

**Relevant Authority:** Prospective bidders must familiarize themselves thoroughly with the Commission's Rules relating to the 929 and 931 MHz Paging Bands, contained in Title 47, Part 22 and Part 90 of the Code of Federal Regulations, and those relating to application and auction procedures, contained in Title 47, Part 1 of the Code of Federal Regulations.

Prospective bidders must also be thoroughly familiar with the procedures, terms and conditions (collectively, "Terms") contained in the *Second Report and Order* in PP Docket No. 93-253, 9 FCC Rcd 2348 (1994); the *Second Memorandum Opinion and Order* in PP Docket No. 93-253, 9 FCC Rcd 7245 (1994); the *Erratum to the Second Memorandum Opinion and Order* in PP Docket No. 93-253 (released Oct. 19, 1994); Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, *Notice of Proposed Rulemaking*, 11 FCC Rcd 3108 (1996) ("Paging Notice"); Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, *First Report and Order*, 11 FCC Rcd 16570 (1996) ("Paging First Report and Order"); Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, *Order on Reconsideration of First Report and Order*, 11 FCC Rcd 7409 (1996) ("First Paging Reconsideration"); Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, *Second Report and Order and Further Notice of Proposed Rulemaking*, 12 FCC Rcd 2731 (1997) ("Paging Second Report and Order"); Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, *Memorandum Opinion and Order on Reconsideration and Third Report and Order*, FCC 99-98 (rel. May 24, 1999) ("Paging Reconsideration Order" and "Paging Third Report and Order"); Auction of 929 and 931 MHz Paging Service Spectrum, *Public Notice*, DA 99-1591 (rel. August 12, 1999).

The terms contained in the Commission's Rules, relevant orders, public notices and bidder information package are not negotiable. The Commission may amend or supplement the information contained in our public notices or the bidder information package at any time, and will issue public notices to convey any new or supplemental information to bidders. It is the responsibility of all prospective bidders to remain current with all Commission Rules and with all public notices pertaining to this auction. Copies of most Commission documents, including public notices, can be retrieved from the FCC Internet node via anonymous ftp @ftp.fcc.gov or the FCC World Wide Web site at <http://www.fcc.gov/wtb/auctions>. Additionally, documents may be obtained for a fee by calling the Commission's copy contractor, International Transcription Service, Inc. (ITS), at (202) 314-3070. When ordering documents from ITS, please provide the appropriate FCC number (e.g., FCC 99-98 for *the Paging Third Report and Order*).

INSERT NEWS RELEASE, 2<sup>ND</sup> R&O  
AND FURTHER NPRM; RECON and 3rd  
R&O; PART 22; PART 90; PART 1  
SUBPART Q; AND PARTIAL  
BIBLIOGRAPHY

## **SELECTED FCC RULES**

Following is an unofficial staff compilation of selected rules applicable to the 929 and 931 MHz Paging Auction, drawn from Parts 1, 22, and 90 of the FCC's rules, which applicants may use until such time as the Government Printing Office publishes a current version in the Code of Federal Regulations (CFR). The rules compiled in this Bidder Information Package reflect rule changes effective August 23, 1999. Applicants should also refer to the official version of the rules contained in FCC orders and in the Federal Register. The official rules govern in the event of conflicts. Relevant orders adopted to date by the FCC are also provided in this Tab. Applicants need to stay apprised of any rule changes that occur after release of this Bidder Information Package by checking the FCC website and the Federal Register. Applicants should also be familiar with international coordination agreements with Canada and Mexico. The Canada agreement is in Part 22. The Mexican coordination agreement is available on the FCC website at <http://www.fcc.gov/wtb/auctions>. Click on the 929 and 931 MHz Paging Auction in right column and click on the last selection, "Link to Paging Web Page and additional information".

**PART 90--PRIVATE LAND MOBILE RADIO SERVICES**  
**SUBPART A--GENERAL INFORMATION**

§ 90.1 Basis and purpose.

(a) Basis. The rules in this part are promulgated under Title II of the Communications Act of 1934, as amended which vests authority in the Federal Communications Commission to regulate radio transmission and to issue licenses for radio stations. All rules in this part are in accordance with applicable treaties and agreements to which the United States is a party.

(b) Purpose. This part states the conditions under which radio communications systems may be licensed and used in the Public Safety, Special Emergency, Industrial, Land Transportation, and Radiolocation Radio Services. These rules do not govern radio systems employed by agencies of the Federal Government.

§ 90.5 Other applicable rule parts.

Other Commission rule parts of importance that may be referred to with respect to licensing and operations in radio services governed under this part include the following:

(a) Part 0 of the Commission's Rules describes the Commission's organization and delegations of authority. This part also lists available Commission publications, and standards and procedures for access to Commission records, and location of Commission Field Offices.

(b) Part 1 of this chapter includes rules of practice and procedure for the filing of applications for stations to operate in the Wireless Telecommunications Services, adjudicatory proceedings including hearing proceedings, and rulemaking proceedings; procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; and the environmental processing requirements that, if applicable, must be complied with prior to initiating construction.

(c) Part 2 contains the table of frequency allocations and special requirements in International regulations, agreements, and treaties. This part also contains standards and procedures concerning marketing of radio frequency devices, and for obtaining equipment certification.

(d) Part 5 contains standards and procedures for obtaining experimental authorizations.

(e) Part 15 provides for the operation of incidental and restricted radio frequency devices that do not require an individual license.

(f) Part 17 contains detailed requirements for construction, marking, and lighting of antenna towers.

(g) Part 18 deals with the operation of industrial, scientific, and medical (ISM) devices that are not intended for radio communication.

(h) Part 20 of this chapter contains rules relating to commercial mobile radio services.

(i) Part 20 of this chapter which governs commercial mobile radio service applicable to certain providers in the following services in this part:

(1) Industrial/business pool.

(2) Private paging;

(3) Land mobile service on 220-222 MHz;

(4) Specialized Mobile Radio Service.

(j) Part 22 contains regulations for public (common carrier) mobile radio services.

(k) Part 51 contains rules relating to interconnection.

(l) Part 68 contains technical standards for connection of private land mobile radio equipment to the public switched telephone network.

(m) Part 101 governs the operation of fixed microwave services.

#### § 90.7 Definitions.

Antenna height above average terrain (AAT). Height of the center of the radiating element of the antenna above the average terrain. (See § 90.309(a)(4) for calculation method.)

Antenna height above sea level. The height of the topmost point of the antenna above mean sea level.

Antenna structure. Structure on which an antenna is mounted.

Assigned frequency. Center of a frequency band assigned to a station.

Assigned frequency band. The frequency band the center of which coincides with the frequency assigned to the station and the width of which equals the necessary bandwidth plus twice the absolute value of the frequency tolerance.

Authorized bandwidth. The frequency band, specified in kilohertz and centered on the carrier frequency containing those frequencies upon which a total of 99 percent of the radiated power appears, extended to include any discrete frequency upon which the power is at least 0.25 percent of the total radiated power.

Automobile emergency licensee. Persons regularly engaged in any of the following activities who operate radio stations for transmission of communications required for dispatching repair trucks, tow trucks, or other road service vehicles to disabled vehicles:

(1) The operation of a private emergency road service for disabled vehicles by associations of owners of private automobiles; or

(2) The business of providing to the general public an emergency road service for disabled vehicles.

Average terrain. The average elevation of terrain between 3.2 and 16 km (2 and 10 miles) from the antenna site.

Base station. A station at a specified site authorized to communicate with mobile stations.

Basic trading areas. Service areas that are based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 38-39, with the following additions licensed separately as BTA-like areas: American Samoa; Guam, Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The Mayaguez/Aguadilla-Ponce BTA-like service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincon, Sabana Grande, Salinas, San German, Santa Isabel, Villalba, and Yauco. The San Juan BTA-like service area consists of all other municipios in Puerto Rico.

Carrier frequency. The frequency of an unmodulated electromagnetic wave.

Channel loading. The number of mobile transmitters authorized to operate on a particular channel within the same service area.

Control point. Any place from which a transmitter's functions may be controlled.

Control station. An Operational Fixed Station, the transmissions of which are used to control automatically the emissions or operation of another radio station at a specified location.

Conventional radio system. A method of operation in which one or more radio frequency channels are assigned to mobile and base stations but are not employed as a trunked group. An "urban-conventional system" is one whose transmitter site is located within 24 km (15 miles) of the geographic center of any of the first 50 urbanized areas (ranked by population) of the United States. A "sub-urban-conventional system" is one whose transmitter site is located more than 24 km (15 miles) from the geographic center of the first 50 urbanized areas. See Table 21, Rank of Urbanized Areas in the United States by Population, page 1-87, U.S. Census (1970); and Table 1 of § 90.635.

Developmental operation. A specially licensed operation for the purpose of testing concepts in the use of radio appropriate to the radio services governed by this part.

Dispatch point. Any place from which radio messages can be originated under the supervision of a control point.

EA-based or EA license. A license authorizing the right to use a specified block of SMR or LMS spectrum within one of the 175 Economic Areas (EAs) as defined by the Department of Commerce Bureau of Economic Analysis. The EA Listings and the EA Map are available for public inspection at the Wireless Telecommunications Bureau public reference room, Room 5608, 2025 M St., NW, Washington, DC 20554.

Economic Areas (EAs). A total of 175 licensing regions based on the United States Department of Commerce Bureau of Economic Analysis Economic Areas defined as of February 1995, with the following exceptions:

(1) Guam and Northern Mariana Islands are licensed as a single EA-like area (identified as EA 173 in the 220 MHz Service);

(2) Puerto Rico and the U.S. Virgin Islands are licensed as a single EA-like area (identified as EA 174 in the 220 MHz Service); and

(3) American Samoa is licensed as a single EA-like area (identified as EA 175 in the 220 MHz Service).

Effective radiated power (ERP). The power supplied to an antenna multiplied by the relative gain of the antenna in a given direction.

Emergency Medical Licensee. Persons or entities engaged in the provision of basic or advanced life support services on an ongoing basis that operate radio stations for transmission of communications essential for the delivery or rendition of emergency medical services for the provision of basic or advanced life support.

Film and video production licensee. Persons primarily engaged in or providing direct technical support to the production, videotaping, or filming of motion pictures or television programs, such as movies, programs, news programs, special events, educational programs, or training films, regardless of whether the productions are prepared primarily for final exhibition at theatrical outlets or on television or for distribution through other mass communications outlets.

Fire licensee. Any territory, possession, state, city, county, town, or similar governmental entity, and persons or organizations charged with specific fire protection activities that operate radio stations for transmission of communications essential to official fire activities.

Fixed relay station. A station at a specified site used to communicate with another station at another specified site.

Forest products licensee. Persons primarily engaged in tree logging, tree farming, or related woods operations, including related hauling activities, if the hauling activities are performed under contract to, and exclusively for, persons engaged in woods operations or engaged in manufacturing lumber, plywood, hardboard, or pulp and paper products from wood fiber.

Forward links. Transmissions in the frequency bands specified in § 90.357(a) and used to control and interrogate the mobile units to be located by multilateration LMS systems.

Frequency coordination. The process of obtaining the recommendation of a frequency coordinator for a frequency(ies) that will most effectively meet the applicant's needs while minimizing interference to licensees already operating within a given frequency band.

Frequency coordinator. An entity or organization that has been certified by the Commission to recommend frequencies for use by licensees in the Private Land Mobile Radio Services.

Geographic center. The geographic center of an urbanized area is defined by the coordinates given at Table 1 of § 90.635.

Geophysical Telemetry. Telemetry involving the simultaneous transmission of seismic data from numerous locations to a central receiver and digital recording unit.

Harmful interference. For the purposes of resolving conflicts between stations operating under this part, any emission, radiation, or induction which specifically degrades, obstructs, or interrupts the service provided by such stations.

Interconnection. Connection through automatic or manual means of private land mobile radio stations with the facilities of the public switched telephone network to permit the transmission of messages or signals between points in the wireline or radio network of a public telephone company and persons served by private land mobile radio stations. Wireline or radio circuits or links furnished by common carriers, which are used by licensees or other authorized persons for transmitter control (including dial-up transmitter control circuits) or as an integral part of an authorized, private, internal system of communication or as an integral part of dispatch point circuits in a private land mobile radio station are not considered to be interconnection for purposes of this rule part.

Internal System. An internal system of communication is one in which all messages are transmitted between the fixed operating positions located on premises controlled by the licensee and the associated mobile stations or paging receivers of the licensee. (See Subpart O).

Itinerant Operation. Operation of a radio station at unspecified locations for varying periods of time.

Land mobile radio service. A mobile service between base stations and land mobile stations, or between land mobile stations.

Land Mobile Radio System. A regularly interacting group of base, mobile and associated control and fixed relay stations intended to provide land mobile radio communications service over a single area of operation.

Land Station. A station in the mobile service not intended to be used while in motion. [As used in this Part, the term may be used to describe a base, control, fixed, operational fixed or fixed relay station, or any such station authorized to operate in the "temporary" mode.]

Line A. An imaginary line within the U.S., approximately paralleling the U.S.-Canadian border, north of which Commission coordination with Canadian authorities in the assignment of frequencies is generally required. It begins at Aberdeen, Washington, running by great circle arc to the intersection of 48° N., 120° W., then along parallel 48° N., to the intersection of 95° W., thence by great circle arc through the southern most point of Duluth,

Minn., thence by great circle arc to 45° N., 85° W., thence southward along meridian 85° W., to its intersection with parallel 41° N., thence along parallel 41° N. to its intersection with meridian . . . 82° W., thence by great circle arc through the southernmost point of Bangor, Maine, thence by great circle arc through the southernmost point of Searsport, Maine, at which point it terminates.

Line C. An imaginary line in Alaska approximately paralleling the border with Canada, East of which Commission coordination with Canadian authorities in the assignment of frequencies is generally required. It begins at the intersection of 70° N., 144° W., thence by great circle arc to the intersection of 60° N., 143° W., thence by great circle arc so as to include all the Alaskan Panhandle.

Location and Monitoring Service (LMS). The use of non-voice signaling methods to locate or monitor mobile radio units. LMS systems may transmit and receive voice and nonvoice status and instructional information related to such units.

Major trading areas. Service areas based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 38-39, with the following exceptions and additions:

- (a) Alaska is separated from the Seattle MTA and is licensed separately.
- (b) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.
- (c) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.
- (d) American Samoa is licensed as a single MTA-like area.

Manufacturers licensee. Persons primarily engaged in any of the following manufacturing activities:

- (1) The mechanical or chemical transformation of substances into new products within such establishments as plants, factories, shipyards, or mills which employ, in that process, powerdriven machines and materials-handling equipment;
- (2) The assembly of components of manufactured products within such establishments as plants, factories, shipyards, or mills where the new product is neither a new structure nor other fixed improvement. Establishments primarily engaged in the wholesale or retail trade, or in service activities, even though they fabricate or assemble any or all the products or commodities handled, are not included in this category; or
- (3) The providing of supporting services or materials by a corporation to its parent corporation, to another subsidiary of its parent or to its own subsidiary, where such supporting services or materials are directly related to those regular activities of such parent or subsidiary which are eligible under paragraphs (1) or (2) of this definition.

Meteor burst communications. Communications by the propagation of radio signals reflected off ionized meteor trails.

Mobile relay station. A base station in the mobile service authorized to retransmit automatically on a mobile service frequency communications which originate on the transmitting frequency of the mobile station.

Mobile Repeater Station. A mobile station authorized to retransmit automatically on a mobile service frequency, communications to or from hand- carried transmitters.

Mobile service. A service of radio-communication between mobile and base stations, or between mobile stations.

Mobile station. A station in the mobile service intended to be used while in motion or during halts at unspecified points. This includes hand carried transmitters.

MTA-based license or MTA license. A license authorizing the right to use a specified block of SMR spectrum within one of the 51 Major Trading Areas ("MTAs"), as embodied in Rand McNally's Trading Area System MTA Diskette and geographically represented in the map contained in Rand McNally's Commercial Atlas & Marketing Guide (the "MTA Map.") The MTA Listings, the MTA Map and the Rand McNally/AMTA license agreement are available for public inspection at the Wireless Telecommunications Bureau's public reference room, Room 628, 1919 M Street NW., Washington, DC 20554.

Multilateration LMS System. A system that is designed to locate vehicles or other objects by measuring the difference of time of arrival, or difference in phase, of signals transmitted from a unit to a number of fixed points or from a number of fixed points to the unit to be located.

Mutually exclusive application. Two or more pending applications are mutually exclusive if the grant of one application would effectively preclude the grant of one or more of the others under Commission rules governing the services involved.

Navigable waters. This term, as used in reference to waters of the United States, its territories and possessions, means the waters shoreward of the baseline of its territorial sea and internal waters as contained in 33 CFR 2.05-25.

900 MHz SMR MTA-based license or MTA license. A license authorizing the right to use a specified block of 900 MHz SMR spectrum within one of the 47 Major Trading Areas ("MTAs"), as embodied in Rand McNally's Trading Areas System MTA Diskette and geographically represented in the map contained in Rand McNally's Commercial Atlas & Marketing Guide (the "MTA Map"), with the following exceptions and additions:

- (1) Alaska is separated from the Seattle MTA and is licensed separately.
- (2) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.
- (3) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.
- (4) American Samoa is licensed as a single MTA-like area.

The MTA map is available for public inspection in the Office of Engineering and Technology's Technical Information Center, room 7317, 2025 M Street NW., Washington, DC.

Motor carrier licensee. Persons primarily engaged in providing a common or contract motor carrier transportation service in any of the following activities: Provided, however, that motor vehicles used as taxicabs, livery vehicles, or school buses, and motor vehicles used for sightseeing or special charter purposes, shall not be included within the meaning of this term. For purposes of this definition, an urban area is defined as being one or more contiguous, incorporated or unincorporated cities, boroughs, towns, or villages, having an aggregate population of 2,500 or more persons.

- (1) The transportation of passengers between urban areas;
- (2) The transportation of property between urban areas;
- (3) The transportation of passengers within a single urban area; or
- (4) The transportation, local distribution or collection of property within a single urban area.

Non-multilateration LMS System. A system that employs any of a number of non- multilateration technologies to transmit information to and/or from vehicular units.

Operational Fixed Station. A fixed station, not open to public correspondence, operated by, and for the sole use of

those agencies operating their own radiocommunication facilities in the Public Safety, Industrial, Land Transportation, Marine, or Aviation Radio Services. (This includes all stations in the fixed service under this part.)

**Output Power.** The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load of the impedance recommended by the manufacturer.

**Paging.** A one-way communications service from a base station to mobile or fixed receivers that provide signaling or information transfer by such means as tone, tone-voice, tactile, optical readout, etc.

**Person.** An individual, partnership, association, joint stock company, trust or corporation.

**Petroleum licensee.** Persons primarily engaged in prospecting for, producing, collecting, refining, or transporting by means of pipeline, petroleum or petroleum products (including natural gas).

**Police licensee.** Any territory, possession, state, city, county, town, or similar governmental entity including a governmental institution authorized by law to provide its own police protection that operate radio stations for transmission of communications essential to official police activities.

**Power licensee.** Persons primarily engaged in any of the following activities:

(1) The generation, transmission, or distribution of electrical energy for use by the general public or by the members of a cooperative organization;

(2) The distribution of manufactured or natural gas by means of pipe line, for use by the general public or by the members of a cooperative organization, or, in a combination of that activity with the production, transmission or storage of manufactured or natural gas preparatory to such distribution;

(3) The distribution of steam by means of pipeline or, of water by means of pipeline, canal, or open ditch, for use by the general public or by the members of a cooperative organization, or in a combination of that activity with the collection, transmission, storage, or purification of water or the generation of steam preparatory to such distribution; or

(4) The providing of a supporting service by a corporation directly related to activities of its parent corporation, of another subsidiary of the same parent, or of its own subsidiary, where the party served is regularly engaged in any of the activities set forth in this definition.

**Private carrier.** An entity licensed in the private services and authorized to provide communications service to other private services on a commercial basis.

**Radio call box.** A transmitter used by the public to request fire, police, medical, road service, or other emergency assistance.

**Radiodetermination.** The determination of position, or the obtaining of information relating to position, by means of the propagation of radio waves.

**Radiofacsimile.** A system of radiocommunication for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

**Radiolocation.** Radiodetermination used for purposes other than those of radionavigation.

**Radionavigation.** Radiodetermination used for the purposes of navigation, including obstruction warning.

**Radio teleprinting.** Radio transmissions to a printing telegraphic instrument having a signal-actuated mechanism

for automatically printing received messages.

Railroad licensee. Railroad common carriers which are regularly engaged in the transportation of passengers or property when such passengers or property are transported over all or part of their route by railroad.

Regional Economic Area Groupings (REAGs). The six geographic areas for Regional licensing in the 220-222 MHz band, based on the United States Department of Commerce Bureau of Economic Analysis Economic Areas (see 60 FR 13114 (March 10, 1995)) defined as of February 1995, and specified as follows:

REAG 1 (Northeast): REAG 1 consists of the following EAs: EA 001 (Bangor, ME) through EA 011 (Harrisburg-Lebanon-Carlisle, PA); and EA 054 (Erie, PA).

REAG 2 (Mid-Atlantic): REAG 2 consists of the following EAs: EA 012 (Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD) through EA 026 (Charleston-North Charleston, SC); EA 041 (Greenville-Spartanburg-Anderson, SC-NC); EA 042 (Asheville, NC); EA 044 (Knoxville, TN) through EA 053 (Pittsburgh, PA-WV); and EA 070 (Louisville, KY-IN).

REAG 3 (Southeast): REAG 3 consists of the following EAs: EA 027 (Augusta- Aiken, GA-SC) through EA 040 (Atlanta, GA-AL-NC); EA 043 (Chattanooga, TN- GA); EA 069 (Evansville-Henderson, IN-KY-IL); EA 071 (Nashville, TN-KY) through EA 086 (Lake Charles, LA); EA 088 (Shreveport-Bossier City, LA-AR) through EA 090 (Little Rock-North Little Rock, AR); EA 095 (Jonesboro, AR- MO); EA 096 (St. Louis, MO-IL); and EA 174 (Puerto Rico and the U.S. Virgin Islands).

REAG 4 (Great Lakes): REAG 4 consists of the following EAs: EA 055 Cleveland-Akron, OH-PA) through EA 068 (Champaign-Urbana, IL); EA 097 (Springfield, IL-MO); and EA 100 (Des Moines, IA-IL-MO) through EA 109 (Duluth-Superior, MN-WI).

REAG 5 (Central/Mountain): REAG 5 consists of the following EAs: EA 087 (Beaumont-Port Arthur, TX); EA 091 (Forth Smith, AR-OK) through EA 094 (Springfield, MO); EA 098 (Columbia, MO); EA 099 (Kansas City, MO-KS); EA 110 (Grand Forks, ND-MN) through EA 146 (Missoula, MT); EA 148 (Idaho Falls, ID-WY); EA 149 (Twin Falls, ID); EA 152 (Salt Lake City-Ogden, UT-ID); and EA 154 (Flagstaff, AZ-UT) through EA 159 (Tucson, AZ).

REAG 6 (Pacific): REAG 6 consists of the following EAs: EA 147 (Spokane, WA- ID); EA 150 (Boise City, ID-OR); EA 151 (Reno, NV-CA); EA 153 (Las Vegas, NV-AZ-UT); EA 160 (Los Angeles-Riverside-Orange County, CA-AZ) through EA 173 (Guam and the Northern Mariana Islands); and EA 175 (American Samoa).

Regional License. A license authorizing the right to use a specified block of 220-222 MHz spectrum within one of six Regional Economic Area Groupings (REAGs).

Relay press licensee. Persons primarily engaged in the publication of a newspaper or in the operation of an established press association.

Secondary operation. Radio communications which may not cause interference to operations authorized on a primary basis and which are not protected from interference from those primary operations.

Signal booster. A device at a fixed location which automatically receives, amplifies, and retransmits on a one-way or two-way basis, the signals received from base, fixed, mobile, and portable stations, with no change in frequency or authorized bandwidth. A signal booster may be either narrowband (Class A), in which case the booster amplifies only those discrete frequencies intended to be retransmitted, or broadband (Class B), in which case all signals within the passband of the signal booster filter are amplified.

Special industrial licensee. Persons regularly engaged in any of the following activities:

- (1) The operation of farms, ranches, or similar land areas, for the quantity production of crops or plants; vines or trees (excluding forestry operations); or for the keeping, grazing or feeding of livestock for animal products, animal increase, or value enhancement;
- (2) Plowing, soil conditioning, seeding, fertilizing, or harvesting for agricultural activities;
- (3) Spraying or dusting of insecticides, herbicides, or fungicides, in areas other than enclosed structures;
- (4) Livestock breeding service;
- (5) The operation of a commercial business regularly engaged in the construction of roads, bridges, sewer systems, pipelines, airfields, or water, oil, gas, or power production, collection, or distribution systems. The construction of buildings is not included in this category;
- (6) The operation of mines for the recovery of solid fuels, minerals, metal, rock, sand and gravel from the earth or the sea, including the exploration for and development of mining properties;
- (7) Maintaining, patrolling or repairing gas or liquid transmission pipelines, tank cars, water or waste disposal wells, industrial storage tanks, or distribution systems of public utilities;
- (8) Acidizing, cementing, logging, perforating, or shooting activities, and services of a similar nature incident to the drilling of new oil or gas wells, or the maintenance of production from established wells;
- (9) Supplying chemicals, mud, tools, pipe, and other materials or equipment unique to the petroleum and gas production industry, as the primary activity of the applicant if delivery, installation or application of these materials requires the use of specifically fitted conveyances;
- (10) The delivery of ice or fuel to the consumer for heating, lighting, refrigeration or power generation purposes, by means other than pipelines or railroads when such products are not to be resold following their delivery; or
- (11) The delivery and pouring of ready mixed concrete or hot asphalt mix.

Specialized Mobile Radio System. A radio system in which licensees provide land mobile communications services (other than radiolocation services) in the 800 MHz and 900 MHz bands on a commercial basis to entities eligible to be licensed under this Part, Federal Government entities, and individuals.

SMSA (Standard Metropolitan Statistical Area). A city of 50,000 or more population and the surrounding counties.

Station authorization. A license issued by the Commission for the operation of a radio station.

Taxicab licensee. Persons regularly engaged in furnishing to the public for hire a nonscheduled passenger land transportation service (which may also include the occasional transport of small items of property) not operated over a regular route or between established terminals.

Telecommand. The transmission of non voice signals for the purpose of remotely controlling a device.

Telemetry (also telemetry). The transmission of non-voice signals for the purpose of automatically indicating or recording measurements at a distance from the measuring instrument.

Telephone maintenance licensee. Communications common carriers engaged in the provision of landline local exchange telephone service, or interexchange communications service, or who provide wire-telegraph service, and radio communications common carriers authorized in the Point-to-Point Microwave Radio Service under part 21 of this chapter. Resellers that do not own or control transmission facilities is not included in this category.

Travelers' Information Station. A base station in the Local Government Radio Service used to transmit non-commercial, voice information pertaining to traffic and road conditions, traffic hazard and traveler advisories, directions, availability of lodging, rest stops, and service stations, and descriptions of local points of interest.

Trunk (telephony). A one or two-way channel provided as a common traffic artery between switching equipment.

Trunk group. All of the trunks of a given type of characteristic that extend between two switching points.

Trunked radio system. A method of operation in which a number of radio frequency channel pairs are assigned to mobile and base stations in the system for use as a trunk group.

220 MHz Service. The radio service for the licensing of frequencies in the 220-222 MHz band.

Universal Licensing System (ULS). The consolidated database, application filing system and processing system for all Wireless Telecommunications Services. The ULS offers Wireless Telecommunications Bureau (WTB) applicants and the general public electronic filing of all applications requests, and full public access to all WTB licensing data.

Urbanized Area. A city and the surrounding closely settled territories.

## **PART 90--PRIVATE LAND MOBILE RADIO SERVICES SUBPART P--PAGING OPERATIONS**

§ 90.490 One-way paging operations in the private services.

(a) Subject to specific prohibition or restriction by rule provisions governing the radio service in which a licensee's radio system is authorized, paging operations are permitted:

(1) Where the signals and messages are transmitted by a control operator of the licensee stationed at a licensed control point in the licensee's system of communication.

(2) Where the signals and messages are transmitted from an operating position within an internal system of communication which meets the tests of §§ 90.471 through 90.475.

