



- Aviation Spectrum Resources, Inc. (ASRI)
- Central Station Alarm Association (CSAA)
- Enterprise Wireless Alliance (EWA)
- Forest Industries Telecommunications (FIT)
- Forestry-Conservation Communications Association (FCCA)
- Intelligent Transportation Society of America, Inc. (ITSA)
- International Association of Fire Chiefs (IAFC)
- International Municipal Signal Association (IMSA)
- MRFAC, Inc. (MRFAC)
- National Association of State Foresters (NASF)
- PCIA – The Wireless Infrastructure Association (PCIA)
- Telecommunications Industry Association (TIA)
- Utilities Telecom Council (UTC)

The members of LMCC represent a significant percentage of the licensees operating under Part 90 of the FCC's rules. For this reason, LMCC was an active participant in previous phases of this proceeding, including through the submission of Comments and Supplemental Comments in which, among other recommendations, it requested the Commission to simplify and clarify the rules governing trunking in the bands below 512 MHz.<sup>2</sup>

LMCC is pleased to see that the FCC has adopted many of the positions recommended by the organization. The decisions reached in the Second Report and Order in this proceeding are sound and will benefit the Private Land Mobile Radio ("PLMR") community.

Additionally, LMCC offers the following recommendations on the issues raised in the *FNPR*, including the important task of rewriting FCC Rule Section 90.187 to provide for the introduction of more advanced technologies into these PLMR bands while maintaining appropriate interference protection for existing and prospective licensees.

### **1) Wireless Medical Telemetry Service Secondary Operations**

In the Second Report and Order portion of this decision, the Commission described the joint coordination agreement between LMCC and the American Hospital Association ("ASHE")

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<sup>2</sup> See LMCC Comments at 22-25, Supplemental Comments at 1-2.

that is designed to avoid interference between medical and non-medical telemetry operations in the shared 1427-1432 MHz band. The FCC concluded that the agreement does not need to be codified in the rules, explaining that doing so would prevent the organizations from amending the agreement by mutual consent.

However, the Commission also indicated that ASHE and Philips Medical Systems argued that the Part 95 rules should be amended to permit the operation of Wireless Medical Telemetry Service ("WMTS") devices on a secondary basis in the portions of this band where non-medical telemetry has primary status. The FCC noted that the comments on this subject were sharply divided, with LMCC and Itron, Inc. challenging both the operational and safety implications of this proposed secondary use. Although the Commission acknowledged that the record did not establish a basis for concluding that the WMTS required access to this spectrum to meet its communications requirements, it nonetheless determined to explore whether these devices might be able to operate effectively on a secondary basis under certain conditions. Thus, the *FNPR* requests comments about what technical requirements, operational restrictions and notification obligations would be needed to permit safe secondary use. It also asks whether the WMTS already has sufficient spectrum assigned to it on a primary basis to meet the requirements of its users.

LMCC maintains its opposition to a rule change that would authorize secondary WMTS operations on spectrum assigned on a primary basis for non-medical usage. The Commission has made generous allocations of spectrum available for WMTS use in recent years, and there is no record evidence to support a claim that those allocations are inadequate to meet medical telemetry requirements. If critical patient needs cannot be satisfied within the spectrum allotted, the solution is not to shift certain transmissions to secondary usage. Instead, the FCC will need

to identify alternative spectrum homes where these communications can be accorded primary or at least co-equal status with other spectrum users.

The complexity of attempting to accommodate WMTS requirements on a secondary basis is confirmed by the questions raised in the *Further Notice*. The FCC would have to address issues such as the need for monitoring capability and redundancy to prevent the WMTS devices from causing interference to primary users while still ensuring receipt of vital messages, the fact that medical personnel without communications expertise would need to be fully educated about the meaning of secondary operations and the obligation to accept interference from non-medical operations, and the reality that the Commission could be placed in the position of having to direct medical facilities to cease operations of WMTS devices that are causing interference, irrespective of the critical nature of the communications being transmitted. Neither primary non-medical users nor the FCC should bear the burden of demanding the discontinuance of such operations, but those situations inevitably will arise if secondary usage is authorized.

