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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Replacement of Part 90 by Part 88)
to Revise the Private Land Mobile)
Radio Services and Modify the)
Policies Governing Them)
)
Examination of Exclusivity and)
Frequency Assignment Policies of)
the Private Land Mobile Radio)
Services)

PR Docket No. 92-235

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OFFICE OF SECRETARY

To: The Commission

REQUEST FOR CLARIFICATION
OF THE
PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION

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SUMMARY

The Personal Communications Industry Association ("PCIA") respectfully hereby respectfully requests clarification of certain aspects of the Commission's Second Report and Order in the above-captioned proceeding. PCIA's request relates to the Commission's definitions with regard to the ability to "trunk" frequencies in the 450-512 MHz band and the Commission's definition of construction.

PCIA believes that the ability to trunk channels in the 450-512 MHz band presents the best hope for improved efficiency in this band. However, the Commission must provide the industry with clear guidelines for permissible trunking operation. Therefore, PCIA requests that the Commission clarify its definition of "centralized trunking" as well as clearly defining whether a system with channel selection at the repeater with monitoring is permitted without co-channel consent.

Recently, PCIA has become aware of a letter issued by Commission personnel to a communications attorney. The letter states that for two-way radio systems, it is permissible to utilize a single repeater programmed for multiple frequencies to constitute construction. A number of PCIA members, unaware of the letter, have questioned whether this type of construction is proper. PCIA requests that the Commission formally clarify whether this type of construction complies with the Commission's Rules. As construction

becomes increasingly important in this and other bands, clear and consistent interpretations of Commission's rules becomes critical to the growth and development of the industry. The Commission should avoid the expense of million of dollars of equipment by licensees, only to have the licensee find out later that the construction was improper, or that the licensee had available additional construction options.

Finally, the Commission has accepted applications for conversion of community repeaters to private carrier systems where the applicant can demonstrate that a licensee on the repeater is no longer operational. The Commission should clarify its "consent" provision to permit such a showing for trunking requests.

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**REQUEST FOR CLARIFICATION
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PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION**

The Personal Communications Industry Association ("PCIA"),¹ through counsel and pursuant to Section 1.419 of the Commission's Rules, respectfully hereby respectfully requests clarification of certain aspects of the Commission's Second Report and Order in the

¹PCIA is an international trade association representing the interests of both commercial mobile radio service ("CMRS") and private mobile radio service ("PMRS") users and businesses involved in all facets of the personal communications industry. PCIA's Federation of Councils include: the Paging and Narrowband PCS Alliance, the Broadband PCS Alliance, the Specialized Mobile Radio Alliance, the Site Owners and Managers Association, the Association of Wireless System Integrators, the Association of Communications Technicians, and the Private System Users Alliance. In addition, PCIA is the FCC-appointed frequency coordinator for the 35-512 MHz bands in the Business Radio Service, the 800 and 900 MHz Business Pools, 800 MHz General Category frequencies for Business eligibles and conventional SMR systems, and for the 929 MHz paging frequencies.

above-captioned proceeding.² PCIA's request relates to the Commission's definitions with regard to the ability to "trunk" frequencies in the 450-512 MHz band and the Commission's definition of construction.

I. OPERATION IN TRUNKED MODE

In the Notice of Inquiry ("NOI") in this proceeding, the Commission provided the following definition of trunking:

26. A trunked system is a multi-channel system in which a user can transmit on any of the channels through specific base station facilities. The system automatically searches for and assigns a user an open channel assigned to that system....

27. Dynamic channel reassignment can also be done without central management. Mobile radios have been designed to monitor a series of channels automatically until an open channel is identified. That open channel is then used for that communications sequence. Other radios in the fleet identify incoming calls by continuously sequentially monitoring channels. This type of decentralized dynamic channel reassignment does not require repeaters specifically designed for trunked operation. It also does not require the Commission to set aside channels specifically for this purpose. Although this decentralized dynamic channel reassignment is not trunking in the traditional sense, for the purposes of this Notice, the concepts are similar enough to be considered together....