(3) Where the signals and messages are transmitted from a dispatch point within the licensee's system of communication, as defined as § 90.7.

(b) Systems employing dial-up circuits (§ 90.461(c) ) may be used in one-way paging operations, but only where the paging signals are transmitted as provided at paragraph (a) (1) of this section.

(c) Paging may be initiated directly from telephone positions in the public switched telephone network. When land stations are multiple licensed or otherwise shared by authorized users, arrangements for the telephone service must be made with a duly authorized carrier by users, licensees, or their authorized agents on a non-profit, cost-shared basis. When telephone service costs are shared, at least one licensee participating in the cost sharing arrangements must maintain cost sharing records and the costs must be distributed at least once a year. Licensees, users, or their authorized agents may also make joint use arrangements with a duly authorized carrier and arrange that each licensee or user pay the carrier directly for the licensee's or user's share of the joint use of the shared telephone service. A report of the cost distribution must be placed in the licensee's station records and made available to participants in the sharing arrangement and the Commission upon request. In all cases, arrangements with the duly authorized carrier must disclose the number of licensees and users and the nature of the use.

§ 90.492 One way paging operations in the 806-824/851-869 MHz and 896- 901/935-940 MHz bands.

Paging operations are permitted in these bands only in accordance with §§ 90.645(e) and (f).

§ 90.493 Paging operations on exclusive channels in the 929-930 MHz band.

Paging operations on the exclusive channels in the 929-930 MHz band are subject to the rules set forth in this section.

(a) Exclusive channels. The center frequencies of the channels in the 929-930 MHz band that may be assigned on an exclusive basis are as follows: 929.0125, 929.1125, 929.1375, 929.1875, 929.2125, 929.2375, 929.2875, 929.3125, 929.3375, 929.3625, 929.3875, 929.4125, 929.4375, 929.4625, 929.4875, 929.5125, 929.5375, 929.5625, 929.5875, 929.6125, 929.6375, 929.6625, 929.6875, 929.7125, 929.7375, 929.7625, 929.7875, 929.8125, 929.8375, 929.8625, 929.8875, 929.9125, 929.9375, 929.9625, and 929.9875 MHz.

(b) Part 22 licensing, construction and operation rules apply. Licensing, construction and operation of paging stations on the exclusive channels in the 929-930 MHz band are subject to the application filing, licensing procedure, auction procedure, construction, operation and notification rules and requirements that are set forth in part 22 of this chapter for paging stations operating in the 931-932 MHz band, instead of procedures elsewhere in this part.

(c) Part 22 power limits apply; type acceptance required. Paging operations on the exclusive channels in the 929-930 MHz band are subject to the transmitting power limits set forth in part 22 of this chapter for paging stations operating in the 931-932 MHz band, instead of power limits elsewhere in this part. Transmitters used on the exclusive channels in the 929-930 MHz band must be of a type accepted under either part 22 of this chapter or this part (or both).

§ 90.494 Paging operations on shared channels in the 929-930 MHz band.

(a) This section applies to licensing of paging stations on the shared (non- exclusive) channels in the 929-930 MHz band. The center frequencies of these channels are listed in paragraph (b) of this section.

(b) The following frequencies are available to all eligible part 90 users for one-way paging systems on a shared basis only and will not be assigned for the exclusive use of any licensee.

929.0375, 929.0625, 929.0875, 929.1625, 929.2625

(c) All frequencies listed in this section may be used to provide one-way paging communications to persons eligible for licensing under subpart B or C of this part, representatives of Federal Government agencies, individuals, and foreign governments and their representatives. The provisions of § 90.173(b) apply to all frequencies listed in this section.

(d) Licensees on these frequencies may utilize any type of paging operation desired (tone only, tone-voice, digital, tactile, optical readout, etc.).

(e) There shall be no minimum or maximum loading standards for these frequencies.

(f) The effective radiated power for base stations providing paging service on the shared channels must not exceed 3500 Watts.

(g) Licenses may be granted on these shared paging channels only for expansion (addition of new sites or relocation of existing sites) or other modification, assignment or transfer of control of existing, licensed private or commercial paging systems, and for new private, internal-use paging systems. Any application for authority to

operate a new commercial paging system on any of these shared channels is unacceptable for filing.

**PART 22--PUBLIC MOBILE SERVICES**  
**SUBPART A—SCOPE AND AUTHORITY**

§ 22.1 Basis and purpose.

This section contains a concise general statement of the basis and purpose of the rules in this part, pursuant to 5 U.S.C. 553(c).

(a) Basis. These rules are issued pursuant to the Communications Act of 1934, as amended, 47 U.S.C. 151 et. seq.

(b) Purpose. The purpose of these rules is to establish the requirements and conditions under which domestic common carrier radio stations may be licensed and used in the Public Mobile Services.

§ 22.3 Authorization required.

Stations in the Public Mobile Services must be used and operated only in accordance with the rules in this part and with a valid authorization granted by the FCC under the provisions of this part.

(a) The holding of an authorization does not create any rights beyond the terms, conditions and period specified in the authorization. Authorizations may be granted upon proper application, provided that the FCC finds that the applicant is qualified in regard to citizenship, character, financial, technical and other criteria, and that the public interest, convenience and necessity will be served. See 47 U.S.C. 301, 308, and 309.

(b) Authority for subscribers to operate mobile or fixed stations in the Public Mobile Services, except for certain stations in the Rural Radiotelephone Service and the Air-Ground Radiotelephone Service, is included in the authorization held by the common carrier providing service to them. Subscribers are not required to apply for, and the FCC does not accept applications from subscribers for, individual mobile or fixed station authorizations in the Public Mobile Services, except as follows:

(1) Individual authorizations are required to operate general aviation airborne mobile stations in the Air-Ground Radiotelephone Service. See § 22.821.

(2) Individual authorizations are required to operate rural subscriber stations in the Rural Radiotelephone Service, except as provided in § 22.703.

§ 22.5 Citizenship.

The rules in this section implement section 310 of the Communications Act of 1934, as amended (47 U.S.C. § 310), in regard to the citizenship of licensees in the Public Mobile Services.

(a) Foreign governments. The FCC will not grant an authorization in the Public Mobile Services to any foreign government or any representative thereof.

(b) Alien ownership or control. The FCC will not grant an authorization in the Public Mobile Services to:

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

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

(3) 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;

(4) 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 FCC finds that the public interest will be served by the refusal or revocation of such license.

#### § 22.7 General eligibility.

Except as otherwise provided in this part, existing and proposed common carriers are eligible to hold authorizations in the Public Mobile Services. Applications are granted only if the applicant is legally, financially, technically and otherwise qualified to render the proposed service.

#### § 22.99 Definitions.

Terms used in this part have the following meanings:

**Air-Ground Radiotelephone Service.** A radio service in which common carriers are authorized to offer and provide radio telecommunications service for hire to subscribers in aircraft.

**Airborne station.** A mobile station in the Air-Ground Radiotelephone Service authorized for use on aircraft while in flight or on the ground.

**Antenna structure.** A structure comprising an antenna, the tower or other structure that exists solely to support antennas, and any surmounting appurtenances (attachments such as beacons or lightning rods).

**Antenna.** A device that converts radio frequency electrical energy to radiated electromagnetic energy and vice versa; in a transmitting station, the device from which radio waves are emitted.

**Authorized bandwidth.** The necessary or occupied bandwidth of an emission, whichever is more.

**Authorized spectrum.** The spectral width of that portion of the electromagnetic spectrum within which the emission power of the authorized transmitter(s) must be contained, in accordance with the rules in this part. The authorized spectrum comprises one channel bandwidth or the bandwidths of two or more contiguous channels.

**Auxiliary test transmitter.** A fixed transmitter used to test Public Mobile systems.

**Base transmitter.** A stationary transmitter that provides radio telecommunications service to mobile and/or fixed receivers, including those associated with mobile stations.

**Blanketing interference.** Disturbance in consumer receivers located in the immediate vicinity of a transmitter, caused by currents directly induced into the consumer receiver's circuitry by the relatively high field strength of the transmitter.

**Build-out transmitters.** In the Cellular Radiotelephone Service, transmitters added to the first cellular system authorized on a channel block in a cellular market during the five year build-out period in order to expand the coverage of the system within the market.

**Cardinal radials.** Eight imaginary straight lines extending radially on the ground from an antenna location in the following azimuths with respect to true North: 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°.

**Carrier frequency.** The frequency of the unmodulated electrical wave at the output of an amplitude modulated (AM), frequency modulated (FM) or phase modulated (PM) transmitter.

**Cell.** The service area of an individual transmitter location in a cellular system.

Cellular Geographic Service Area. The geographic area served by a cellular system, within which that system is entitled to protection and adverse effects are recognized, for the purpose of determining whether a petitioner has standing. See § 22.911.

Cellular markets. Standard geographic areas used by the FCC for administrative convenience in the licensing of cellular systems. See § 22.909.

Cellular Radiotelephone Service. A radio service in which common carriers are authorized to offer and provide cellular service for hire to the general public. This service was formerly titled Domestic Public Cellular Radio Telecommunications Service.

Cellular repeater. In the Cellular Radiotelephone Service, a stationary transmitter or device that automatically re-radiates the transmissions of base transmitters at a particular cell site and mobile stations communicating with those base transmitters, with or without channel translation.

Cellular service. Radio telecommunication services provided using a cellular system.

Cellular system. An automated high-capacity system of one or more multichannel base stations designed to provide radio telecommunication services to mobile stations over a wide area in a spectrally efficient manner. Cellular systems employ techniques such as low transmitting power and automatic hand-off between base stations of communications in progress to enable channels to be reused at relatively short distances. Cellular systems may also employ digital techniques such as voice encoding and decoding, data compression, error correction, and time or code division multiple access in order to increase system capacity.

Center frequency. The frequency of the middle of the bandwidth of a channel.

Central office transmitter. A fixed transmitter in the Rural Radiotelephone Service that provides service to rural subscriber stations.

CGSA. See Cellular Geographic Service Area.

Channel. The portion of the electromagnetic spectrum assigned by the FCC for one emission. In certain circumstances, however, more than one emission may be transmitted on a channel. See, for example, § 22.161.

Channel bandwidth. The spectral width of a channel, as specified in this part, within which 99% of the emission power must be contained.

Channel block. A group of channels that are assigned together, not individually.

Channel pair. Two channels that are assigned together, not individually. In this part, channel pairs are indicated by an ellipsis between the center frequencies.

Communications channel. In the Cellular Radiotelephone and Air-ground Radiotelephone Services, a channel used to carry subscriber communications.

Construction period. The period between the date of grant of an authorization and the date of required commencement of service.

Control channel. In the Cellular Radiotelephone Service and the Air-ground Radiotelephone Service, a channel used to transmit information necessary to establish or maintain communications. In the other Public Mobile Services, a channel that may be assigned to a control transmitter.

Control point. A location where the operation of a public mobile station is supervised and controlled by the

licensee of that station.

**Control transmitter.** A fixed transmitter in the Public Mobile Services that transmits control signals to one or more base or fixed stations for the purpose of controlling the operation of the base or fixed stations, and/or transmits subscriber communications to one or more base or fixed stations that retransmit them to subscribers.

**Dead spots.** Small areas within a service area where the field strength is lower than the minimum level for reliable service. Service within dead spots is presumed.

**Dispatch service.** A radiotelephone service comprising communications between a dispatcher and one or more mobile units. These communications normally do not exceed one minute in duration and are transmitted directly through a base station, without passing through mobile telephone switching facilities.

**Effective radiated power (ERP).** The effective radiated power of a transmitter (with antenna, transmission line, duplexers etc.) is the power that would be necessary at the input terminals of a reference half-wave dipole antenna in order to produce the same maximum field intensity. ERP is usually calculated by multiplying the measured transmitter output power by the specified antenna system gain, relative to a half-wave dipole, in the direction of interest.

**Emission.** The electromagnetic energy radiated from an antenna.

**Emission designator.** An internationally accepted symbol for describing an emission in terms of its bandwidth and the characteristics of its modulation, if any. See § 2.201 of this chapter for details.

**Emission mask.** The design limits imposed, as a condition or certification, on the mean power of emissions as a function of frequency both within the authorized bandwidth and in the adjacent spectrum.

**Equivalent isotropically radiated power (EIRP).** The equivalent isotropically radiated power of a transmitter (with antenna, transmission line, duplexers etc.) is the power that would be necessary at the input terminals of a reference isotropic radiator in order to produce the same maximum field intensity. An isotropic radiator is a theoretical lossless point source of radiation with unity gain in all directions. EIRP is usually calculated by multiplying the measured transmitter output power by the specified antenna system gain, relative to an isotropic radiator, in the direction of interest.

**Extension.** In the Cellular Radiotelephone Service, an area within the service area boundary of a cellular system, but outside of the market boundary. See §§ 22.911(c) and 22.912.

**Facsimile service.** Transmission of still images from one place to another by means of radio.

**Fill-in transmitters.** Transmitters added to a station, in the same area and transmitting on the same channel or channel block as previously authorized transmitters, that do not expand the existing service area, but are established for the purpose of improving reception in dead spots.

**Five year build-out period.** A five year period during which the licensee of the first cellular system authorized on each channel block in each cellular market may expand the system within that market. See § 22.947.

**Fixed transmitter.** A stationary transmitter that communicates with other stationary transmitters.

**Frequency.** The number of cycles occurring per second of an electrical or electromagnetic wave; a number representing a specific point in the electromagnetic spectrum.

**Ground station.** In the Air-ground Radiotelephone Service, a stationary transmitter that provides service to airborne mobile stations.

Height above average terrain (HAAT). The height of an antenna above the average elevation of the surrounding area.

In-building radiation systems. Supplementary systems comprising low power transmitters, receivers, indoor antennas and/or leaky coaxial cable radiators, designed to improve service reliability inside buildings or structures located within the service areas of stations in the Public Mobile Services.

Initial cellular applications. Applications for authority to construct and operate a new cellular system, excluding applications for interim operating authority.

Interfering contour. The locus of points surrounding a transmitter where the predicted median field strength of the signal from that transmitter is the maximum field strength that is not considered to cause interference at the service contour of another transmitter.

Interoffice transmitter. A fixed transmitter in the Rural Radiotelephone Service that communicates with other interoffice transmitters for the purpose of interconnecting rural central offices.

Meteor burst propagation mode. A long distance VHF radio communication path occurring as a result of the refraction of electromagnetic waves by ionized meteor trails.

Mobile station. One or more transmitters that are capable of operation while in motion.

Necessary bandwidth. The calculated spectral width of an emission. Calculations are made using procedures set forth in part 2 of this chapter. The bandwidth so calculated is considered to be the minimum necessary to convey information at the desired rate with the desired accuracy.

Occupied bandwidth. The measured spectral width of an emission. The measurement determines occupied bandwidth as the difference between upper and lower frequencies where 0.5% of the emission power is above the upper frequency and 0.5% of the emission power is below the lower frequency.

Offshore central transmitter. A fixed transmitter in the Offshore Radiotelephone Service that provides service to offshore subscriber stations.

Offshore Radiotelephone Service. A radio service in which common carriers are authorized to offer and provide radio telecommunication services for hire to subscribers on structures in the offshore coastal waters of the Gulf of Mexico.

Offshore subscriber station. One or more fixed and/or mobile transmitters in the Offshore Radiotelephone Service that receive service from offshore central transmitters.

Pager. A small radio receiver designed to be carried by a person and to give an aural, visual or tactile indication when activated by the reception of a radio signal containing its specific code. It may also reproduce sounds and/or display messages that were also transmitted. Some pagers also transmit a radio signal acknowledging that a message has been received.

Paging and Radiotelephone Service. A radio service in which common carriers are authorized to offer and provide paging and radiotelephone service for hire to the general public. This service was formerly titled Public Land Mobile Service.

Paging geographic area authorization. An authorization conveying the exclusive right to establish and expand one or more stations throughout a paging geographic area or, in the case of a partitioned geographic area, throughout a specified portion of a paging geographic area, on a specified channel allocated for assignment in the Paging and Radiotelephone Service. These are subject to the conditions that no interference may be caused to existing co-channel stations operated by other licensees within the paging geographic area and that no interference may be

caused to existing or proposed co-channel stations of other licensees in adjoining paging geographic areas.

Paging geographic areas. Standard geographic areas used by the FCC for administrative convenience in the licensing of stations to operate on channels allocated for assignment in the Paging and Radiotelephone Service. See § 22.503(b).

Paging service. Transmission of coded radio signals for the purpose of activating specific pagers; such transmissions may include messages and/or sounds.

Partitioned cellular market. A cellular market with two or more authorized cellular systems on the same channel block during the five year build-out period, as a result of settlements during initial licensing or contract(s) between the licensee of the first cellular system and the licensee(s) of the subsequent systems. See § 22.947(b).

Public Mobile Services. Radio services in which common carriers are authorized to offer and provide mobile and related fixed radio telecommunication services for hire to the public.

Radio common carrier. A telecommunications common carrier that provides radio communications services but is not engaged in the business of providing landline local exchange telephone service.

Radio telecommunication services. Communication services provided by the use of radio, including radiotelephone, radiotelegraph, paging and facsimile service.

Radiotelegraph service. Transmission of messages from one place to another by means of radio.

Radiotelephone service. Transmission of sound from one place to another by means of radio.

Repeater. A fixed transmitter that retransmits the signals of other stations.

Roamer. A mobile station receiving service from a station or system in the Public Mobile Services other than one to which it is a subscriber.

Rural Radiotelephone Service. A radio service in which common carriers are authorized to offer and provide radio telecommunication services for hire to subscribers in areas where it is not feasible to provide communication services by wire or other means.

Rural subscriber station. One or more fixed transmitters in the Rural Radiotelephone Service that receive service from central office transmitters.

Service area. The geographic area considered by the FCC to be reliably served by a station in the Public Mobile Services.

Service contour. The locus of points surrounding a transmitter where the predicted median field strength of the signal from that transmitter is the minimum field strength that is considered sufficient to provide reliable service to mobile stations.

Service to subscribers. Service to at least one subscriber that is not affiliated with, controlled by or related to the providing carrier.

Signal booster. A stationary device that automatically reradiates signals from base transmitters without channel translation, for the purpose of improving the reliability of existing service by increasing the signal strength in dead spots.

Station. A station equipped to engage in radio communication or radio transmission of energy (47 U.S.C. 153(k)).

Telecommunications common carrier. An individual, partnership, association, joint-stock company, trust or corporation engaged in rendering radio telecommunications services to the general public for hire.

Temporary fixed station. One or more fixed transmitters that normally do not remain at any particular location for longer than 6 months.

Universal licensing system. The Universal Licensing System (ULS) is the consolidated database, application filing system, and processing system for all Wireless Radio Services. ULS supports electronic filing of all applications and related documents by applicants and licensees in the Wireless Radio Services, and provides public access to licensing information.

Unreserved areas. With regard to a channel block allocated for assignment in the Cellular Radiotelephone Service: Geographic area in the District of Columbia, or any State, Territory or possession of the United States of America that is not within the CGSA of any cellular system authorized to transmit on that channel block. With regard to a channel allocated for assignment in the Paging and Radiotelephone Service: Geographic area within the District of Columbia, or any State, Territory or possession of the United States of America that is not within the service contour of any base transmitter in any station authorized to transmit on that channel.

Wireline common carrier. A telecommunications common carrier that is also engaged in the business of providing landline local exchange telephone service.

## **PART 22--PUBLIC MOBILE SERVICES**

### **SUBPART B—LICENSING REQUIREMENTS AND PROCEDURES**

§ 22.107 General application requirements.

In general, applications for authorizations, assignments of authorizations, or consent to transfer of control of licensees in the Public Mobile Services must:

- (a) Demonstrate the applicant's qualifications to hold an authorization in the Public Mobile services;
- (b) State how a grant would serve the public interest, convenience, and necessity;
- (c) Contain all information required by FCC rules or application forms;
- (d) Propose operation of a facility in compliance with all rules governing the Public Mobile service;
- (e) Be amended as necessary to remain substantially accurate and complete in all significant respects, in accordance with the provisions of § 1.65 of this chapter; and,
- (f) Be signed in accordance with § 1.743 of this chapter.

§ 22.131 Procedures for mutually exclusive applications.

Two or more pending applications are mutually exclusive if the grant of one application would effectively preclude the grant of one or more of the others under Commission rules governing the Public Mobile Services involved. The Commission uses the general procedures in this section for processing mutually exclusive applications in the Public Mobile Services. Additional specific procedures are prescribed in the subparts of this part governing the individual Public Mobile Services (see §§ 22.509, 22.717, and 22.949) and in part 1 of this chapter.

(a) Separate applications. Any applicant that files an application knowing that it will be mutually exclusive with one or more applications should not include in the mutually exclusive application a request for other channels or

facilities that would not, by themselves, render the application mutually exclusive with those other applications. Instead, the request for such other channels or facilities should be filed in a separate application.

(b) Filing groups. Pending mutually exclusive applications are processed in filing groups. Mutually exclusive applications in a filing group are given concurrent consideration. The Commission may dismiss as defective (pursuant to § 1.945 of this chapter) any mutually exclusive application(s) whose filing date is outside of the date range for inclusion in the filing group. The types of filing groups used in day-to-day application processing are specified in paragraph (c)(3) of this section. A filing group is one of the following types:

(1) Renewal filing group. A renewal filing group comprises a timely-filed application for renewal of an authorization and all timely-filed mutually exclusive competing applications (see § 1.935 of this chapter).

(2) Same-day filing group. A same-day filing group comprises all mutually exclusive applications whose filing date is the same day, which is normally the filing date of the first-filed application(s).

(3) Thirty-day notice and cut-off filing group. A 30-day notice and cut-off filing group comprises mutually exclusive applications whose filing date is no later than thirty (30) days after the date of the Public Notice listing the first-filed application(s) (according to the filing dates) as acceptable for filing.

(4) Window filing group. A window filing group comprises mutually exclusive applications whose filing date is within an announced filing window. An announced filing window is a period of time between and including two specific dates, which are the first and last dates on which applications (or amendments) for a particular purpose may be accepted for filing. In the case of a one-day window, the two dates are the same. The dates are made known to the public in advance.

(c) Procedures. Generally, the Commission may grant one application in a filing group of mutually exclusive applications and dismiss the other application(s) in the filing that are excluded by that grant, pursuant to § 1.945 of this chapter.

(1) Selection methods. In selecting the application to grant, the Commission will use competitive bidding.

(2) Dismissal of applications. The Commission may dismiss any application in a filing group that is defective or otherwise subject to dismissal under § 1.945 of this chapter, either before or after employing selection procedures.

(3) Type of filing group used. Except as otherwise provided in this part, the type of filing group used in the processing of two or more mutually exclusive applications depends upon the purpose(s) of the applications.

(i) If one of the mutually exclusive applications is a timely-filed application for renewal of an authorization, a renewal filing group is used.

(ii) If any mutually exclusive application filed on the earliest filing date is an application for modification and none of the mutually exclusive applications is a timely-filed application for renewal, a same-day filing group is used.

(iii) If all of the mutually exclusive applications filed on the earliest filing date are applications for initial authorization, a 30-day notice and cut-off filing group is used, except that, for Phase I unserved area applications in the Cellular Radiotelephone Service, a one-day window filing group is used (see § 22.949).

(4) Disposition. If there is only one application in any type of filing group, the Commission may grant that application and dismiss without prejudice any mutually exclusive applications not in the filing group. If there is more than one mutually exclusive application in a filing group, the Commission disposes of these applications as follows:

(i) Applications in a renewal filing group. All mutually exclusive applications in a renewal filing group are

designated for comparative consideration in a hearing.

(ii) Applications in a 30-day notice and cut-off filing group.

(A) If all of the mutually exclusive applications in a 30-day notice and cut-off filing group are applications for initial authorization, the FCC administers competitive bidding procedures in accordance with § 22.201 through § 22.227 and subpart Q of part 1 of this chapter, as applicable. After such procedures, the application of the successful bidder may be granted and the other applications may be dismissed without prejudice.

(B) If any of the mutually exclusive applications in a 30-day notice and cut-off filing group is an application for modification, the Commission may attempt to resolve the mutual exclusivity by facilitating a settlement between the applicants. If a settlement is not reached within a reasonable time, the FCC may designate all applications in the filing group for comparative consideration in a hearing. In this event, the result of the hearing disposes all of the applications in the filing group.

(iii) Applications in a same-day filing group. If there are two or more mutually exclusive applications in a same-day filing group, the Commission may attempt to resolve the mutual exclusivity by facilitating a settlement between the applicants. If a settlement is not reached within a reasonable time, the Commission may designate all applications in the filing group for comparative consideration in a hearing. In this event, the result of the hearing disposes of all of the applications in the filing group.

(iv) Applications in a window filing group. Applications in a window filing group are processed in accordance with the procedures for a 30-day notice and cut-off filing group in paragraph (c)(4)(ii) of this section.

(d) Terminology. For the purposes of this section, terms have the following meanings:

(1) The filing date of an application is the date on which that application was received in a condition acceptable for filing or the date on which the most recently filed major amendment to that application was received, whichever is later, excluding major amendments in the following circumstances:

(i) The major amendment reflects only a change in ownership or control found by the Commission to be in the public interest;

(ii) The major amendment as received is defective or otherwise found unacceptable for filing; or

(iii) The application being amended has been designated for hearing and the Commission or the presiding officer accepts the major amendment.

(2) An application for initial authorization is:

(i) Any application requesting an authorization for a new system or station;

(ii) Any application requesting authorization for an existing station to operate on an additional channel, unless the additional channel is for paired two-way radiotelephone operation, is in the same frequency range as the existing channel(s), and will be operationally integrated with the existing channel(s) such as by trunking;

(iii) Any application requesting authorization for a new transmitter at a location more than 2 kilometers (1.2 miles) from any existing transmitters of the applicant licensee on the requested channel or channel block; or

(iv) Any application to expand the CGSA of a cellular system (as defined in § 22.911), except during the five-year build-out period.

(v) Any "short-form" application (filed on FCC Form 175) requesting a new paging geographic area authorization.

§ 22.143 Construction prior to grant of application.

Applicants may construct facilities in the Public Mobile services prior to grant of their applications, subject to the provisions of this section, but must not operate such facilities until the FCC grants an authorization. If the conditions stated in this section are not met, applicants must not begin to construct facilities in the Public Mobile Services.

(a) When applicants may begin construction. An applicant may begin construction of a facility 35 days after the date of the Public Notice listing the application for that facility as acceptable for filing, except that an applicant whose application to operate a new cellular system was selected in a random selection process may begin construction of that new cellular system 35 days after the date of the Public Notice listing it as the tentative selectee.

(b) Notification to stop. If the FCC for any reason determines that construction should not be started or should be stopped while an application is pending, and so notifies the applicant, orally (followed by written confirmation) or in writing, the applicant must not begin construction or, if construction has begun, must stop construction immediately.

(c) Assumption of risk. Applicants that begin construction pursuant to this section before receiving an authorization do so at their own risk and have no recourse against the United States for any losses resulting from:

- (1) Applications that are not granted;
- (2) Errors or delays in issuing Public Notices;
- (3) Having to alter, relocate or dismantle the facility; or
- (4) Incurring whatever costs may be necessary to bring the facility into compliance with applicable laws, or FCC rules and orders.

(d) Conditions. Except as indicated, all pre-grant construction is subject to the following conditions:

- (1) The application is not mutually exclusive with any other application, except for successful bidders and tentative selectees in the Cellular Radiotelephone Service;
- (2) No petitions to deny the application have been filed;
- (3) The application does not include a request for a waiver of one or more FCC rules;
- (4) For any construction or alteration that would exceed the requirements of § 17.7 of this chapter, the licensee has notified the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460-1), filed a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, PRB, Support Services Branch, Gettysburg, PA 17325;
- (5) The applicant has indicated in the application that the proposed facility would not have a significant environmental effect, in accordance with §§ 1.1301 through 1.1319 of this chapter; and,
- (6) Under applicable international agreements and rules in this part, individual coordination of the proposed channel assignment(s) with a foreign administration is not required.

§ 22.150 Standard pre-filing technical coordination procedure.

For operations on certain channels in the Public Mobile Services, carriers must attempt to coordinate the proposed use of spectrum with other spectrum users prior to filing an application for authority to operate a station. Rules requiring this procedure for specific channels and types of stations are contained in the subparts governing the individual Public Mobile Services.

(a) Coordination comprises two steps--notification and response. Each step may be accomplished orally or in writing.

