subscriber-based services under parts 22 (Cellular), 24 (Broadband PCS), 27 (AWS–1, 700 MHz Lower A–E Blocks, and 700 MHz Upper C Block), and 90 (Specialized Mobile Radio) of this chapter. The Commission will not certificate any Consumer Signal Boosters for operation on part 90 of this chapter (Specialized Mobile Radio) frequencies until the Commission releases a public notice announcing the date Consumer Signal Boosters may be used in the band.

(4) *Self-monitoring.* Consumer Signal Boosters must automatically self-monitor their operation to ensure compliance with applicable noise and gain limits and either self-correct or shut down automatically if their operation exceeds those parameters.

(5) *Anti-oscillation.* Consumer Signal Boosters must be able to detect and mitigate any unintended oscillations in uplink and downlink bands (such as may result from insufficient isolation between the antennas).

(6) *Power Down.* Consumer Signal Boosters must automatically power down or cease amplification as they approach any affected base station.

(7) *Interference Avoidance for Wireless Subsystems.* Consumer Signal Boosters using unlicensed (part 15 of this chapter) or other frequency bands for wireless transmissions between donor and server subsystems for their internal operations must employ interference avoidance methods to prevent interference transmitted into authorized CMRS spectrum bands.

(8) *Wideband Consumer Signal Boosters.* A Wideband Consumer Signal Booster will meet the Consumer Signal Booster Network Protection Standard if it complies with paragraphs (e)(1) through (e)(7) of this section and the following:

(i) *Technical Requirements*—(A) *Noise Limits.* (*1*) The transmitted noise power in dBm/MHz of consumer boosters at their uplink port shall not exceed −103 dBm/MHz—RSSI. RSSI (received signal strength indication expressed in negative dB units relative to 1 mW) is the downlink composite received signal power in dBm at the booster donor port for all base stations in the band of operation.

(*2*) The transmitted maximum noise power in dBm/MHz of consumer boosters at their uplink and downlink ports shall not exceed the following limits:

(*i*) Fixed booster maximum noise power shall not exceed −102.5 dBm/MHz + 20 Log_{10} (Frequency), where Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*ii*) Mobile booster maximum noise power shall not exceed −59 dBm/MHz.

(*iii*) Compliance with Noise limits will use instrumentation calibrated in terms of RMS equivalent voltage, and with booster input ports terminated or without input signals applied within the band of measurement.

(B) *Bidirectional Capability.* Consumer Boosters must be able to provide equivalent uplink and downlink gain and conducted uplink power output that is at least 0.05 watts. One-way consumer boosters (*i.e.*, uplink only, downlink only, uplink impaired, downlink impaired) are prohibited. Spectrum block filtering may be used provided the uplink filter attenuation is not less than the downlink filter attenuation, and where RSSI is measured after spectrum block filtering is applied referenced to the booster's input port for each band of operation.

(C) *Booster Gain Limits.* (*1*) The uplink gain in dB of a consumer booster referenced to its input and output ports shall not exceed −34 dB—RSSI + MSCL.

(*i*) Where RSSI is the downlink composite received signal power in dBm at the booster donor port for all base stations in the band of operation. RSSI is expressed in negative dB units relative to 1 mW.

(*ii*) Where MSCL (Mobile Station Coupling Loss) is the minimum coupling loss in dB between the wireless device and input port of the consumer booster. MSCL must be calculated or measured for each band of operation and provided in compliance test reports.

(*2*) The uplink and downlink maximum gain of a Consumer Booster referenced to its input and output ports shall not exceed the following limits:

(*i*) Fixed Booster maximum gain shall not exceed 6.5 dB + 20 Log_{10} (Frequency)

(*ii*) Where, Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*iii*) Mobile Booster maximum gain shall not exceed 50 dB when using an inside antenna (e.g., inside a vehicle), 23 dB when using direct contact coupling (e.g., cradle-type boosters), or 15 dB when directly connected (e.g., boosters with a physical connection to the phone).

(D) *Power Limits.* A booster's uplink power must not exceed 1 watt composite conducted power and equivalent isotropic radiated power (EIRP) for each band of operation. Composite downlink power shall not exceed 0.05 watt (17 dBm) conducted and EIRP for each band of operation. Compliance with power limits will use instrumentation calibrated in terms of RMS equivalent voltage.

(E) *Out of Band Emission Limits.* Booster out of band emissions (OOBE) shall be at least 6 dB below the FCC's mobile emission limits for the supported bands of operation. Compliance to OOBE limits will utilize high peak-to-average CMRS signal types.