30. We believe sufficient technological progress has been made that many of the technical problems associated with trunking on shared use spectrum can be resolved. New equipment, discussed in paragraph 27, above, has been developed that uses mobile radio

²62 FR 18834 (April 17, 1997) ("Second Report and Order").

units to monitor until a clear channel can be identified and assigned. This new type of equipment may be used on shared spectrum. The critical difference between equipment designed to trunk on exclusive use channels and this new equipment is that rather than using centrally located equipment to assign channels automatically based solely on activity by users of that system, this new equipment monitors for potential interference to co-channel users. This monitoring is an automated version of the monitoring required of all users of shared spectrum.

31. Thus, we now consider two types of trunked operation. Traditional trunking is prohibited by policy below 800 MHz and requires exclusive channel assignments. The new decentralized type uses monitoring, is not prohibited and does not require exclusive channel assignments. In considering issues regarding trunked operation, we request that commenters differentiate between these types of dynamic frequency assignment.³

In the Second Report and Order, the Commission stated:

56. A centralized trunked system uses multiple channel pairs in conjunction with a computer which automatically assigns a user the first available channel or places the user in a queue to be served in turn...

57. ... We will permit licensees to implement centralized trunked systems in the 150-174 MHz, 421-430 MHz, 450-470 MHz, and 470-512 MHz bands, provided that they (1) obtain the consent of all licensees whose service areas overlap a circle with a radius of 113 km (70 mi) from the trunked system's base station ... and (2) comply with all frequency coordination requirements.⁴

³Notice of Inquiry, PR Docket No. 91-170, 6 FCC Rcd 4126 (1991) at para. 26-31.

⁴Second Report and Order, supra at para. 56-57.

Based upon the NOI language, PCIA believed that the Commission intended "decentralized trunking" to be a system where the mobile radio selected the frequency to be utilized, and "centralized trunking" to be a system where the channel selection is performed at the repeater. Based upon the Second Report and Order language, PCIA understood the Commission to mean that licensees are permitted to utilize radio equipment where the mobile unit performs the channel selection without the consent of co-channel licensees, but licensees with systems where the channel selection is performed at the repeater must obtain the consent of co-channel licensees within the proscribed service area.⁵

PCIA has become increasingly aware of the use by some licensees of equipment where the channel selection is performed at the repeater, but the licensee has employed monitoring at the repeater to prevent co-channel interference. Previously, PCIA had believed that such operation would be permitted by the Commission on a waiver basis only. However, PCIA has learned that the Commission has informally told some licensees that such operation is not centralized trunking, and does not require co-channel consent or a waiver. In addition, PCIA understands that some industry members have stated at industry seminars that the Commission's statement in the NOI that centralized trunking was not

⁵The need for co-channel consent would not apply in the 470-512 MHz band where the licensee has already obtained exclusive use of the channel.

permitted below 800 MHz constitutes improper rule making on the part of the Commission. The rationale advanced for this position is that the Commission had allegedly not listed this issue for notice and comment.⁶

As it has stated in the past, PCIA believes that the ability to trunk channels in the 450-512 MHz band presents the best hope for improved efficiency in this band. However, the Commission must provide the industry with clear guidelines for permissible trunking operation. Therefore, PCIA requests that the Commission clarify its definition of "centralized trunking" as well as clearly defining whether a system with channel selection at the repeater with monitoring is permitted without co-channel consent.

PCIA believes that the Commission should give careful consideration to this clarification. PCIA wants the Commission to give the greatest latitude possible to licensees and encourage the use of trunked equipment. However, PCIA is concerned by what it has learned from some of its members as to the actual use in the field of "trunked monitoring" equipment. The manner in which such equipment is utilized greatly impacts the protection afforded co-channel licensees.