(b) Notification must include relevant technical details of the proposal. At minimum, this should include the following:

- (1) Geographical coordinates of the antenna site(s).
- (2) Transmitting and receiving channels to be added or changed.
- (3) Transmitting power, emission type and polarization.
- (4) Transmitting antenna pattern and maximum gain.
- (5) Transmitting antenna height above ground level.

(c) Applicants and licensees receiving notification must respond promptly, even if no channel usage conflicts are anticipated. If any notified party fails to respond within 30 days, the applicant may file the application without a response from that party.

(d) The 30-day period begins on the date the notification is submitted to the Commission via the ULS. If the notification is by mail, this date may be ascertained by:

- (1) The return receipt on certified mail,
- (2) The enclosure of a card to be dated and returned by the party being notified, or
- (3) A reasonable estimate of the time required for the mail to reach its destination. In this case, the date when the 30-day period will expire must be stated in the notification.

(e) All channel usage conflicts discovered during the coordination process should be resolved prior to filing of the application. If the applicant is unable or unwilling to resolve a particular conflict, the application may be accepted for filing if it contains a statement describing the unresolved conflict and a brief explanation of the reasons why a resolution was not achieved.

(f) If a number of changes in the technical parameters of a proposed facility become necessary during the course of the coordination process, an attempt should be made to minimize the number of separate notifications. If the changes are incorporated into a completely revised notice, the items that were changed from the previous notice should be identified.

(g) In situations where subsequent changes are not numerous or complex, the party receiving the changed notification should make an effort to respond in less than 30 days. If the applicant believes a shorter response time is reasonable and appropriate, it should so indicate in the notice and suggest a response date.

(h) If a subsequent change in the technical parameters of a proposed facility could not affect the facilities of one or more of the parties that received an initial notification, the applicant is not required to coordinate that change with these parties. However, these parties must be advised of the change and of the opinion that coordination is not required.

§ 22.157 Distance computation.

The method given in this section must be used to compute the distance between any two locations, except that, for computation of distance involving stations in Canada and Mexico, methods for distance computation specified in the applicable international agreement, if any, must be used instead. The method set forth in this paragraph is considered to be sufficiently accurate for distances not exceeding 475 km (295 miles).

(a) Convert the latitudes and longitudes of each reference point from degree- minute-second format to degree-decimal format by dividing minutes by 60 and seconds by 3600, then adding the results to degrees.

$$\text{LATX}_{\text{dd}} = \text{DD} + \frac{\text{MM}}{60} + \frac{\text{SS}}{3600}$$

$$\text{LONX}_{\text{dd}} = \text{DDD} + \frac{\text{MM}}{60} + \frac{\text{SS}}{3600}$$

(b) Calculate the mean geodetic latitude between the two reference points by averaging the two latitudes:

$$\text{ML} = \frac{\text{LAT1}_{\text{dd}} + \text{LAT2}_{\text{dd}}}{2}$$

(c) Calculate the number of kilometers per degree latitude difference for the mean geodetic latitude calculated in paragraph (b) of this section as follows:

$$\text{KPD}_{\text{lat}} = 111.13209 - 0.56605 \cos 2\text{ML} \\ + 0.00120 \cos 4\text{ML}$$

(d) Calculate the number of kilometers per degree of longitude difference for the mean geodetic latitude calculated in paragraph (b) of this section as follows:

$$\text{KPD}_{\text{lon}} = 111.41513 \cos \text{ML} \\ - 0.09455 \cos 3\text{ML} \\ + 0.00012 \cos 5\text{ML}$$

(e) Calculate the North-South distance in kilometers as follows:

$$\text{NS} = \text{KPD}_{\text{lat}} \times (\text{LAT1}_{\text{dd}} - \text{LAT2}_{\text{dd}})$$

(f) Calculate the East-West distance in kilometers as follows:

$$\text{EW} = \text{KPD}_{\text{lon}} \times (\text{LON1}_{\text{dd}} - \text{LON2}_{\text{dd}})$$

(g) Calculate the distance between the locations by taking the square root of the sum of the squares of the East-West and North-South distances:

$$\text{DIST} = \sqrt{\text{NS}^2 + \text{EW}^2}$$

(h) Terms used in this section are defined as follows:

- (1) LAT<sub>1dd</sub> and LON<sub>1dd</sub> are the coordinates of the first location in degree-decimal format.
- (2) LAT<sub>2dd</sub> and LON<sub>2dd</sub> are the coordinates of the second location in degree-decimal format.
- (3) ML is the mean geodetic latitude in degree-decimal format.
- (4) KPD<sub>lat</sub> is the number of kilometers per degree of latitude at a given mean geodetic latitude.
- (5) KPD<sub>lon</sub> is the number of kilometers per degree of longitude at a given mean geodetic latitude.
- (6) NS is the North-South distance in kilometers.
- (7) DIST is the distance between the two locations, in kilometers.

#### § 22.159 Computation of average terrain elevation.

Average terrain elevation must be calculated by computer using elevations from a 30 second point or better topographic data file. The file must be identified. If a 30 second point data file is used, the elevation data must be processed for intermediate points using interpolation techniques; otherwise, the nearest point may be used. In cases of dispute, average terrain elevation determinations can also be done manually, if the results differ significantly from the computer derived averages.

(a) Radial average terrain elevation is calculated as the average of the elevation along a straight line path from 3 to 16 kilometers (2 and 10 miles) extending radially from the antenna site. If a portion of the radial path extends over foreign territory or water, such portion must not be included in the computation of average elevation unless the radial path again passes over United States land between 16 and 134 kilometers (10 and 83 miles) away from the station. At least 50 evenly spaced data points for each radial should be used in the computation.

(b) Average terrain elevation is the average of the eight radial average terrain elevations (for the eight cardinal radials).

(c) For locations in Dade and Broward Counties, Florida, the method prescribed above may be used or average terrain elevation may be assumed to be 3 meters (10 feet).

#### § 22.161 Application requirements for ASSB.

Applications for base stations employing amplitude compandored single sideband modulation (ASSB) must contain the following information:

(a) The application must describe fully the modulation characteristics, emission and occupied bandwidth, and specify the center frequency of the emission for each channel, carrier frequency, and pilot channels, if any. The emission must fall completely within a channel assignable for two-way operation in the Paging and Radiotelephone Service, Rural Radiotelephone Service or Offshore Radiotelephone Service.

(b) The application must contain interference studies between stations within an authorized bandwidth, whether FM-to-ASSB, ASSB-to-FM, or ASSB-to-ASSB in accordance with the following: For ASSB stations, the transmitter nearest to the protected station must be used. The effective radiated power in the direction of the

protected station must be the sum of the peak effective radiated power of all transmitters in the group, in the direction of the protected station. The antenna center of radiation height above average terrain must be the highest antenna center of radiation height of any transmitter in the group in the direction of the protected station. The channel of the group is assumed to be the same as that of the protected station (co-channel), and studies must be made in accordance with § 22.567.

§ 22.165 Additional transmitters for existing systems.

A licensee may operate additional transmitters at additional locations on the same channel or channel block as its existing system without obtaining prior Commission approval provided:

(a) International coordination. The locations and/or technical parameters of the additional transmitters are such that individual coordination of the channel assignment(s) with a foreign administration, under applicable international agreements and rules in this part, is not required.

(b) Antenna structure registration. Certain antenna structures must be registered with the Commission prior to construction or alteration. Registration requirements are contained in part 17 of this chapter.

(c) Environmental. The additional transmitters must not have a significant environmental effect as defined by §§ 1.1301 through 1.1319 of this chapter.

(d) Paging and Radiotelephone Service. The provisions in this paragraph apply for stations in the Paging and Radiotelephone Service.

(1) The interfering contours of the additional transmitter(s) must be totally encompassed by the composite interfering contour of the existing station (or stations under common control of the applicant) on the same channel, except that this limitation does not apply to nationwide network paging stations or in-building radiation systems.

(2) Additional transmitters in the 43 MHz frequency range operate under developmental authority, subject to the conditions set forth in § 22.411.

(3) The additional transmitters must not operate on control channels in the 72-76 MHz, 470-512 MHz, 928 MHz, 932 MHz, 941 MHz or 959 MHz frequency ranges.

(e) Cellular radiotelephone service. During the five-year build-out period, the service area boundaries of the additional transmitters, as calculated by the method set forth in § 22.911(a), must remain within the market, except that the service area boundaries may extend beyond the market boundary into the area that is part of the COSA or is already encompassed by the service area boundaries of previously authorized facilities. After the five-year build-out period, the service area boundaries of the additional transmitters, as calculated by the method set forth in § 22.911(a), must remain within the COSA. Licensees must notify the Commission (FCC Form 601) of any transmitters added under this section that cause a change in the COSA boundary. The notification must include full size and reduced maps, and supporting engineering, as described in § 22.953(a)(5)(i) through (iii). If the addition of transmitters involves a contract service area boundary (SAB) extension (see § 22.912), the notification must include a statement as to whether the five-year build-out period for the system on the relevant channel block in the market into which the SAB extends has elapsed and whether the SAB extends into any unserved area in the market. The notification must be made electronically via the ULS, or delivered to the filing place (see § 1.913 of this chapter) no later than 15 days after the addition is made.

(f) Air-ground Radiotelephone Service. Ground stations may be added to Commercial Aviation air-ground systems at previously established ground station locations, pursuant to § 22.859, subject to compliance with the applicable technical rules. This section does not apply to General Aviation air-ground stations.

(g) Rural Radiotelephone Service. A "service area" and "interfering contours" must be determined using the same method as for stations in the Paging and Radiotelephone Service. The service area and interfering contours so

determined for the additional transmitter(s) must be totally encompassed by the similarly determined composite service area contour and predicted interfering contour, respectively, of the existing station on the same channel. This section does not apply to Basic Exchange Telecommunications Radio Systems.

(h) Offshore Radiotelephone Service. This section does not apply to stations in the Offshore Radiotelephone Service.

(i) Provision of information upon request. Upon request by the FCC, licensees must supply administrative or technical information concerning the additional transmitters. At the time transmitters are added pursuant to this section, licensees must make a record of the pertinent technical and administrative information so that such information is readily available. See § 22.303.

#### § 22.201 Scope of competitive bidding rules.

Sections 22.201 through 22.227, inclusive (and, unless otherwise specified in this part, the procedures set forth in part 1, subpart Q, of this chapter), apply only to competitive bidding ("auction") procedures for authorizations as follows:

(a) Paging geographic area authorizations issued pursuant to this part or to part 90 of this chapter.

(b) [Reserved]

#### § 22.203 Competitive bidding design for paging licensing.

A simultaneous multiple round auction will be used to choose from among mutually exclusive initial applications for paging geographic area authorizations, unless the FCC specifies otherwise by Public Notice prior to the competitive bidding procedure.

#### § 22.205 Competitive bidding mechanisms.

(a) Sequencing. The FCC will establish and may vary the sequence in which paging geographic area authorizations are auctioned.

(b) Grouping. The FCC will determine which licenses will be auctioned simultaneously or in combination based on interdependency and administrative circumstances.

(c) Minimum Bid Increments. The FCC may, by public announcement before or during an auction, require minimum bid increments in dollar or percentage terms.

(d) Stopping Rules. The FCC may establish stopping rules before or during an auction in order to terminate the auction within a reasonable time.

(e) Activity Rules. The FCC may establish activity rules which require a minimum amount of bidding activity. In the event that the FCC establishes an activity rule in connection with a simultaneous multiple round auction, each bidder may request waivers of such rule during the auction. The FCC may, by public announcement either before or during an auction, specify or vary the number of waivers available to each bidder.

#### § 22.207 Withdrawal, default, and disqualification payments.

The FCC will impose payments on bidders who withdraw high bids during the course of an auction, who default on payments due after an auction terminates, or who are disqualified. When the FCC conducts a simultaneous

multiple round auction, payments will be calculated as set forth in §§ 1.2104(g) and 1.2109 of this chapter. When the amount of such a payment cannot be determined, a deposit of up to 20 percent of the amount bid on the license will be required.

§ 22.211 Submission of upfront payments and down payments.

(a) The FCC will require applicants to submit an upfront payment prior to the start of a paging auction. The amount of the upfront payment for each geographic area license auctioned and the procedures for submitting it will be set forth by the Wireless Telecommunications Bureau in a Public Notice in accordance with § 1.2106 of this chapter.

(b) Each winning bidder in a paging auction must submit a down payment to the FCC in an amount sufficient to bring its total deposits up to 20 percent of its winning bid. All winning bidders except small businesses will be required to make such payment within ten business days following the release of a Public Notice announcing the close of bidding. Small businesses must bring their deposits up to 10 percent of their winning bids within ten business days following the release of a Public Notice announcing the close of bidding, and must pay an additional 10 percent prior to licensing, by a date and time to be specified by Public Notice.

§ 22.213 Long-form application (FCC Form 601).

Each successful bidder for a paging geographic area authorization must submit a "long-form" application (Form 601) within ten (10) business days after being notified by Public Notice that it is the winning bidder. Applications for paging geographic area authorizations on FCC Form 601 must be submitted in accordance with § 1.2107 and § 1.2112 of this chapter, all applicable procedures set forth in the rules in this part, and any applicable Public Notices that the FCC may issue in connection with an auction. After an auction, the FCC will not accept long-form applications for paging geographic area authorizations from anyone other than the auction winners and parties seeking partitioned authorizations pursuant to agreements with auction winners under § 22.221 of this part.

§ 22.215 Authorization grant, denial, default, and disqualification.

(a) Each winning bidder will be required to pay the full balance of its winning bid no later than ten (10) business days following the release date of a Public Notice establishing the payment deadline. If a winning bidder fails to pay the balance of its winning bids in a lump sum by the applicable deadline as specified by the Commission, it will be allowed to make payment no later than ten (10) business days after the payment deadline, provided that it also pays a late fee equal to five (5) percent of the amount due. When a winning bidder fails to pay the balance of its winning bid by the late payment deadline, it is considered to be in default on its authorization(s) and subject to the applicable default payments. Authorizations will be awarded upon the full and timely payment of winning bids and any applicable late fees.

(b) A bidder that withdraws its bid subsequent to the close of bidding, defaults on a payment due, or is disqualified, is subject to the payments specified in § 22.207, § 1.2104(g), or § 1.2109 of this chapter, as applicable.

§ 22.217 Bidding credits for small businesses.

(a) A winning bidder that qualifies as a small business or a consortium of small businesses as defined in § 22.223(b)(1)(i) of this part may use a bidding credit of thirty-five (35) percent to lower the cost of its winning bid. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in § 22.223(b)(1)(ii) of this part may use a bidding credit of twenty-five (25) percent to lower the cost of its winning bid.

(b) Unjust Enrichment:

(1) If a small business that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to an entity that is not a small business under § 22.223(b)(1), or seeks to make any other change in ownership that would result in the licensee losing eligibility as a small business, the small business must seek FCC approval and reimburse the U.S. government for the amount of the bidding credit (plus interest at the rate imposed for installment financing at the time the license was awarded), as a condition of approval of such assignment, transfer, or other ownership change.

(2) If a small business that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to a small business meeting the eligibility standards for a lower bidding credit, or seeks to make any other change in ownership that would result in the licensee qualifying for a lower bidding credit under this section, the licensee must seek FCC approval and reimburse the U.S. government for the difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee, or licensee is eligible under this section (plus interest at the rate imposed for installment financing at the time the license was awarded), as a condition of the approval of such assignment, transfer, or other ownership change.

(3) The amount of payments made pursuant to paragraphs (b)(1) and (b)(2) of this section will be reduced over time as follows: A transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or the difference between the bidding credit obtained by the original licensee and the bidding credit for which the post-transfer licensee is eligible); in year 3 of the license term the payment will be 75 percent; in year 4 the payment will be 50 percent; and in year 5 the payment will be 25 percent, after which there will be no assessment.

(4) If a small business that utilizes a bidding credit under this section partitions its authorization or disaggregates its spectrum to an entity not meeting the eligibility standards for the same bidding credit, the partitioning or disaggregating licensee will be subject to the provisions concerning unjust enrichment as set forth in § 1.2111(e)(2) and (3) of this chapter.

§ 22.221 Eligibility for partitioned licenses.

If partitioned licenses are being applied for in conjunction with a license(s) to be awarded through competitive bidding procedures--

(a) The applicable procedures for filing short-form applications and for submitting upfront payments and down payments contained in this chapter shall be followed by the applicant, who must disclose as part of its short-form application all parties to agreement(s) with or among other entities to partition the license pursuant to this section, if won at auction (see 47 CFR 1.2105(a)(2)(viii));

(b) Each party to an agreement to partition the authorization must file a long-form application (FCC Form 601) for its respective, mutually agreed-upon geographic area together with the application for the remainder of the MEA or EA filed by the auction winner.

(c) If the partitioned authorization is being applied for as a partial assignment of the MEA or EA authorization following grant of the initial authorization, request for authorization for partial assignment of an authorization shall be made pursuant to § 1.948 of this part.

§ 22.223 Definitions concerning competitive bidding process.

(a) Scope. The definitions in this section apply to §§ 22.201 through 22.227, unless otherwise specified in those sections.

(b) Small business; consortium of small businesses.

(1) A small business is an entity that either:

(i) Together with its affiliates and controlling interests has average gross revenues that are not more than \$3 million for the preceding three years; or

(ii) Together with its affiliates and controlling interests has average gross revenues that are not more than \$15 million for the preceding three years.

(2) For purposes of determining whether an entity meets either the \$3 million or \$15 million average annual gross revenues size standard set forth in paragraph (b)(1) of this section, the gross revenues of the entity, its affiliates, and controlling interests shall be considered on a cumulative basis and aggregated.

(3) A consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition of a small business in paragraph (b)(1) of this section. Each individual member must establish its eligibility as a small business, as defined in this section. Where an applicant (or licensee) is a consortium of small businesses, the gross revenues of each small business shall not be aggregated.

(4) Applicants without identifiable controlling interests. Where an applicant (or licensee) cannot identify controlling interests under the standards set forth in this section, the gross revenues of all interest holders in the applicant, and their affiliates, will be attributable.

(c) Gross Revenues. Gross revenues shall mean all income received by an entity, whether earned or passive, before any deductions are made for costs of doing business (e.g., cost of goods sold). Gross revenues are evidenced by audited financial statements for the relevant number of calendar or fiscal years preceding the filing of the applicant's short-form application. If an entity was not in existence for all or part of the relevant period, gross revenues shall be evidenced by the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate. When an applicant does not otherwise use audited financial statements, its gross revenues may be certified by its chief financial officer or its equivalent.

(d) Affiliate.--

(1) Basis for Affiliation. An individual or entity is an affiliate of an applicant if such individual or entity:

(i) Directly or indirectly controls or has the power to control the applicant, or

(ii) Is directly or indirectly controlled by the applicant, or

(iii) Is directly or indirectly controlled by a third party or parties who also control or have the power to control the applicant, or

(iv) Has an "identity of interest" with the applicant.

(2) Nature of control in determining affiliation.

(i) Every business concern is considered to have one or more parties who directly or indirectly control or have the power to control it. Control may be affirmative or negative and it is immaterial whether it is exercised so long as the power to control exists.

Example for paragraph (d)(2)(i). An applicant owning 50 percent of the voting stock of another concern would

have negative power to control such concern since such party can block any action of the other stockholders. Also, the bylaws of a corporation may permit a stockholder with less than 50 percent of the voting stock to block any actions taken by the other stockholders in the other entity. Affiliation exists when the applicant has the power to control a concern while at the same time another person, or persons, are in control of the concern at the will of the party or parties with the power of control.

(ii) Control can arise through stock ownership; occupancy of director, officer or key employee positions; contractual or other business relations; or combinations of these and other factors. A key employee is an employee who, because of his/her position in the concern, has a critical influence in or substantive control over the operations or management of the concern.

(iii) Control can arise through management positions if the voting stock is so widely distributed that no effective control can be established.

Example for paragraph (d)(2)(iii). In a corporation where the officers and directors own various size blocks of stock totaling 40 percent of the corporation's voting stock, but no officer or director has a block sufficient to give him/her control or the power to control and the remaining 60 percent is widely distributed with no individual stockholder having a stock interest greater than 10 percent, management has the power to control. If persons with such management control of the other entity are controlling principals of the applicant, the other entity will be deemed an affiliate of the applicant.

(3) Identity of interest between and among persons. Affiliation can arise between or among two or more persons with an identity of interest, such as members of the same family or persons with common investments. In determining if the applicant controls or is controlled by a concern, persons with an identity of interest will be treated as though they were one person.

(i) Spousal affiliation. Both spouses are deemed to own or control or have the power to control interests owned or controlled by either of them, unless they are subject to a legal separation recognized by a court of competent jurisdiction in the United States.

(ii) Kinship affiliation. Immediate family members will be presumed to own or control or have the power to control interests owned or controlled by other immediate family members. In this context "immediate family member" means father, mother, husband, wife, son, daughter, brother, sister, father- or mother-in-law, son- or daughter-in-law, brother- or sister-in-law, step-father, or -mother, step-brother, or -sister, step-son, or -daughter, half-brother or -sister. This presumption may be rebutted by showing that:

(A) The family members are estranged,

(B) The family ties are remote, or

(C) The family members are not closely involved with each other in business matters.

Example for paragraph (d)(3)(ii). A owns a controlling interest in Corporation X. A's sister-in-law, B, has a controlling interest in a paging geographic area authorization application. Because A and B have a presumptive kinship affiliation, A's interest in Corporation X is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(4) Affiliation through stock ownership.

(i) An applicant is presumed to control or have the power to control a concern if he/she owns or controls or has the power to control 50 percent or more of its voting stock.

(ii) An applicant is presumed to control or have the power to control a concern even though he/she owns, controls, or has the power to control less than 50 percent of the concern's voting stock, if the block of stock he/she owns,

controls, or has the power to control is large as compared with any other outstanding block of stock.

(iii) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, such minority holdings are equal or approximately equal in size, and the aggregate of these minority holdings is large as compared with any other stock holding, the presumption arises that each one of these persons individually controls or has the power to control the concern; however, such presumption may be rebutted by a showing that such control or power to control, in fact, does not exist.

(5) Affiliation arising under stock options, convertible debentures, and agreements to merge. Stock options, convertible debentures, and agreements to merge (including agreements in principle) are generally considered to have a present effect on the power to control the concern. Therefore, in making a size determination, such options, debentures, and agreements will generally be treated as though the rights held thereunder had been exercised. However, neither an affiliate nor an applicant can use such options and debentures to appear to terminate its control over another concern before it actually does so.

Example 1 for paragraph (d)(5). If company B holds an option to purchase a controlling interest in company A, who holds a controlling interest in a paging geographic area authorization application, the situation is treated as though company B had exercised its rights and had become owner of a controlling interest in company A. The gross revenues of company B must be taken into account in determining the size of the applicant.

Example 2 for paragraph (d)(5). If a large company, BigCo, holds 70% (70 of 100 outstanding shares) of the voting stock of company A, who holds a controlling interest in a paging geographic area authorization application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company A, and thus the applicant, until SmallCo actually exercises its options to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule which requires such options to be considered on a fully diluted basis, the option is not considered to have present effect in this case.

Example 3 for paragraph (d)(5). If company A has entered into an agreement to merge with company B in the future, the situation is treated as though the merger has taken place.

(6) Affiliation under voting trusts.

(i) Stock interests held in trust shall be deemed controlled by any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will.

(ii) If a trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust will be deemed controlled by the grantor or beneficiary, as appropriate.

(iii) If the primary purpose of a voting trust, or similar agreement, is to separate voting power from beneficial ownership of voting stock for the purpose of shifting control of or the power to control a concern in order that such concern or another concern may meet the Commission's size standards, such voting trust shall not be considered valid for this purpose regardless of whether it is or is not recognized within the appropriate jurisdiction.

(7) Affiliation through common management. Affiliation generally arises where officers, directors, or key employees serve as the majority or otherwise as the controlling element of the board of directors and/or the management of another entity.

(8) Affiliation through common facilities. Affiliation generally arises where one concern shares office space and/or employees and/or other facilities with another concern, particularly where such concerns are in the same or related industry or field of operations, or where such concerns were formerly affiliated, and through these sharing arrangements one concern has control, or potential control, of the other concern.

(9) Affiliation through contractual relationships. Affiliation generally arises where one concern is dependent upon

another concern for contracts and business to such a degree that one concern has control, or potential control, of the other concern.

(10) Affiliation under joint venture arrangements.

(i) A joint venture for size determination purposes is an association of concerns and/or individuals, with interests in any degree or proportion, formed by contract, express or implied, to engage in and carry out a single, specific business venture for joint profit for which purpose they combine their efforts, property, money, skill and knowledge, but not on a continuing or permanent basis for conducting business generally. The determination whether an entity is a joint venture is based upon the facts of the business operation, regardless of how the business operation may be designated by the parties involved. An agreement to share profits/losses proportionate to each party's contribution to the business operation is a significant factor in determining whether the business operation is a joint venture.

(ii) The parties to a joint venture are considered to be affiliated with each other.

(e) Controlling interest.

(1) For purposes of this section, controlling interest includes individuals or entities with de jure and de facto control of the applicant. De jure control is greater than 50 percent of the voting stock of a corporation, or in the case of a partnership, the general partner. De facto control is determined on a case-by-case basis. An entity must disclose its equity interest and demonstrate at least the following indicia of control to establish that it retains de facto control of the applicant:

(i) The entity constitutes or appoints more than 50 percent of the board of directors or management committee;

(ii) The entity has authority to appoint, promote, demote, and fire senior executives that control the day-to-day activities of the licensee; and

(iii) The entity plays an integral role in management decisions.

(2) Calculation of certain interests.

(i) Ownership interests shall be calculated on a fully diluted basis; all agreements such as warrants, stock options and convertible debentures will generally be treated as if the rights thereunder already have been fully exercised.

(ii) Partnership and other ownership interests and any stock interest equity, or outstanding stock, or outstanding voting stock shall be attributed as specified below.

(iii) Stock interests held in trust shall be attributed to any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and, to any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familial, personal, or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust.

(iv) Non-voting stock shall be attributed as an interest in the issuing entity.

(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) Officers and directors of an entity shall be considered to have an attributable interest in the entity. The officers and directors of an entity that controls a licensee or applicant shall be considered to have an attributable interest in the licensee or applicant.

(vii) 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.

(viii) Any person who manages the operations of an applicant or licensee pursuant to a management agreement shall be considered to have an attributable interest in such applicant or licensee if such person or its affiliate pursuant to paragraph (d) of this section has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence,

(A) The nature or types of services offered by such an applicant or licensee;

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

(C) The prices charged for such services.

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

(A) The nature or types of services offered by such an applicant or licensee;

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

(C) The prices charged for such services.

#### § 22.225 Certifications, disclosures, records maintenance and audits.

(a) Short-form applications: certifications and disclosure. In addition to certifications and disclosures required by part 1, subpart Q, of this chapter, each applicant for a paging license which qualifies as a small business or consortium of small businesses shall append the following information as an exhibit to its FCC Form 175:

(1) The identity of the applicant's controlling interests and affiliates, and, if a consortium of small businesses, the members of the joint venture; and

(2) The applicant's gross revenues, computed in accordance with § 22.223.

(b) Long form applications: certifications and disclosure. Each applicant submitting a long-form application for a paging geographic area authorization and qualifying as a small business shall, in an exhibit to its long-form application:

(1) Disclose separately and in the aggregate the gross revenues, computed in accordance with § 22.223, for each of the following: the applicant, the applicant's affiliates, the applicant's controlling interests, and, if a consortium of small businesses, the members of the joint venture;

(2) List and summarize all agreements or other instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business under §§ 22.217 through 22.223, including the establishment of de facto and de jure control; such agreements and instruments include, but are not limited to, articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, franchise agreements, and any other relevant agreements, including letters of intent, oral or written; and

(3) List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees.

(c) Records maintenance. All winning bidders qualifying as small businesses shall maintain at their principal place of business an updated file of ownership, revenue, and asset information, including any documents necessary to establish eligibility as a small business and/or consortium of small businesses under § 22.223. Licensees (and their successors-in-interest) shall maintain such files for the term of the license. Applicants that do not obtain the license(s) for which they applied shall maintain such files until the grant of such license(s) is final, or one year from the date of the filing of their short-form application (FCC Form 175), whichever is earlier.

(d) Audits.