The ill-advised business decision of at least one manufacturer to design WMTS devices that can operate across the entire band should not be allowed to influence this important policy determination. LMCC urges the Commission not to revisit an allocation decision that took many years to finalize, one that struck an equitable balance between the needs of the WMTS and those of entities that use the non-medical segments of the 1427-1432 MHz band to support mission-critical operations of utilities, transportation providers and other enterprise users.

## **2) End-of-Train Devices**

The Commission has incorporated into the *FNPR* a request for comment on a petition for rulemaking filed by the Association of American Railroads ("AAR").<sup>3</sup> The AAR Petition asks

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<sup>3</sup> See Petition for Rulemaking of the Association of American Railroads (filed October 2, 2007) ("AAR Petition").

the FCC to amend its rule to allow end-of-train ("EOT") devices to operate on 452/7.9375 MHz with up to eight watts transmitter output power rather than the two watts permitted under FCC Rule Section 90.238(e) governing telemetry operations in the 450-470 MHz band.

LMCC supports this proposed change in the FCC rules. AAR has described in detail the important role these EOT devices play in supporting the safe and efficient operation of rail freight transportation and the need for a 6 dB increase in output power. Since AAR is the FCC's certified frequency coordinator for the frequency pair in question as well as the frequencies adjacent to it, LMCC is confident that AAR will manage its frequency recommendations so as to avoid allowing interference from EOT devices to other railroad operations.

### **3) Trunking Rules**

In its Comments in this proceeding, LMCC identified revisions to Rule Section 90.187, the rules governing trunking in the bands below 512 MHz, as a matter of the highest priority to its members. It identified the clarifications and changes that it believed were necessary to promote optimal use of these bands, including by facilitating the introduction of more advanced technologies, and provided a draft of the revised rule consistent with LMCC's proposed changes.<sup>4</sup> Subsequently, LMCC fine-tuned certain provisions in that draft rule and submitted those revisions in supplemental comments filed in this proceeding.<sup>5</sup>

The Commission has agreed in the *FNPR* that it would be beneficial to clarify this rule section, one which has been modified in piecemeal fashion over the years in response to specific issues. The changes proposed by the Commission in the *Further Notice* and those reflected in the draft rules accompanying the *FNPR*, for the most part, are consistent with the revisions proposed by LMCC.

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<sup>4</sup> See n. 2.

<sup>5</sup> *Id.*

LMCC is pleased that there is a common view of how best to serve the PLMR industry through modifications to this critical aspect of the Part 90 regulatory structure. As detailed below, LMCC supports most of the recommendations of the FCC with respect to this rule and is confident that common ground can be found in those few areas where the views of LMCC and the FCC differ. LMCC also has provided proposed revisions to the *FNPR*'s draft Rule Section 90.187 for the Commission's consideration.

- LMCC agrees with the FCC's decision to eliminate the distance analysis option for identifying "affected licensees." The Commission also has requested comment on LMCC's recommendation that the rules use a table to depict the spectral separations that are part of the "affected licensees" calculation in lieu of descriptive text. LMCC believes that the table will be more easily understood by licensees and prospective applicants and thereby minimize instances wherein disputes over this issue must be resolved by the Commission. LMCC is unclear why the table in the draft rule does not use the same bandwidths for both the proposed trunked station and the incumbent stations as had been shown in the table submitted by LMCC, so LMCC has modified the table to again make these bandwidths consistent in the attached revised draft of Section 90.187.
- Subsection (d)(1)(B) of the FCC's draft rule incorporates the concept of a two-way contour analysis, such that "affected licensees" are those whose service contours are overlapped by a proposed centralized trunked station's interference contour and those whose interference contours are overlapped by a proposed centralized trunked station's service contour. Although the Commission included this provision in its rule, and noted that the approach is consistent with the requirements for 12.5 kHz offset channels in the 470-512 MHz band, it also seeks comment on whether this change should be adopted, whether it should apply to situations other than those addressed by LMCC, and whether new trunked systems could be authorized on a secondary basis only if their service contour is overlapped by the interference contour of an "affected licensee."