(F) *Intermodulation Limits.* The transmitted intermodulation products of a consumer booster at its uplink and downlink ports shall not exceed the power level of −19 dBm for the supported bands of operation. Compliance with intermodulation limits will use boosters operating at maximum gain and maximum rated output power, with two continuous wave (CW) input signals spaced 600 kHz apart and centered in the pass band of the booster, and with a 3 kHz measurement bandwidth.

(G) *Booster Antenna Kitting.* All consumer boosters must be sold with user manuals specifying all antennas and cables that meet the requirements of this section. All consumer boosters must be sold together with antennas, cables, and/or coupling devices that meet the requirements of this section. The grantee is required to submit a technical document with the application for FCC equipment authorization that shows compliance of all antennas, cables and/or coupling devices with the requirements of this section, including any antenna or equipment upgrade options that may be available at initial purchase or as a subsequent upgrade.

(H) *Transmit Power Off Mode.* When the consumer booster cannot otherwise meet the noise and gain limits defined herein it must operate in ''Transmit Power Off Mode.'' In this mode of operation, the uplink and downlink noise power shall not exceed −70 dBm/MHz and both uplink and downlink gain shall not exceed the lesser of 23 dB or MSCL.

(I) *Uplink Inactivity.* When a consumer booster is not serving an active device connection after 5 minutes the uplink noise power shall not exceed −70 dBm/MHz.

(ii) *Interference Safeguards.* Consumer boosters must include features to prevent harmful interference including, at a minimum, those enumerated in this subsection. These features may not be deactivated by the operator and must be enabled and operating at all times the signal booster is in use.

(A) *Anti-Oscillation.* Consumer boosters must be able to detect and mitigate (*i.e.*, by automatic gain reduction or shut down), any oscillations in uplink and downlink bands. Oscillation detection and mitigation must occur automatically within 0.3 seconds in the uplink band and within 1 second in the downlink band. In cases where oscillation is detected, the booster must continue mitigation for at least one minute before restarting. After five such restarts, the booster must not resume operation until manually reset.

(B) *Gain Control.* Consumer boosters must have automatic limiting control to protect against excessive input signals that would cause output power and emissions in excess of that authorized by the Commission.

(C) *Interference Avoidance for Wireless Subsystems.* Consumer boosters using unlicensed (part 15) or other frequency bands for wireless transmissions between donor and server subsystems for its internal operations must employ interference avoidance methods to prevent interference transmitted into authorized CMRS spectrum bands and must meet applicable limits for radio-frequency exposure.

(9) *Provider-Specific Consumer Signal Boosters.* A Provider-Specific Consumer Signal Booster will meet the Consumer Signal Booster Network Protection Standard if it complies with paragraphs (e)(1) through (e)(7) of this section and the following:

(i) *Technical Requirements*—(A) *Noise Limits.* The transmitted noise power in dBm/MHz of frequency selective consumer boosters outside the licensee's spectrum blocks at their uplink and downlink ports shall not exceed the following limits:

(*1*) −103 dBm/MHz − RSSI

(*i*) Where RSSI is the downlink composite signal power received in dBm for frequencies in the band of operation outside the licensee's spectrum block as measured after spectrum block filtering is applied and is referenced to the booster's donor port for each band of operation. RSSI is expressed in negative dB units relative to 1 mW.

(*ii*) Boosters with MSCL less than 40 dB, shall reduce the Noise output in (A) by 40 dB − MSCL, where MSCL is the minimum coupling loss in dB between the wireless device and booster's server port. MSCL must be calculated or measured for each band of operation and provided in compliance test reports.

(*2*)(*i*) Fixed booster maximum downlink noise power shall not exceed −102.5 dBm/MHz + 20 Log_{10} (Frequency), where Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*ii*) Mobile booster maximum noise power shall not exceed −59 dBm/MHz.

(*iii*) Compliance with Noise limits will use instrumentation calibrated in terms of RMS equivalent voltage, and with booster input ports terminated or without input signals applied within the band of measurement.

(B) *Bidirectional Capability.* Consumer Boosters must be able to provide equivalent uplink and downlink gain and conducted uplink power output that is at least 0.05 watts. One-way consumer boosters (*i.e.*, uplink only, downlink only, uplink impaired, downlink impaired) are prohibited. Spectrum block filtering used must provide uplink filter attenuation not less than the downlink filter attenuation, and where RSSI is measured after spectrum block filtering is applied referenced to the booster's input port for each band of operation.

(C) *Booster Gain Limits.* The gain of the frequency selective consumer booster shall meet the limits below.

