

PART 22, SUBPART J – REQUIRED NEW CAPABILITIES PURSUANT TO THE COMMUNICATIONS ASSISTANCE FOR LAW ENFORCEMENT ACT (CALEA)

Description

The Communications Assistance for Law Enforcement Act (CALEA) was enacted by Congress to establish procedures for law enforcement to obtain authorized access to wireless and wireline communications or call-identifying information where such information is needed for law enforcement purposes.¹⁷⁹ Part 22, subpart J¹⁸⁰ contains technical standards and capabilities for cellular carriers to ensure that communications and call-identifying information will be accessible to law enforcement, as required by section 103 of CALEA.¹⁸¹ These rules were adopted in 1999.¹⁸² The Commission has adopted parallel requirements and standards for broadband PCS licensees in Part 24, subpart J¹⁸³ and for wireline telecommunications carriers in Part 64, subpart W.¹⁸⁴

Purpose

The purpose of the CALEA rules is to ensure that law enforcement, pursuant to court order or other lawful authorization, will have reasonable access to wireless and wireline communications or call-identifying information where such information is needed for law enforcement purposes.

Comments

No comments were filed with respect to this subpart.

Analysis

While CALEA is a communications-specific statute codified in Title 47, it does not fall within the Communications Act of 1934 as amended. As such, the CALEA rules are not part of the Commission's section 11 biennial review.¹⁸⁵

¹⁷⁹ 47 U.S.C. § 1002.

¹⁸⁰ 47 C.F.R. Part 22, subpart J.

¹⁸¹ *Id.*

¹⁸² See Communications Assistance for Law Enforcement Act, *Third Report and Order*, 14 FCC Rcd 16794 (1999).

¹⁸³ 47 C.F.R. Part 24, subpart J.

¹⁸⁴ 64 C.F.R. Part 64, subpart W.

¹⁸⁵ Section 11 of the Communications Act instructs the Commission to review "all regulations issued *under this Act . . .*" 47 U.S.C. § 161 (emphasis added).

PART 24 – PERSONAL COMMUNICATIONS SERVICES (PCS)**Description**

Part 24 contains licensing, technical, operational, and auction rules for broadband and narrowband Personal Communications Services (PCS).¹⁸⁶ The rules in this part: (1) define permissible communications, terms, and definitions relating to PCS licenses; (2) specify application and licensing requirements, including eligibility, term of license, and renewal procedures; (3) establish the frequencies available to PCS licensees; (4) establish operational parameters, including technical standards and limits on operation (*e.g.*, antenna height, transmitter power) to prevent harmful interference; (5) set forth rules for narrowband and broadband PCS licensees, including minimum coverage requirements; and (6) set forth application procedures and competitive bidding rules for the auction and award of PCS licenses.

In addition, Part 24 contains requirements applicable to PCS under the Communications Assistance for Law Enforcement Act (CALEA).¹⁸⁷ Specifically, these rules set forth certain capability standards applicable to broadband PCS telecommunications carriers in order to ensure that, when properly authorized, law enforcement has access to communications or call-identifying information.

Part 24 is organized into ten subparts:

- A. General Information
- B. Applications and Licenses
- C. Technical Standards
- D. Narrowband PCS
- E. Broadband PCS
- F. Competitive Bidding Procedures for Narrowband PCS
- G. Interim Application, Licensing and Processing Rules for Narrowband PCS
- H. Competitive Bidding Procedures for Broadband PCS
- I. Interim Application, Licensing and Processing Rules for Broadband PCS
- J. Required New Capabilities Pursuant to the Communications Assistance for Law Enforcement Act (CALEA)

The Part 24 rules were initially adopted in 1993,¹⁸⁸ and were modified on reconsideration in 1994.¹⁸⁹ In 2000, the Commission issued an order further revising certain aspects of

¹⁸⁶ 47 C.F.R. Part 24. Narrowband PCS operates in the 901-902, 930-931, and 940-941 MHz bands. Broadband PCS operates in the 1850-1910 and 1930-1990 MHz bands.

¹⁸⁷ See Communications Assistance for Law Enforcement Act (CALEA), Pub. Law No. 103-414, 108 Stat. 4279 (1994). We discuss these rules, *supra*, when discussing Part 22, Subpart J.

¹⁸⁸ See Amendment of the Commission's Rules to Establish New Personal Communications Services, *Second Report and Order*, 8 FCC Rcd 7700 (1993); Amendment of the Commission's Rules to Establish New Personal Communications Services, *Third Report and Order*, 9 FCC Rcd 1337 (1994).

¹⁸⁹ See Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Fifth Report and Order*, 9 FCC Rcd 5532 (1994); Implementation of Section 309(j) of the Communications Act –

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the Part 24 narrowband PCS rules.¹⁹⁰ The CALEA rules were adopted in a separate proceeding.¹⁹¹

Purpose

The purposes of the Part 24 rules are to establish basic ground rules for assignment of PCS spectrum, ensure efficient spectrum use by PCS licensees, and prevent interference. In addition, Part 24 contains rules that define eligibility for the PCS entrepreneurs' blocks and for "designated entity" (*i.e.*, small business) status within these blocks. The purpose of these provisions is to implement the objectives of section 309(j)(3) of the Communications Act¹⁹² to ensure that the distribution of PCS licenses is not excessively concentrated, and that small businesses, rural telephone companies, and businesses owned by women and minorities have opportunities to become PCS licensees.

Analysis

Status of Competition

Broadband PCS providers offer mobile telephony service in competition with cellular and some SMR services. PCS, cellular, and digital SMR networks use the same basic design.¹⁹³ The Commission estimates that as of December 2003, there were 160.6 million mobile telephone subscribers, up from 141.8 million at the end of 2002, which translates into a nationwide penetration rate of 54 percent.¹⁹⁴ The additional 18.8 million subscribers was nearly a 40 percent increase from the 13.3 million added in 2002. The *Ninth CMRS Competition Report* cites an analyst that postulates that the surge in subscriber growth is attributable to three factors: 1) wireless is economically sensitive

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Competitive Bidding, *Fourth Memorandum Opinion and Order*, 9 FCC Rcd 6858 (1994); Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Fifth Memorandum Opinion and Order*, 10 FCC Rcd 403 (1994).