LMCC recommended this provision based on experience in the bands above 800 MHz before adoption of the "short-spacing table" codified in Rule Section 90.621(b). Prior to incorporating that table in the rules, the FCC relied on contour calculations to determine where exclusive co-channel licenses could be assigned. There were a number of instances in which new systems were proposed with power and antenna heights so low that their interference contours did not overlap the service contours of protected stations, but their service contours were substantially overlapped by incumbent stations' interference contours. Since the proposed facilities did not appear to represent viable communications systems,

there was concern that they were intended as potential greenmail opportunities in the event the incumbent needed to modify its system in any way.

This is a practice that should be strongly discouraged in the bands below 512 MHz and that would be deterred by the two-way contour analysis recommended by LMCC. In those unusual cases where a legitimate applicant could accept what would appear to be destructive interference from an incumbent system(s), the waiver process can be used to explain why such an application should be granted.

- The FCC has not proposed to modify its rules to incorporate LMCC's recommendation that a non-centralized trunked station coordinated because its interference contour does not overlap the service contour of a centralized trunked station should not be treated as an affected licensee in the event the centralized trunked station seeks to modify its license, unless that modification extends the centralized trunked station's interference contour in the direction of the non-centralized trunked station. The *Further Notice* states the need for this provision is unclear, but nonetheless seeks comment on it.

This provision was intended to mirror Section 90.621(b)(6), a rule applicable to systems in the 800/900 MHz bands. It permits a station that has been short-spaced not to be restricted by that short-spacing in its subsequent modifications, provided it does not expand its contour in the direction of the station that short-spaced it. This protection may not be necessary if the Commission adopts the two-way contour analysis discussed above, but LMCC believes there is no reason not to include it. It simply ensures that licensees are not prevented from modifying their systems when doing so does not worsen the existing spectrum environment vis-à-vis an affected licensee.

- One area of particular importance to LMCC members is the contour calculation standard for mobiles, both those in mobile-only systems and those associated with base station facilities. Prior to 2008, LMCC members had not conducted mobile contour calculations for units with associated base station facilities and had relied on the contours from those facilities. The contours for mobile-only systems that identified center coordinates on the licenses were calculated based on those coordinates, using the ground elevation at that location, the licensed effective radiated power ("ERP:") (or the output power if no ERP was listed on the license) and a presumed two meter antenna. No contour analyses were performed for mobile-only licenses that did not indicate the center coordinates for their operating area.

In a 2008 letter to LMCC, the Wireless Telecommunications Bureau and the Public Safety and Homeland Security Bureau jointly responded to LMCC concerns about the over-protection of mobile operations. The FCC confirmed that LMCC members were to consider not only base station contours, but mobile contours as well, and to calculate the latter based on mobiles located at the edge

of the associated base station service contour.<sup>6</sup> The contours of mobile-only systems were to be calculated from the edge of their operating area.

The proposed revisions to Section 90.187 in the *FNPR* appear responsive to the concerns expressed by LMCC, at least with respect to mobile-only systems. Proposed subsection (d)(2) reads as follows:

Licensees (and filers of previously filed pending applicants) with no permanent base station may be deemed to be affected licensees for the purposes of this section only if center geographic coordinates are specified for the authorized operating area. In such a case, the contours set forth in paragraph (c)(1)(B) of this section shall be calculated with respect to a station located at the center coordinates.<sup>7</sup>

Neither the *FNPR* nor proposed Section 90.187 addresses the issue of requiring mobile contour calculation for units with an associated base station.

Although the proposed rule is consistent with LMCC's recommendation regarding mobile-only systems, the *Further Notice* expresses concern that this approach may not be the "optimal solution" and may understate the potential for interference from or to such systems. It also indicates that the FCC does not agree with establishing different protection standards based on whether the mobile-only operating area is defined as a radius around specified center coordinates or as a geographic unit such as a county or state. Therefore, the FCC has requested comment on the approach recommended by LMCC and codified in the proposed rule.

For the reasons detailed in the LMCC letter to the FCC that prompted the responsive Haller Letter,<sup>8</sup> which LMCC letter was supported by the Public Safety Communications Council,<sup>9</sup> LMCC remains confident that the approach it has recommended will provide the necessary levels of protection to and from mobile operations, whether in a mobile-only system or associated with base station facilities. LMCC's members have extensive, successful experience coordinating systems in these bands using the pre-2008 standards described in the LMCC Letter. They would not propose a return to that approach if their real-world experience over many decades suggested that a more conservative analysis such as that proposed by the FCC were necessary. Therefore, LMCC urges the FCC to

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<sup>6</sup> See Ralph A. Haller, *Letter*, 23 FCC Rcd 4717 (WTB/PSHSB 2008) ("Haller Letter").