(1) Applicants and licensees claiming eligibility as a small business or consortium of small businesses under §§ 22.217 through 22.223 shall be subject to audits by the Commission. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short-form application (FCC Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding licensed paging service and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(e) Definitions. The terms affiliate, small business, consortium of small businesses, gross revenues, and controlling interest used in this section are defined in § 22.223.

§ 22.227 Petitions to deny and limitations on settlements.

(a) Procedures regarding petitions to deny long-form applications in the paging service will be governed by §§ 1.2108(b) through 1.2108(d) of this chapter, § 22.130, and § 90.163.

(b) The consideration that an individual or an entity will be permitted to receive for agreeing to withdraw an application or a petition to deny will be limited by the provisions set forth in § 22.129, § 90.162, and § 1.2105(c) of this chapter.

## **PART 22--PUBLIC MOBILE SERVICES**

### **SUBPART C—OPERATIONAL AND TECHNICAL REQUIREMENTS**

§ 22.301 Station inspection.

Upon reasonable request, the licensee of any station authorized in the Public Mobile Services must make the station and station records available for inspection by authorized representatives of the Commission at any reasonable hour.

§ 22.303 Retention of station authorizations; identifying transmitters.

The current authorization for each station, together with current administrative and technical information concerning modifications to facilities pursuant to § 22.163 and added facilities pursuant to § 22.165 must be

retained as a permanent part of the station records. A clearly legible photocopy of the authorization must be available at each regularly attended control point of the station, or in lieu of this photocopy, licensees may instead make available at each regularly attended control point the address or location where the licensee's current authorization and other records may be found. The station call sign must be clearly and legibly marked on or near every transmitting facility, other than mobile transmitters, of the station.

#### § 22.305 Operator and maintenance requirements.

FCC operator permits and licenses are not required to operate, repair or maintain equipment authorized in the Public Mobile Services. Station licensees are responsible for the proper operation and maintenance of their stations, and for compliance with FCC rules.

#### § 22.307 Operation during emergency.

Licensees of stations in the Public Mobile services may, during a period of emergency in which normal communications facilities are disrupted as a result of hurricane, flood, earthquake or other natural disaster, civil unrest, widespread vandalism, national emergencies or emergencies declared by Executive Order of the President, use their stations to temporarily provide emergency communications services in a manner or configuration not normally allowed by this part, provided that such operations comply with the provisions of this section.

(a) Technical limitations. Public Mobile stations providing temporary emergency communications service must not transmit:

- (1) On channels other than those authorized for normal operations.
- (2) With power in excess of that authorized for normal operations;
- (3) Emission types other than those authorized for normal operations.

(b) Discontinuance. Temporary emergency use of Public Mobile stations must be discontinued as soon as normal communication facilities are restored. The FCC may, at any time, order the discontinuance of any such emergency communication services.

#### § 22.313 Station identification.

The licensee of each station in the Public Mobile Services must ensure that the transmissions of that station are identified in accordance with the requirements of this section.

(a) Station identification is not required for transmission by:

- (1) Stations in the Cellular Radiotelephone Service;
- (2) General aviation ground stations in the Air-ground Radiotelephone Service;
- (3) Rural subscriber stations using meteor burst propagation mode communications in the Rural Radiotelephone Service;
- (4) Stations using Basic Exchange Telephone Radio Systems in the Rural Radiotelephone Service;
- (5) Nationwide network paging stations operating on 931 MHz channels; or,

(6) Stations operating pursuant to paging geographic area authorizations.

(b) For all other stations in the Public Mobile Services, station identification must be transmitted each hour within five minutes of the hour, or upon completion of the first transmission after the hour. Transmission of station identification may be temporarily delayed to avoid interrupting the continuity of any public communication in progress, provided that station identification is transmitted at the conclusion of that public communication.

(c) Station identification must be transmitted by telephony using the English language or by telegraphy using the international Morse code, and in a form that can be received using equipment appropriate for the modulation type employed, and understood without the use of unscrambling devices, except that, alternatively, station identification may be transmitted digitally, provided that the licensee provides the Commission with information sufficient to decode the digital transmission to ascertain the call sign. Station identification comprises transmission of the call sign assigned by the Commission to the station, however, the following may be used in lieu of the call sign.

(1) For transmission from subscriber operated transmitters, the telephone number or other designation assigned by the carrier, provided that a written record of such designations is maintained by the carrier;

(2) For general aviation airborne mobile stations in the Air-Ground Radiotelephone Service, the official FAA registration number of the aircraft;

(3) For stations in the Paging and Radiotelephone Service, a call sign assigned to another station within the same system.

#### § 22.317 Discontinuance of station operation.

If the operation of a Public Mobile Services station is permanently discontinued, the licensee shall send authorization for cancellation by electronic filing via the ULS on FCC Form 601. For purposes of this section, any station that has not provided service to subscribers for 90 continuous days is considered to have been permanently discontinued, unless the applicant notified the FCC otherwise prior to the end of the 90 day period and provided a date on which operation will resume, which date must not be in excess of 30 additional days.

#### § 22.321 Equal employment opportunities.

Public Mobile Services licensees shall afford equal opportunity in employment to all qualified persons, and personnel must not be discriminated against in employment because of sex, race, color, religion, or national origin.

(a) Equal employment opportunity program. Each licensee shall establish, maintain, and carry out a positive continuing program of specific practices designed to assure equal opportunity in every aspect of employment policy and practice.

(1) Under the terms of its program, each licensee shall:

(i) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(ii) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(iii) Communicate its equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to sex, race, color, religion or national origin, and solicit their recruitment assistance on a continuing basis.

(iv) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon sex, race, color, religion, or national origin, from the licensee's personnel policies and practices and working conditions.

(v) Conduct a continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to ensure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility.

(2) The program must reasonably address specific concerns through policies and actions as set forth in this paragraph, to the extent that they are appropriate in consideration of licensee size, location and other factors.

(i) To assure nondiscrimination in recruiting.

(A) Posting notices in the licensee's offices informing applicants for employment of their equal employment rights and their right to notify the Equal Employment Opportunity Commission (EEOC), the Federal Communications Commission (FCC), or other appropriate agency. Where a substantial number of applicants are Spanish-surnamed Americans, such notice should be posted in both Spanish and English.

(B) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of sex, race, color, religion or national origin is prohibited, and that they may notify the EEOC, the FCC or other appropriate agency if they believe they have been discriminated against.

(C) Placing employment advertisements in media which have significant circulation among minority groups in the recruiting area.

(D) Recruiting through schools and colleges with significant minority group enrollments.

(E) Maintaining systematic contacts with minority and human relations organizations, leaders and spokespersons to encourage referral of qualified minority or female applicants.

(F) Encouraging present employees to refer minority or female applicants.

(G) Making known to the appropriate recruitment sources in the employer's immediate area that qualified minority members are being sought for consideration whenever the licensee hires.

(ii) To assure nondiscrimination in selection and hiring.

(A) Instructing employees of the licensee who make hiring decisions that all applicants for all jobs are to be considered without discrimination.

(B) Where union agreements exist, cooperating with the union or unions in the development of programs to assure qualified minority persons or females of equal opportunity for employment, and including an effective nondiscrimination clause in new or renegotiated union agreements.

(C) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iii) To assure nondiscriminatory placement and promotion.

(A) Instructing employees of the licensee who make decisions on placement and promotion that minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed to determine whether this results from discrimination.

(B) Giving minority groups and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower-paid employees with respect to any of the higher-paid positions,

followed by assistance, counseling, and effective measures to enable employees with interest and potential to qualify themselves for such positions.

(C) Reviewing seniority practices to insure that such practices are nondiscriminatory and do not have a discriminatory effect.

(D) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iv) To assure nondiscrimination in other areas of employment practices.

(A) Examining rates of pay and fringe benefits for present employees with equivalent duties and adjusting any inequities found.

(B) Providing opportunity to perform overtime work on a basis that does not discriminate against qualified minority groups or female employees.

(b) EEO statement. Each licensee having 16 or more full-time employees shall file with the FCC, no later than May 31st following the grant of that licensee's first Public Mobile Services authorization, a statement describing fully its current equal employment opportunity program, indicating specific practices to be followed in order to assure equal employment opportunity on the basis of sex, race, color, religion or national origin in such aspects of employment practices as regards recruitment, selection, training, placement, promotion, pay, working conditions, demotion, layoff and termination. Any licensee having 16 or more full-time employees that changes its existing equal employment opportunity program shall file with the FCC, no later than May 31st thereafter, a revised statement reflecting the change(s).

Note to paragraph (b) of § 22.321: Licensees having 16 or more full-time employees that were granted their first Public Mobile Services authorization prior to January 1, 1995, and do not have a current EEO statement on file with the FCC, must file such statement, required by paragraph (b) of this section, no later than May 31, 1995.

(c) Report of complaints filed against licensees. Each licensee, regardless of how many employees it has, shall submit an annual report to the FCC no later than May 31st of each year indicating whether any complaints regarding violations by the licensee or equal employment provisions of Federal, State, Territorial, or local law have been filed before anybody having competent jurisdiction.

(1) The report should state the parties involved, the date filing, the courts or agencies before which the matters have been heard, the appropriate file number (if any), and the respective disposition or current status of any such complaints.

(2) Any licensee who has filed such information with the EEOC may file a notification of such filing with the FCC in lieu of a report.

(d) Complaints of violations of Equal Employment Programs. Complaints alleging employment discrimination against a common carrier licensee are considered by the FCC in the following manner:

(1) If a complaint raising an issue of discrimination is received against a licensee who is within the jurisdiction of the EEOC, it is submitted to that agency. The FCC maintains a liaison with that agency that keeps the FCC informed of the disposition of complaints filed against common carrier licensees.

(2) Complaints alleging employment discrimination against a common carrier licensee who does not fall under the jurisdiction of the EEOC but is covered by appropriate enforceable State law, to which penalties apply, may be submitted by the FCC to the respective State agency.

(3) Complaints alleging employment discrimination against a common carrier licensee who does not fall under the

jurisdiction of the EEOC or an appropriate State law, are accorded appropriate treatment by the FCC.

(4) The FCC will consult with the EEOC on all matters relating to the evaluation and determination of compliance by the common carrier licensees with the principles of equal employment as set forth herein.

(5) Complaints indicating a general pattern of disregard of equal employment practices which are received against a licensee that is required to file an employment report to the FCC under § 1.815(a) of this chapter are investigated by the FCC.

(e) FCC records. A copy of every annual employment report, equal employment opportunity program statement, reports on complaints regarding violation of equal employment provisions of Federal, State, Territorial, or local law, and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference, are open for public inspection at the offices of the FCC.

(f) Licensee records. Each licensee required to file annual employment reports (pursuant to § 1.815(a) of this chapter), equal employment opportunity program statements, and annual reports on complaints regarding violations of equal employment provisions of Federal, State, Territorial, or local law shall maintain for public inspection a file containing a copy of each such report and copies of all exhibits, letters, and other documents filed as part thereto, all correspondence between the licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference. The documents must be retained for a period of 2 years.

#### § 22.323 Incidental communication services.

Carriers authorized to operate stations in the Public Mobile radio services may use these stations to provide other communications services incidental to the primary public mobile service for which the authorizations were issued, provided that:

(a) The costs and charges of subscribers who do not wish to use incidental services are not increased as a result of provision of incidental services to other subscribers;

(b) The quality of the primary public mobile service does not materially deteriorate as a result of provision of incidental services, and neither growth nor availability of the primary public mobile service is significantly diminished as a result of provision of incidental services;

(c) The provision of the incidental services is not inconsistent with the Communications Act of 1934, as amended, or with FCC rules and policies; and

(d) The licensee notifies the Commission using FCC Form 601 before providing the incidental services. This notification must include a complete description of the incidental services.

#### § 22.325 Control points.

Each station in the Public Mobile Services must have at least one control point and a person on duty who is responsible for station operation. This section does not require that the person on duty be at the control point or continuously monitor all transmissions of the station. However, the control point must have facilities that enable the person on duty to turn off the transmitters in the event of a malfunction.

#### § 22.351 Channel assignment policy.

The channels allocated for use in the Public Mobile Services are listed in the applicable subparts of this part.

Channels and channel blocks are assigned in such a manner as to facilitate the rendition of service on an interference-free basis in each service area. Except as otherwise provided in this part, each channel or channel block is assigned exclusively to one common carrier in each service area. All applicants for, and licensees of, stations in the Public Mobile Services shall cooperate in the selection and use of channels in order to minimize interference and obtain the most efficient use of the allocated spectrum.

§ 22.352 Protection from interference.

Public Mobile Service stations operating in accordance with FCC rules that provide technical channel assignment criteria for the radio service and channels involved, all other applicable FCC rules, and the terms and conditions of their authorizations are normally considered to be non-interfering. If the FCC determines, however, that interference that significantly interrupts or degrades a radio service is being caused, it may, in accordance with the provisions of sections 303(f) and 316 of the Communications Act of 1934, as amended, (47 U.S.C. 303(f), 316), require modifications to any Public Mobile station as necessary to eliminate such interference.

(a) Failure to operate as authorized. Any licensee causing interference to the service of other stations by failing to operate its station in full accordance with its authorization and applicable FCC rules shall discontinue all transmissions, except those necessary for the immediate safety of life or property, until it can bring its station into full compliance with the authorization and rules.

(b) Intermodulation interference. Licensees should attempt to resolve such interference by technical means.

(c) Situations in which no protection is afforded. Except as provided elsewhere in this part, no protection from interference is afforded in the following situations:

(1) Interference to base receivers from base or fixed transmitters. Licensees should attempt to resolve such interference by technical means or operating arrangements.

(2) Interference to mobile receivers from mobile transmitters. No protection is provided against mobile-to-mobile interference.

(3) Interference to base receivers from mobile transmitters. No protection is provided against mobile-to-base interference.

(4) Interference to fixed stations. Licensees should attempt to resolve such interference by technical means or operating arrangements.

(5) Anomalous or infrequent propagation modes. No protection is provided against interference caused by tropospheric and ionospheric propagation of signals.

(6) Facilities for which the Commission is not notified. No protection is provided against interference to the service of any additional or modified transmitter operating pursuant to §§ 1.929 or 22.165, unless and until the licensee modifies its authorization using FCC Form 601.

(7) In-building radiation systems. No protection is provided against interference to the service of in-building radiation systems (see § 22.383).

§ 22.353 Blanketing interference.

Licensees of Public Mobile Services stations are responsible for resolving cases of blanketing interference in accordance with the provisions of this section.

(a) Except as provided in paragraph (c) of this section, licensees must resolve any cases of blanketing interference in their area of responsibility caused by operation of their transmitter(s) during a one-year period following

commencement of service from new or modified transmitter(s). Interference must be resolved promptly at no cost to the complainant.

(b) The area of responsibility is that area in the immediate vicinity of the transmitting antenna of stations where the field strength of the electromagnetic radiation from such stations equals or exceeds 115 dBµV/m. To determine the radial distance to the boundary of this area, the following formula must be used:

$$d = 0.394 \times \sqrt{p}$$

where d is the radial distance to the boundary, in kilometers

p is the radial effective radiated power, in kilowatts

The maximum effective radiated power in the pertinent direction, without consideration of the antenna's vertical radiation pattern or height, must be used in the formula.

(c) Licensees are not required to resolve blanketing interference to mobile receivers or non-RF devices or blanketing interference occurring as a result of malfunctioning or mistuned receivers, improperly installed consumer antenna systems, or the use of high gain antennas or antenna booster amplifiers by consumers.

(d) Licensees that install transmitting antennas at a location where there are already one or more transmitting antennas are responsible for resolving any new cases of blanketing interference in accordance with this section.

(e) Two or more licensees that concurrently install transmitting antennas at the same location are jointly responsible for resolving blanketing interference cases, unless the FCC can readily determine which station is causing the interference, in which case the licensee of that station is held fully responsible.

(f) After the one year period of responsibility to resolve blanketing interference, licensees must provide upon request technical information to complainants on remedies for blanketing interference.

§ 22.355 Frequency tolerance.

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

Table C-1.--Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency range (MHz)	Base, fixed (ppm)	Mobile <=3 watts (ppm)	Mobile <=3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

§ 22.357 Emission types.

Any authorized station in the Public Mobile Services may transmit any emission type provided that the resulting emission complies with the appropriate emission mask. See §§ 22.359, 22.861 and 22.917.

§ 22.359 Emission masks.

Unless otherwise indicated in the rules governing a specific radio service, all transmitters intended for use in the Public Mobile Services must be designed to comply with the emission masks outlined in this section. If an emission outside of the authorized bandwidth causes harmful interference, the FCC may, at its discretion, require greater attenuation than specified in this section.

(a) Analog modulation. For transmitters other than those employing digital modulation techniques, the mean or peak envelope power of adjacent channel emissions must be attenuated below the output mean or peak envelope power of the total emission ( $P$ , in Watts) in accordance with the following schedule:

(1) On any frequency removed from the center frequency of the assigned channel by more than 50 percent up to and including 100 percent of the authorized bandwidth:

at least 25 dB:

(2) On any frequency removed from the center frequency of the assigned channel by more than 100 percent up to and including 250 percent of the authorized bandwidth:

at least 35 dB:

(3) On any frequency removed from the center frequency of the assigned channel by more than 250 percent of the authorized bandwidth:

at least  $43 + 10 \log P$  dB, or 80 dB, whichever is the lesser attenuation.

(b) Digital modulation. For transmitters not equipped with an audio low pass filter and for transmitters employing digital modulation techniques, the mean or peak envelope power of sideband emissions must be attenuated below the mean or peak envelope power of the total emission ( $P$ , in Watts) in accordance with the following schedule:

(1) For transmitters that operate in the frequency ranges 35 to 44 MHz, 72 to 73 MHz, 75.4 to 76.0 MHz and 152 to 159 MHz,

(i) On any frequency removed from the center frequency of the assigned channel by a displacement frequency  $f_d$  (in kHz) of more than 5 kHz but not more than 10 kHz:

at least  $83 \log (f_d / 5)$  dB;

(ii) On any frequency removed from the center frequency of the assigned channel by a displacement frequency  $f_d$  (in kHz) of more than 10 kHz but not more than 250 percent of the authorized bandwidth:

at least  $29 \log (f_d / 11)$  dB or 50 dB, whichever is the lesser attenuation;

(iii) On any frequency removed from the center frequency of the assigned channel by more than 250 percent of the authorized bandwidth:

at least  $43 + 10 \log P$  dB, or 80 dB, whichever is the lesser attenuation.

(2) For transmitters that operate in the frequency ranges 450 to 512 MHz and 929 to 932 MHz,

(i) On any frequency removed from the center frequency of the assigned channel by a displacement frequency  $f_d$  (in kHz) of more than 5 kHz but not more than 10 kHz:

at least  $83 \log (f_d / 5)$  dB;

(ii) On any frequency removed from the center frequency of the assigned channel by a displacement frequency  $f_d$  (in kHz) of more than 10 kHz but not more than 250 percent of the authorized bandwidth:

at least  $116 \log (f_d / 6.1)$  dB, or  $50 + 10 \log P$  dB, or 70 dB, whichever is the lesser attenuation;

(iii) On any frequency removed from the center frequency of the assigned channel by more than 250 percent of the authorized bandwidth:

at least  $43 + 10 \log P$  dB, or 80 dB, whichever is the lesser attenuation.

(c) Measurement procedure. Either peak or average power may be used, provided that the same technique is used for both the adjacent channel or sideband emissions and the total emission. The resolution bandwidth of the measuring instrument must be set to 300 Hz for measurements on any frequency removed from the center frequency of the assigned channel by no more than 250 percent of the authorized bandwidth and 30 kHz for measurements on any frequency removed from the center frequency of the assigned channel by more than 250 percent of the authorized bandwidth.

§ 22.361 Standby facilities.

Licenseses of stations in the Public Mobile Services may install standby transmitters for the purpose of continuing service in the event of failure or during required maintenance of regular transmitters without obtaining separate authorization, provided that operation of the standby transmitters would not increase the service areas or interference potential of the stations, and that such standby transmitters use the same antenna as the regular transmitters they temporarily replace.

Table C-2.--Technical Requirements for Directional Antennas

Frequency range	Maximum beamwidth	Suppression
35 to 512 MHz	80°	10 dB
512 to 1500 MHz	20°	13 dB
1500 to 2500 MHz	12°	13 dB

§ 22.363 Directional antennas.

Fixed transmitters for point-to-point operation must use a directional transmitting antenna with the major lobe of radiation in the horizontal plane directed toward the receiving antenna or passive reflector of the station for which the transmissions are intended. Directional antennas used in the Public Mobile Services must meet the technical requirements given in Table C-2 to § 22.361.

(a) Maximum beamwidth is for the major lobe at the half power points.

(b) Suppression is the minimum attenuation for any secondary lobe referenced to the main lobe.

(c) An omnidirectional antenna may be used for fixed transmitters where there are two or more receive locations at different azimuths.

§ 22.365 Antenna structures; air navigation safety.

Licensees that own their antenna structures must not allow these antenna structures to become a hazard to air navigation. In general, antenna structure owners are responsible for registering antenna structures with the FCC if required by part 17 of this chapter, and for installing and maintaining any required marking and lighting. However, in the event of default of this responsibility by an antenna structure owner, each FCC permittee or licensee authorized to use an affected antenna structure will be held responsible by the FCC for ensuring that the antenna structure continues to meet the requirements of part 17 of this chapter. See § 17.6 of this chapter.

(a) Marking and lighting. Antenna structures must be marked, lighted and maintained in accordance with Part 17 of this chapter and all applicable rules and requirements of the Federal Aviation Administration.

(b) Maintenance contracts. Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) may enter into contracts with other entities to monitor and carry out necessary maintenance of antenna structures. Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) that make such contractual arrangements continue to be responsible for the maintenance of antenna structures in regard to air navigation safety.

§ 22.367 Wave polarization.

Public mobile station antennas must be of the correct type and properly installed such that the electromagnetic emissions have the polarization required by this section.

(a) Vertical. Waves radiated by the following must be vertically polarized:

(1) Base, mobile, dispatch, and auxiliary test transmitters in the Paging and Radiotelephone Service;

(2) Transmitters in the Offshore Radiotelephone Service;

(3) Transmitters on channels in the 72-76 MHz frequency range;

(4) Base, mobile and auxiliary test transmitters in the Cellular Radiotelephone Service;

(5) Control and repeater transmitters on channels in the 900-960 MHz frequency range;

(6) Rural subscriber stations communicating with base transmitters in the Paging and Radiotelephone Service pursuant to § 22.563.

(7) Ground and airborne mobile transmitters in the Air-ground Radiotelephone Service.

(b) Horizontal. Waves radiated by transmitters in the Public Mobile Services, other than transmitters required by paragraph (a) of this section to radiate a vertically polarized wave must be horizontally polarized, except as otherwise provided in paragraphs (c) and (d) of this section.

(c) Circular. If communications efficiency would be improved and/or interference reduced, the FCC may authorize transmitters other than those listed in paragraphs (a)(1) through (a)(7) of this section to radiate a circularly polarized wave.

(d) Any polarization. Public Land Mobile stations transmitting on channels higher than 960 MHz are not limited as to wave polarization.

#### § 22.371 Disturbance of AM broadcast station antenna patterns.

Public Mobile Service licensees that construct or modify towers in the immediate vicinity of AM broadcast stations are responsible for measures necessary to correct disturbance of the AM station antenna pattern which causes operation outside of the radiation parameters specified by the FCC for the AM station, if the disturbance occurred as a result of such construction or modification.

(a) Non-directional AM stations. If tower construction or modification is planned within 1 kilometer (0.6 mile) of a non-directional AM broadcast station tower, the Public Mobile Service licensee must notify the licensee of the AM broadcast station in advance of the planned construction or modification. Measurements must be made to determine whether the construction or modification affected the AM station antenna pattern. The Public Mobile Service licensee is responsible for the installation and continued maintenance of any detuning apparatus necessary to restore proper non-directional performance of the AM station tower.

(b) Directional AM stations. If tower construction or modification is planned within 3 kilometers (1.9 miles) of a directional AM broadcast station array, the Public Mobile Service licensee must notify the licensee of the AM broadcast station in advance of the planned construction or modification. Measurements must be made to determine whether the construction or modification affected the AM station antenna pattern. The Public Mobile Service licensee is responsible for the installation and continued maintenance of any detuning apparatus necessary to restore proper performance of the AM station array.

#### § 22.373 Access to transmitters.

Unless otherwise provided in this part, the design and installation of transmitters in the Public Mobile Services must meet the requirements of this section.

(a) Transmitters and control points, other than those used with in-building radiation systems, must be installed such that they are readily accessible only to persons authorized by the licensee to operate or service them.

(b) Transmitters must be designed and installed such that any adjustments or controls that could cause the transmitter to deviate from its authorized operating parameters are readily accessible only to persons authorized by the licensee to make such adjustments.

(c) Transmitters (other than hand-carried or pack-carried mobile transmitters) and control points must be equipped with a means of indicating when the control circuitry has been put in a condition that should cause the transmitter to radiate.

(d) Transmitters must be designed such that they can be turned off independently of any remote control circuits.

(e) Transmitters used with in-building radiation systems must be installed such that, to the extent possible, they are readily accessible only to persons authorized by the licensee to access them.

(f) Transmitters used with in-building radiation systems must be designed such that, in the event an unauthorized person does gain access, that person can not cause the transmitter to deviate from its authorized operating parameters in such a way as to cause interference to other stations.

#### § 22.377 Certification of transmitters.

Except as provided in paragraph (b) of this section, transmitters used in the Public Mobile Services, including those used with signal boosters, in-building radiation systems and cellular repeaters, must be certificated for use in the radio services regulated under this part. Transmitters must be type accepted when the station is ready for service, not necessarily at the time of filing an application.

(a) The FCC may list as certificated only transmitters that are capable of meeting all technical requirements of the rules governing the service in which they will operate. The procedure for obtaining certification is set forth in part 2 of this chapter.

(b) Transmitters operating under a developmental authorization (see subpart D of this part) do not have to be certificated.

(c) In addition to the technical standards contained in this part, transmitters intended for operation in the Cellular Radiotelephone Service must be designed to comply with the technical requirements contained in the cellular system compatibility specification (see § 22.933) and the electronic serial number rule (see § 22.919).

#### § 22.379 Replacement of equipment.

Licensees may replace any equipment in Public Mobile Service stations without applying for authorization or notifying the FCC, provided that:

(a) If a transmitter is replaced, the replacement transmitter must be certificated for use in the Public Mobile Services;

(b) The antenna structure must not become a hazard to air navigation and its height must not be increased;

(c) The interference potential of the station must not be increased;

(d) The Effective radiated power, emission type, antenna radiation pattern and center of radiation height above average terrain are not changed.

#### § 22.381 Auxiliary test transmitters.

Auxiliary test transmitters may be used only for testing the performance of fixed receiving equipment located remotely from the control point. Auxiliary test transmitters may transmit only on channels designated for mobile transmitters.

#### § 22.383 In-building radiation systems.

Licensees may install and operate in-building radiation systems without applying for authorization or notifying the FCC, provided that the locations of the in-building radiation systems are within the protected service area of the licensee's authorized transmitter(s) on the same channel or channel block.

## **PART 22--PUBLIC MOBILE SERVICES** **SUBPART E—PAGING AND RADIOTELEPHONE SERVICE**

#### § 22.501 Scope.

The rules in this subpart govern the licensing and operation of public mobile paging and radiotelephone stations. The licensing and operation of these stations are also subject to rules elsewhere in this part that apply generally to the Public Mobile Services. However, in case of conflict, the rules in this subpart govern.

§ 22.503 Paging geographic area authorizations.

The FCC considers applications for and issues paging geographic area authorizations in the Paging and Radiotelephone Service in accordance with the rules in this section. Each paging geographic area authorization contains conditions requiring compliance with paragraphs (h) and (i) of this section.

(a) Channels. The FCC may issue a paging geographic area authorization for any channel listed in § 22.531 of this part or for any channel pair listed in § 22.561 of this part.

(b) Paging geographic areas. The paging geographic areas are as follows:

(1) The Nationwide paging geographic area comprises the District of Columbia and all States, Territories and possessions of the United States of America.