In many standard set-ups, the repeater only monitors the "high side" or repeater transmit frequency. Because the mobile (or

⁶In fact, paragraph 29 of the NOI makes clear that this issue had been fully commented upon by the industry in PR Docket No. 87-213. See, Report and Order, PR Docket No. 87-213, 5 FCC Rcd 4016 (1990).

portable) radio in this arrangement often is not configured to monitor the "low side" or mobile transmit frequency, the mobile simply keys up and begins transmitting, regardless of the presence of any transmissions on the "low side". If such a trunked system operates on the same frequency as a non-repeater system (simply mobile to base or mobile to mobile in a design typically called "talk-around"), the repeater will not "hear" the non-repeater system, causing interference. Therefore, PCIA recommends that non-consensual trunking be confined to channels where co-channel users are also operating in a repeater mode.⁷

In addition, it is possible that a repeater may be placed at a distance which prevents the repeater from "hearing" a co-channel repeater, but the mobile units in between are close enough to each other to cause interference with one another. In this situation, it may actually be preferable that the two repeaters be as close together as possible. Therefore, PCIA also recommends that non-consensual trunking be confined to frequencies where the applicant seeking to utilize trunked equipment can demonstrate that the trunked repeater is within the service area of the co-channel licensee's repeater, or that the trunked applicant's service area

⁷It should also be noted that certain trunked systems utilize a "control channel". This channel sends out a constant stream of data, directing mobile units. Obviously, this type of system would cause interference if the control channel is shared. It is PCIA's understanding that some operators have sought to use an exclusive Part 22 frequency in the same band for the control channel, thus preventing any of the shared channels from being used for control. PCIA supports this type of operation.

is beyond the co-channel licensee's service area. Alternatively, where the two service areas overlap, but the repeaters cannot "hear" each other, it should be required that the repeaters monitor the mobile transmit frequency. This is important in some LTR-type trunking systems, where each channel is designed to send out a data burst approximately every 10 seconds.

Because of these concerns, it is PCIA's recommendation that the Commission permit non-consensual trunked operation with centralized trunking equipment utilizing co-channel monitoring, but such operation must be: (1) specifically licensed and coordinated for trunked operation; (2) limited to channels where co-channel users also operate in a repeater mode; and (3) pursuant to a demonstration as discussed above with regard to the distances of co-channel repeaters.⁸

Also, PCIA understands that certain narrowband linear equipment may have the ability to avoid interference to co-channel FM analog systems, even when the two systems are simultaneously transmitting. Assuming that such equipment does in fact prove to prevent interference in the field, PCIA recommends that the Commission clarify its trunking rules to provide for this type of operation without the concurrence of co-channel FM analog licensees. This process can be accommodated in the frequency coordination process.

⁸These suggestions should also apply to the 150 MHz band, to the extent that repeaters are permitted in that band.

II. CLARIFICATION OF "CONSTRUCTION"

The Commission rules specify certain requirements with regard to construction.⁹ The definition of construction has been further refined in the "Finder's Preference Proceeding"¹⁰, individual Finder's Preference cases¹¹, and in the Commission's Third Report and Order in the "CMRS Proceeding". With the need to obtain co-channel consent in the 450-512 MHz band, the construction and operational status of channels in this band will be important for the first time. Therefore, PCIA believes that it would be appropriate at this time to clarify certain aspects of the Commission's construction rules in order to avoid protracted litigation.

Generally, the Commission's Rules require that a station be placed in "permanent" operation.¹² Installing a base station and then immediately removing the base station does not meet this standard.¹³ Rather, base stations must be in "continuous"

⁹See, for example, Sections 90.155, 90.631, 90.655 and 90.757.

¹⁰Report and Order, PR Docket No. 90-481, 6 FCC Rcd 7297 (1991).

¹¹See, for example, Robert A. Berry, DA 93-1200, released October 12, 1993; Letter from W. Riley Hollingsworth, Deputy Associate Bureau Chief, Office of Operations, to Elizabeth R. Sachs, Esquire, dated March 18, 1997 (FCC File Nos. 93F602 & 93F603) (hereinafter "Sachs Letter").