(*1*) The uplink and downlink gain in dB of a frequency selective consumer booster referenced to its input and output ports shall not exceed BSCL − 28 dB − (40 dB − MSCL).

(*i*) Where BSCL is the coupling loss between the booster's donor port and the base station's input port, and MSCL is the minimum coupling loss in dB between the wireless device and the booster's server port. MSCL must be calculated or measured for each band of operation and provided in compliance test reports.

(*ii*) In order of preference, BSCL is determined as follows: determine path loss between the base station and the booster; such measurement shall be based on measuring the received forward pilot/control channel power at the booster and reading the pilot/control channel transmit power from the base station as defined in the system information messages sent by the base station; estimate BSCL by assuming that the base station is transmitting at a level of + 25 dBm per channel (assume a small, lightly loaded cell) and measuring the total received signal power level within the channel in dBm (RPCH) received at the booster input port. BSCL is then calculated as 25–RPCH; or assume that the BSCL is 70 dB without performing any measurement.

(*2*) The uplink and downlink maximum gain of a frequency selective consumer booster referenced to its input and output ports shall not exceed the following limits:

(*i*) Fixed Booster maximum gain shall not exceed 19.5 dB + 20 Log_{10} (Frequency), or 100 dB for systems having automatic gain adjustment based on isolation measurements between booster donor and server antennas.

(*ii*) Where, Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*iii*) Mobile Booster maximum gain shall not exceed 15 dB when directly

connected (*e.g.*, boosters with a physical connection to the subscriber device), 23 dB when using direct contact coupling (*e.g.*, cradle-type boosters), or 50 dB when using an inside antenna (*e.g.*, inside a vehicle). For systems using an inside antenna that have automatic gain adjustment based on isolation measurements between booster donor and server antenna and automatic feedback cancellation, the mobile booster maximum gain shall not exceed 58 dB and 65 dB for frequencies below and above 1 GHz, respectively.

(D) *Power Limits.* A booster's uplink power must not exceed 1 watt composite conducted power and equivalent isotropic radiated power (EIRP) for each band of operation. Downlink power shall not exceed 0.05 watt (17 dBm) composite and 10 dBm per channel conducted and EIRP for each band of operation. Compliance with power limits will use instrumentation calibrated in terms of RMS equivalent voltage.

(E) *Out of Band Gain Limits.* (*1*) A frequency selective booster shall have the following minimum attenuation referenced to the gain in the center of the pass band of the booster:

(*i*) −20 dB at the band edge, where band edge is the end of the licensee's allocated spectrum,

(*ii*) −30 dB at 1 MHz offset from band edge,

(*iii*) −40 dB at 5 MHz offset from band edge.

(*2*) A frequency selective booster having maximum gain greater than 80 dB (referenced to the center of the pass band) shall limit the out of band gain to 60 dB at 0.2 MHz offset from the band edge, and 45 dB at 1 MHz offset from the band edge, where band edge is the end of the licensee's allocated spectrum.

(F) *Out of Band Emission Limits.* Booster out of band emissions (OOBE) shall meet the FCC's mobile emission limits for the supported bands of operation. Compliance to OOBE limits will utilize high peak-to-average CMRS signal types.

(G) *Intermodulation Limits.* The transmitted intermodulation products of a consumer booster at its uplink and downlink ports shall not exceed the power level of −19 dBm for the supported bands of operation. Compliance with intermodulation limits will use boosters operating at maximum gain and maximum rated output power, with two continuous wave (CW) input signals spaced 600 kHz apart and centered in the pass band of the booster, and with a 3 kHz measurement bandwidth.

(H) *Booster Antenna Kitting.* All consumer boosters must be sold with user manuals specifying all antennas and cables that meet the requirements of this section. All consumer boosters must be sold together with antennas, cables, and/or coupling devices that meet the requirements of this section. The grantee is required to submit a technical document with the application for FCC equipment authorization that shows compliance of all antennas, cables, and/or coupling devices with the requirements of this section, including any antenna or equipment upgrade options that may be available at initial purchase or as a subsequent upgrade.

(I) *Transmit Power Off Mode.* When the consumer booster cannot otherwise meet the noise and gain limits defined herein it must operate in ''Transmit Power OFF Mode.'' In this mode of operation, the uplink and downlink noise power shall not exceed −70 dBm/MHz and uplink gain shall not exceed the lesser of 23 dB or MSCL.

(J) *Uplink Inactivity.* When a consumer booster is not serving an active device connection after 5 seconds the uplink noise power shall not exceed −70 dBm/MHz.