(2) Major Economic Areas (MEAs) and Economic Areas (EAs) are defined below. EAs are defined by the Department of Commerce, Bureau of Economic Analysis. See Final Redefinition of the MEA Economic Areas, 60 FR 13114 (March 10, 1995). MEAs are based on EAs. In addition to the Department of Commerce's 172 EAs, the FCC shall separately license Guam and the Northern Mariana Islands, Puerto Rico and the United States Virgin Islands, and American Samoa, which have been assigned FCC-created EA numbers 173-175, respectively, and MEA numbers 49-51, respectively.

(3) The 51 MEAs are composed of one or more EAs as defined in the table below:

MEAs	EAs
1 (Boston)	1-3
2 (New York City)	4-7, 10
3 (Buffalo)	8
4 (Philadelphia)	11-12
5 (Washington)	13-14
6 (Richmond)	15-17, 20
7 (Charlotte-Greensboro-Greenville-Raleigh)	18-19, 21-26, 41-42, 46
8 (Atlanta)	27-28, 37-40, 43
9 (Jacksonville)	29, 35
10 (Tampa-St. Petersburg- Orlando)	30, 33-34
11 (Miami)	31-32
12 (Pittsburgh)	9, 52-53
13 (Cincinnati-Dayton)	48-50
14 (Columbus)	51
15 (Cleveland)	54-55
16 (Detroit)	56-58, 61-62
17 (Milwaukee)	59-60, 63, 104-105, 108

18 (Chicago)	64-66, 68, 97, 101
19 (Indianapolis)	67
20 (Minneapolis-St. Paul)	106-107, 109-114, 116
21 (Des Moines-Quad Cities)	100, 102-103, 117
22 (Knoxville)	44-45
23 (Louisville-Lexington-Evansville)	47, 69-70, 72
24 (Birmingham)	36, 74, 78-79
25 (Nashville)	71
26 (Memphis-Jackson)	73, 75-77
27 (New Orleans-Baton Rouge)	80-85
28 (Little Rock)	90-92, 95
29 (Kansas City)	93, 99, 123
30 (St. Louis)	94, 96, 98
31 (Houston)	86-87, 131
32 (Dallas-Fort Worth)	88-89, 127-130, 135, 137-138
33 (Denver)	115, 140-143
34 (Omaha)	118-121
35 (Wichita)	122
36 (Tulsa)	124
37 (Oklahoma City)	125-126
38 (San Antonio)	132-134
39 (El Paso-Albuquerque)	136, 139, 155-157
40 (Phoenix)	154, 158-159
41 (Spokane-Billings)	144-147, 168
42 (Salt Lake City)	148-150, 152
43 (San Francisco-Oakland-San Jose)	151, 162-165
44 (Los Angeles-San Diego)	153, 160-161
45 (Portland)	166-167
46 (Seattle)	169-170
47 (Alaska)	171
48 (Hawaii)	172
49 (Guam and the Northern Mariana Islands)	173

50 (Puerto Rico and U.S. Virgin Islands)	174
51 (American Samoa)	175

(c) Availability. The FCC may determine whether to issue a paging geographic area authorization for any specific channel or channel pair in any specific paging geographic area. The FCC may replace existing site specific authorizations for facilities on a channel or channel pair located in a paging geographic area with a paging geographic area authorization for that channel or channel pair, if in its sole discretion, the FCC determines that the public interest would be served by such replacement.

(d) Filing windows. The FCC accepts applications for paging geographic area authorizations only during filing windows. The FCC issues Public Notices announcing in advance the dates of the filing windows, and the specific paging geographic areas and channels for which applications may be accepted.

(e) One grant per geographic area. The FCC may grant one and only one application for a paging geographic area authorization for any specific channel or channel pair in any specific paging geographic area defined in paragraph (b) of this section. Selection from among mutually exclusive applications for a paging geographic area authorization will be made in accordance with the procedures in §§ 22.131 and 22.200 through 22.299. If after the selection process but prior to filing a "long form" application, a successful bidder decides to partition the paging geographic area, the FCC may require and accept multiple "long form" applications from the consortium members.

(f) Exclusive right to expand. During the term of a paging geographic area authorization, the FCC does not accept, from anyone other than the paging geographic area licensee, any major application for authorization to operate a facility that would serve unserved area within the paging geographic area specified in that paging geographic area authorization, on the channel specified in that paging geographic area authorization, unless any extension of the interfering contour of the proposed facility falls:

- (1) Within the composite interfering contour of another licensee; or,
- (2) Into unserved area and the paging geographic area licensee consents to such extension.

(g) Subsequent applications not accepted. During the term of a paging geographic area authorization, the FCC does not accept any application for authorization relating to a facility that is or would be located within the paging geographic area specified in that paging geographic area authorization, on the channel specified in that paging geographic area authorization, except in the following situations:

(1) FCC grant of an application authorizing the construction of the facility could have a significant environmental effect as defined by § 1.1307 of this chapter. See § 22.115(a)(5).

(2) Specific international coordination procedures are required, prior to assignment of a channel to the facility, pursuant to a treaty or other agreement between the United States government and the government of Canada or Mexico. See § 22.169.

(3) The paging geographic area licensee or another licensee of a system within the paging geographic area applies to assign its authorization or for FCC consent to a transfer of control.

(h) Adjacent geographic area coordination required. Before constructing a facility for which the interfering contour (as defined in § 22.537 or § 22.567 of this part, as appropriate for the channel involved) would extend into another paging geographic area, a paging geographic area licensee must obtain the consent of the relevant co-channel paging geographic area licensee, if any, into whose area the interfering contour would extend. Licensees are expected to cooperate fully and in good faith attempt to resolve potential interference problems before bringing matters to the FCC. In the event that there is no co-channel paging geographic area licensee from whom

to obtain consent in the area into which the interfering contour would extend, the facility may be constructed and operated subject to the condition that, at such time as the FCC issues a paging geographic area authorization for that adjacent geographic area, either consent must be obtained or the facility modified or eliminated such that the interfering contour no longer extends into the adjacent geographic area.

(i) Protection of existing service. All facilities constructed and operated pursuant to a paging geographic area authorization must provide co-channel interference protection in accordance with § 22.537 or § 22.567, as appropriate for the channel involved, to all authorized co-channel facilities of exclusive licensees within the paging geographic area. Non-exclusive licensees on the thirty-five exclusive 929 MHz channels are not entitled to exclusive status, and will continue to operate under the sharing arrangements established with the exclusive licensees and other non-exclusive licensees that were in effect prior to February 19, 1997. MEA, EA, and nationwide geographic area licensees have the right to share with non-exclusive licensees on the thirty-five exclusive 929 MHz channels on a non-interfering basis.

(j) Site location restriction. The transmitting antenna of each facility constructed and operated pursuant to a paging geographic area authorization must be located within the paging geographic area specified in the authorization.

(k) Coverage requirements. Failure by an MEA or EA licensee to meet either the coverage requirements in paragraphs (k)(1) and (k)(2) of this section, or alternatively, the substantial service requirement in paragraph (k)(3) of this section, will result in automatic termination of authorizations for those facilities that were not authorized, constructed, and operating at the time the geographic area authorization was granted. MEA and EA licensees have the burden of showing when their facilities were authorized, constructed, and operating, and should retain necessary records of these sites until coverage requirements are fulfilled. For the purpose of this paragraph, to "cover" area means to include geographic area within the composite of the service contour(s) determined by the methods of §§ 22.537 or 22.567 as appropriate for the particular channel involved. Licensees may determine the population of geographic areas included within their service contours using either the 1990 census or the 2000 census, but not both.

(1) No later than three years after the initial grant of an MEA or EA geographic area authorization, the licensee must construct or otherwise acquire and operate sufficient facilities to cover one third of the population in the paging geographic area. The licensee must notify the FCC at the end of the three-year period pursuant to § 1.946 of this chapter, either that it has satisfied this requirement or that it plans to satisfy the alternative requirement to provide substantial service in accordance with paragraph (k)(3) of this section.

(2) No later than five years after the initial grant of an MEA or EA geographic area authorization, the licensee must construct or otherwise acquire and operate sufficient facilities to cover two thirds of the population in the paging geographic area. The licensee must notify the FCC at the end of the five year period pursuant to § 1.946 of this chapter, either that it has satisfied this requirement or that it has satisfied the alternative requirement to provide substantial service in accordance with paragraph (k)(3) of this section.

(3) As an alternative to the coverage requirements of paragraphs (k)(1) and (k)(2) of this section, the paging geographic area licensee may demonstrate that, no later than five years after the initial grant of its paging geographic area authorization, it provides substantial service to the paging geographic area. "Substantial service" means service that is sound, favorable, and substantially above a level of mediocre service that would barely warrant renewal.

#### § 22.507 Number of transmitters per station.

This section concerns the number of transmitters licensed under each station authorization in the Paging and Radiotelephone Service, other than paging geographic area authorizations.

(a) Operationally related transmitters. Each station must have at least one transmitter. There is no limit to the

number of transmitters that a station may comprise. However, transmitters within a station should be operationally related and/or should serve the same general geographical area. Operationally related transmitters are those that operate together as a system (e.g., trunked systems, simulcast systems), rather than independently.

(b) Split of large systems. The FCC may split wide-area systems into two or more stations for administrative convenience. Except for nationwide paging and other operationally related transmitters, transmitters that are widely separated geographically are not licensed under a single authorization.

(c) Consolidation of separate stations. The FCC may consolidate site-specific contiguous authorizations upon request (FCC Form 601) of the licensee, if appropriate under paragraph (a) of this section. Paging licensees may include remote, stand-alone transmitters under the single system-wide authorization, if the remote, stand-alone transmitter is linked to the system via a control/repeater facility or by satellite. Including a remote, stand-alone transmitter in a system-wide authorization does not alter the limitations provided under § 22.503(f) on entities other than the paging geographic area licensee. In the alternative, paging licensees may maintain separate site-specific authorizations for stand-alone or remote transmitters. The earliest expiration date of the authorizations that make up the single system-wide authorization will determine the expiration date for the system-wide authorization. Licensees must file timely renewal applications for site-specific authorizations included in a single system-wide authorization request until the request is approved. Renewal of the system-wide authorization will be subject to § 1.949 of this chapter.

(d) Replacement of site-by-site authorizations with single authorization. After a paging geographic area authorization for a channel has been issued, the FCC may, on its own motion, replace the authorization(s) of any other licensee (for facilities located within that paging geographic area on that channel) with a single replacement authorization.

#### § 22.509 Procedures for mutually exclusive applications in the Paging and Radiotelephone Service.

Mutually exclusive applications in the Paging and Radiotelephone Service, including those that are mutually exclusive with applications in the Rural Radiotelephone Service, are processed in accordance with § 22.131 and with this section.

(a) Applications in the Paging and Radiotelephone Service may be mutually exclusive with applications in the Rural Radiotelephone Service if they seek authorization to operate facilities on the same channel in the same area, or the technical proposals are otherwise in conflict. See § 22.567.

(b) A modification application in either service filed on the earliest filing date may cause all later-filed mutually exclusive applications of any type in either service to be "cut off" (excluded from a same-day filing group) and dismissed, pursuant to § 22.131(c)(3)(ii) and § 22.131(c)(4).

#### § 22.511 Construction period for the Paging and Radiotelephone Service.

The construction period for stations in the Paging and Radiotelephone Service is one year.

#### § 22.513 Partitioning and disaggregation.

MEA and EA licensees may apply to partition their authorized geographic service area or disaggregate their authorized spectrum at any time following grant of their geographic area authorizations. Nationwide geographic area licensees may apply to partition their authorized geographic service area or disaggregate their authorized spectrum at any time as of August 23, 1999.

(a) Application required. Parties seeking approval for partitioning and/or disaggregation shall apply for partial

assignment of a license pursuant to § 1.948 of this chapter.

(b) Partitioning. In the case of partitioning, requests for authorization for partial assignment of a license must include, as attachments, a description of the partitioned service area and a calculation of the population of the partitioned service area and the authorized geographic service area. The partitioned service area shall be defined by 120 sets of geographic coordinates at points at every 3 degrees azimuth from a point within the partitioned service area along the partitioned service area boundary unless either an FCC- recognized service area is used (e.g., MEA or EA) or county lines are followed. The geographical coordinates must be specified in degrees, minutes, and seconds to the nearest second latitude and longitude, and must be based upon the 1983 North American Datum (NAD83). In the case where FCC-recognized service areas or county lines are used, applicants need only list the specific area(s) through use of FCC designations or county names that constitute the partitioned area.

(c) Disaggregation. Spectrum may be disaggregated in any amount.

(d) Combined partitioning and disaggregation. Licensees may apply for partial assignment of authorizations that propose combinations of partitioning and disaggregation.

(e) License term. The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in § 1.955 of this chapter.

(f) Coverage requirements for partitioning.

(1) Parties to a partitioning agreement must satisfy at least one of the following requirements:

(i) The partitionee must satisfy the applicable coverage requirements set forth in § 22.503(k)(1), (2) and (3) for the partitioned license area; or

(ii) The original licensee must meet the coverage requirements set forth in § 22.503(k)(1), (2) and (3) for the entire geographic area. In this case, the partitionee must meet only the requirements for renewal of its authorization for the partitioned license area.

(2) Parties seeking authority to partition must submit with their partial assignment application a certification signed by both parties stating which of the above options they select.

(3) Partitionees must submit supporting documents showing compliance with their coverage requirements as set forth in § 22.503(k)(1), (2) and (3).

(4) Failure by any partitionee to meet its coverage requirements will result in automatic cancellation of the partitioned authorization without further Commission action.

(g) Coverage requirements for disaggregation.

(1) Parties to a disaggregation agreement must satisfy at least one of the following requirements:

(i) Either the disaggregator or disaggregatee must satisfy the coverage requirements set forth in § 22.503(k)(1), (2) and (3) for the entire license area; or

(ii) Parties must agree to share responsibility for meeting the coverage requirements set forth in § 22.503(k)(1), (2) and (3) for the entire license area.

(2) Parties seeking authority to disaggregate must submit with their partial assignment application a certification signed by both parties stating which of the above requirements they meet.

(3) Disaggregatees must submit supporting documents showing compliance with their coverage requirements as

set forth in § 22.503(k)(1), (2) and (3).

(4) Parties that accept responsibility for meeting the coverage requirements and later fail to do so will be subject to automatic license cancellation without further Commission action.

#### § 22.515 Permissible communications paths.

Mobile stations may communicate only with and through base stations. Base stations may communicate only with mobile stations and receivers on land or surface vessels.

#### § 22.527 Signal boosters.

Licensees may install and operate signal boosters on channels listed in § 22.531 only in accordance with the provisions of § 22.165 governing additional transmitters for existing systems. Licensees must not allow any signal booster that they operate to cause interference to the service or operation of any other authorized stations or systems.

#### § 22.529 Application requirements for the Paging and Radiotelephone Service.

In addition to information required by subparts B and D of this part, applications for authorization in the Paging and Radiotelephone Service must contain the applicable information and data described in this section.

(a) Administrative information. The following information, associated with Form 601, is required as indicated. Each application of any type, including applications for paging geographic area authorizations, must contain one and only one Schedule A.

(b) Technical data. The following data, associated with FCC Form 601, are required as indicated for each application. Applications for a paging geographic area authorization must not contain Schedule B. Other type of applications may contain as many Schedule Bs as are necessary for the intended purpose.

(1) For each transmitting antenna site to be added, deleted or modified, the following are required: an indication of the desired database action, the Commission location number, if any, the street address or other description of the transmitting antenna site, the city, county and state, the geographic coordinates (latitude and longitude), correct to +-1 second, of the transmitting antenna site (NAD83), and in the case of a proposed relocation of a transmitting antenna, the Commission location number and geographic coordinates, correct to +-1 second, of the transmitting antenna site (NAD83) to which the geographic coordinates of the current location are referenced.

(2) For each transmitting antenna site to be added, deleted or modified, the following supplementary information is required: An indication as to whether or not the transmitting antenna site is within 200 kilometers (124 miles) of the U.S.-Mexico border, and an indication as to whether or not the transmitting antenna site is North of Line A or East of Line C. Line A and Line C are defined in § 2.1 of this chapter. For each adjacent geographic area within 200 kilometers (124 miles) of each transmitting antenna site to be added, deleted or modified, the geographic area designator and name, and the shortest distance (in kilometers) to the boundary of that geographic area.

(3) The height (in meters) above average terrain of the center of radiation of the antenna, the beamwidth of the main lobe of the horizontal radiation pattern of the electric field of the antenna, the height (in meters) to the tip of the antenna above ground level, a polar plot of the horizontal gain pattern of the antenna, the antenna gain in the maximum lobe and the electric field polarization of the wave emitted by the antenna when installed as proposed.

(i) The center frequency of the requested channel, the transmitter classification (e.g. base, fixed mobile), the

designator for any non-standard emission type to be used, including bandwidth and modulation type, and the maximum effective radiated power.

(ii) For each of the eight cardinal radials, the antenna height above the average elevation along the radial, and the effective radiated power of each transmitter in the direction of the radial.

(iii) For each transmitter proposed to transmit on a channel reserved for point-to-multipoint operation involving transmission to four or more points of communications (i.e. base transmitters), the following is required for each point of communication: an indication of the desired database action, the location (city or town, state), and the geographical coordinates (latitude and longitude, NAD 83).

§ 22.531 Channels for paging operation.

The following channels are allocated for assignment to base transmitters that provide paging service, either individually or collectively under a paging geographic area authorization. Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

Low VHF Channels

35.20 ..... 35.46 ..... 43.20 ... 43.46  
35.22 ..... 35.50 ..... 43.22 ... 43.50  
35.24 ..... 35.54 ..... 43.24 ... 43.54  
35.26 ..... 35.56 ..... 43.26 ... 43.56  
35.30 ..... 35.58 ..... 43.30 ... 43.58  
35.34 ..... 35.60 ..... 43.34 ... 43.60  
35.38 ..... 35.62 ..... 43.38 ... 43.62  
35.42 ..... 35.66 ..... 43.42 ... 43.66

High VHF Channels

152.24 ..... 152.84 ..... 158.10 ... 158.70

UHF Channels

931.0125 ... 931.2625 ... 931.5125 ... 931.7625  
931.0375 ... 931.2875 ... 931.5375 ... 931.7875  
931.0625 ... 931.3125 ... 931.5625 ... 931.8125  
931.0875 ... 931.3375 ... 931.5875 ... 931.8375  
931.1125 ... 931.3625 ... 931.6125 ... 931.8625  
931.1375 ... 931.3875 ... 931.6375 ... 931.8875  
931.1625 ... 931.4125 ... 931.6625 ... 931.9125  
931.1875 ... 931.4375 ... 931.6875 ... 931.9375  
931.2125 ... 931.4625 ... 931.7125 ... 931.9625  
931.2375 ... 931.4875 ... 931.7375 ... 931.9875

(a) The 43 MHz channels may be assigned under developmental authorizations, pursuant to the requirements of § 22.411.

(b) Channels 931.8875, 931.9125, and 931.9375 MHz may be assigned only to transmitters providing nationwide network paging service.

(c) Upon application using FCC Form 601, common carriers may be authorized to provide one-way paging service using the leased subcarrier facilities of broadcast stations licensed under part 73 of this chapter.

(d) Occasionally in case law and other formal and informal documents, the low VHF channels have been referred to as "lowband" channels, and the high VHF channels have been referred to as "guardband" channels.

(e) Pursuant to the U.S.-Canada Interim Coordination Considerations for 929- 932 MHz, as amended, only the following UHF channels may be assigned in the continental United States North of Line A or in the State of Alaska East of Line C, within the indicated longitudes:

(1) From longitude W.73° to longitude W.75° and from longitude W.78° to longitude W.81°:

931.0125 .... 931.1125 ... 931.1875 ... 931.2625  
931.0375 .... 931.1375 ... 931.2125 ... 931.8625  
931.0625 .... 931.1625 ... 931.2375

(2) From longitude W.81° to longitude W.85°:

931.0125 .... 931.2125 ... 931.3875 ... 931.5875  
931.0375 .... 931.2375 ... 931.4125 ... 931.6125  
931.0625 .... 931.2625 ... 931.4625 ... 931.6375  
931.1125 .... 931.2875 ... 931.4875 ... 931.8625  
931.1375 .... 931.3125 ... 931.5125  
931.1625 .... 931.3375 ... 931.5375  
931.1875 .... 931.3625 ... 931.5625

(3) Longitudes other than specified in paragraphs (e)(1) and (e)(2) of this section:

931.0125 .... 931.1625 ... 931.2875 ... 931.4125  
931.0375 .... 931.1875 ... 931.3125 ... 931.4625  
931.0625 .... 931.2125 ... 931.3375 ... 931.8625  
931.1125 .... 931.2375 ... 931.3625  
931.1375 .... 931.2625 ... 931.3875

(4) At any longitude, with authorization condition requiring coordinated, shared use and equal access by licensees in both countries:

931.4375 .... 931.8875 .... 931.9125 .... 931.9375

(f) For the purpose of issuing paging geographic authorizations, the paging geographic areas used for UHF channels are the MEAs, and the paging geographic areas used for the low and high VHF channels are the EAs (see § 22.503(b)).

§ 22.535 Effective radiated power limits.

The effective radiated power (ERP) of transmitters operating on the channels listed in § 22.531 must not exceed the limits in this section.

(a) Maximum ERP. The ERP must not exceed the applicable limits in this paragraph under any circumstances.

-----  
Frequency range    Maximum ERP  
                  (MHz)                    (Watts)  
-----

35-36 .....	600
43-44 .....	500
152-159 .....	1400
931-932 .....	3500

---

(b) Basic power limit. Except as provided in paragraph (d) of this section, the ERP of transmitters on the VHF channels must not exceed 500 Watts.

(c) Height-power limit. Except as provided in paragraph (d) of this section, the ERP of transmitters on the VHF channels must not exceed the amount that would result in an average distance to the service contour of 32.2 kilometers (20 miles). The average distance to the service contour is calculated by taking the arithmetic mean of the distances determined using the procedures specified in § 22.537 for the eight cardinal radial directions, excluding cardinal radial directions for which 90% or more of the distance so calculated is over water.

(d) Encompassed interfering contour areas. Transmitters are exempt from the basic power and height-power limits of this section if the area within their interfering contours is totally encompassed by the interfering contours of operating co-channel base transmitters controlled by the same licensee. For the purpose of this paragraph, operating transmitters are authorized transmitters that are providing service to subscribers.

(e) Adjacent channel protection. The ERP of transmitters must not exceed 500 Watts if they:

(1) Transmit on a channel in the 152-159 MHz frequency range and are located less than 5 kilometers (3.1 miles) from any station licensed in the Private Radio Services that receives on an adjacent channel; or,

(2) Transmit on channel 158.10 or 158.70 MHz and are located less than 5 kilometers (3.1 miles) from any station licensed in the Public Mobile Services that receives on either of the following adjacent channels: 158.07 MHz or 158.67 MHz.

(f) Signal boosters. The effective radiated power of signal boosters must not exceed 5 watts ERP under any normal operating condition.

§ 22.537 Technical channel assignment criteria.

The rules in this section establish technical assignment criteria for the channels listed in § 22.531. These criteria permit channel assignments to be made in a manner such that reception by public paging receivers of signals from base transmitters, within the service area of such base transmitters, is protected from interference caused by the operation of independent co-channel base transmitters.

(a) Contour overlap. The FCC may grant an application requesting assignment of a channel to a proposed base transmitter only if:

(1) The interfering contour of the proposed transmitter does not overlap the service contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless that carrier has agreed in writing to accept any interference that may result from operation of the proposed transmitter; and,

(2) The service contour of the proposed transmitter does not overlap the interfering contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless the applicant agrees to accept any interference that may result from operation of the protected co-channel transmitter; and,

(3) The area and/or population to which service would be provided by the proposed transmitter is substantial, and service gained would exceed that lost as a result of agreements to accept interference.

(b) Protected transmitter. For the purposes of this section, protected transmitters are authorized transmitters for

which there is a current FCC public record and transmitters proposed in prior-filed pending applications.

(c) VHF service contour. For paging stations transmitting on the VHF channels, the distance from the transmitting antenna to the service contour along each cardinal radial is calculated as follows:

$$d=1.243xh^{0.40} xp^{0.20}$$

where d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the service contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the service contour using the formula in paragraph (c) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(d) VHF interfering contour. For paging stations transmitting on the VHF channels, the distance from the transmitting antenna to the interfering contour along each cardinal radial is calculated as follows:

$$d=6.509xh^{0.28} xp^{0.17}$$

where d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the interfering contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. In resolving petitions to deny, however, the FCC may calculate the distance to the interfering contour using the formula in paragraph (d) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(e) 931 MHz service contour. For paging stations transmitting on the 931 MHz channels, the service contour is a circle, centered on the transmitting antenna, with a radius determined from Table E-1 of this section.

TABLE E-1. - 931 MHz PAGING SERVICE RADII	
Service radius km (miles)	Effective radiated power (Watts)

Antenna HAAT meters (feet)	0-125	126-250	251-500	501-1000	1001-1860	1861-3500
0-177..... (0-581)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)
178-305..... (582-1001)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)	37.0 (23)	41.8 (26)
306-427..... (1002-1401)	32.2 (20)	32.2 (20)	37.0 (23)	41.8 (26)	56.3 (35)	56.3 (35)
428-610..... (1402-2001)	32.2 (20)	37.0 (23)	41.8 (26)	56.3 (35)	56.3 (35)	56.3 (35)
611-861..... (2002-2825)	37.0 (23)	41.8 (26)	41.8 (26)	56.3 (35)	83.7 (52)	83.7 (52)
862-1219..... (2826-3999)	41.8 (26)	56.3 (35)	56.3 (35)	83.7 (52)	83.7 (52)	83.7 (52)
1220+..... (4000+)	56.3 (35)	56.3 (35)	83.7 (52)	83.7 (52)	83.7 (52)	83.7 (52)

(f) 931 MHz interfering contour. For paging stations transmitting on the 931 MHz channels, the interfering contour is a circle, centered on the transmitting antenna, with a radius determined from Table E-2 of this section.

TABLE E-2. - 931 MHz PAGING INTERFERING RADII						
Interfering radius km (miles)	Effective radiated power (Watts)					
Antenna HAAT meters (feet)	0-125	126-250	251-500	501-1000	1001-1860	1861-3500
0-177..... (0-581)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)
178-305..... (582-1001)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)	88.5 (55)	96.6 (60)
306-427..... (1002-1401)	80.5 (50)	80.5 (50)	88.5 (55)	96.6 (60)	130.4 (81)	130.4 (81)
428-610..... (1402-2001)	80.5 (50)	88.5 (55)	96.6 (60)	130.4 (81)	130.4 (81)	130.4 (81)
611-861..... (2002-2825)	88.5 (55)	96.6 (60)	96.6 (60)	130.4 (81)	191.5 (119)	191.5 (119)
862-1219..... (2826-3999)	96.6 (60)	130.4 (81)	130.4 (81)	191.5 (119)	191.5 (119)	191.5 (119)
1220+..... (4000+)	130.4 (81)	130.4 (81)	191.5 (119)	191.5 (119)	191.5 (119)	191.5 (119)

(g) In-building radiation systems. The locations of in-building radiation systems must be within the service contour(s) of the licensee's authorized transmitter(s) on the same channel. In-building radiation systems are not protected facilities, and therefore do not have service or interfering contours.

(h) Signal boosters on 931 MHz channels. For the purpose of compliance with § 22.165 and notwithstanding paragraphs (e) and (f) of this section, signal boosters operating on the 931 MHz channels with an antenna HAAT not exceeding 30 meters (98 feet) are deemed to have as a service contour a circle with a radius of 1.0 kilometer (0.6 mile) and as an interfering contour a circle with a radius of 10 kilometers (6.2 miles).

§ 22.539 Additional channel policies.

The rules in this subsection govern the processing of applications for a paging channel when the applicant has

applied for or been granted an authorization for other paging channels in the same geographic area. This section applies to applications proposing to use the channels listed in § 22.531, excluding the nationwide network paging channels and broadcast station subcarriers, or the channels listed in § 22.561, where the application proposes to use those channels to provide paging service only. The general policy of the Commission is to assign one paging channel in an area to a carrier per application cycle. That is, a carrier must apply for one paging channel, receive the authorization, construct the station, provide service to the subscribers, and notify the Commission of commencement of service to subscribers by using FCC Form 601 before applying for an additional paging channel in that area. This notification must be sent by electronic filing via the ULS.