¹²Robert A. Berry, *supra*; Notice of Proposed Rule Making, PR Docket No. 89-553, 4 FCC Rcd 8673, 8678 (1989) at para. 40; First Report and Order and Further Notice of Proposed Rule Making, PR Docket No. 89-553, 8 FCC Rcd 1469, 1482 (1993) at para. 53-55.

¹³Sachs Letter, *supra* at footnote 1; Notice of Proposed Rule Making, PR Docket No. 89-553, *supra* at para. 40; Report and Order,

operation.¹⁴ This has been interpreted by the Commission to mean that "periodic programming of frequencies and temporary sharing of existing transmitters" do not constitute permanent operation.¹⁵ The Commission's goal is to ensure that licensees construct and operate the facilities which they have licensed, rather than establish temporary operations for brief periods.¹⁶

In addition to the actual installation of transmitters, the Commission also has a "placed in operation" requirement.¹⁷ This requirement requires conventional systems to have at least one mobile unit and one base station placed in operation by the construction deadline, and trunked systems must have two mobiles and a base station placed in operation.¹⁸ In addition, the Commission requires that the licensee construct a base station that is operational on all of the channels assigned.¹⁹

PR Docket No. 90-481, supra at footnote 28; First Report and Order and Further Notice of Proposed Rule Making, PR Docket No. 89-553, supra at para. 55.

¹⁴Notice of Proposed Rule Making, PR Docket No. 89-553, supra at para. 40.

¹⁵Sachs Letter, supra at 4.

¹⁶First Report and Order and Further Notice of Proposed Rule Making, PR Docket No. 89-553, supra at para. 55.

¹⁷Report and Order, PR Docket No. 90-481, supra at para. 9-10.

¹⁸Id. For PMRS stations, the mobile units may be internal units. However, for CMRS stations, the system operator must be providing service to at least one unaffiliated party. Third Report and Order, GN Docket No. 93-252, supra at para. 178.

¹⁹Report and Order, PR Docket No. 90-481, supra at para. 9.

Recently, PCIA has become aware of a letter issued by Commission personnel to a communications attorney. The letter states that for two-way radio systems, it is permissible to utilize a single repeater programmed for multiple frequencies to constitute construction.²⁰

A number of PCIA members, unaware of the Fox Letter, have questioned whether this type of construction is proper. PCIA requests that the Commission formally clarify whether this type of construction complies with the Commission's Rules. As construction becomes increasingly important in this and other bands, clear and consistent interpretations of Commission's rules becomes critical to the growth and development of the industry. The Commission should avoid the expense of million of dollars of equipment by licensees, only to have the licensee find out later that the construction was improper, or that the licensee had available additional construction options.

In reviewing the Commission's Rules, PCIA is concerned that it would appear that a multi-frequency transmitter may constitute "periodic reprogramming", contrary to numerous Finder's Preference decisions.²¹ In Finder's Preference cases 93F744, 93F738 and

²⁰Letter from David L. Furth, Acting Deputy Chief, Commercial Radio Division, Wireless Telecommunications Bureau to Russell H. Fox, Esquire, dated December 12, 1994 (hereinafter "Fox Letter"). A copy of the letter is attached hereto.

²¹See, for example, Sachs Letter; Letter from Anne Marie Wypijewski, Counsel, Licensing Division to Tony R. Davis dated September 29, 1994 (FCC File No. 94F012).

93F745, four licensees were sharing transmitters for four different trunked SMR systems. In that case, the Commission stated that "[b]riefly reprogramming an existing SMR does not satisfy the requirements of 47 C.F.R. §90.631."²² However, it would appear that the Fox Letter would permit this transmitter sharing.