¹⁹⁰ See Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS, *Second Report and Order*, 15 FCC Rcd 10456 (2000).

¹⁹¹ See Communications Assistance for Law Enforcement Act, CC Docket No. 97-213, *Third Report and Order*, 14 FCC Rcd 16794 (1999), *vacated in part and remanded*, *United States Telecom Ass'n v. FCC*, 227 F.3d 450 (D.C. Cir. 2000).

¹⁹² 47 U.S.C. § 309(j)(3).

¹⁹³ See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services *Eighth Report*, 18 FCC Rcd 14783 (2003) ("*Eighth Report*"). All use a series of low-power transmitters to serve relatively small areas ("cells"), and all employ frequency reuse to maximize spectrum efficiency. In the past, cellular and SMR networks used an analog technology, while PCS networks were designed from the start to use a digital format. Digital technology provides better sound quality and increased spectral efficiency than analog technology. From a customer's perspective, digital service in the cellular band or SMR bands is virtually identical to digital service in the PCS band. Digital technology is now dominant in the mobile telephone sector, with approximately 88 percent of all wireless subscribers using digital service.

¹⁹⁴ *Ninth CMRS Competition Report*, FCC 04-216 at ¶ 174 (2004).

and with the improving economy the industry is experiencing improved growth; 2) around the current penetration rate, a network effect takes over that promotes increased subscriber growth; and 3) the increased availability of data applications increases the desirability and utility of a cell phone.¹⁹⁵ Digital subscribers made up approximately 91 percent of all wireless subscribers at the end of 2003, up from 88 percent at the end of 2002.¹⁹⁶ Approximately 14 million analog-only mobile telephone subscribers remain.¹⁹⁷

Non-voice services continue to play an increasingly important role in the CMRS industry. While subscriber numbers for paging continue to drop, the number of mobile data users appears to be rising both absolutely and as a percentage of the mobile telephone subscriber base.¹⁹⁸ The *Eighth Report* cited an estimate by one analyst that there were 11.9 million mobile telephone users who subscribed to some type of mobile data service at the end of 2002, less than 10 percent of the total number of U.S. mobile telephone subscribers at that time.¹⁹⁹ In contrast the *Ninth CMRS Competition Report* cites an analyst's estimate that almost 25 percent of U.S. mobile subscribers can be considered casual data users, most of whom use SMS and some of whom use picture mail, download ring tones or do simple web surfing. The *Ninth CMRS Competition Report* cites that there are only 1 million wireless data devices in service today, with a data device defined as a PDA such as a Blackberry or a laptop card, down from 2.3 million data-only mobile users at the end of 2002.²⁰⁰

Advantages

The Part 24 rules provide the basic regulatory structure necessary for the orderly assignment and use of PCS spectrum, while otherwise affording licensees substantial flexibility to determine what technology, type of service, and business strategy they will use. The Part 24 competitive bidding rules promote efficient licensing of PCS spectrum to those entities that value it the most.

¹⁹⁵ See *Ninth CMRS Competition Report*, FCC 04-216 at ¶ 175.

¹⁹⁶ During 2003, the number of customers subscribing to digital services climbed 17 percent, from approximately 125 million to 146 million. See *Ninth CMRS Competition Report*, FCC 04-216 at ¶ 176.

¹⁹⁷ See *Ninth CMRS Competition Report*, ¶ 176.

¹⁹⁸ See *Ninth CMRS Competition Report*, ¶ 178. Also, the Commission estimates there were 11.2 million paging units in service as of the end of 2003, down 21 percent from 14.1 million units at the end of 2002. *Ninth CMRS Competition Report*, ¶ 177, citing, Craig Stroup and John Vu, Numbering Resource Utilization in the United States as of December 31, 2003, Federal Communications Commission, May 2004, at 12 (Table 1: Number Utilization by Carrier Type as of December 31, 2003).

¹⁹⁹ *Ninth CMRS Competition Report*, ¶ 178, citing, *Eighth Report*, at 14839.

²⁰⁰ See *Ninth CMRS Competition Report*, ¶ 179.

Disadvantages

The Part 24 rules impose limited administrative and technical burdens that are inherent in the licensing process and necessary for compliance with technical and operational rules. Certain of the licensing and technical rules differ somewhat from those for other similar CMRS services, such that there may be opportunity for further harmonization in the interest of creating additional flexibility and regulatory symmetry.

Recent Efforts

On January 7, 2004, the Commission released a Notice of Proposed Rulemaking (*Streamlining Notice*) initiating a proceeding to streamline and harmonize licensing provisions in the wireless radio services (WRS) that were identified in part during the Commission's 2000 and 2002 biennial regulatory reviews.²⁰¹ The Commission concluded that streamlining and harmonizing these rules would clarify spectrum rights and obligations for affected licensees and support recent efforts to maximize the public benefits derived from the use of the radio spectrum. Among other matters, the Commission sought comment on whether all power limit references in Part 22 and 24 should be specified in terms of equivalent isotropically radiated power (EIRP) or whether all references to power limits should continue to be expressed in terms of EIRP and effective radiate power (ERP). The Commission also sought comment on whether to eliminate the Part 24 transmitter output power limits and increase Part 24 EIRP limits in certain circumstances.