<sup>7</sup> LMCC believes that the paragraph cited should be (d)(1)(B) and has made this correction in its proposed revisions to this rule.

<sup>8</sup> See Letter from Ralph A. Haller, President, LMCC, to Fred Campbell, chief, Wireless Telecommunications Bureau and Derek Poarch, Chief, Public Safety and Homeland Security Bureau, dated Dec. 12, 2007 ("LMCC Letter").

<sup>9</sup> See Letter from Richard Kinsman, Chairman, PSCC, to Fred Campbell, Chief, Wireless Telecommunications Bureau and Derek Poarch, Chief, Public Safety and Homeland Security Bureau, Dated Dec. 17, 2007.

adopt subsection (d)(2) in the Commission's draft rules, as well as LMCC's proposed revision to subsection(d)(1)(B)(i) clarifying that contour calculations for base stations only, and not for their associated mobiles, need to be considered.<sup>10</sup>

#### **4) 470-512 MHz Band Offset Channels**

In the *Further Notice*, the Commission has questioned whether LMCC wishes to have codified in the FCC rules the LMCC consensus coordination procedures for 12.5 kHz offset channels in the 470-512 MHz band. That consensus was described to the FCC in a September 10, 1997 letter from Larry A. Miller, President, LMCC to Daniel B. Phythyon, Esq., Acting Chief, Wireless Telecommunications Bureau and was referenced by the Commission in its Public Notice lifting the freeze on the filing of applications for those channels.<sup>11</sup> This consensus coordination standard relies upon the interference criteria of TIA/EIA/TSB-88<sup>12</sup> and provides that an application for an offset channel in this band will not be coordinated if there is an unacceptable interference of more than five percent reduction in the calculated service area reliability of either an incumbent or the applicant. The LMCC consensus has been used as the basis for the coordination of thousands of 421-430 and 470-512 MHz offset channels since its adoption and remains the applicable coordination standard for these channels today.

Although LMCC had included a reference to this standard in a section of its proposed revisions to Rule Section 90.187 described above, it agrees with the FCC that, on balance, it would be preferable not to codify the TSB-88 requirement. While doing so might provide some greater clarity, the possible benefit is outweighed by the flexibility of being able to modify the

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<sup>10</sup> APCO and IMSA do not support this position. APCO has indicated it will file separate comments regarding the need to protect mobile-only use by public safety licensees that is defined by jurisdictional area of operation.

<sup>11</sup> See Filing Freeze to Be Lifted for Applications Under Part 90 for 12.5 kHz Offset Channels in the 421-430 and 470-512 MHz Bands, *Public Notice*, 13 FCC Rcd 5942 (WTB 1997).

<sup>12</sup> See Telecommunications Industry Association/Electronics Industry Association Telecommunications Systems Bulletin 88 (TIA/EIA/TSB-88), *Wireline Communications System – Performance in Noise and Interference-Limited Situations – Recommended Methods for Technology-Independent Modeling, Simulation, and Verification* (January 1998).

TSB-88 procedures, should that ever prove necessary, without also amending the FCC rules.

These coordination procedures have been in place for more than a decade, are well-known to the PLMR industry and are already referenced in the Commission Public Notice cited in n. 10 above.

LMCC concurs with the FCC that they do not need to be codified in the rules themselves.

For the reasons described herein, LMCC respectfully requests the Commission to adopt rules consistent with the positions detailed above and in the proposed revisions to the FCC's draft Rule Section 90.187.