PCIA is also unclear as to whether multi-frequency transmitters for two-way systems can constitute an operational system under the Commission's Rules.²³ PCIA is concerned that such systems may not be able to comply with the Commission's Rules which "... require 'transmission and reception of radio signals between a base station and mobile station,'"²⁴ because a mobile unit may not be able to communicate with the repeater if the repeater is at that time listening to or operating on a different channel. Further, the Commission has found that, for trunked systems, "... system operation requires transmission and reception of radio signals

²²Letter from William H. Kellett, Counsel, Licensing Division to Marilyn I. Suhecki dated September 28, 1994 (FCC File No. 93F744); Letter from William H. Kellett, Counsel, Licensing Division to Marilyn I. Suhecki dated September 28, 1994 (FCC File No. 93F738); Letter from William H. Kellett, Counsel, Licensing Division to Marilyn I. Suhecki dated September 23, 1994 (FCC File No. 93F745).

²³Multi-frequency transmitters have long been recognized and used for paging systems. In paging, the system typically sends out "burst" of pages. As a result, it is simple for the transmitter to change frequencies after a burst, transmit a burst on the second frequency, and move on. This is far different than two-way voice communications.

²⁴Report and Order, PR Docket No. 90-481, supra at 10; System 800, FCC 85-68, released February 19, 1985.

between a base station and mobile station by way of a number of computer controlled radio frequency channel pairs assigned to mobile and base stations in the system."²⁵ "In a trunked system, communications are automatically routed by a computer to an idle channel in the system. Thus, if a mobile unit were blocked on one channel, the trunked system's computer would automatically switch the unit to a clear channel".²⁶ It is unclear to PCIA whether a multi-channel transmitter complies with these requirements.

However, assuming that such operation can result in two-way communication between a base station and mobile unit and constitute a true operational system, the Commission should make the effort to inform all licensees, in order to prevent needless litigation amongst co-channel licensees. PCIA expects that system construction will become a major issue in the refarming bands. Therefore, PCIA believes that it is appropriate to address this issue in this proceeding.²⁷

III. ASSISTANCE FOR LICENSEES PROPOSING TRUNKED OPERATION

Finally, PCIA expects that many licensees, seeking to implement trunked systems and contacting co-channel licensees to

²⁵System 800, FCC 85-68, released February 19, 1985.

²⁶P & R Temmer v. FCC, 743 F.2d 918 (D.C. Cir. 1983) at footnote 2.

²⁷It should be noted that it is not PCIA's intent that the Commission should penalize licensees who have already relied on the Fox Letter to build their systems. Therefore, if the Commission for any reason decides that the Fox Letter cannot be used to justify construction, such action should be prospective only.

obtain their consent to the trunked operation, will encounter two problems. First, the applicant will find that many co-channel licensees are no longer operational, and may no longer be in business. Since the applicant will therefore be unable to obtain the co-channel licensee's consent, the Commission must create a mechanism for permitting trunked operation and revoking the licenses of those non-operational licensees. In some instances, the Finder's Preference rules provide relief. However, the Commission's Finder's Preference rules do not apply in the 150-470 MHz bands, and do not apply to shared channels.²⁸

Previously, the Commission has accepted applications for conversion of community repeaters to private carrier systems where the applicant can demonstrate that a licensee on the repeater is no longer operational. The Commission should clarify its "consent" provision to permit such a showing for trunked requests.

Second, when applicants seek consent of co-channel licensees, it is possible that competitors may become aware of the applicant's intent and seek to thwart the applicant's efforts by immediately filing a co-channel application for conventional operation. Originally, the Commission sought to prevent this occurrence by permitting applicants to "freeze" a particular channel for a period of time while the applicant sought concurrence.²⁹ However, this

²⁸47 C.F.R. §90.173.