A Narrowband PCS auction (Auction No. 50) concluded on September 29, 2003, after 4 applicants placed winning bids on 48 licenses.²⁰² A second Regional Narrowband PCS auction, employing combinatorial bidding, (Auction No. 51) concluded on September 25, 2003, after an applicant placed a single winning bid on 5 licenses.²⁰³

Comments

Section 24.232(a) – Power limitations. Ericsson requests that the Commission seek comment on 1) eliminating all references to “peak” or, alternatively, also including references to “average” each time “peak” is mentioned in Section 24.232(a), (b), and (c) so that the rule will permit output power measurements on either a “peak” or “average” basis, without restriction; 2) revising the Section 24.232(a) transmitter limit to eliminate any output restrictions on transmitters; 3) revising its Section 24.232(a) base station EIRP limit to 6560 watts/MHz/carrier for channel bandwidths 1 MHz and greater, and 6560

²⁰¹ See *In the Matter of Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services*, WT Docket No. 03-264, *Notice of Proposed Rulemaking*, 19 FCC Rcd 708 (2003) (*Streamlining NPRM*).

²⁰² “Narrowband PCS Spectrum Auction Closes; Winning Bidders Announced,” *Public Notice*, DA 03-3012 (rel. Oct. 2, 2003).

²⁰³ “Regional Narrowband PCS Spectrum Auction Closes; Winning Bidder Announced,” *Public Notice*, DA 04-3006 (rel. Oct. 1, 2003).

watts per carrier for channel bandwidths less than 1 MHz; and 4) eliminating any transmitter limits and mirroring these base station EIRP and “peak” rule changes in Section 27.50(d)(1) of its Advanced Wireless services (“AWS”) rules to ensure regulatory parity.²⁰⁴

Recommendation

In its *Notice*, the Commission requested comment on whether to eliminate the transmitter output power limit and whether to revise the base station EIRP limit of 24.232(a). These issues should be resolved in a subsequent Report and Order. Further, the staff recommends that the Commission initiate a proceeding to review whether the references to measuring “peak” power should be eliminated from 24.232(a) or whether licensees should be allowed to alternatively measure “peak” or “average” power without restriction. The staff also recommends seeking comments on whether to mirror these changes in Part 27.

²⁰⁴ Ericsson Comments at 2.

PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES**Description**

Part 27²⁰⁵ contains licensing, technical, and operational rules for the “miscellaneous wireless communications services” (WCS). The rules in this part: (1) define WCS license areas; (2) specify the spectrum bands available to WCS licensees; (3) permit flexible use for all services within a given spectrum band’s allocation;²⁰⁶ (4) establish license terms and other general licensing requirements; (5) establish minimum technical standards and limits on operation (*e.g.*, antenna height, power limits) to prevent interference; and (6) set forth application procedures and competitive bidding rules for the auction and award of WCS licenses.

Part 27 is divided into eleven sub-parts:

- A – General Information
- B – Applications and Licenses
- C – Technical Standards
- D – Competitive Bidding Procedures for the 2305-2320 MHz and 2345-2360 MHz Bands
- E – Application, Licensing and Processing Rules for WCS
- F – Competitive Bidding Procedures for the 746-764 MHz and 776-794 MHz Bands
- G – Guard Band Managers
- H – Competitive Bidding Procedures for the 698-746 MHz Band
- I – 1.4 GHz Band
- J – 1670-1675 MHz Band
- K – 2385-2390 MHz Band

On June 10, 2004, the Commission transformed the rules governing the Multipoint Distribution Service (MDS) and Instructional Television Fixed Service (ITFS) in the 2495-2690 MHz band by adopting rules that provide greater flexibility and a more functional band plan for MDS and ITFS licensees.²⁰⁷ The Commission’s order changed the names of the MDS and ITFS services to the Broadband Radio Service (BRS) and Educational Broadband Service (EBS), respectively, and consolidated the EBS

²⁰⁵ 47 C.F.R. Part 27.

²⁰⁶ Section 303(y)(2) authorizes the Commission to allocate spectrum to provide flexibility of use upon making certain findings. *See* 47 U.S.C. § 303(y)(2). The Commission must make affirmative findings that such flexibility: (1) is consistent with international agreements, (2) would be in the public interest, (3) would not deter investment in communications services and systems, or technology development, and (4) would not result in harmful interference among users. *See id.*

²⁰⁷ *See EBS/BRS Report and Order*, WT Docket No. 03-66, 19 FCC Rcd 14165 (2004).

regulations with the regulations for the new BRS in Part 27. On December 10, 2004, the *EBS/BRS Report and Order* was published in the Federal Register.²⁰⁸

Purpose

The purposes of the Part 27 rules are to establish initial definitions to assign licenses at auction, ensure efficient spectrum use by licensees, and prevent interference. Part 27 establishes a general framework of rules to set forth an optimal initial scope of licenses for spectrum allocated to flexible use. The Part 27 service rule framework is designed to promote the efficient use of spectrum and permit service providers to select the technologies and services that the market may demand.

Part 27 also contains rules that define eligibility for small business status within the spectrum bands available to WCS licensees. These provisions implement the objectives of section 309(j)(3) of the Act that the distribution of licenses not be excessively concentrated, and that small businesses, rural telephone companies, and businesses owned by women and minorities have opportunities to participate in the provision of WCS and other wireless services.

Analysis

Status of Competition

Competition within the miscellaneous WCS is beginning to develop as Part 27 services are licensed. Because there is considerable range in the frequency bands allocated for flexible use and licensing under Part 27, the status of competition varies depending on the frequencies and their feasibility of use to offer services within a particular market. Accordingly, WCS licensees may not necessarily compete with one another in the same market and will more than likely use their flexibility to offer services that compete with existing fixed, mobile, and/or broadcast services depending on market demand at any particular point in time.

To date, the Commission has only held auctions and issued licenses for spectrum in the 2.3 GHz frequency band, the guard band portions of the Upper 700 MHz Band and the C and D Blocks of the lower 700 MHz Band. The providers of WCS in 2.3 GHz frequency bands have mainly focused on the offering of fixed wireless voice and data services in conjunction or competition with fixed wireless uses in several spectrum bands, including Multipoint Distribution Service (MDS),²⁰⁹ unlicensed spectrum bands, 24 GHz, Local Multipoint Distribution Service (LMDS), and 39 GHz. Based on recent annual reports from 700 MHz guard band managers, there has not yet been significant leasing or use of the guard band frequencies in the Upper 700 MHz Band As reflected in the *Ninth CMRS*

²⁰⁸ 69 Fed. Reg. 72020 (Dec. 10, 2004).