(a) VHF transmitters in same area. Any transmitter on any VHF channel listed in § 22.531 is considered to be in the same geographic area as another transmitter on any other VHF channel listed in § 22.531 if:

(1) One transmitter location is within the service area of the other transmitter; or,

(2) the area within the overlap of the service contours of the two transmitters constitutes 50 percent or more of the service area of either of the transmitters.

(b) 931 MHz transmitters in same area. Any transmitter on any 931 MHz channel is considered to be in the same geographic area as another transmitter on any channel listed in § 22.531 if it is located less than 64.4 kilometers (40 miles) from the transmitter. Likewise, any transmitter on any channel listed in § 22.531 is considered to be in the same geographic area as another transmitter on any 931 MHz channel if it is located less than 64.4 kilometers (40 miles) from that transmitter.

(c) Initial channel. The FCC will not assign more than one channel for new paging stations. Paging stations are considered to be new if there are no authorized transmitters on any channel listed in § 22.531 controlled by the applicant in the same geographic area.

(d) Additional channel. Applications for transmitters to be located in the same geographic area as an authorized station controlled by the applicant, but to operate on a different channel, are considered as requesting an additional channel for the authorized station, unless paragraph (e) of this section applies.

(e) Additional transmitters on same channel. Notwithstanding other provisions of this section, the following applications are not considered to be requests for an additional paging channel:

(1) Applications for transmitters to be located in the same geographic area as an authorized station controlled by the applicant, and to operate on the same paging channel;

(2) Applications for transmitters to be located within a paging geographic area for which the applicant holds the paging geographic area authorization for the requested channel; and,

(3) Applications for paging geographic area authorizations.

(f) Amendment of pending application. If the FCC receives and accepts for filing an application for a transmitter to be located in the same geographic area as a transmitter proposed in a pending application previously filed by the applicant, but on a different channel, the subsequent application is considered as a major amendment to change the technical proposal of the prior application, unless paragraph (e) applies. The filing date of any application so amended is the date the FCC received the subsequent application.

(g) Dismissal of premature applications for additional channel. If the FCC receives an application requesting an additional channel for an authorized station prior to receiving notification that the station is providing service to subscribers on the authorized channel(s), the FCC may dismiss that application without prejudice in accordance with § 22.128.

§ 22.551 Nationwide network paging service.

The rules in this section govern the application for and provision of nationwide network paging service on the channels reserved specifically for such service in § 22.531(b).

(a) Nationwide network providers; organizers. If and when a nationwide network paging channel becomes available for assignment, the FCC will issue a Public Notice inviting applications from eligibles seeking to provide or organize a nationwide network paging service. The Public Notice will provide complete details regarding application requirements and procedures.

(b) Licensing. The FCC may issue a paging geographic area authorization to the nationwide network provider or organizer. All transmissions of nationwide network messages on the channels reserved for such service in § 22.531(b) are authorized solely under the authorization(s) of the nationwide network provider or organizer, notwithstanding whether or not the messages pass through facilities owned, operated or licensed to affiliated local carriers.

§ 22.559 Paging application requirements.

In addition to information required by Subparts B and D and § 22.529, applications for authorization to operate a paging transmitter on the channels listed in § 22.531, other than applications for a paging geographic area authorization, must contain the applicable supplementary information described in this section.

(a) Interference exhibit. Except as provided in paragraph (b) of this section, an exhibit demonstrating compliance with § 22.537 with regard to protected transmitters is required for applications to operate a transmitter on the VHF channels. This exhibit must:

(1) Identify each protected transmitter located within 109 kilometers (68 miles) of the proposed transmitter in directions in which the distance to the interfering contour is 76.5 kilometers (47.5 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 76.5 kilometers (47.5 miles).

(2) For each protected transmitter identified, show the results of distance calculations indicating that there would be no overlap of service and interfering contours, or alternatively, indicate that the licensee of or applicant for the protected transmitter and/or the applicant, as required, have agreed in writing to accept any interference resulting from operation of the proposed transmitter.

(b) Encompassment exhibit. An exhibit showing that the area within the interfering contour of the proposed transmitter would be totally encompassed by interfering contours of operating co-channel base transmitters controlled by the applicant is required for applications to operate a transmitter with ERP exceeding the basic power and height-power limits of § 22.535. For VHF transmitters, this encompassment exhibit may substitute for the interference exhibit required in paragraph (a) of this section.

§ 22.561 Channels for one-way or two-way mobile operation.

The following channels are allocated for paired assignment to transmitters that provide (or support other transmitters that provide) one-way or two-way public land mobile service, either individually or collectively under a paging geographic area authorization. The paging geographic areas used for these channels are the EAs (see § 22.503(b)(3)). These channels may be assigned for use by mobile or base transmitters as indicated, and or by fixed transmitters (including control, repeater or other fixed transmitters). The mobile channels may also be assigned for use by base or fixed transmitters under certain circumstances (see § 22.567(h)). Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

Base	Mobile	Base	Mobile
VHF Channels			
152.03 .....	158.49	152.57 .....	157.83
152.06 .....	158.52	152.60 .....	157.86
152.09 .....	158.55	152.63 .....	157.89
152.12 .....	158.58	152.66 .....	157.92
152.15 .....	158.61	152.69 .....	157.95
152.18 .....	158.64	152.72 .....	157.98
152.21 .....	158.67	152.75 .....	158.01
152.51 .....	157.77	152.78 .....	158.04
152.54 .....	157.80	152.81 .....	158.07
UHF Channels			
454.025 .....	459.025	454.350 .....	459.350
454.050 .....	459.050	454.375 .....	459.375
454.075 .....	459.075	454.400 .....	459.400
454.100 .....	459.100	454.425 .....	459.425
454.125 .....	459.125	454.450 .....	459.450
454.150 .....	459.150	454.475 .....	459.475
454.175 .....	459.175	454.500 .....	459.500
454.200 .....	459.200	454.525 .....	459.525
454.225 .....	459.225	454.550 .....	459.550
454.250 .....	459.250	454.575 .....	459.575
454.275 .....	459.275	454.600 .....	459.600
454.300 .....	459.300	454.625 .....	459.625
454.325 .....	459.325	454.650 .....	459.650

§ 22.563 Provision of rural radiotelephone service upon request.

Channels in the frequency ranges 152.03-152.81, 157.77-158.67, 454.025-454.650 and 459.025-459.650 MHz, inclusive, are also allocated for assignment in the Rural Radiotelephone Service. Stations in the Paging and Radiotelephone Service that provide two-way public mobile service on these channels must also provide rural radiotelephone service upon request from a subscriber.

§ 22.565 Transmitting power limits.

The transmitting power of base, mobile and fixed transmitters operating on the channels listed in § 22.561 must not exceed the limits in this section.

(a) Maximum ERP. The effective radiated power (ERP) of base and fixed transmitters must not exceed the applicable limits in this paragraph under any circumstances.

Frequency range (MHz)	Maximum ERP (watts)
152-153 .....	1400

157-159 .....	150
454-455 .....	3500
459-460 .....	150

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(b) Basic power limit. Except as provided in paragraph (d) of this section, the ERP of base transmitters must not exceed 500 Watts.

(c) Height-power limits. Except as provided in paragraph (d) of this section, the ERP of base transmitters must not exceed the amount that would result in an average distance to the service contour of 41.6 kilometers (26 miles) for VHF channels or 30.7 kilometers (19 miles) for UHF channels. The average distance to the service contour is calculated by taking the arithmetic mean of the distances determined using the procedures specified in § 22.567 for the eight cardinal radial directions, excluding cardinal radial directions for which 90% or more of the distance so calculated is over water.

(d) Encompassed interfering contour areas. Base transmitters are exempt from the basic power and height-power limits of this section if the area within their interfering contours is totally encompassed by the interfering contours of operating co-channel based transmitters controlled by the same licensee. For the purpose of this paragraph, operating transmitters are authorized transmitters that are providing service to subscribers.

(e) Adjacent channel protection. The ERP of base and fixed transmitters must not exceed 500 Watts if they transmit on channel 454.025 MHz and are located less than 7 kilometers (4.3 miles) from any Private Radio Services station receiving on adjacent channel 454.0000 MHz.

(f) Mobile transmitters. The transmitter output power of mobile transmitters must not exceed 60 watts.

(g) Other transmitters. The ERP of dispatch and auxiliary test transmitters must not exceed 100 watts.

§ 22.567 Technical channel assignment criteria.

The rules in this section establish technical assignment criteria for the channels listed in § 22.561. The criteria in paragraphs (a) through (f) of this section permit channel assignments to be made in a manner such that reception by public mobile receivers of signals from base transmitters, within the service area of such base transmitters, is protected from interference caused by the operation of independent co-channel base and fixed transmitters in the Paging and Radiotelephone Service and central office stations, including Basic Exchange Telephone Radio Systems (BETRS), in the Rural Radiotelephone Service. Additional criteria in paragraph (g) of this section permit channel assignments to be made in a manner such that BETRS communications are protected from interference caused by the operation of independent co-channel base and fixed transmitters in the Paging and Radiotelephone Service and other central office stations in the Rural Radiotelephone Service. Separate criteria in paragraph (h) of this section apply only to assignment of the channels designated in § 22.561 as mobile channels to base and fixed transmitters, and permit these channel assignments to be made in a manner such that reception by public base and fixed receivers of signals from associated mobile and fixed transmitters is protected from interference caused by the operation of independent co-channel base and fixed transmitters.

(a) Contour overlap. The FCC may grant an application requesting assignment of a channel to a proposed base, fixed or central office station transmitter only if:

(1) The interfering contour of the proposed transmitter does not overlap the service contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless that carrier has agreed in writing to accept any interference that may result from operation of the proposed transmitter; and

(2) The service contour of the proposed transmitter does not overlap the interfering contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless the application contains a statement that the applicant agrees to accept any interference that may result from operation of the protected co-channel

transmitter; and

(3) The area and/or population to which service would be provided by the proposed transmitter is substantial, and service gained would exceed that lost as a result of agreements to accept interference.

(b) Protected transmitter. For the purposes of this section, protected transmitters are authorized transmitters for which there is a current FCC public record and transmitters proposed in prior-filed pending applications, in the Paging and Radiotelephone Service and the Rural Radiotelephone Service.

(c) VHF service contour. For base stations transmitting on the VHF channels, the radial distance from the transmitting antenna to the service contour along each cardinal radial is calculated as follows:

$$d=1.609xh^{0.40} xp^{0.20}$$

where:

d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the service contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the service contour using the formula in paragraph (c) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(d) VHF interfering contour. For base and fixed stations transmitting on the VHF channels, the radial distance from the transmitting antenna to the interfering contour along each cardinal radial is calculated as follows:

(1) If the radial antenna HAAT is less than 150 meters:

$$d=8.577xh^{0.24} xp^{0.19}$$

where:

d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) If the radial antenna HAAT is 150 meters or more:

$$d=12.306xh^{0.23} xp^{0.14}$$

where:

d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

(3) The value used for p in the above formulas must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(4) The distance from the transmitting antenna to the interfering contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the interfering contour using the appropriate formula in paragraph (d) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(e) UHF service contour. For base stations transmitting on the UHF channels, the radial distance from the transmitting antenna to the service contour along each cardinal radial is calculated as follows:

$$d=1.726xh^{0.35} xp^{0.18}$$

where:

d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the service contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the service contour using the formula in paragraph (e) of this section with actual HAAT and ERP data for the inter-station radial and addition radials above and below the below the inter-station radial at 2.5° intervals.

(f) UHF interfering contour. For base and fixed stations transmitting on the UHF channels, the radial distance from the transmitting antenna to the interfering contour along each cardinal radial is calculated as follows:

(1) If the radial antenna HAAT is less than 150 meters:

$$d=9.471xh^{0.23} xp^{0.15}$$

where:

d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) If the radial antenna HAAT is 150 meters or more:

$$d=6.336xh^{0.31} \times p^{0.15}$$

where:

d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

(3) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(4) The distance from the transmitting antenna to the interfering contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the interfering contour using the appropriate formula in paragraph (f) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(g) Protection for BETRS. In applying the provisions of paragraph (a) of this section, if either or both of the transmitters involved is a BETRS central office station, the following contour substitutions must be used:

(1) The service contour of the BETRS central office station(s) is a circle, centered on the central office station antenna, with a radius of 40 kilometers (25 miles).

(2) The interfering contour of any station of any type, when determining whether it would overlap the service contour of a BETRS central office station, is calculated as follows:

$$d=36.364xh^{0.2} \times p^{0.1}$$

where:

d is the radial distance in kilometers

h is the radial antenna HAAT in meters

p is the radial ERP in Watts

Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula. The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(h) Assignment of mobile channels to base or fixed transmitters. Mobile channels may be assigned to base or fixed transmitters if the following criteria are met:

(1) The paired base channel, as designated in § 22.561, is assigned to base transmitters in the same geographical area operated by the same licensee.

(2) The authorization is granted subject to the condition that no interference be caused to fixed receivers in use on or prior to the date of the grant.

§ 22.569 Additional channel policies.

The rules in this section govern the processing of applications for a mobile channel when the applicant has applied or been granted an authorization for other mobile channels in the same geographic area. This section applies to applications proposing to use the channels listed in § 22.561, except applications that propose to use these channels to provide paging service only, which are subject to § 22.539, instead of this section. The general policy of the FCC is to assign no more than two channels in an area to a carrier per application cycle. That is, a carrier must apply for no more than two channels, receive the authorization, construct the station, provide service to subscribers, and notify the FCC of commencement of service to subscribers (FCC Form 489) before applying for additional mobile channels in that area.

(a) Transmitters in same area. Any transmitter on any channel listed in § 22.561 is considered to be in the same geographic area as another transmitter or any other channel listed in § 22.561 if:

(1) One transmitter location is within the service area of the other transmitter; or,

(2) The area within the overlap of the service contours of the two transmitters constitutes 50 percent or more of the service area of either of the transmitters.

(b) Initial channel. The FCC will not assign more than two channels for new stations. Stations are considered to be new if there are no authorized transmitters on any channel listed in § 22.561 controlled by the applicant in the same geographic area.

(c) Additional channel. Applications for transmitters to be located in the same geographic area as an authorized station controlled by the applicant, but to operate on a different channel, are considered as requests for an additional channel for the authorized station, unless paragraph (d) of this section applies.

(d) Additional transmitters on same channel. Notwithstanding other provisions of this section, the following applications are not considered to be requests for an additional channel:

(1) Applications for transmitters to be located in the same geographic area as an authorized station controlled by the applicant, and to operate on the same paging channel;

(2) Applications for transmitters to be located within a paging geographic area for which the applicant holds the paging geographic area authorization for the requested channel; and,

(3) Applications for paging geographic area authorizations.

(e) [Reserved]

(f) Dismissal of application constituting cumulative request for more than two channels. If the FCC receives an application for a transmitter to be located in the same geographic area as a transmitter proposed in a pending application previously filed by the applicant, but on different channels such that, considered together, the applications would constitute a request for more than two channels, the FCC may dismiss the subsequent application without prejudice.

(g) Dismissal of premature applications for additional channel. If the FCC receives an application requesting two additional channels (or one additional channel) for an authorized station prior to receiving notification that the station is providing service to subscribers on all (or all except one) of the authorized channels, the FCC may dismiss that application without prejudice.

#### § 22.571 Responsibility for mobile stations.

Mobile stations that are subscribers in good standing to a two-way service in the Paging and Radiotelephone Service, when receiving service from that station, are considered to be operating under the authorization of that station. Licensees are responsible for exercising effective operational control over mobile stations receiving service through their stations. Mobile stations that are subscribers in good standing to a two-way service in the Paging and Radiotelephone Service, while receiving service from a different station, are considered to be operating under the authorization of such different station. The licensee of such different station is responsible, during such temporary period, for exercising effective operational control over such mobile stations as if they were subscribers to it.

#### § 22.573 Use of base transmitters as repeaters.

As an additional function, base transmitters may be used as repeaters. Licensees must be able to turn the base transmitter on or off from the control point regardless of whether a subscriber-operated transmitter is transmitting.

#### § 22.575 Use of mobile channel for remote control of station functions.

Carriers may remotely control station functions (e.g. shut down or reactivate base transmitters, turn aviation obstruction warning lights on or off, etc.) using a control transmitter operating on a mobile channel, subject to the conditions in this section and in § 22.567(h).

(a) The control transmitter must be capable of overriding transmissions from subscriber-operated transmitters if necessary. Subscriber-operated transmitters must not be capable of being used to deliberately or accidentally prevent the licensee from controlling the station.

(b) The licensee must implement measures designed to prevent station functions from being controlled by persons not authorized by the licensee to control the station.

(c) The control transmitter location must be within the composite service contour of the licensee's authorized station on the paired base channel.

#### § 22.577 Dispatch service.

Carriers licensed under this subpart may provide dispatch service in accordance with the rules in this section.

(a) Installation without prior FCC approval. A station licensee may install or remove dispatch points for subscribers without obtaining prior FCC approval. A station licensee may install or remove dispatch transmitters for subscribers without applying for specific authorization, provided that the following conditions are met.

(1) Each dispatch transmitter must be able to transmit only on the mobile channel that is paired with the channel used by the base station.

(2) The antenna of the dispatch transmitter must not exceed the criteria in § 17.7 of this chapter that determine whether the FAA must be notified of the proposed construction.

(3) The output power of the dispatch transmitter must not exceed 10 Watts.

(4) The dispatch transmitter must be incapable of overriding the functioning of any control transmitter that may be using the same channel.

(5) The dispatch transmitter must be under the continuous supervision of the licensee.

(b) Notification. Licensees must notify the Commission by filing FCC Form 601 whenever a dispatch transmitter is installed pursuant to paragraph (a) of this section. The notification must include the name and address of the subscriber(s) for which the dispatch transmitter was installed, the location of the dispatch transmitter, the height of antenna structure above ground and above mean sea level, the channel(s) used, and the call sign and location of the base station.

(c) Termination without hearing. Operation of a dispatch transmitter pursuant to paragraphs (a) and (b) of this section may be terminated by the FCC without a hearing upon notice to the licensee.

(d) Dispatch transmitters requiring authorization. A dispatch transmitter that does not meet all of the requirements of paragraph (a) of this section may be installed only upon the grant of an application for authorization by electronically filing FCC Form 601.

(e) Permissible communications. A dispatch transmitter operated by a subscriber may communicate only with mobile transmitters operated by that subscriber through the associated base transmitter.

#### § 22.579 Operation of mobile transmitters across U.S.-Canada border.

Mobile stations licensed by Canada may receive two-way service while in the United States from stations licensed under this part, after authorization has been granted by the FCC. Mobile stations that normally operate under the authority of base stations licensed under this part may receive two-way service while in Canada from stations licensed under this part or by Canada, upon authorization by Canada.

#### § 22.589 One-way or two-way application requirements.

In addition to information required by subparts B and D and § 22.529, applications for authorization to operate a paging transmitter on the channels listed in § 22.531, other than applications for a paging geographic area authorization, must contain the applicable supplementary information described in this section.

(a) Interference exhibit. Except as provided in paragraph (b) of this section, an exhibit demonstrating compliance with § 22.567 with regard to protected transmitters is required. This exhibit must:

(1) For UHF channels, identify each protected transmitter located within 108 kilometers (67 miles) of the proposed transmitter in directions in which the distance to the interfering contour is 76.4 kilometers (47.5 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 76.4 kilometers (47.5 miles); and identify each protected Basic Exchange Telephone Radio System central office transmitter in the Rural Radiotelephone Service within 231 kilometers (144 miles),

(2) For VHF channels, identify each protected transmitter located within 135 kilometers (84 miles) of the proposed transmitter in directions in which the distance to the interfering contour is 93.3 kilometers (58 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 93.3 kilometers (58 miles).

(3) For each protected transmitter identified, show the results of distance calculations indicating that there would be no overlap of service and interfering contours, or alternatively, indicate that the licensee of or applicant for the

protected transmitter and/or the applicant, as required, have agreed in writing to accept any interference resulting from operation of the proposed transmitter.

(b) Encompassment exhibit. An exhibit showing that the area within the interfering contour of the proposed transmitter would be totally encompassed by interfering contours of operating co-channel base transmitters controlled by the applicant is required for applications to operate a transmitter with ERP exceeding the basic power and height-power limits of § 22.565. This encompassment exhibit may substitute for the interference exhibit required in paragraph (a) of this section.

§ 22.591 Channels for point-to-point operation.

The following channels are allocated for assignment to fixed transmitters that support other transmitters that provide public mobile service. Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

VHF Channels

72.02	.....	72.36	....	72.80	....	75.66
72.04	.....	72.38	....	72.82	....	75.68
72.06	.....	72.40	....	72.84	....	75.70
72.08	.....	72.42	....	72.86	....	75.72
72.10	.....	72.46	....	72.88	....	75.74
72.12	.....	72.50	....	72.90	....	75.76
72.14	.....	72.54	....	72.92	....	75.78
72.16	.....	72.58	....	72.94	....	75.80
72.18	.....	72.62	....	72.96	....	75.82
72.20	.....	72.64	....	72.98	....	75.84
72.22	.....	72.66	....	75.42	....	75.86
72.24	.....	72.68	....	75.46	....	75.88
72.26	.....	72.70	....	75.50	....	75.90
72.28	.....	72.72	....	75.54	....	75.92
72.30	.....	72.74	....	75.58	....	75.94
72.32	.....	72.76	....	75.62	....	75.96
72.34	.....	72.78	....	75.64	....	75.98
72.10	.....	72.46	....	72.88	....	75.74
72.12	.....	72.50	....	72.90	....	75.76
72.14	.....	72.54	....	72.92	....	75.78
72.16	.....	72.58	....	72.94	....	75.80
72.18	.....	72.62	....	72.96	....	75.82
72.20	.....	72.64	....	72.98	....	75.84
72.22	.....	72.66	....	75.42	....	75.86
72.24	.....	72.68	....	75.46	....	75.88
72.26	.....	72.70	....	75.50	....	75.90
72.28	.....	72.72	....	75.54	....	75.92
72.30	.....	72.74	....	75.58	....	75.94
72.32	.....	72.76	....	75.62	....	75.96
72.34	.....	72.78	....	75.64	....	75.98

UHF Channels--State of Hawaii

488.250	....	491.250	....	489.750	....	492.750
488.750	....	491.750	....	490.250	....	493.250
489.250	....	492.250	....	490.750	....	493.750

Microwave Channels

[Bandwidth individually assigned]

2110.1 .....	2160.1
2110.2 .....	2160.2
2110.3 .....	2160.3
2129.9 .....	2179.9

(a) The 72-76 MHz channels may be assigned under developmental authority pursuant to the requirements of § 22.413. The 72-76 MHz channels may also be used in point-to-multipoint configurations. The 72-76 MHz channels are also allocated for assignment in the Private Radio Services (see Part 90 of this chapter).

(b) Channels in the frequency ranges 2110-2130 and 2160-2180 MHz are also allocated for assignment in the broadband Personal Communications Service (see part 24 of this chapter), the Multipoint Distribution Service and the Point-to-Point Microwave Radio Service (see part 21 of this chapter). Assignment of channels in these ranges is subject to the transition rules in § 22.602.

(c) Channels in the frequency ranges 488.250-490.750 and 491.250-493.750 MHz may be assigned only to inter-island fixed stations located in the State of Hawaii.

§ 22.593 Effective radiated power limits.

The effective radiated power of fixed stations operating on the channels listed in § 22.591 must not exceed 150 Watts. The equivalent isotropic radiated power of fixed stations operating in the frequency ranges 2110-2130 and 2160-2180 MHz must not exceed the limits set forth in Part 21 of this chapter for stations operating in these frequency ranges.

§ 22.599 Assignment of 72-76 MHz channels.

Because of the potential for interference to the reception of TV Channels 4 and 5 by broadcast television sets and video recorders, assignments of the 72- 76 MHz channels are subject to the following conditions:

(a) Assignments of 72-76 MHz channels for use within 129 kilometers (80 miles) of a full service TV station transmitting on TV Channel 4 or 5 are subject to the condition that the licensee must eliminate any interference caused to television reception on TV Channels 4 and 5. If the FCC notifies the licensee of an interference problem and the licensee does not resolve the problem within 90 days of such notification, operation of the interfering 72-76 MHz fixed station must be immediately discontinued.

(b) 72-76 MHz channels may be assigned for use within 16 kilometers (10 miles) of a full service TV station transmitting on TV Channel 4 or 5 under a developmental authorization, pursuant to § 22.413. However, for use within 50 meters (164 feet) of a TV station transmitting on TV Channel 4 or 5, 72-76 MHz channels may be assigned under a regular authorization, rather than a developmental authorization.

§ 22.601 Assignment of microwave channels.

Assignment of the microwave channels listed in § 22.591 is subject to the transition rules in § 22.602. No new systems will be authorized under this part.

(a) Coordination required. Before filing applications for authority to modify existing stations on these channels or major amendments to such applications, carriers must coordinate the planned channel usage, using the procedure outlined in § 22.150, with affected parties in this radio service and the Point-to-Point Microwave Service and the Multipoint Distribution Service. Affected parties are licensees and other applicants with previously filed pending

applications whose stations could affect or be affected by the proposed modification of the existing station in terms of interference.

(b) System parameters. In designing a system modification, the applicant must select sites, equipment and channels that will avoid harmful interference to other users. All parties must cooperate fully and make reasonable efforts to resolve technical problems and conflicts that may inhibit the most effective and efficient use of the radio spectrum; however, a party receiving notification is not obligated to suggest changes or re-design a proposal in cases involving conflicts. The applicant must identify in the application all parties with which the technical proposal was coordinated. In the event that technical problems are not resolved or if an affected party does not respond to coordination efforts within 30 days after notification, an explanation must be contained in the application. Where technical conflicts are resolved by an agreement between the parties that requires special procedures to reduce the likelihood of harmful interference (such as the use of artificial site shielding), or would result in a reduction of quality or capacity of either system, the details thereof must be contained in the application.

(c) Bandwidth. Applicants must request the minimum emission bandwidth necessary. The FCC does not authorize bandwidths larger than 800 kHz under this part.

#### § 22.602 Transition of the 2110-2130 and 2160-2180 MHz channels to emerging technologies.

The microwave channels listed in § 22.591 have been allocated for use by emerging technologies (ET) services. No new systems will be authorized under this part. The rules in this section provide for a transition period during which existing Paging and Radiotelephone Service (PARS) licensees using these channels may relocate operations to other media or to other fixed channels, including those in other microwave bands. For PARS licensees relocating operations to other microwave bands, authorization must be obtained under Part 101 of this chapter.

(a) Licensees proposing to implement ET services may negotiate with PARS licensees authorized to use these channels, for the purpose of agreeing to terms under which the PARS licensees would--

(1) Relocate their operations to other fixed microwave bands or other media, or alternatively,

(2) Accept a sharing arrangement with the ET licensee that may result in an otherwise impermissible level of interference to the PARS operations.

(b) PARS operations on these channels will continue to be co-primary with other users of this spectrum until two years after the FCC commences acceptance of applications for ET services, and until one year after an ET licensee initiates negotiations for relocation of the fixed microwave licensee's operations.

(c) Voluntary Negotiations. During the two year voluntary negotiation period, negotiations are strictly voluntary and are not defined by any parameters. However, if the parties have not reached an agreement within one year after the commencement of the voluntary period, the PARS licensee must allow the ET licensee (if it so chooses) to gain access to the existing facilities to be relocated so that an independent third party can examine the PARS licensee's 2 GHz system and prepare an estimate of the cost and the time needed to relocate the PARS licensee to comparable facilities. The ET licensee must pay for any such estimate.

(d) Mandatory Negotiations. If a relocation agreement is not reached during the two year voluntary period, the ET licensee may initiate a mandatory negotiation period. This mandatory period is triggered at the option of the ET licensee, but ET licensees may not invoke their right to mandatory negotiation until the voluntary negotiation period has expired. Once mandatory negotiations have begun, a PARS licensee may not refuse to negotiate and all parties are required to negotiate in good faith. Good faith requires each party to provide information to the other that is reasonably necessary to facilitate the relocation process. In evaluating claims that a party has not negotiated in good faith, the FCC will consider, inter alia, the following factors:

(1) Whether the ET licensee has made a bona fide offer to relocate the PARS licensee to comparable facilities in

accordance with Section 101.75(b) of this chapter;

(2) If the PARS licensee has demanded a premium, the type of premium requested (e.g., whether the premium is directly related to relocation, such as system-wide relocations and analog-to-digital conversions, versus other types of premiums), and whether the value of the premium as compared to the cost of providing comparable facilities is disproportionate (i.e., whether there is a lack of proportion or relation between the two);

(3) What steps the parties have taken to determine the actual cost of relocation to comparable facilities;

(4) Whether either party has withheld information requested by the other party that is necessary to estimate relocation costs or to facilitate the relocation process. Any party alleging a violation of our good faith requirement must attach an independent estimate of the relocation costs in question to any documentation filed with the Commission in support of its claim. An independent cost estimate must include a specification for the comparable facility and a statement of the costs associated with providing that facility to the incumbent licensee.