²⁹Report and Order and Further Notice of Proposed Rule Making, PR Docket No. 92-235, 10 FCC Rcd 10076 (1995) at para. 129.

proposal could lead to further difficulties. Insincere applicants could create "rolling freezes" by substituting another proposed applicant each time the window on the previous "freeze" was about to close. PCIA's Member Councils are currently considering what mechanisms can be put in place to alleviate this problem, and PCIA hopes to provide additional input on this issue in future filings.³⁰

³⁰It is PCIA's analysis of paragraphs 54 and 55 of the Second Report and Order that frequency advisory committees will have the authority to deny a request for a specific frequency if the coordinator has specific knowledge that an existing licensee is currently attempting to obtain concurrences on that frequency.

IV. CONCLUSION

WHEREFORE, the Personal Communications Industry Association respectfully requests that the Commission act in accordance with the views expressed herein.

Respectfully submitted,

**PERSONAL COMMUNICATIONS
INDUSTRY ASSOCIATION**

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Date: May 19, 1997



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Washington, D.C. 20554

DEC 12 1994

In Reply Refer To:
1700A1/7310-01

Russell H. Fox
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Washington, D. C. 20005

Dear Mr. Fox:

This is in reply to your letter dated November 23, 1994, concerning use of multiple channel base stations. You ask whether licensees of radio facilities under Part 90 of the Commission's rules may satisfy our "construction and placed in operation" requirements by use of a base station that operates on more than one channel.

Currently, Section 90.155 of the Commission's rules provides that private land mobile licensees must construct and place their facilities "in operation" within eight months after the license is granted. Section 90.631(e) and 90.633(c) of the Commission's rules establish similar requirements for trunked and conventional Part 90 licensees above 800 MHz, with conventional licensees given eight months and trunked licensees one year to commence operation.

In your letter, you request confirmation that a licensee may comply with the above requirements by using a multi-channel base station. You define a multi-channel base station as a station capable of transmitting and receiving on a preselected number of channels, although communication on one of the channels temporarily precludes the base station's simultaneous use of other channels. You note that in the past, multi-channel base stations required manual tuning to a particular channel in order to receive transmissions from a mobile station on a corresponding frequency, but that recent technological advances have led to the development of multi-channel stations that can automatically scan and select a channel for receipt of communications.

In support of the interpretation of the Commission's rules presented in your letter, you note that while a multi-channel station operates on only one channel at a time, it operates on every channel for which it is programmed at one time or another, and the channel selected for a given communication is a function of the communications traffic patterns at the time. You further note that the Commission's rules do not require a base station to operate without

Russell H. Fox

2.

interruption on a channel to be deemed in operation on that channel, so long as operation is not permanently discontinued. Finally, you indicate that under your proposed interpretation, use of a multi-channel station would be determinative only of whether the station is operating, and would not be determinative of other issues such as whether the licensee has exclusive rights to the channel.

Based on the facts as you have presented them, we agree that operation of a multi-channel station of the type described in your letter meets the requirements of Part 90 of the Commission's rules. The requirement that a station be placed in operation on the channel for which it is authorized may be met by operation of a station that is dedicated to that channel alone or by operation of a station that is capable of transmitting on other channels as well. Similarly, the fact that a multi-channel station may be temporarily precluded from operating on an authorized channel by operations on a different channel does not cause it to be deemed to have discontinued operations under our rules. Therefore, so long as a station (1) is operating on the authorized channel except when other channels are in use, and (2) does not permanently discontinue operation on that channel, as defined by our rules, we will consider it to be in compliance with our rules for construction and operation with respect to that channel.

We also agree with the view stated in your letter that use of a multi-channel station may not be determinative of whether the licensee has exclusive rights to a channel. In the 929-930 MHz private paging service, for example, we have expressly allowed licensees to use multi-channel transmitters, but such transmitters may be counted towards exclusivity only on a single channel. In general, while use of a multi-channel station is sufficient to meet our requirements for construction and operation, it may not be sufficient to entitle the licensee to channel exclusivity, interference protection, or other protection under our rules. Such issues implicate different rules and may subject the licensee to additional requirements not addressed here.

I trust this is responsive to your request.

Sincerely,



David L. Furth
Acting Deputy Chief
Commercial Radio Division
Wireless Telecommunications Bureau