²⁰⁹ What is commonly referred to as MDS or wireless cable spectrum includes 33 different 6 megahertz channels in the 2.1-2.2 GHz and 2.5-2.7 GHz spectrum bands. These channels include MDS, MMDS, and ITFS channels. MDS operators generally use the MMDS and MDS channels and lease excess capacity from ITFS operators.

Competition Report, much of the Upper and Lower 700 MHz spectrum is currently encumbered by television broadcasters, and may remain so until the end of the period when broadcasters convert from analog to digital transmission systems.²¹⁰

Advantages

The Part 27 rules provide a clearly defined umbrella structure for the assignment of spectrum to various services with maximum practicable flexibility. The service rules rely on a market-based approach that affords flexibility to licensees to decide on development and deployment of new services and products to consumers. This framework ensures that licensees are not constrained to a single regulatory status nor use of this spectrum and, therefore, can offer a mix of services and technologies to their customers.

Disadvantages

43. The Part 27 rules impose administrative burdens inherent to the licensing process and necessary for compliance with technical and operational rules.

Recent Efforts

On August 12, 2004, the Wireless Telecommunications Bureau issued a Memorandum Opinion and Order²¹¹ granting Access Spectrum LLC, a 700 MHz “A Block” Guard Band licensee, a waiver of section 27.60 of the Commission’s rules²¹² to permit 700 MHz operations within the Grade B contour of incumbent broadcaster KZJL in Houston, Texas, subject to certain conditions mostly involving resolution of interference.

On November 7, 2002, the Commission allocated 90 megahertz of spectrum that can be used to provide advanced wireless services (AWS), including services commonly referred to as “Third Generation” or “IMT-2000.” In a companion *Notice of Proposed Rulemaking* in WT Docket No. 02-353, the Commission proposed Part 27 licensing and service rules that would permit these bands to be used for any service consistent with the bands’ fixed and mobile allocations, including the provision of AWS. The Commission sought comment on Part 27 licensing, technical, and operational rules to provide a flexible regulatory framework that includes basic licensing requirements and sets out certain technical requirements to prevent interference.

In February 2002, the Commission adopted a *Second Report and Order and Further Notice of Proposed Rulemaking* in WT Docket No. 00-32, allocating 50 megahertz of spectrum in the 4940-4990 MHz band (4.9 GHz band) for fixed and mobile services (except aeronautical mobile service) and designating the band for use in support of public

²¹⁰ *Ninth CMRS Competition Report*, FCC 04-216 at ¶ 95.

²¹¹ In the Matter of Access Spectrum, LLC, Request for waiver of Section 27.60, *Memorandum Opinion and Order*, DA 04-2527 (WTB rel. August 12, 2004).

²¹² 47 C.F.R. § 27.60.

safety.²¹³ The Commission sought comment *inter alia* on the possibility of regulating all uses of the band pursuant to Part 27 of the Commission's Rules.

The first Lower 700 MHz Band auction (Auction No. 44) concluded on September 18, 2002, after 102 applicants placed winning bids on 484 licenses.²¹⁴ The second Lower 700 MHz Band auction (Auction No. 49) concluded on June 13, 2003, after 35 applicants placed winning bids on 251 licenses.²¹⁵

In May 2002, the Commission adopted service and competitive bidding rules to govern the licensing of 27 MHz of electromagnetic spectrum, including the 1390-1395 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz bands which were recently reallocated for non-Government use.²¹⁶ The 1650-1675 MHz Band auction (Auction No. 46) concluded on April 30, 2003, after an applicant placed the winning bid on the one nationwide license offered.²¹⁷

Comments

Section 24.232(a) – Power limitations. In order to achieve regulatory parity with services governed by Section 24.232(a), Ericsson requests that the Commission seek comment on 1) eliminating all references to “peak” or, alternatively, also including references to “average” each time “peak” is mentioned in Section 27.50(d)(1) of its Advanced Wireless services (“AWS”) rules so that the rule will permit output power measurements on either a “peak” or “average” basis, without restriction; 2) revising the AWS rules to eliminate any output power restrictions on transmitters; and 3) revising the AWS rules to increase the base station e.i.r.p. limit to 6560 watts/MHz/carrier for channel bandwidths 1 MHz and greater, and 6560 watts per carrier for channel bandwidths less than 1 MHz.

Recommendation

The Part 27 rules are concerned with licensing procedures and technical and operational standards, which protect against interference among Part 27 licensees as well licensees in adjacent services. As such, the need and purposes for these rules are not directly affected by competitive developments in the services that guide our Section 11 analysis.

²¹³ The 4.9GH Band Transferred From Federal Government Use, WT Docket No. 00-32, *Second Report and Further Notice of Proposed Rulemaking*, 17 FCC Rcd 3955 (2002).

²¹⁴ “Lower 700 MHz Band Auction Closes; Winning Bidders Announced,” *Public Notice*, DA 02-2323 (rel. Sept. 20, 2002).

²¹⁵ “Lower 700 MHz Band Auction Closes; Winning Bidders Announced,” *Public Notice*, DA 03-1978 (rel. June 18, 2003).

²¹⁶ Amendments to Parts 1, 2, 27 and 90 of Commission's Rules to License Services in 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-4135 MHz, 1670-1675 MHz and 2385-2390 MHz Government Transfer Bands, *Report and Order*, 17 FCC Rcd 9980 (2002).

²¹⁷ “1650-1675 MHz Band Auction Closes; Winning Bidder Announced,” *Public Notice*, DA 03-1472 (rel. May 2, 2003).