Respectfully submitted,

By: \_\_\_\_\_ /s/  
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May 14, 2010

# **ATTACHMENT 1**

## **Appendix D (Redlined Edits)**

## APPENDIX D

### Proposed Rules

Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations are amended as follows:

1. The authority citation for Part 90 continues to read as follows:

**Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7).**

2. Section 90.7 is amended by adding definitions for “centralized trunked system” and “decentralized trunked system” in alphabetical order and by revising the definition of “trunked radio system” to read as follows:

#### **§ 90.7 Definitions.**

\* \* \* \* \*

*Centralized trunked system.* A system in which there is dynamic assignment of communications paths by automatically searching all communications paths in the system for and assigning to a user an open communications path within that system. Individual communications paths within a trunked system may be classified as centralized or decentralized in accordance with the requirements of Section 90.187 of this chapter.

\* \* \* \* \*

*Decentralized trunked system.* A system which monitors the communications paths within its assigned channels for activity within and outside of the trunked system and transmits only when an available communications path is found. Individual communications paths within trunked system may be classified as centralized or decentralized in accordance with the requirements of Section 90.187 of this chapter.

\* \* \* \* \*

*Trunked radio system.* A radio system employing technology that provides the availability to search two or more available communications paths and automatically assign a user an open communications path.

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3. Section 90.187 is amended to read as follows:

#### **§ 90.187 Trunking in the bands between 150 and 512 MHz.**

(a) Applicants for centralized and decentralized trunked systems operating on frequencies between 150 and 512 MHz (except 220-222 MHz) must indicate on their applications (radio service and class of station code, instructions for FCC Form 601) that their system will be trunked. Licensees of stations that are not trunked may trunk their systems only after modifying their license (see Section 1.927 of this chapter).

(b) Trunked systems, other than centralized trunked systems, operating under this section must employ equipment that prevents transmission on a trunked frequency if a signal from another system is present on that frequency. The level of monitoring must be sufficient to avoid harmful interference to other systems.

(c) The monitoring requirement in paragraph (b) of this section does not apply to centralized trunked systems operating in the 470-512 MHz band that meet the loading requirements of section 90.313 of this part and have exclusive use of their frequencies in their service area.

(d) The monitoring requirement in paragraph (b) of this section does not apply to centralized trunked systems operating in other than the 470-512 MHz band if the application is ~~be~~ accompanied by written consent from all affected licensees.

(1) Affected licensees for the purposes of this section are licensees (and previously filed pending applicants) meeting both of these following criteria:

(A) Spectral overlap. Licensees (and filers of previously filed pending applications) with an assigned (or proposed) frequency having a spectral separation from a frequency of the proposed centralized trunked station that does not exceed these values:

Proposed Station	Incumbent Authorized Bandwidth		
	<del>205</del> kHz	<del>17.5</del> kHz	<u>6.25</u> kHz
25 kHz	15.0 kHz	15.0 kHz	15.0 kHz
12.5 kHz	15.0 kHz	7.5 kHz	7.5 kHz
6.25 kHz	15.0 kHz	7.5 kHz	3.125 kHz

*The left column is the authorized bandwidth requested for the proposed trunked station. The second row is the authorized bandwidth of the incumbent. The other cells in the table show the frequency range above and below the frequency of the proposed centralized trunked station that must be considered.*

(B) Contour overlap. (i) Licensees (and filers of previously filed pending applications) with a service contour (37 dBu for stations in the 150-174 MHz band, and 39 dBu for stations in the 421-512 MHz band) that is overlapped by the proposed centralized trunked station's interference contour (19 dBu for stations in the 150-174 MHz band, and 21 dBu for stations in the 421-512 MHz band), or with an interference contour that is overlapped by the proposed centralized trunked station's service contour. Contour calculations are required only for base station facilities and not for mobile stations associated with those base stations.

(ii) The calculation of service and interference contours shall be performed using generally accepted engineering practices and standards, including appropriate derating factors, agreed to by a consensus of all certified frequency coordinators. Frequency coordinators shall make this information available to the Commission upon request.

(2) Licensees (and filers of previously filed pending applicants) with no permanent base station may be deemed to be affected licensees for the purposes of this section only if center geographic coordinates are specified for the authorized operating area. In such a case, the contours set forth in paragraph (e)(1)(B) of this section shall be calculated with respect to a station located at the center coordinates, using the ground elevation of those center coordinates, the licensed effective radiated power (ERP) (or the licensed output power if no ERP is provided) and assuming an antenna height of 2 meters.