(e) Involuntary period. After the periods specified in paragraph (b) of this section have expired, ET licensees may initiate involuntary relocation procedures under the Commission's rules. ET licensees are obligated to pay to relocate only the specific microwave links to which their systems pose an interference problem. Under involuntary relocation, a PARS licensee is required to relocate, provided that:

(1) The ET applicant, provider, licensee or representative guarantees payment of relocation costs, including all engineering, equipment, site and FCC fees, as well as any legitimate and prudent transaction expenses incurred by the PARS licensee that are directly attributable to an involuntary relocation, subject to a cap of two percent of the hard costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. ET licensees are not required to pay PARS licensees for internal resources devoted to the relocation process. ET licensees are not required to pay for transaction costs incurred by PARS licensees during the voluntary or mandatory periods once the involuntary period is initiated or for fees that cannot be legitimately tied to the provision of comparable facilities;

(2) The ET applicant, provider, licensee or representative completes all activities necessary for implementing the replacement facilities, including engineering and cost analysis of the relocation procedure and, if radio facilities are involved, identifying and obtaining, on the incumbents behalf, new channels and frequency coordination; and,

(3) The ET applicant, provider, licensee or representative builds the replacement system and tests it for comparability with the existing 2 GHz system.

(f) Comparable Facilities. The replacement system provided to an incumbent during an involuntary relocation must be at least equivalent to the existing PARS system with respect to the following three factors:

(1) Throughput. Communications throughput is the amount of information transferred within a system in a given amount of time. If analog facilities are being replaced with analog, the ET licensee is required to provide the PARS licensee with an equivalent number of 4 kHz voice channels. If digital facilities are being replaced with digital, the ET licensee must provide the PARS licensee with equivalent data loading bits per second (bps). ET licensees must provide PARS licensees with enough throughput to satisfy the PARS licensee's system use at the time of relocation, not match the total capacity of the PARS system.

(2) Reliability. System reliability is the degree to which information is transferred accurately within a system. ET licensees must provide PARS licensees with reliability equal to the overall reliability of their system. For digital data systems, reliability is measured by the percent of time the bit error rate (BER) exceeds a desired value, and for analog or digital voice transmissions, it is measured by the percent of time that audio signal quality meets an established threshold. If an analog voice system is replaced with a digital voice system, only the resulting frequency response, harmonic distortion, signal-to-noise ratio and its reliability will be considered in determining comparable reliability.

(3) Operating Costs. Operating costs are the cost to operate and maintain the PARS system. ET licensees must compensate PARS licensees for any increased recurring costs associated with the replacement facilities (e.g. additional rental payments, increased utility fees) for five years after relocation. ET licensees may satisfy this obligation by making a lump-sum payment based on present value using current interest rates. Additionally, the maintenance costs to the PARS licensee must be equivalent to the 2 GHz system in order for the replacement system to be considered comparable.

(g) The PARS licensee is not required to relocate until the alternative facilities are available to it for a reasonable time to make adjustments, determine comparability, and ensure a seamless handoff.

(h) The Commission's Twelve-Month Trial Period. If, within one year after the relocation to new facilities, the PARS licensee demonstrates that the new facilities are not comparable to the former facilities, the ET applicant, provider, licensee or representative must remedy the defects or pay to relocate the PARS licensee to one of the following: its former or equivalent 2 GHz channels, another comparable frequency band, a land-line system, or any other facility that satisfies the requirements specified in paragraph (f) of this section. This trial period commences on the date that the PARS licensee begins full operation of the replacement link. If the PARS licensee has retained its 2 GHz authorization during the trial period, it must return the license to the Commission at the end of the twelve months.

(i) After April 25, 1996, all major modifications and extensions to existing PARS systems operating on channels in the 2110-2130 and 2160-2180 MHz bands will be authorized on a secondary basis to future ET operations. All other modifications will render the modified PARS license secondary to future ET operations unless the incumbent affirmatively justifies primary status and the incumbent PARS licensee establishes that the modification would not add to the relocation costs of ET licensees. Incumbent PARS licensees will maintain primary status for the following technical changes:

- (1) Decreases in power;
- (2) Minor changes (increases or decreases) in antenna height;
- (3) Minor location changes (up to two seconds);
- (4) Any data correction which does not involve a change in the location of an existing facility;
- (5) Reductions in authorized bandwidth;
- (6) Minor changes (increases or decreases) in structure height;
- (7) Changes (increases or decreases) in ground elevation that do not affect centerline height;
- (8) Minor equipment changes.

(j) Sunset. PARS licensees will maintain primary status in the 2110-2130 and 2160-2180 MHz bands unless and until an ET licensee requires use of the spectrum. ET licensees are not required to pay relocation costs after the relocation rules sunset (i.e. ten years after the voluntary period begins for the first ET licensees in the service). Once the relocation rules sunset, an ET licensee may require the incumbent to cease operations, provided that the ET licensee intends to turn on a system within interference range of the incumbent, as determined by TIA Bulletin 10-F or any standard successor. ET licensee notification to the affected PARS licensee must be in writing and must provide the incumbent with no less than six months to vacate the spectrum. After the six-month notice period has expired, the PARS licensee must turn its license back into the Commission, unless the parties have entered into an agreement which allows the PARS licensee to continue to operate on a mutually agreed upon basis. If the parties cannot agree on a schedule or an alternative arrangement, requests for extension will be accepted and reviewed on a case-by- case basis. The Commission will grant such extensions only if the incumbent can demonstrate that:

(1) It cannot relocate within the six-month period (e.g., because no alternative spectrum or other reasonable option is available), and;

(2) The public interest would be harmed if the incumbent is forced to terminate operations (e.g., if public safety communications services would be disrupted).

#### § 22.603 488-494 MHz fixed service in Hawaii.

Before filing applications for authorization of inter-island control and/or repeater stations, applicants must coordinate the planned channel usage with existing licensees and other applicants with previously filed applications, using the procedure outlined in § 22.150. Applicants and licensees shall cooperate fully and make reasonable efforts to resolve any channel usage conflicts. In situations where technical solutions to such conflicts cannot be devised, the FCC may select a channel or channels to assign or may designate the application(s) for hearing. To be acceptable for filing, applications and major technical amendments must contain a certification that coordination has been completed and an exhibit listing the name(s) of the licensees and applicants with which the planned channel usage has been coordinated.

#### § 22.623 System configuration.

This section requires a minimum configuration for point-to-multipoint systems using the channels listed in § 22.621.

(a) 928-960 MHz. The channels may be assigned, individually or paired, only to fixed transmitters in a system that controls at least four public mobile base transmitters that transmit on the same channel. If a 932-933 MHz channel and a 941-942 MHz channel are assigned as a pair, the 941-942 MHz channel must be assigned only to control transmitters; the 932-933 MHz channel may be assigned to control or fixed relay transmitters.

(b) 470-512 MHz. These channels may be assigned only individually (unpaired), to control transmitters that directly control at least four public mobile base transmitters that transmit on the same channel. Fixed relay transmitters are not authorized.

(c) Selection and assignment. The FCC selects and assigns a channel when granting applications for authorization to operate a new station to transmit in the 470-512, 932-933 and 941-942 MHz frequency ranges. Applicants having a preference may request the assignment of a specific channel or channel pair, but the FCC may in some cases be unable to satisfy such requests.

#### § 22.625 Transmitter locations.

This section governs where point-to-multipoint transmitters on the channels listed in § 22.621 may be located.

(a) 928-960 MHz. In this frequency range, the required minimum distance separation between co-channel fixed transmitters is 113 kilometers (70 miles). However, this requirement may be waived if the applicant submits an engineering analysis that shows that no interference would be caused to either system. In such a case, a developmental authorization may be issued (see § 22.415). If no interference is experienced during the term of the developmental authorization, the licensee may apply for a regular authorization.

(b) 470-512 MHz. The purpose of the rule in paragraph (b)(1) of this section is to define the areas in which the 470-512 MHz channels are allocated for public mobile use. The purpose of the rules in paragraphs (b)(2) and (b)(3) of this section is to reduce the likelihood that interference to television reception from public mobile operations on these channels will occur.

(1) Control transmitter locations. Control transmitter locations must be within 80 kilometers (50 miles) of the

designated locations in this paragraph.

Urban area	N. latitude	W. longitude
Boston, MA	42°21'24.4"	71°03'22.2"
Chicago, IL	41°52'28.1"	87°38'22.2"
Cleveland, OH	41°29'51.2"	81°41'49.5"
Dallas, TX	32°47'09.5"	96°47'38.0"
Detroit, MI	42°19'48.1"	83°02'56.7"
Houston, TX	29°45'26.8"	95°21'37.8"
Los Angeles, CA	34°03'15.0"	118°14'31.3"
Miami, FL	25°46'38.6"	80°11'31.2"
New York, NY	40°45'6.4"	73°59'37.5"
Philadelphia, PA	39°56'58.4"	75°09'19.6"
Pittsburgh, PA	40°26'19.2"	79°59'59.2"
San Francisco-Oakland, CA	37°46'38.7"	122°24'43.9"
Washington, DC	38°53'51.4"	77°00'31.9"

Note: Coordinates are referenced to North American Datum 1983 (NAD 83).

(2) Protection from intermodulation interference. Control transmitter locations must be at least 1.6 kilometers (1 mile) from the main transmitter locations of all TV stations transmitting on TV channels separated by 2, 3, 4, 5, 7, or 8 TV channels from the TV channel containing the frequencies on which the control station will transmit. This requirement is intended to reduce the likelihood of intermodulation interference.

(3) Co-channel protection from control transmitters with high antennas. This paragraph applies only to control transmitters that utilize an antenna height of more than 152 meters (500 feet) above average terrain. The distance between the location of such a control transmitter and the applicable protected TV station location specified in this paragraph must equal or exceed the sum of the distance from the control transmitter location to the radio horizon in the direction of the specified location and 89 kilometers (55 miles--representing the distance from the main transmitter location of the TV station to its Grade B contour in the direction of the control transmitter). The protected TV station locations in this paragraph are the locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(i) The protected TV station locations are as follows:

Control transmitter frequency range	Protected TV station location
470-476 MHz	Washington, DC 38°57'17" 77°00'17"
476-482 MHz	Lancaster, PA 40°15'45" 76°27'49"

(ii) The distance to the radio horizon is calculated using the following formula:

$$d = \sqrt{17xh}$$

where

$d$  is the distance to the radio horizon in kilometers

$h$  is the height of the antenna center of radiation above ground level in meters

**PART 1--PRACTICE AND PROCEDURE**  
**SUBPART Q--COMPETITIVE BIDDING PROCEEDINGS**

§ 1.2101 Purpose.

The provisions of this subpart implement Section 309(j) of the Communications Act of 1934, as added by the Omnibus Budget Reconciliation Act of 1993 (Pub.L. 103-66) and the Balanced Budget Act of 1997 (Pub.L. 105-33), authorizing the Commission to employ competitive bidding procedures to choose from among two or more mutually exclusive applications for certain initial licenses.

§ 1.2102 Eligibility of applications for competitive bidding.

(a) Mutually exclusive initial applications are subject to competitive bidding.

(b) The following types of license applications are not subject to competitive bidding procedures:

(1) Public safety radio services, including private internal radio services used by state and local governments and non-government entities and including emergency road services provided by not-for-profit organizations, that

(i) Are used to protect the safety of life, health, or property; and

(ii) Are not commercially available to the public;

(2) Initial licenses or construction permits for digital television service given to existing terrestrial broadcast licensees to replace their analog television service licenses; or

(3) Noncommercial educational and public broadcast stations described under 47 U.S.C. 397(6).

Note to § 1.2102: To determine the rules that apply to competitive bidding, specific service rules should also be consulted.

§ 1.2103 Competitive bidding design options.

(a) The Commission will choose from one or more of the following types of auction designs for services or classes of services subject to competitive bidding:

(1) Simultaneous multiple-round auctions (using remote or on-site electronic bidding);

(2) Sequential multiple round auctions (using either oral ascending or remote and/or on-site electronic bidding);

(3) Sequential or simultaneous single-round auctions (using either sealed paper or remote and/or on-site electronic bidding); and

(4) Combinatorial (package/contingent) bidding auctions.

(b) The Commission may use combinatorial bidding, which would allow bidders to submit all or nothing bids on combinations of licenses or authorizations, in addition to bids on individual licenses or authorizations. The Commission may require that to be declared the high bid, a combinatorial bid must exceed the sum of the individual bids by a specified amount. Combinatorial bidding may be used with any type of auction. The Commission may also allow bidders to submit contingent bids on individual and/or combinations of licenses.

(c) The Commission may use single combined auctions, which combine bidding for two or more substitutable

licenses and award licenses to the highest bidders until the available licenses are exhausted. This technique may be used in conjunction with any type of auction.

(d) The Commission may use real time bidding in all electronic auction designs.

#### § 1.2104 Competitive bidding mechanisms.

(a) Sequencing. The Commission will establish the sequence in which multiple licenses will be auctioned.

(b) Grouping. In the event the Commission uses either a simultaneous multiple round competitive bidding design or combinatorial bidding, the Commission will determine which licenses will be auctioned simultaneously or in combination.

(c) Reservation Price. The Commission may establish a reservation price, either disclosed or undisclosed, below which a license subject to auction will not be awarded.

(d) Minimum Bid Increments, Minimum Opening Bids and Maximum Bid Increments. The Commission may, by announcement before or during an auction, require minimum bid increments in dollar or percentage terms. The Commission also may establish minimum opening bids and maximum bid increments on a service-specific basis.

(e) Stopping Rules. The Commission may establish stopping rules before or during multiple round auctions in order to terminate the auctions within a reasonable time.

(f) Activity Rules. The Commission may establish activity rules which require a minimum amount of bidding activity.

(g) Withdrawal, Default and Disqualification Payment. As specified below, when the Commission conducts an auction pursuant to § 1.2103, the Commission will impose payments on bidders who withdraw high bids during the course of an auction, or who default on payments due after an auction closes or who are disqualified.

(1) Bid withdrawal prior to close of auction. A bidder who withdraws a high bid during the course of an auction is subject to a payment equal to the difference between the amount bid and the amount of the winning bid the next time the license is offered by the Commission. The bid withdrawal payment is either the difference between the net withdrawn bid and the subsequent net winning bid, or the difference between the gross withdrawn bid and the subsequent gross winning bid, whichever is less. No withdrawal payment is assessed if the subsequent winning bid exceeds the withdrawn bid. This payment amount is deducted from any upfront payments or down payments that the withdrawing bidder has deposited with the Commission.

(2) Default or disqualification after close of auction. If a high bidder defaults or is disqualified after the close of such an auction, the defaulting bidder will be subject to the payment in paragraph (g)(1) of this section plus an additional payment equal to 3 percent of the subsequent winning bid. If the subsequent winning bid exceeds the defaulting bidder's bid amount, the 3 percent payment will be calculated based on the defaulting bidder's bid amount. If either bid amount is subject to a bidding credit, the 3 percent credit will be calculated using the same bid amounts and basis (net or gross bids) as in the calculation of the payment in paragraph (g)(1) of this section. Thus, for example, if gross bids are used to calculate the payment in paragraph (g)(1) of this section, the 3 percent will be applied to the gross amount of the subsequent winning bid, or the gross amount of the defaulting bid, whichever is less.

(h) The Commission will generally release information concerning the identities of bidders before each auction but may choose, on an auction-by-auction basis, to withhold the identity of the bidders associated with bidder identification numbers.

(i) The Commission may delay, suspend, or cancel an auction in the event of a natural disaster, technical obstacle,

evidence of security breach, unlawful bidding activity, administrative necessity, or for any other reason that affects the fair and efficient conduct of the competitive bidding. The Commission also has the authority, at its sole discretion, to resume the competitive bidding starting from the beginning of the current or some previous round or cancel the competitive bidding in its entirety.

§ 1.2105 Bidding application and certification procedures; prohibition of collusion.

(a) Submission of Short-Form Application (FCC Form 175). In order to be eligible to bid, an applicant must timely submit a short-form application (FCC Form 175), together with any appropriate upfront payment set forth by Public Notice. Beginning January 1, 1999, all short-form applications must be filed electronically.

(1) All short-form applications will be due:

(i) On the date(s) specified by public notice; or

(ii) In the case of application filing dates which occur automatically by operation of law (see, e.g., 47 CFR 22.902), on a date specified by public notice after the Commission has reviewed the applications that have been filed on those dates and determined that mutual exclusivity exists.

(2) The short-form application must contain the following information:

(i) Identification of each license on which the applicant wishes to bid;

(ii)(A) The applicant's name, if the applicant is an individual. If the applicant is a corporation, then the short-form application will require the name and address of the corporate office and the name and title of an officer or director. If the applicant is a partnership, then the application will require the name, citizenship and address of all general partners, and, if a partner is not a natural person, then the name and title of a responsible person should be included as well. If the applicant is a trust, then the name and address of the trustee will be required. If the applicant is none of the above, then it must identify and describe itself and its principals or other responsible persons; and

(B) Applicant ownership information, as set forth in § 1.2112.

(iii) The identity of the person(s) authorized to make or withdraw a bid;

(iv) If the applicant applies as a designated entity pursuant to § 1.2110, a statement to that effect and a declaration, under penalty of perjury, that the applicant is qualified as a designated entity under § 1.2110.

(v) Certification that the applicant is legally, technically, financially and otherwise qualified pursuant to section 308(b) of the Communications Act of 1934, as amended. The Commission will accept applications certifying that a request for waiver or other relief from the requirements of section 310 is pending;

(vi) Certification that the applicant is in compliance with the foreign ownership provisions of section 310 of the Communications Act of 1934, as amended;

(vii) Certification that the applicant is and will, during the pendency of its application(s), remain in compliance with any service-specific qualifications applicable to the licenses on which the applicant intends to bid including, but not limited to, financial qualifications. The Commission may require certification in certain services that the applicant will, following grant of a license, come into compliance with certain service-specific rules, including, but not limited to, ownership eligibility limitations;

(viii) An exhibit, certified as truthful under penalty of perjury, identifying all parties with whom the applicant has entered into partnerships, joint ventures, consortia or other agreements, arrangements or understandings of any

kind relating to the licenses being auctioned, including any such agreements relating to the post-auction market structure.

(ix) Certification under penalty of perjury that it has not entered and will not enter into any explicit or implicit agreements, arrangements or understandings of any kind with any parties other than those identified pursuant to paragraph (a)(2)(viii) regarding the amount of their bids, bidding strategies or the particular licenses on which they will or will not bid.

(x) Certification that the applicant is not in default on any Commission licenses and that it is not delinquent on any non-tax debt owed to any Federal agency.

(xi) For C block applicants, an attached statement made under penalty of perjury indicating whether or not the applicant has ever been in default on any Commission licenses or has ever been delinquent on any non-tax debt owed to any Federal agency.

Note to paragraph (a): The Commission may also request applicants to submit additional information for informational purposes to aid in its preparation of required reports to Congress.

(b) Modification and Dismissal of Short-Form Application (FCC Form 175).

(1) Any short-form application (FCC Form 175) that does not contain all of the certifications required pursuant to this section is unacceptable for filing and cannot be corrected subsequent to the applicable filing deadline. The application will be dismissed with prejudice and the upfront payment, if paid, will be returned.

(2) The Commission will provide bidders a limited opportunity to cure defects specified herein (except for failure to sign the application and to make certifications) and to resubmit a corrected application. During the resubmission period for curing defects, a short-form application may be amended or modified to cure defects identified by the Commission or to make minor amendments or modifications. After the resubmission period has ended, a short-form application may be amended or modified to make minor changes or correct minor errors in the application. Major amendments cannot be made to a short-form application after the initial filing deadline. Major amendments include changes in ownership of the applicant that would constitute an assignment or transfer of control, changes in an applicant's size which would affect eligibility for designated entity provisions, and changes in the license service areas identified on the short-form application on which the applicant intends to bid. Minor amendments include, but are not limited to, the correction of typographical errors and other minor defects not identified as major. An application will be considered to be newly filed if it is amended by a major amendment and may not be resubmitted after applicable filing deadlines.

(3) Applicants who fail to correct defects in their applications in a timely manner as specified by public notice will have their applications dismissed with no opportunity for resubmission.

(c) Prohibition of collusion.

(1) Except as provided in paragraphs (c)(2), (c)(3) and (c)(4) of this section, after the filing of short-form applications, all applicants are prohibited from cooperating, collaborating, discussing or disclosing in any manner the substance of their bids or bidding strategies, or discussing or negotiating settlement agreements, with other applicants until after the high bidder makes the required down payment, unless such applicants are members of a bidding consortium or other joint bidding arrangement identified on the bidder's short-form application pursuant to § 1.2105(a)(2)(viii).

(2) Applicants may modify their short-form applications to reflect formation of consortia or changes in ownership at any time before or during an auction, provided such changes do not result in a change in control of the applicant, and provided that the parties forming consortia or entering into ownership agreements have not applied for licenses in any of the same geographic license areas. Such changes will not be considered major modifications of the application.

(3) After the filing of short-form applications, applicants may make agreements to bid jointly for licenses, provided the parties to the agreement have not applied for licenses in any of the same geographic license areas.

(4) After the filing of short-form applications, a holder of a non-controlling attributable interest in an entity submitting a short-form application may acquire an ownership interest in, form a consortium with, or enter into a joint bidding arrangement with, other applicants for licenses in the same geographic license area, provided that:

(i) The attributable interest holder certifies to the Commission that it has not communicated and will not communicate with any party concerning the bids or bidding strategies of more than one of the applicants in which it holds an attributable interest, or with which it has a consortium or joint bidding arrangement, and which have applied for licenses in the same geographic license area(s); and

(ii) The arrangements do not result in any change in control of an applicant; or

(iii) When an applicant has withdrawn from the auction, is no longer placing bids and has no further eligibility, a holder of a non-controlling, attributable interest in such an applicant may obtain an ownership interest in or enter into a consortium with another applicant for a license in the same geographic service area, provided that the attributable interest holder certifies to the Commission that it did not communicate with the new applicant prior to the date that the original applicant withdrew from the auction.

(5) Applicants must modify their short-form applications to reflect any changes in ownership or in membership of consortia or joint bidding arrangements.

(6) For purposes of this paragraph:

(i) The term applicant shall include all controlling interests in the entity submitting a short-form application to participate in an auction (FCC Form 175), as well as all holders of partnership and other ownership interests and any stock interest amounting to 10 percent or more of the entity, or outstanding stock, or outstanding voting stock of the entity submitting a short-form application, and all officers and directors of that entity; and

(ii) The term bids or bidding strategies shall include capital calls or requests for additional funds in support of bids or bidding strategies.

Example: Company A is an applicant in area 1. Company B and Company C each own 10 percent of Company A. Company D is an applicant in area 1, area 2, and area 3. Company C is an applicant in area 3. Without violating the Commission's Rules, Company B can enter into a consortium arrangement with Company D or acquire an ownership interest in Company D if Company B certifies either (1) that it has communicated with and will communicate neither with Company A or anyone else concerning Company A's bids or bidding strategy, nor with Company C or anyone else concerning Company C's bids or bidding strategy, or (2) that it has not communicated with and will not communicate with Company D or anyone else concerning Company D's bids or bidding strategy.

#### § 1.2106 Submission of upfront payments.

(a) The Commission may require applicants for licenses subject to competitive bidding to submit an upfront payment. In that event, the amount of the upfront payment and the procedures for submitting it will be set forth in a Public Notice. No interest will be paid on upfront payments.

(b) Upfront payments must be made by wire transfer in U.S. dollars from a financial institution whose deposits are insured by the Federal Deposit Insurance Corporation and must be made payable to the Federal Communications Commission.

(c) If an upfront payment is not in compliance with the Commission's Rules, or if insufficient funds are tendered to constitute a valid upfront payment, the applicant shall have a limited opportunity to correct its submission to bring it up to the minimum valid upfront payment prior to the auction. If the applicant does not submit at least the minimum upfront payment, it will be ineligible to bid, its application will be dismissed and any upfront payment it has made will be returned.

(d) The upfront payment(s) of a bidder will be credited toward any down payment required for licenses on which the bidder is the high bidder. Where the upfront payment amount exceeds the required deposit of a winning bidder, the Commission may refund the excess amount after determining that no bid withdrawal penalties are owed by that bidder.

(e) In accordance with the provisions of paragraph (d), in the event a penalty is assessed pursuant to § 1.2104 for bid withdrawal or default, upfront payments or down payments on deposit with the Commission will be used to satisfy the bid withdrawal or default penalty before being applied toward any additional payment obligations that the high bidder may have.

#### § 1.2107 Submission of down payment and filing of long-form applications.

(a) After bidding has ended, the Commission will identify and notify the high bidder and declare the bidding closed.

(b) Unless otherwise specified by public notice, within ten (10) business days after being notified that it is a high bidder on a particular license(s), a high bidder must submit to the Commission's lockbox bank such additional funds (the "down payment") as are necessary to bring its total deposits (not including upfront payments applied to satisfy bid withdrawal or default payments) up to twenty (20) percent of its high bid(s). (In single round sealed bid auctions conducted under § 1.2103, however, bidders may be required to submit their down payments with their bids.) Unless otherwise specified by public notice, this down payment must be made by wire transfer in U.S. dollars from a financial institution whose deposits are insured by the Federal Deposit Insurance Corporation and must be made payable to the Federal Communications Commission. Down payments will be held by the Commission until the high bidder has been awarded the license and has paid the remaining balance due on the license or authorization, in which case it will not be returned, or until the winning bidder is found unqualified to be a licensee or has defaulted, in which case it will be returned, less applicable payments. No interest on any down payment will be paid to the bidders.

(c) A high bidder that meets its down payment obligations in a timely manner must, within ten (10) business days after being notified that it is a high bidder, submit an additional application (the "long-form application") pursuant to the rules governing the service in which the applicant is the high bidder. Notwithstanding any other provision in title 47 of the Code of Federal Regulations to the contrary, high bidders need not submit an additional application filing fee with their long-form applications. Specific procedures for filing applications will be set out by Public Notice. Ownership disclosure requirements are set forth in § 1.2112. Beginning January 1, 1999, all long-form applications must be filed electronically. An applicant that fails to submit the required long-form application under this paragraph and fails to establish good cause for any late-filed submission, shall be deemed to have defaulted and will be subject to the payments set forth in § 1.2104.

(d) As an exhibit to its long-form application, the applicant must provide a detailed explanation of the terms and conditions and parties involved in any bidding consortia, joint venture, partnership or other agreement or arrangement it had entered into relating to the competitive bidding process prior to the time bidding was completed. Such agreements must have been entered into prior to the filing of short-form applications pursuant to § 1.2105.

(e) An applicant must also submit FCC Form 602 (see § 1.919 of this chapter) with its long form application (FCC Form 601).

§ 1.2108 Procedures for filing petitions to deny against long-form applications.

(a) Where petitions to deny are otherwise provided for under the Act or the commission's Rules, and unless other service-specific procedures for the filing of such petitions are provided for elsewhere in the Commission's Rules, the procedures in this section shall apply to the filing of petitions to deny the long-form applications of winning bidders.

(b) Within a period specified by Public Notice, and after the Commission by public notice announces that long-form applications have been accepted for filing, petitions to deny such applications may be filed. In all cases, the period for filing petitions to deny shall be no shorter than five (5) days. Any such petitions must contain allegations of fact supported by affidavit of a person or persons with personal knowledge thereof.

(c) An applicant may file an opposition to any petition to deny, and the petitioner a reply to such opposition. Allegations of fact or denials thereof must be supported by affidavit of a person or persons with personal knowledge thereof. The time for filing such oppositions shall be at least five (5) days from the filing date for petitions to deny, and the time for filing replies shall be at least five (5) days from the filing date for oppositions. The Commission may grant a license based on any long-form application that has been accepted for filing. The Commission shall in no case grant licenses earlier than seven (7) days following issuance of a public notice announcing long-form applications have been accepted for filing.