Accordingly, we do not find that these Part 27 rules are “no longer necessary in the public interest as the result of meaningful economic competition between providers of such [telecommunications] service.”

While the staff generally determines that the Part 27 rules remain necessary in the public interest, it nonetheless also concludes that certain modifications of these rules may be in the public interest for reasons other than those related to competitive developments that fall within the scope of Section 11 review. In this regard, the staff recommends that the Commission seek comment on whether any changes in Part 24 technical operations rules should be mirrored in Part 27.

PART 27, SUBPART I – 1.4 GHZ BAND**Description**

Part 27, subpart I contains licensing, technical, and operational rules for the 1.4 GHz Band.²¹⁸ The allocations covered by subpart E are primarily used for tone, voice, numeric, and alphanumeric paging services. In general, the rules in this subpart: (1) specify the frequency bands allocated to PARS; (2) provide methods for determining the reliable service area and interfering contour of individual stations; (3) establish construction and commencement of operation requirements for licensees; and (4) define technical limits on operation (*e.g.*, transmitter power) to reduce the likelihood of interference.

Purpose

The purpose of subpart I is to establish rules governing service in the paired 1392 – 1395 MHz and 1432 – 1435 MHz bands as well as the unpaired 1390 – 1392 MHz band (1.4 GHz band). The 1432-1435 MHz band is paired with the 1392-1395 MHz band and assigned by six (6) Economic Area Groupings. To facilitate competition, open eligibility for initial licenses assigned by geographic area licensing is employed. Licensees are permitted to partition and/or disaggregate their licenses.

²¹⁸ 47 C.F.R Part 27, subpart I.

Analysis

Status of Competition

Geographic area licensing for the paired 1392-1395 MHz and 1432-1435 MHz bands will provide licenses with substantial flexibility to respond to market demand and will better enable licensees to coordinate usage.

Advantages

The Subpart I rules provide a flexible regulatory structure and licensing framework, including proscribed coordination procedures governing certain fixed and mobile operations.

Disadvantages

The Subpart I rules impose limited administrative and technical burdens that are inherent to the licensing process and necessary for compliance with technical and operational rules and for limiting interference to co-channel incumbent Government facilities and licensees in adjacent bands.

Recent Efforts

In 2002, the Commission adopted a *Report and Order* implementing new service rules governing, *inter alia*, the 1427-1429.5 MHz, 1429.5-1432 MHz, and 1432-1435 MHz bands. These bands have been reallocated for non-government use. The latter action provides opportunities for new services to utilize this spectrum to address spectrum scarcity concerns as well as to promote the delivery of technologically innovative services to the public.

Comments

No comments were filed with respect to this subpart.

Recommendation

The various Part 27, subpart I rules concern licensing, technical, and operational rules relating to channel usage and operational or interference-related issues among Part 27 licensees as well as licensees in adjacent services. As such, the need and purposes for these rules are not directly affected by competitive developments that guide our Section 11 analysis. Accordingly, we do not find that these Part 27 rules are “no longer necessary in the public interest as the result of meaningful economic competition between providers of such [telecommunications] service.”

**PART 74 – EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST
AND OTHER PROGRAM DISTRIBUTIONAL SERVICES**

SUBPART I-INSTRUCTIONAL TELEVISION FIXED SERVICE

Description

Part 74 of the Commission's Rules contains the regulatory provisions applicable to the Experimental, Auxiliary and Special Broadcast, and Other Program Distributional Services. Subpart I of Part 74 specifically contained the regulations applicable to the Instructional Television Fixed Service (ITFS). The Commission recently released the *EBS/BRS Report and Order*, which revamped ITFS and changed the name of ITFS to the Educational Broadband Service (EBS).²¹⁹ In the same proceeding, the Commission consolidated the EBS regulations with the regulations for the new Broadband Radio Service and placed these regulations into Part 27.²²⁰ On December 10, 2004, the *EBS/BRS Report and Order* was published in the Federal Register.²²¹ Subpart I of Part 74 has been deleted in its entirety, and any remaining regulations applicable to the ITFS/EBS service have been deleted from Part 74.

²¹⁹ *EBS/BRS Report and Order*, WT Docket No. 03-66, 19 FCC Rcd 14165 (2004).

²²⁰ *Id.*

²²¹ 69 Fed. Reg. 72020 (Dec. 10, 2004).

PART 80, SUBPARTS J AND Y – PUBLIC COAST STATIONS AND COMPETITIVE BIDDING PROCEDURES

Description

Part 80 contains licensing, technical, and operational rules for radio stations in the maritime services, which provide for the distress, operational, and personal communications needs of vessels at sea and on inland waterways.²²² Most maritime frequencies are allocated internationally by geographic region and type of communication in order to facilitate interoperable radio communications among vessels of all nations and stations on land worldwide. (Frequencies for Automated Maritime Telecommunications Systems (AMTS) are not allocated internationally.) Land stations in the maritime services are the links between vessels at sea and activities on shore. They are spread throughout the coastal and inland areas of the United States to carry radio signals and messages to and from ships.

Staff's review of Part 80 in this report focuses on the rules affecting public coast stations (subparts J and Y in particular²²³). Public coast stations are CMRS providers that allow ships to send and receive messages and to interconnect with the public switched telephone network. They are unique in the Maritime Services in that they are used for commercial applications. There are three types of public coast stations: VPC (157-162 MHz), AMTS (217-220 MHz), and high seas (which operates on low frequency (.100-.160 MHz band), middle frequency (.405-.525 MHz and 2 MHz bands), and high frequency (4, 6, 8, 12, 16, 18/19, 22, and 25/26 MHz bands) spectrum). Unlike other Part 80 stations, VHF Band Public Coast (VPC) stations and AMTS stations are licensed on a geographic, exclusive-use basis, and are subject to licensing by the Commission's competitive bidding procedures.