(3) After January 1, 2013, licensees with an authorized bandwidth exceeding 12.5 kHz will not be deemed affected licensees, unless the licensee meets the efficiency standard set forth in section 90.203(j)(3) of this chapter.

(4) The written consent from an affected licensee shall state all terms agreed to by the parties and shall be signed by the parties. The written consent shall be maintained by the operator of the centralized trunked station and be made available to the Commission upon request. An application for a centralized trunked station shall include either a certification from the applicant that written consent has been obtained from all affected licensees, or a certification from the frequency coordinator that there are no affected licensees.

(~~5e~~) The exclusive service area of a station that has been authorized for centralized trunked operation will be protected from proposed centralized trunked, decentralized trunked or conventional operations in accordance with the standards of subsections (d)(1)(~~AB~~)(i) and (ii) above.

(~~4f~~) Trunking of systems licensed on paging-only channels or licensed in the Radiolocation Service (subpart F) is not permitted.

(~~eg~~) No more than 10 channels for new centralized trunked operation in the Industrial/Business Pool may be applied for at a single transmitter location or at locations with overlapping service contours as specified in paragraph (c)(1)(b) of this section. Subsequent applications for centralized trunked operation are limited to no more than an additional 10 channels, and must be accompanied by a certification, submitted to the certified frequency coordinator coordinating the application, that all of the applicant's existing channels authorized for centralized trunked operation at that location or at locations with overlapping service contours have been constructed and placed in operation. Certified frequency coordinators are authorized to require documentation in support of the applicant's certification that existing channels have been constructed and placed in operation. Applicants for Public Safety Pool channels may request more than 10 centralized trunked channels at a single location or at locations with overlapping service contours if accompanied by a showing of sufficient need. The requirement for such a showing may be satisfied by submission of loading studies demonstrating that requested channels in excess of 10 will be loaded with 50 mobiles per channel within a five year period commencing with the grant of the application.

(~~4h~~) If a licensee authorized for centralized trunked operation discontinues trunked operation for a period of 30 consecutive days, the licensee, within 7 days thereafter, shall file a conforming application for modification of license with the Commission.

## **ATTACHMENT 2**

### **Appendix D (Edits Accepted)**

## APPENDIX D

### Proposed Rules

Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations are amended as follows:

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**Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7).**

2. Section 90.7 is amended by adding definitions for “centralized trunked system” and “decentralized trunked system” in alphabetical order and by revising the definition of “trunked radio system” to read as follows:

#### **§ 90.7 Definitions.**

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*Centralized trunked system.* A system in which there is dynamic assignment of communications paths by automatically searching all communications paths in the system for and assigning to a user an open communications path within that system. Individual communications paths within a trunked system may be classified as centralized or decentralized in accordance with the requirements of Section 90.187 of this chapter.

\* \* \* \* \*

*Decentralized trunked system.* A system which monitors the communications paths within its assigned channels for activity within and outside of the trunked system and transmits only when an available communications path is found. Individual communications paths within trunked system may be classified as centralized or decentralized in accordance with the requirements of Section 90.187 of this chapter.

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*Trunked radio system.* A radio system employing technology that provides the availability to search two or more available communications paths and automatically assign a user an open communications path.

\* \* \* \* \*

3. Section 90.187 is amended to read as follows:

#### **§ 90.187 Trunking in the bands between 150 and 512 MHz.**

(a) Applicants for centralized and decentralized trunked systems operating on frequencies between 150 and 512 MHz (except 220-222 MHz) must indicate on their applications (radio service and class of station code, instructions for FCC Form 601) that their system will be trunked. Licensees of stations that are not trunked may trunk their systems only after modifying their license (see Section 1.927 of this chapter).

(b) Trunked systems, other than centralized trunked systems, operating under this section must employ equipment that prevents transmission on a trunked frequency if a signal from another system is present on that frequency. The level of monitoring must be sufficient to avoid harmful interference to other systems.

(c) The monitoring requirement in paragraph (b) of this section does not apply to centralized trunked systems operating in the 470-512 MHz band that meet the loading requirements of section 90.313 of this part and have exclusive use of their frequencies in their service area.

(d) The monitoring requirement in paragraph (b) of this section does not apply to centralized trunked systems operating in other than the 470-512 MHz band if the application is accompanied by written consent from all affected licensees.