(d) If the Commission determines that:

(1) an applicant is qualified and there is no substantial and material issue of fact concerning that determination, it will grant the application.

(2) an applicant is not qualified and that there is no substantial issue of fact concerning that determination, the Commission need not hold a evidentiary hearing and will deny the application.

(3) substantial and material issues of fact require a hearing, it will conduct a hearing. The Commission may permit all or part of the evidence to be submitted in written form and may permit employees other than administrative law judges to preside at the taking of written evidence. Such hearing will be conducted on an expedited basis.

§ 1.2109 License grant, denial, default, and disqualification.

(a) Unless otherwise specified by public notice, auction winners are required to pay the balance of their winning bids in a lump sum within ten (10) business days following the release of a public notice establishing the payment deadline. If a winning bidder fails to pay the balance of its winning bids in a lump sum by the applicable deadline as specified by the Commission, it will be allowed to make payment within ten (10) business days after the payment deadline, provided that it also pays a late fee equal to five percent of the amount due. When a winning bidder fails to pay the balance of its winning bid by the late payment deadline, it is considered to be in default on its license(s) and subject to the applicable default payments. Licenses will be awarded upon the full and timely payment of winning bids and any applicable late fees.

(b) If a winning bidder withdraws its bid after the Commission has declared competitive bidding closed or fails to remit the required down payment within ten (10) business days after the Commission has declared competitive bidding closed, the bidder will be deemed to have defaulted, its application will be dismissed, and it will be liable for the default payment specified in § 1.2104(g)(2). In such event, the Commission, at its discretion, may either re-auction the license to existing or new applicants or offer it to the other highest bidders (in descending order) at their final bids. The down payment obligations set forth in § 1.2107(b) will apply.

(c) A winning bidder who is found unqualified to be a licensee, fails to remit the balance of its winning bid in a

timely manner, or defaults or is disqualified for any reason after having made the required down payment, will be deemed to have defaulted and will be liable for the payment set forth in § 1.2104(g)(2). In such event, the Commission may either re-auction the license to existing or new applicants or offer it to the other highest bidders (in descending order) at their final bids.

(d) Bidders who are found to have violated the antitrust laws or the Commission's rules in connection with their participation in the competitive bidding process may be subject, in addition to any other applicable sanctions, to forfeiture of their upfront payment, down payment or full bid amount, and may be prohibited from participating in future auctions.

#### § 1.2110 Designated entities.

(a) Designated entities are small businesses, businesses owned by members of minority groups and/or women, and rural telephone companies.

(b) Definitions.

(1) Small businesses. The Commission will establish the definition of a small business on a service-specific basis, taking into consideration the characteristics and capital requirements of the particular service.

(2) Businesses owned by members of minority groups and/or women. Unless otherwise provided in rules governing specific services, a business owned by members of minority groups and/or women is one in which minorities and/or women who are U.S. citizens control the applicant, have at least 50.1 percent equity ownership and, in the case of a corporate applicant, a 50.1 percent voting interest. For applicants that are partnerships, every general partner either must be a minority and/or woman (or minorities and/or women) who are U.S. citizens and who individually or together own at least 50.1 percent of the partnership equity, or an entity that is 100 percent owned and controlled by minorities and/or women who are U.S. citizens. The interests of minorities and women are to be calculated on a fully-diluted basis; agreements such as stock options and convertible debentures shall be considered to have a present effect on the power to control an entity and shall be treated as if the rights thereunder already have been fully exercised. However, upon a demonstration that options or conversion rights held by non-controlling principals will not deprive the minority and female principals of a substantial financial stake in the venture or impair their rights to control the designated entity, a designated entity may seek a waiver of the requirement that the equity of the minority and female principals must be calculated on a fully-diluted basis. The term minority includes individuals of African American, Hispanic-surnamed, American Eskimo, Aleut, American Indian and Asian American extraction.

(3) Rural telephone companies. A rural telephone company is any local exchange carrier operating entity to the extent that such entity--

(i) provides common carrier service to any local exchange carrier study area that does not include either

(A) any incorporated place of 10,000 inhabitants or more, or any part thereof, based on the most recently available population statistics of the Bureau of the Census, or

(B) any territory, incorporated or unincorporated, included in an urbanized area, as defined by the Bureau of the Census as of August 10, 1993;

(ii) provides telephone exchange service, including exchange access, to fewer than 50,000 access lines;

(iii) provides telephone exchange service to any local exchange carrier study area with fewer than 100,000 access lines; or

(iv) has less than 15 percent of its access lines in communities of more than 50,000 on the date of enactment of the

Telecommunications Act of 1996.

(4) Affiliate.

(i) An individual or entity is an affiliate of an applicant or of a person holding an attributable interest in an applicant if such individual or entity--

(A) Directly or indirectly controls or has the power to control the applicant, or

(B) Is directly or indirectly controlled by the applicant, or

(C) Is directly or indirectly controlled by a third party or parties that also controls or has the power to control the applicant, or

(D) Has an "identity of interest" with the applicant.

(ii) Nature of control in determining affiliation.

(A) Every business concern is considered to have one or more parties who directly or indirectly control or have the power to control it. Control may be affirmative or negative and it is immaterial whether it is exercised so long as the power to control exists.

Example. An applicant owning 50 percent of the voting stock of another concern would have negative power to control such concern since such party can block any action of the other stockholders. Also, the bylaws of a corporation may permit a stockholder with less than 50 percent of the voting stock to block any actions taken by the other stockholders in the other entity. Affiliation exists when the applicant has the power to control a concern while at the same time another person, or persons, are in control of the concern at the will of the party or parties with the power to control.

(B) Control can arise through stock ownership; occupancy of director, officer or key employee positions; contractual or other business relations; or combinations of these and other factors. A key employee is an employee who, because of his/her position in the concern, has a critical influence in or substantive control over the operations or management of the concern.

(C) Control can arise through management positions where a concern's voting stock is so widely distributed that no effective control can be established.

Example. In a corporation where the officers and directors own various size blocks of stock totaling 40 percent of the corporation's voting stock, but no officer or director has a block sufficient to give him or her control or the power to control and the remaining 60 percent is widely distributed with no individual stockholder having a stock interest greater than 10 percent, management has the power to control. If persons with such management control of the other entity are persons with attributable interests in the applicant, the other entity will be deemed an affiliate of the applicant.

(iii) Identity of interest between and among persons. Affiliation can arise between or among two or more persons with an identity of interest, such as members of the same family or persons with common investments. In determining if the applicant controls or has the power to control a concern, persons with an identity of interest will be treated as though they were one person.

Example. Two shareholders in Corporation Y each have attributable interests in the same PCS application. While neither shareholder has enough shares to individually control Corporation Y, together they have the power to control Corporation Y. The two shareholders with these common investments (or identity in interest) are treated as though they are one person and Corporation Y would be deemed an affiliate of the applicant.

(A) Spousal affiliation. Both spouses are deemed to own or control or have the power to control interests owned or controlled by either of them, unless they are subject to a legal separation recognized by a court of competent jurisdiction in the United States. In calculating their net worth, investors who are legally separated must include their share of interests in property held jointly with a spouse.

(B) Kinship affiliation. Immediate family members will be presumed to own or control or have the power to control interests owned or controlled by other immediate family members. In this context "immediate family member" means father, mother, husband, wife, son, daughter, brother, sister, father- or mother-in-law, son- or daughter-in-law, brother- or sister-in-law, step-father or -mother, step-brother or -sister, step-son or -daughter, half brother or sister. This presumption may be rebutted by showing that the family members are estranged, the family ties are remote, or the family members are not closely involved with each other in business matters.

Example. A owns a controlling interest in Corporation X. A's sister-in-law, B, has an attributable interest in a PCS application. Because A and B have a presumptive kinship affiliation, A's interest in Corporation Y is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(iv) Affiliation through stock ownership.

(A) An applicant is presumed to control or have the power to control a concern if he or she owns or controls or has the power to control 50 percent or more of its voting stock.

(B) An applicant is presumed to control or have the power to control a concern even though he or she owns, controls or has the power to control less than 50 percent of the concern's voting stock, if the block of stock he or she owns, controls or has the power to control is large as compared with any other outstanding block of stock.

(C) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, such minority holdings are equal or approximately equal in size, and the aggregate of these minority holdings is large as compared with any other stock holding, the presumption arises that each one of these persons individually controls or has the power to control the concern; however, such presumption may be rebutted by a showing that such control or power to control, in fact, does not exist.

(v) Affiliation arising under stock options, convertible debentures, and agreements to merge. Stock options, convertible debentures, and agreements to merge (including agreements in principle) are generally considered to have a present effect on the power to control the concern. Therefore, in making a size determination, such options, debentures, and agreements are generally treated as though the rights held thereunder had been exercised. However, an affiliate cannot use such options and debentures to appear to terminate its control over another concern before it actually does so.

Example 1. If company B holds an option to purchase a controlling interest in company A, who holds an attributable interest in a PCS application, the situation is treated as though company B had exercised its rights and had come owner of a controlling interest in company A. The gross revenues of company B must be taken into account in determining the size of the applicant.

Example 2. If a large company, BigCo, holds 70% (70 of 100 outstanding shares) of the voting stock of company A, who holds an attributable interest in a PCS application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company A, and thus the applicant, until SmallCo actually exercises its option to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule which requires such options to be considered on a fully diluted basis, the option is not considered to have present effect in this case.

Example 3. If company A has entered into an agreement to merge with company B in the future, the situation is treated as though the merger has taken place.

(vi) Affiliation under voting trusts.

(A) Stock interests held in trust shall be deemed controlled by any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will.

(B) If a trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust will be deemed controlled by the grantor or beneficiary, as appropriate.

(C) If the primary purpose of a voting trust, or similar agreement, is to separate voting power from beneficial ownership of voting stock for the purpose of shifting control of or the power to control a concern in order that such concern or another concern may meet the Commission's size standards, such voting trust shall not be considered valid for this purpose regardless of whether it is or is not recognized within the appropriate jurisdiction.

(vii) Affiliation through common management. Affiliation generally arises where officers, directors, or key employees serve as the majority or otherwise as the controlling element of the board of directors and/or the management of another entity.

(viii) Affiliation through common facilities. Affiliation generally arises where one concern shares office space and/or employees and/or other facilities with another concern, particularly where such concerns are in the same or related industry or field of operations, or where such concerns were formerly affiliated, and through these sharing arrangements one concern has control, or potential control, of the other concern.

(ix) Affiliation through contractual relationships. Affiliation generally arises where one concern is dependent upon another concern for contracts and business to such a degree that one concern has control, or potential control, of the other concern.

(x) Affiliation under joint venture arrangements.

(A) A joint venture for size determination purposes is an association of concerns and/or individuals, with interests in any degree or proportion, formed by contract, express or implied, to engage in and carry out a single, specific business venture for joint profit for which purpose they combine their efforts, property, money, skill and knowledge, but not on a continuing or permanent basis for conducting business generally. The determination whether an entity is a joint venture is based upon the facts of the business operation, regardless of how the business operation may be designated by the parties involved. An agreement to share profits/losses proportionate to each party's contribution to the business operation is a significant factor in determining whether the business operation is a joint venture.

(B) The parties to a joint venture are considered to be affiliated with each other. Nothing in this subsection shall be construed to define a small business consortium, for purposes of determining status as a designated entity, as a joint venture under attribution standards provided in this section.

(xi) Exclusion from affiliation coverage. For purposes of this section, Indian tribes or Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.), or entities owned and controlled by such tribes or corporations, are not considered affiliates of an applicant (or licensee) that is owned and controlled by such tribes, corporations or entities, and that otherwise complies with the requirements of this section, except that gross revenues derived from gaming activities conducted by affiliate entities pursuant to the Indian Gaming Regulatory Act (25 U.S.C. 2701 et seq.) will be counted in determining such applicant's (or licensee's) compliance with the financial requirements of this section, unless such applicant establishes that it will not receive a substantial unfair competitive advantage because significant legal constraints restrict the applicant's ability to access such gross revenues.

(c) The Commission may set aside specific licenses for which only eligible designated entities, as specified by the Commission, may bid.

(d) The Commission may permit partitioning of service areas in particular services for eligible designated entities.

(e) Bidding credits.

(1) The Commission may award bidding credits (i.e., payment discounts) to eligible designated entities. Competitive bidding rules applicable to individual services will specify the designated entities eligible for bidding credits, the licenses for which bidding credits are available, the amounts of bidding credits and other procedures.

(2) Size of bidding credits. A winning bidder that qualifies as a small business or a consortium of small businesses may use the following bidding credits corresponding to their respective average gross revenues for the preceding 3 years:

(i) Businesses with average gross revenues for the preceding years, 3 years not exceeding \$3 million are eligible for bidding credits of 35 percent;

(ii) Businesses with average gross revenues for the preceding years, 3 years not exceeding \$15 million are eligible for bidding credits of 25 percent; and

(iii) Businesses with average gross revenues for the preceding years, 3 years not exceeding \$40 million are eligible for bidding credits of 15 percent.

(f) Installment payments. The Commission may permit small businesses (including small businesses owned by women, minorities, or rural telephone companies that qualify as small businesses) and other entities determined to be eligible on a service-specific basis, which are high bidders for licenses specified by the Commission, to pay the full amount of their high bids in installments over the term of their licenses pursuant to the following:

(1) Unless otherwise specified by public notice, each eligible applicant paying for its license(s) on an installment basis must deposit by wire transfer in the manner specified in § 1.2107(b) sufficient additional funds as are necessary to bring its total deposits to ten (10) percent of its winning bid(s) within ten (10) days after the Commission has declared it the winning bidder and closed the bidding. Failure to remit the required payment will make the bidder liable to pay a default payment pursuant to § 1.2104(g)(2).

(2) Within ten (10) days of the conditional grant of the license application of a winning bidder eligible for installment payments, the licensee shall pay another ten (10) percent of the high bid, thereby commencing the eligible licensee's installment payment plan. If a winning bidder eligible for installment payments fails to submit this additional ten (10) percent of its high bid by the applicable deadline as specified by the Commission, it will be allowed to make payment within ten (10) business days after the payment deadline, provided that it also pays a late fee equal to five percent of the amount due. When a winning bidder eligible for installment payments fails to submit this additional ten (10) percent of its winning bid, plus the late fee, by the late payment deadline, it is considered to be in default on its license(s) and subject to the applicable default payments. Licenses will be awarded upon the full and timely payment of second down payments and any applicable late fees.

(3) Upon grant of the license, the Commission will notify each eligible licensee of the terms of its installment payment plan and that it must execute a promissory note and security agreement as a condition of the installment payment plan. Unless other terms are specified in the rules of particular services, such plans will:

(i) Impose interest based on the rate of U.S. Treasury obligations (with maturities closest to the duration of the license term) at the time of licensing;

(ii) Allow installment payments for the full license term;

(iii) Begin with interest-only payments for the first two years; and

(iv) Amortize principal and interest over the remaining term of the license.

(4) A license granted to an eligible entity that elects installment payments shall be conditioned upon the full and timely performance of the licensee's payment obligations under the installment plan.

(i) Any licensee that fails to submit payment on an installment obligation will automatically have an additional ninety (90) days in which to submit its required payment without being considered delinquent. Any licensee making its required payment during this period will be assessed a late payment fee equal to five percent (5%) of the amount of the past due payment. Late fees assessed under this paragraph will accrue on the next business day following the payment due date. Payments made at the close of any grace period will first be applied to satisfy any lender advances as required under each licensee's "Note and Security Agreement." Afterwards, payments will be applied in the following order: late charges, interest charges, principal payments.

(ii) If any licensee fails to make the required payment at the close of the 90-day period set forth in paragraph (i) of this section, the licensee will automatically be provided with a subsequent 90-day grace period, except that no subsequent automatic grace period will be provided for payments from C or F block licensees that are not made within 90 days of the payment resumption date for those licensees, as explained in Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, Order on Reconsideration of the Second Report and Order, WT Docket No. 97-82, FCC 98-46 (rel. Mar. 24, 1998). Any licensee making a required payment during this subsequent period will be assessed a late payment fee equal to ten percent (10%) of the amount of the past due payment. Licensees shall not be required to submit any form of request in order to take advantage of the initial 90-day non-delinquency period and subsequent automatic 90-day grace period. All licensees that avail themselves of the automatic grace period must pay the required late fee(s), all interest accrued during the non-delinquency and grace periods, and the appropriate scheduled payment with the first payment made following the conclusion of the grace period.

(iii) If an eligible entity making installment payments is more than one hundred and eighty (180) days delinquent in any payment, it shall be in default, except that C and F block licensees shall be in default if their payment due on the payment resumption date, referenced in paragraph (f)(4)(ii) of this section, is more than ninety (90) days delinquent.

(iv) Any eligible entity that submits an installment payment after the due date but fails to pay any late fee, interest or principal at the close of the 90-day non-delinquency period and subsequent automatic grace period, if such a grace period is available, will be declared in default, its license will automatically cancel, and will be subject to debt collection procedures.

(g) The Commission may establish different upfront payment requirements for categories of designated entities in competitive bidding rules of particular auctionable services.

(h) The Commission may offer designated entities a combination of the available preferences or additional preferences.

(i) Designated entities must describe on their long-form applications how they satisfy the requirements for eligibility for designated entity status, and must list and summarize on their long-form applications all agreements that effect designated entity status, such as partnership agreements, shareholder agreements, management agreements and other agreements, including oral agreements, which establish that the designated entity will have both de facto and de jure control of the entity. Such information must be maintained at the licensees' facilities or by their designated agents for the term of the license in order to enable the Commission to audit designated entity eligibility on an ongoing basis.

(j) The Commission may, on a service-specific basis, permit consortia, each member of which individually meets the eligibility requirements, to qualify for any designated entity provisions.

(k) The Commission may, on a service-specific basis, permit publicly-traded companies that are owned by members of minority groups or women to qualify for any designated entity provisions.

(l) Audits.

(1) Applicants and licensees claiming eligibility under this section shall be subject to audits by the Commission, using in-house and contract resources. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short- form application (FCC Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding FCC-licensed service and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(m) Gross revenues. Gross revenues shall mean all income received by an entity, whether earned or passive, before any deductions are made for costs of doing business (e.g., cost of goods sold), as evidenced by audited financial statements for the relevant number of most recently completed calendar years or, if audited financial statements were not prepared on a calendar-year basis, for the most recently completed fiscal years preceding the filing of the applicant's short-form (FCC Form 175). If an entity was not in existence for all or part of the relevant period, gross revenues shall be evidenced by the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate. When an applicant does not otherwise use audited financial statements, its gross revenues may be certified by its chief financial officer or its equivalent and must be prepared in accordance with Generally Accepted Accounting Principles.

§ 1.2111 Assignment or transfer of control: unjust enrichment.

(a) Reporting requirement. An applicant seeking approval for a transfer of control or assignment (otherwise permitted under the Commission's Rules) of a license within three years of receiving a new license through a competitive bidding procedure must, together with its application for transfer of control or assignment, file with the Commission's statement indicating that its license was obtained through competitive bidding. Such applicant must also file with the Commission the associated contracts for sale, option agreements, management agreements, or other documents disclosing the local consideration that the applicant would receive in return for the transfer or assignment of its license (see § 1.948 of this chapter). This information should include not only a monetary purchase price, but also any future, contingent, in-kind, or other consideration (e.g., management or consulting contracts either with or without an option to purchase; below market financing).

(b) Unjust enrichment payment: set-aside. As specified in this paragraph an applicant seeking approval for a transfer of control or assignment (otherwise permitted under the Commission's Rules) of a license acquired by the transferor or assignor pursuant to a set-aside for eligible designated entities under § 1.2110(c), or who proposes to take any other action relating to ownership or control that will result in loss of status as an eligible designated entity, must seek Commission approval and may be required to make an unjust enrichment payment (Payment) to the Commission by cashier's check or wire transfer before consent will be granted. The Payment will be based upon a schedule that will take account of the term of the license, any applicable construction benchmarks, and the estimated value of the set-aside benefit, which will be calculated as the difference between the amount paid by the designated entity for the license and the value of comparable non-set-aside license in the free market at the time of the auction. The Commission will establish the amount of the Payment and the burden will be on the applicants to disprove this amount. No payment will be required if:

(1) The license is transferred or assigned more than five years after its initial issuance, unless otherwise specified; or

(2) The proposed transferee or assignee is an eligible designated entity under § 1.2110(c) or the service-specific competitive bidding rules of the particular service, and so certifies.

(c) Unjust enrichment payment: installment financing.

(1) If a licensee that utilizes installment financing under this section seeks to assign or transfer control of its license to an entity not meeting the eligibility standards for installment payments, the licensee must make full payment of the remaining unpaid principal and any unpaid interest accrued through the date of assignment or transfer as a condition of approval.

(2) If a licensee that utilizes installment financing under this section seeks to make any change in ownership structure that would result in the licensee losing eligibility for installment payments, the licensee shall first seek Commission approval and must make full payment of the remaining unpaid principal and any unpaid interest accrued through the date of such change as a condition of approval. A licensee's (or other attributable entity's) increased gross revenues or increased total assets due to nonattributable equity investments, debt financing, revenue from operations or other investments, business development or expanded service shall not be considered to result in the licensee losing eligibility for installment payments.

(3) If a licensee seeks to make any change in ownership that would result in the licensee qualifying for a less favorable installment plan under this section, the licensee shall seek Commission approval and must adjust its payment plan to reflect its new eligibility status. A licensee may not switch its payment plan to a more favorable plan.

(d) Unjust enrichment payment: bidding credits.

(1) A licensee that utilizes a bidding credit, and that during the initial term seeks to assign or transfer control of a license to an entity that does not meet the eligibility criteria for a bidding credit, will be required to reimburse the U.S. Government for the amount of the bidding credit, plus interest based on the rate for ten year U.S. Treasury obligations applicable on the date the license was granted, as a condition of Commission approval of the assignment or transfer. If, within the initial term of the license, a licensee that utilizes a bidding credit seeks to assign or transfer control of a license to an entity that is eligible for a lower bidding credit, the difference between the bidding credit obtained by the assigning party and the bidding credit for which the acquiring party would qualify, plus interest based on the rate for ten year U.S. treasury obligations applicable on the date the license is granted, must be paid to the U.S. Government as a condition of Commission approval of the assignment or transfer. If, within the initial term of the license, a licensee that utilizes a bidding credit seeks to make any ownership change that would result in the licensee losing eligibility for a bidding credit (or qualifying for a lower bidding credit), the amount of the bidding credit (or the difference between the bidding credit originally obtained and the bidding credit for which the restructured licensee would qualify), plus interest based on the rate for ten year U.S. treasury obligations applicable on the date the license is granted, must be paid to the U.S. Government as a condition of Commission approval of the assignment or transfer.

(2) Payment schedule.

(i) The amount of payments made pursuant to paragraph (d)(1) of this section will be reduced over time as follows:

(A) A transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or in the case of very small businesses transferring to small businesses, 100 percent of the difference between the bidding credit received by the former and the bidding credit for which the latter is eligible);

(B) A transfer in year 3 of the license term will result in a forfeiture of 75 percent of the value of the bidding credit;

(C) A transfer in year 4 of the license term will result in a forfeiture of 50 percent of the value of the bidding

credit;

(D) A transfer in year 5 of the license term will result in a forfeiture of 25 percent of the value of the bidding credit; and

(E) for a transfer in year 6 or thereafter, there will be no payment.

(ii) These payments will have to be paid to the United States Treasury as a condition of approval of the assignment, transfer, or ownership change.

(e) Unjust enrichment: partitioning and disaggregation.

(1) Installment payments. Licensees making installment payments, that partition their licenses or disaggregate their spectrum to entities not meeting the eligibility standards for installment payments, will be subject to the provisions concerning unjust enrichment as set forth in this section.

(2) Bidding credits. Licensees that received a bidding credit that partition their licenses or disaggregate their spectrum to entities not meeting the eligibility standards for such a bidding credit, will be subject to the provisions concerning unjust enrichment as set forth in this section.

(3) Apportioning unjust enrichment payments. Unjust enrichment payments for partitioned license areas shall be calculated based upon the ratio of the population of the partitioned license area to the overall population of the license area and by utilizing the most recent census data. Unjust enrichment payments for disaggregated spectrum shall be calculated based upon the ratio of the amount of spectrum disaggregated to the amount of spectrum held by the licensee.

#### § 1.2112 Ownership disclosure requirements for short- and long-form applications.

(a) Each application for a license or authorization or for consent to assign or transfer control of a license or authorization shall disclose fully the real party or parties in interest and must include in an exhibit the following information:

(1) A list of any FCC-regulated business 10 percent or more of whose stock, warrants, options or debt securities are owned by the applicant or an officer, director, attributable stockholder or key management personnel of the applicant. This list must include a description of each such business's principal business and a description of each such business's relationship to the applicant;

(2) A list of any party holding a 10 percent or greater interest in the applicant, including the specific amount of the interest;

(3) A list of any party holding a 10 percent or greater interest in any entity holding or applying for any FCC-regulated business in which a 10 percent or more interest is held by another party which holds a 10 percent or more interest in the applicant (e.g., If company A owns 10 percent of Company B (the applicant) and 10 percent of Company C then Companies A and C must be listed on Company B's application;

(4) A list of the names, addresses, and citizenship of any party holding 10 percent or more of each class of stock, warrants, options or debt securities together with the amount and percentage held;

(5) A list of the names, addresses, and citizenship of all controlling interests of the applicants, as set forth in § 1.2110;

(6) In the case of a general partnerships, the name, address and citizenship of each partner, and the share or interest participation in the partnership;

(7) In the case of a limited partnerships, the name, address and citizenship of each limited partner whose interest in the applicant is equal to or greater than 10 percent (as calculated according to the percentage of equity paid in and the percentage of distribution of profits and losses);

(8) In the case of a limited liability corporation, the name, address and citizenship of each of its members; and

(9) A list of all parties holding indirect ownership interests in the applicant, as determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain, that equals 10 percent or more of the applicant, 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 and reported as if it were a 100 percent interest.

(b) In addition to the information required under paragraph (a) of this section, each applicant for a license or authorization claiming status as a small business shall, as an exhibit to its long-form application:

(1) Disclose separately and in the aggregate the gross revenues, computed in accordance with § 1.2110, for each of the following: the applicant and its affiliates, the applicant's attributable investors, affiliates of its attributable investors, and, if a consortium of small businesses, the members comprising the consortium;

(2) List and summarize all agreements or instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business under the applicable designated entity provisions, including the establishment of de facto and de jure control; such agreements and instruments include articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, franchise agreements, and any other relevant agreements (including letters of intent), oral or written; and

(3) List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees.

#### § 1.2113 Construction prior to grant of application.

Subject to the provisions of this section, applicants for licenses awarded by competitive bidding may construct facilities to provide service prior to grant of their applications, but must not operate such facilities until the FCC grants an authorization. If the conditions stated in this section are not met, applicants must not begin to construct facilities for licenses subject to competitive bidding.

(a) When applicants may begin construction. An applicant may begin construction of a facility upon release of the Public Notice listing the post- auction long-form application for that facility as acceptable for filing.

(b) Notification to stop. If the FCC for any reason determines that construction should not be started or should be stopped while an application is pending, and so notifies the applicant, orally (followed by written confirmation) or in writing, the applicant must not begin construction or, if construction has begun, must stop construction immediately.

(c) Assumption of risk. Applicants that begin construction pursuant to this section before receiving an authorization do so at their own risk and have no recourse against the United States for any losses resulting from:

(1) Applications that are not granted;

(2) Errors or delays in issuing public notices;

(3) Having to alter, relocate or dismantle the facility; or

(4) Incurring whatever costs may be necessary to bring the facility into compliance with applicable laws, or FCC rules and orders.

(d) Conditions. Except as indicated, all pre-grant construction is subject to the following conditions:

(1) The application does not include a request for a waiver of one or more FCC rules;

(2) For any construction or alteration that would exceed the requirements of § 17.7 of this chapter, the licensee has notified the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460-1), filed a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, PRB, Support Services Branch, Gettysburg, PA 17325;

(3) The applicant has indicated in the application that the proposed facility would not have a significant environmental effect, in accordance with §§ 1.1301 through 1.1319;

(4) Under applicable international agreements and rules in this part, individual coordination of the proposed channel assignment(s) with a foreign administration is not required; and

(5) Any service-specific restrictions not listed herein.

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