Purpose

The Part 80 rules establish the mechanism for allocating licenses and ensure spectrum use that provides public coast licensees with maximum flexibility while concurrently respecting the unique nature of maritime spectrum and preventing interference.

Analysis

Status of Competition

While competition in the CMRS industry as a whole has increased, competition is generally less robust in the public coast services. VPC and AMTS stations, which generally serve ports, coastal areas, and inland waterways, have lost significant market share to other CMRS services (*e.g.*, cellular and PCS) that have coverage in those areas

²²² 47 C.F.R. Part 80.

²²³ Subparts J and Y deal exclusively with public coast station licensing and operations. Other rules governing public coast stations are in subparts B, C, G, and P. In addition, rules pertaining to all coast stations, including public coast stations, can be found in subparts D, E, and H.

and offer service at much lower cost. In addition, high seas public coast stations have lost business satellite communications providers, which can offer higher quality, more user-friendly service. Due to station closures and industry consolidation, a single entity (MariTel, Inc.) is the predominant VPC licensee, as many small and independent licensees have left the business. Competition is stronger in Automated Maritime Telecommunications System Stations (AMTS) than on the high seas bands, which also have experienced a reduction in the number of licensed stations.

Advantages

The Part 80 rules promote the safety of life and property at sea, while concurrently allowing licensees to compete as CMRS providers. The rules allow partitioning and disaggregation, and permit VPC and AMTS licensees to use capacity that is not needed for maritime service to serve units on land.

The subpart Y competitive bidding rules allow the efficient licensing of spectrum and are likely to result in award of licenses to those entities that value the spectrum the most and will use it most efficiently. These rules also enable the Commission to recover a portion of the value of the spectrum for the benefit of the public.

Disadvantages

Because of the unique characteristics of the maritime services, VPC and high seas public coast station licensees are subject to responsibilities that other CMRS providers do not face. The international allocation of maritime frequencies and the associated statutes, treaties, and agreements limit the flexibility of use of these maritime frequencies. There are additional administrative burdens associated with the competitive bidding of public coast station licenses, including filing and reporting requirements, as well as the cost of maintaining staff and electronic resources to participate in auctions.

Recent Efforts

In the 2002 *Maritime Second Memorandum Opinion and Order and Fifth Report and Order*, the Commission converted AMTS to geographic licensing.²²⁴ In a separate docket, the Commission consolidated, revised, and streamlined the Part 80 rules to address new international maritime requirements, improve the operational ability of all users of marine radios, and remove unnecessary or duplicative requirements.²²⁵ In 2004,

²²⁴ Amendment of the Commission's Rules Concerning Maritime Communications, PR Docket 92-257, *Second Memorandum Opinion and Order and Fifth Report and Order*, 17 FCC Rcd 6685 (2002).

²²⁵ Amendment of Parts 13 and 80 of the Commission's Rules Concerning Maritime Communications, *Second Report and Order, Sixth Report and Order and Second Further Notice of Proposed Rulemaking*, WT Docket No. 00-48, 19 FCC Rcd 3120 (2004).

the Commission proposed to afford VPC and AMTS licensees additional flexibility in providing service to units on land.²²⁶

The initial AMTS auction (Auction No. 57) concluded on September 15, 2004, after four applicants placed winning bids (net \$1,057,365) on ten AMTS licenses.²²⁷

Comments

No comments were filed with respect to this rule part.

Recommendation

Staff recommends taking no action regarding this rule with respect to this Biennial Review.

²²⁶ MariTel, Inc. and Mobex Network Services, LLC, *Notice of Proposed Rule Making*, WT Docket No. 04-257, 19 FCC Rcd 15225 (2004).

²²⁷ See Automated Maritime Telecommunications System Spectrum Auction Closes; Winning Bidders Announced, *Public Notice*, DA 04-3012 (rel. Sept. 17, 2004).

PART 90 – PRIVATE LAND MOBILE RADIO SERVICES

Description

Part 90 contains licensing, technical, and operational rules for the group of mobile services historically described as “private land mobile radio services” (PLMRS).²²⁸ Services regulated under this rule part include commercial services such as Specialized Mobile Radio (SMR) and private carrier paging (PCP), non-commercial services such as public safety, and services that are used by utilities, transportation companies, and other businesses for both commercial and private internal purposes.

With the passage of the Omnibus Budget Reconciliation Act of 1993 (OBRA),²²⁹ Congress reclassified some PLMRS (e.g., 800 MHz and 900 MHz SMR, PCP, and some 220 MHz and Business Radio services) as CMRS and required providers in these services to be regulated as common carriers.²³⁰ The regulatory status of non-CMRS Part 90 services were unaffected by OBRA, and these services continue to be classified as private services.

Part 90 contains 23 subparts. Some of these subparts apply generally to all Part 90 licensees, while others establish rules for specific services.²³¹ In general, the rules in this part: (1) specify the frequency bands in which each service operates; (2) define the service area of licenses in each frequency band; (3) establish minimum construction or coverage requirements for licensees; and (4) define technical limits on operation (e.g., antenna height, transmitter power) to prevent interference. For certain CMRS services, Part 90 also contains subparts dealing with the auction and award of licenses,²³² although the Commission eliminated many of the service-specific licensing rules in Part 90 as part of its consolidation, in 1998, of all wireless licensing rules into Part 1 in the *Universal Licensing* proceeding.²³³

²²⁸ 47 C.F.R. Part 90.

²²⁹ Omnibus Budget Reconciliation Act of 1993, Pub. Law No. 103-66, 107 Stat. 312 (largely codified at 47 U.S.C. § 332 *et seq.*) (1993 Budget Act or OBRA).

²³⁰ Implementation of Sections 3(n) and 332 of the Communications Act Regulatory Treatment of Mobile Services, *Second Report and Order*, 9 FCC Rcd 1411 (1994) (*CMRS Second Report and Order*).

²³¹ See, e.g., Part 90, subpart L (Authorization and Use of Frequencies in the 470-512 MHz Band).