(ii) *Interference Safeguards.* Consumer boosters must include features to prevent harmful interference including, at a minimum, those enumerated in this subsection. These features may not be deactivated by the operator and must be enabled and operating at all times the signal booster is in use.

(A) *Anti-Oscillation.* Consumer boosters must be able to detect and mitigate (*i.e.*, by automatic gain reduction or shut down), any oscillations in uplink and downlink bands. Oscillation detection and mitigation must occur automatically within 0.3 seconds in the uplink band and within 1 second in the downlink band. In cases where oscillation is detected, the booster must continue mitigation for at least one

minute before restarting. After five such restarts, the booster must not resume operation until manually reset.

(B) *Gain Control.* Consumer boosters must have automatic limiting control to protect against excessive input signals that would cause output power and emissions in excess of that authorized by the Commission.

(C) *Interference Avoidance for Wireless Subsystems.* Consumer boosters using unlicensed (part 15) or other frequency bands for wireless transmissions between donor and server subsystems for its internal operations must employ interference avoidance methods to prevent interference transmitted into authorized CMRS spectrum bands.

(10) *Equivalent Protections.* Consumer Signal Boosters which do not meet the technical specifications enumerated in paragraphs (e)(1) through (e)(9) of this section may also meet the Network Protection Standard if they provide equivalent protections as determined by the Wireless Telecommunications Bureau.

(f) *Signal booster labeling requirements.* (1) Signal booster manufacturers, distributors, and retailers must ensure that all signal boosters marketed on or after March 1, 2014 include the following advisories:

(i) In on-line, point-of-sale marketing materials,

(ii) In any print or on-line owner's manual and installation instructions,

(iii) On the outside packaging of the device, and

(iv) On a label affixed to the device:

(A) For Consumer Signal Boosters:

(*1*) This is a CONSUMER device.

BEFORE USE, you MUST REGISTER THIS DEVICE with your wireless provider and have your provider's consent. Most wireless providers consent to the use of signal boosters. Some providers may not consent to the use of this device on their network. If you are unsure, contact your provider.

You MUST operate this device with approved antennas and cables as specified by the manufacturer. Antennas MUST be installed at least 20 cm (8 inches) from any person.

You MUST cease operating this device immediately if requested by the FCC or a licensed wireless service provider.

WARNING. E911 location information may not be provided or may be inaccurate for calls served by using this device.

(*2*) The label for Consumer Signal Boosters certified for fixed indoor operation also must include the following language:

This device may be operated ONLY in a fixed location for in-building use.

(B) For Industrial Signal Boosters:

WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of $100,000 for each continuing violation.

(2) A Consumer Signal Booster label may contain an acknowledgement that particular provider(s) have given their consent for all consumers to use the device. Such an acknowledgement would be inserted prior to, ''Some wireless providers may not consent to the use of this device on their network. If you are unsure, contact your provider.'' The remaining language of the advisory shall remain the same.

(g) *Marketing and sale of signal boosters.* Except as provided in § 2.803 of this chapter, no person, manufacturer, distributor, or retailer may market, distribute or offer for sale or lease any Consumer Signal Booster that does not comply with the requirements of this section to any person in the United States or to any person intending to operate the Consumer Signal Booster within the United States at any time on or after March 1, 2014. Consumer Signal Boosters may only be sold to members of the general public for their personal use.

(h) *Registration.* Each licensee consenting to the operation of a Consumer Signal Booster must establish a free registration mechanism for subscribers and register all Consumer Signal Boosters to which it consents. A licensee must establish a registration mechanism by the later of March 1, 2014 or within 90 days of consenting to the operation of a Consumer Signal Booster. At a minimum, a licensee must collect:

(1) The name of the Consumer Signal Booster owner and/or operator, if different individuals;

(2) The make, model, and serial number of the device;

(3) The location of the device; and

(4) The date of initial operation. Licensee consent is voluntary and may be withdrawn at the licensee's discretion.

[78 FR 21559, Apr. 11, 2013, as amended at 79 FR 70795, Nov. 28, 2014]

§ 20.22 Rules governing mobile spectrum holdings.

(a) Applicants for mobile wireless licenses for commercial use, for assignment or transfer of control of such licenses, or for long-term *de facto* transfer leasing arrangements as defined in §1.9003 of this chapter and long-term spectrum manager leasing arrangements as identified in §1.9020(e)(1)(ii) must demonstrate that the public interest, convenience, and necessity will be served thereby. The Commission will evaluate any such license application consistent with the policies set forth in Policies Regarding Mobile Spectrum Holdings, *Report and Order*, FCC 14–63, WT Docket No. 12–269, adopted May 15, 2014.