(1) Affected licensees for the purposes of this section are licensees (and previously filed pending applicants) meeting both of the following criteria:

(A) Spectral overlap. Licensees (and filers of previously filed pending applications) with an assigned (or proposed) frequency having a spectral separation from a frequency of the proposed centralized trunked station that does not exceed these values:

Proposed Station	Incumbent Authorized Bandwidth		
	25 kHz	12.5 kHz	6.25 kHz
25 kHz	15.0 kHz	15.0 kHz	15.0 kHz
12.5 kHz	15.0 kHz	7.5 kHz	7.5 kHz
6.25 kHz	15.0 kHz	7.5 kHz	3.125 kHz

*The left column is the authorized bandwidth requested for the proposed trunked station. The second row is the authorized bandwidth of the incumbent. The other cells in the table show the frequency range above and below the frequency of the proposed centralized trunked station that must be considered.*

(B) Contour overlap. (i) Licensees (and filers of previously filed pending applications) with a service contour (37 dBu for stations in the 150-174 MHz band, and 39 dBu for stations in the 421-512 MHz band) that is overlapped by the proposed centralized trunked station's interference contour (19 dBu for stations in the 150-174 MHz band, and 21 dBu for stations in the 421-512 MHz band), or with an interference contour that is overlapped by the proposed centralized trunked station's service contour. Contour calculations are required only for base station facilities and not for mobile stations associated with those base stations.

(ii) The calculation of service and interference contours shall be performed using generally accepted engineering practices and standards, including appropriate derating factors, agreed to by a consensus of all certified frequency coordinators. Frequency coordinators shall make this information available to the Commission upon request.

(2) Licensees (and filers of previously filed pending applicants) with no permanent base station may be deemed to be affected licensees for the purposes of this section only if center geographic coordinates are specified for the authorized operating area. In such a case, the contours set forth in paragraph (d)(1)(B) of this section shall be calculated with respect to a station located at the center coordinates, using the ground elevation of those center coordinates, the licensed effective radiated power (ERP) (or the licensed output power if no ERP is provided) and assuming an antenna height of 2 meters.

(3) After January 1, 2013, licensees with an authorized bandwidth exceeding 12.5 kHz will not be deemed affected licensees, unless the licensee meets the efficiency standard set forth in section 90.203(j)(3) of this chapter.

(4) The written consent from an affected licensee shall state all terms agreed to by the parties and shall be signed by the parties. The written consent shall be maintained by the operator of the centralized trunked station and be made available to the Commission upon request. An application for a centralized trunked station shall include either a certification from the applicant that written consent has been obtained from all affected licensees, or a certification from the frequency coordinator that there are no affected licensees.

(e) The exclusive service area of a station that has been authorized for centralized trunked operation will be protected from proposed centralized trunked, decentralized trunked or conventional operations in accordance with the standards of subsections (d)(1)(B)(i) and (ii) above.

(f) Trunking of systems licensed on paging-only channels or licensed in the Radiolocation Service (subpart F) is not permitted.

(g) No more than 10 channels for new centralized trunked operation in the Industrial/Business Pool may be applied for at a single transmitter location or at locations with overlapping service contours as specified in paragraph (c)(1)(b) of this section. Subsequent applications for centralized trunked operation are limited to no more than an additional 10 channels, and must be accompanied by a certification, submitted to the certified frequency coordinator coordinating the application, that all of the applicant's existing channels authorized for centralized trunked operation at that location or at locations with overlapping service contours have been constructed and placed in operation. Certified frequency coordinators are authorized to require documentation in support of the applicant's certification that existing channels have been constructed and placed in operation. Applicants for Public Safety Pool channels may request more than 10 centralized trunked channels at a single location or at locations with overlapping service contours if accompanied by a showing of sufficient need. The requirement for such a showing may be satisfied by submission of loading studies demonstrating that requested channels in excess of 10 will be loaded with 50 mobiles per channel within a five year period commencing with the grant of the application.

(h) If a licensee authorized for centralized trunked operation discontinues trunked operation for a period of 30 consecutive days, the licensee, within 7 days thereafter, shall file a conforming application for modification of license with the Commission.