²³² See, e.g., Part 90, subpart U (Competitive Bidding Procedures for the 900 MHz Specialized Mobile Radio Service).

²³³ Biennial Regulatory Review – Amendment of Parts 0, 1, 13, 22, 24, 26, 27, 80, 87, 90, 95, 97, and 101 of the Commission’s Rules to Facilitate the Development and Use of the Universal Licensing System in the Wireless Telecommunications Services, *Report and Order*, 13 FCC Rcd 21027 (1998); *Memorandum Opinion and Order on Reconsideration*, 14 FCC Rcd 11145 (1998).

The analysis of Part 90 in this report focuses on those subparts that affect CMRS providers:

- Subpart C – Industrial/Business Pool
- Subpart G – Applications and Authorizations
- Subpart H – Policies Governing Assignment of Frequencies
- Subpart I - General Technical Standards
- Subpart L - Authorizations in 470-512 MHz Band
- Subparts M, X - Intelligent Transportation Systems Radio Service/Auction Rules
- Subpart N – Operating Requirements
- Subpart P - Paging Operations
- Subpart R – Regulations Governing the Licensing and Use of Frequencies in the 764-776 and 794-806 MHz Bands
- Subparts S, U, V - 800/900 MHz SMR Service/Auction Rules
- Subparts T, W - 220 MHz Service/Auction Rules

Purpose

The purposes of the Part 90 rules are to establish basic ground rules for assignment of spectrum in Part 90 services, to ensure efficient spectrum use by licensees, and to prevent interference.

Analysis

Status of Competition

As detailed in the *Ninth CMRS Competition Report*, Part 90 CMRS providers operate in an environment that is marked by significant and increasing competition in mobile telephony, paging/messaging, and mobile data, which has resulted in innovation, lower prices for customers, and increased diversity of service offerings.²³⁴

Advantages

The Part 90 rules provide a clear, predictable structure for the assignment and use of spectrum. In the Part 90 frequency bands that are licensed exclusively to CMRS providers (e.g., SMR), auction rules promote efficient licensing of spectrum to those entities that value it the most. In other bands, site-specific licensing and frequency coordination are used to promote efficient spectrum use.

Disadvantages

The Part 90 rules impose limited administrative and technical burdens that are inherent to the licensing process and necessary for compliance with technical and operational rules.

²³⁴ *Ninth CMRS Competition Report*, FCC 04-216 at ¶¶ 89-90.

Recent Efforts

The Commission has made numerous changes to Part 90 rules in the *Report and Order* in the Part 90 Biennial Regulatory Review proceeding.²³⁵ In addition, in May 2002, the Commission adopted service and competitive bidding rules to govern the licensing of 27 MHz of electromagnetic spectrum, including Part 90 bands (216-220 MHz, 1427-1429.5 MHz, and 1429.5-1432 MHz) which were recently reallocated for non-Government use.²³⁶

In February 2003, the Commission adopted rules to encourage spectral efficiency in the 150-174 MHz and 470-512 MHz bands.²³⁷ Additionally, the Commission sought comment on whether the equipment certification provision in the current rules is sufficient to promote PLMRS migration to one voice path per 6.25 kHz bandwidth, or equivalent technology, or whether migration to 6.25 kHz bandwidth or equivalent technology should be mandatory.²³⁸

In December 2003, the Commission granted a request to stay the January 13, 2004 deadline for filing applications for new wideband systems or expansions of existing wideband systems in the 150-174 MHz and 421-512 MHz bands, pursuant to Section 90.209(b)(6) of the Commission's Rules, pending resolution of the petitions for reconsideration of the *Second Report and Order*.²³⁹ In response to petitions for reconsideration of the *Second Report and Order* and comments provided in response to the *Second FNPRM*, the Commission is considering whether to further refine the Commission's approach to encourage the migration of private land mobile radio systems in the 150-174 MHz and 421-512 MHz bands to narrowband technology.²⁴⁰

²³⁵ 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 - Private Land Mobile Radio Services, WT Docket No. 98-182, *Memorandum Opinion and Order and Second Report and Order*, 17 FCC Rcd 9830 (2002) (*PLMRS MO&O and Second R&O*). See also 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 - Private Land Mobile Radio Services, WT Docket No. 98-182, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 16673 (2000).

²³⁶ Amendments to Parts 1, 2, 27 and 90 of Commission's Rules to License Services in 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz Government Transfer Bands, *Report and Order*, 17 FCC Rcd 9980 (2002).

²³⁷ Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended / Promotion of Spectrum efficient technologies on Certain Part 90 Frequencies, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 18 FCC Rcd 3034 (2003) (*Second Report and Order and Second FNPRM*).

²³⁸ *Id.*

²³⁹ Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended / Promotion of Spectrum efficient technologies on Certain Part 90 Frequencies, *Order*, 18 FCC Rcd 25491 (2003).

²⁴⁰ Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended/Promotion of spectrum Efficient Technologies on Certain Part 90 Frequencies, *Third Memorandum Opinion and Order and Third Further Notice of Proposed Rule Making*, WT Docket No. 99-87, FCC 04-292 (rel. Dec. 23, 2004).

On January 7, 2004, the Commission released a *Notice of Proposed Rulemaking*,²⁴¹ which commenced a proceeding to streamline and harmonize licensing provisions in the wireless radio services (WRS)²⁴² that were identified in comments filed during the Commission's 2000 and 2002 biennial regulatory reviews pursuant to Section 11 of the Communications Act of 1934, as amended ("Communications Act" or "Act").²⁴³ In the *Notice*, the Commission proposed various amendments to Parts 1, 22, 24, 27, and 90 of the rules to modify or eliminate provisions that treat licensees differently and/or have become outdated as a result of technological change, supervening changes to related Commission rules, and/or increased competition within WRS.