(b) *Attribution of interests.* (1) The following criteria will apply to attribute partial ownership and other interests in spectrum holdings for purposes of:

(i) Applying a mobile spectrum holding limit to the licensing of spectrum through competitive bidding; and

(ii) Applying the initial spectrum screen to secondary market transactions.

(2) *Controlling interests shall be attributable.* Controlling interest means majority voting equity ownership, any general partnership interest, or any means of actual working control (including negative control) over the operation of the licensee, in whatever manner exercised.

(3) *Non-controlling interests of 10 percent or more in spectrum shall be attributable.* Interests of less than 10 percent in spectrum shall be attributable if such interest confers *de facto* control, including but not limited to partnership and other ownership interests and any stock interest in a licensee.

(4) The following interests in spectrum shall also be attributable to holders:

(i) Officers and directors of a licensee shall be considered to have an attributable interest in the entity with which they are so associated. The officers and directors of an entity that controls a licensee or applicant shall be considered to have an attributable interest in the licensee.

(ii) Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that if the ownership percentage for an interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest. (For example, if A owns 20% of B, and B owns 40% of licensee C, then A's interest in licensee C would be 8%. If A owns 20% of B, and B owns 51% of licensee C, then A's interest in licensee C would be 20% because B's ownership of C exceeds 50%).

(iii) Any person who manages the operations of a licensee pursuant to a management agreement shall be considered to have an attributable interest in such licensee if such person, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence, the nature or types of services offered by such licensee, the terms upon which such services are offered, or the prices charged for such services.

(iv) Any licensee or its affiliate who enters into a joint marketing arrangement with another licensee or its affiliate shall be considered to have an attributable interest in the other licensee's holdings if it has authority to make decisions or otherwise engage in practices or activities that determine or significantly influence the nature or types of services offered by the other licensee, the terms upon which such services are offered, or the prices charged for such services.

(v) Limited partnership interests shall be attributed to limited partners and shall be calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses.

(vi) Debt and instruments such as warrants, convertible debentures, options, or other interests (except nonvoting stock) with rights of conversion

to voting interests shall not be attributed unless and until converted or unless the Commission determines that these interests confer *de facto* control.

(vii) Long-term *de facto* transfer leasing arrangements as defined in §1.9003 of this chapter and long-term spectrum manager leasing arrangements as identified in §1.9020(e)(1)(ii) that enable commercial use shall be attributable to lessees, lessors, sublessees, and sublessors for purposes of this section.

(c) *600 MHz Band holdings.* (1) The Commission will reserve licenses for up to 30 megahertz of the 600 MHz Band, offered in the Incentive Auction authorized by Congress pursuant to 47 U.S.C. 309(j)(8)(G), for otherwise qualified bidders who do not hold an attributable interest in 45 megahertz or more of the total 134 megahertz of below-1-GHz spectrum which consists of the cellular (50 megahertz), the 700 MHz (70 megahertz), and the SMR (14 megahertz) spectrum in a Partial Economic Area (PEA), as calculated on a county by county population-weighted basis, utilizing 2010 U.S. Census data. The amount of reserved and unreserved 600 MHz Band licenses will be determined based on the market-based spectrum reserve set forth in Policies Regarding Mobile Spectrum Holdings, *Report and Order*, FCC 14–63, WT Docket No. 12–269, adopted May 15, 2014, as well as subsequent Public Notices. Nothing in this paragraph will limit, or may be construed to limit, an otherwise qualified bidder that is a non-nationwide provider of mobile wireless services from bidding on any reserved or unreserved license offered in the Incentive Auction.

(2) For a period of six years, after initial licensing, no 600 MHz Band license, regardless of whether it is reserved or unreserved, may be transferred, assigned, partitioned, disaggregated, or long term leased to any entity that, after consummation of the transfer, assignment, or leased on a long term basis, would hold an attributable interest in one-third or more of the total suitable and available below-1-GHz spectrum as calculated on a county by county population-weighted basis in the relevant license area, utilizing 2010 U.S. Census data.

(3) For a period of six years, after initial licensing, no 600 MHz Band reserved license may be transferred, assigned, partitioned, disaggregated, or leased on a long term basis to an entity that was not qualified to bid on that reserved spectrum license under paragraph (c)(1) of this section at the time of the Incentive Auction short-form application deadline.

[79 FR 40002, July 11, 2014]

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