In August 2004, the Commission issued a *Report and Order* establishing technical and procedural rules to remedy interference to 800 MHz public safety systems, including reconfiguring the 800 MHz band to eliminate or reduce interference.²⁴⁴

Comments

No comments were filed with respect to this rule part.

Recommendation

Staff recommendations with respect to Part 90 rule sections are set forth in the discussions of specific Part 90 subparts.

²⁴¹ In the Matter of Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, *Notice of Proposed Rulemaking*, 19 FCC Rcd 708 (2004) (*Streamlining and Harmonization NPRM*).

²⁴² 47 C.F.R. § 1.907. WRS is defined in the Commission's rules as "[a]ll radio services authorized in parts 13, 20, 22, 24, 26, 27, 74, 80, 87, 90, 95, 97 and 101 . . . whether commercial or private in nature." *Id.*

²⁴³ 47 U.S.C. § 161.

²⁴⁴ Improving Public Safety in the 800 MHz Band; Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order*, 19 FCC Rcd 14969 (2004).

PART 90, SUBPART C – INDUSTRIAL/BUSINESS RADIO POOL**Description**

Part 90, subpart C²⁴⁵ sets forth the regulations governing the licensing and operations of the radio communications of entities engaged in certain commercial activities, engaged in clergy activities, operating educational, philanthropic, or ecclesiastical institutions, or operating hospitals, clinics, or medical associations.

Purpose

The purpose of the subpart C rules is to establish the rules governing eligibility, frequency availability, licensing, permissible communications, and system requirements for licensees in the industrial/business radio pool.

Analysis**Status of Competition**

See Part 90 – Private Land Mobile Radio Services “Status of Competition” discussion, *supra*.

Advantages

The subpart C rules provide a clear structure for the assignment and use of spectrum to assist eligible entities in the operation of their day-to-day activities.

Disadvantages

The subpart C rules impose limited administrative and technical burdens inherent to the licensing process and necessary for compliance with technical and operational rules.

Recent Efforts

In 2001, the Commission initiated WT Docket No. 01-146 (Amendment of Part 90 of the Commission’s Rules and Policies for Applications and Licensing of Low Operations in the Private Land Mobile 450-470 Band) and sought comment on revisions to the Commission’s rules and policies governing low-power operations in the 450-470 MHz band.²⁴⁶ In 2003, the Commission adopted rules in this proceeding to accommodate a broad range of potential low power users while maximizing efficient use of the band.²⁴⁷

²⁴⁵ 47 C.F.R. Part 90, subpart R.

²⁴⁶ Amendment of Part 90 of the Commission’s Rules and Policies for Applications and Licensing of Low Operations in the Private Land Mobile 450-470 Band, WT Docket No. 01-146, *Notice of Proposed Rulemaking*, 16 FCC Rcd 14949 (2001).

²⁴⁷ Amendment of Part 90 of the Commission’s Rules and Policies for Applications and Licensing of Low Operations in the Private Land Mobile 450-470 Band, WT Docket No. 01-146, *Report and Order*, 18 FCC (continued....)

As indicated in the overview of Part 90 above, the Commission initiated several actions to promote spectrum efficiency – specifically, the migration of PLMRS to narrowband technology - in the 150-174 MHz and 421-512 MHz bands, which comprise a significant number of industrial/business radio pool licensees. See Part 90 – Private Land Mobile Radio Services “Recent Efforts” discussion, *supra*.

Comments

No comments were filed with respect to this subpart.

Recommendation

The Part 90, subpart C rules commented upon by parties in this proceeding concern frequencies that are limited to communications designed to aid in the pursuit of the eligible entities’ primary line of business, and not in the provision of commercial service to consumers. As such, the need and purposes for these rules are not directly affected by competitive developments that guide our Section 11 analysis. Accordingly, we do not find that these Part 90 rules are “no longer necessary in the public interest as the result of meaningful economic competition between providers of such [telecommunications] service.”

The staff finds that the existing rules in Part 90, subpart C remain necessary in the public interest, and therefore recommends that neither modification nor repeal of these rules is warranted. However, it will continue to be receptive to further careful examination of these rules for potential repeal or modification, in the event they become no longer necessary in the public interest.

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Rcd 3948 (2003). Subsequently, for various reasons, the Commission denied a petition for reconsideration filed by American Association of Paging Carriers, which requested that the Commission prohibit the licensing of stations on frequencies (or channels) 12.5 kHz removed from eight specific Part 90 450-470 MHz band paging frequencies. See Amendment of Part 90 of the Commission’s Rules and Policies for Applications and Licensing of Low Operations in the Private Land Mobile 450-470 Band, WT Docket No. 01-146, *Memorandum Opinion and Order*, 19 FCC Rcd 18501 (2004).

PART 90, SUBPART G – APPLICATIONS AND AUTHORIZATIONS**Description**

Part 90, subpart G²⁴⁸ supplements subpart F of Part 1 of the Commission's Rules which establishes the requirements and conditions under which commercial and private radio stations may be licensed and used in the Wireless Telecommunications Services.

In general, the rules in subpart G: (1) establish application requirements; (2) define the license term; (3) establish licensing procedures; and (4) define certain permissible preauthorization activities (*e.g.*, conditional authorization, and construction prior to grant of an application.)

Purpose

The purposes of the subpart G rules are to establish basic rules for the preparation, submission, and evaluation of applications to operate in the Wireless Telecommunications Services.

Analysis**Status of Competition**

See Part 90 – Private Land Mobile Radio Services “Status of Competition” discussion, *supra*.

Advantages

The subpart G rules provide a clear, predictable structure for the preparation, submission and evaluation of applications.

Disadvantages

The subpart G rules impose limited administrative and technical burdens that are inherent to the licensing process and necessary for compliance with technical and operational rules.

Recent Efforts

See Part 90 – Private Land Mobile Radio Services “Recent Efforts” discussion, *supra*.

Comments

No comments were filed with respect to this subpart.

²⁴⁸ 47 C.F.R. Part 90, subpart G.