Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90	)	WT Docket No. 07-100
of the Commission's Rules	)	

COMMENTS OF THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

The National Public Safety Telecommunications Council (NPSTC) submits these comments in response to the Commission's Notice of Proposed Rulemaking (*NPRM*)[1] proposing miscellaneous rule changes to Part 90 of the Commission's Rules. It also seeks comment regarding changes to the rules governing the 4.9 GHz band.

Introduction

NPSTC strongly opposes eliminating or restricting paging capability currently permitted in the public safety pool frequencies. Paging remains a crucial cost efficient element to expedite emergency response. Proposals to eliminate frequency coordination should not include adjustments to bandwidth. The Commission's proposal to clarify that cross banding capability in the 150-160 MHz band is applicable to all public services is sound as is its embrace of the Land Mobile Communications Council proposal regarding treatment of expired licenses. Non government transit and toll road operators should only be allowed access to public safety pool spectrum when a currently eligible licensee remains responsible for and consents to such authorization. Obligations to protect AM broadcast operations should be placed on tower owners. NPSTC supports a clarification

[1] In the Matter of Amendment of Part 90 of the Commission's Rules, *Notice of Proposed Rulemaking,* WT Docket No. 07-100, FCC 07-85 (May 14, 2007).

of the 4.9 GHz rules. The Commission should not reorganize or restructure the Part 90 rules.[2]

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The National Public Safety Telecommunications Council

NPSTC serves both as a resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC is a federation of public safety organizations dedicated to encouraging and facilitating, through its collective voice, the implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety agencies, analyzes the ramifications of particular issues, and submits comments to governmental bodies with the objective of furthering public safety communications worldwide. NPSTC serves as a standing forum for the exchange of

[2] NPSTC takes no position of those parts of the *NPRM* addressing Mobile Repeaters, Multiple Licensing, the FB8T Station Class, and the Wireless Telemetry Service.

ideas and information for effective public safety telecommunications. The following 14 organizations participate in NPSTC:

American Association of State Highway and Transportation Officials

American Radio Relay League

American Red Cross

Association of Fish and Wildlife Agencies

Association of Public-Safety Communications Officials-International

Forestry Conservation Communications Association

International Association of Chiefs of Police

International Association of Emergency Managers

International Association of Fire Chiefs

International Municipal Signal Association

National Association of State Chief Information Officers

National Association of State Emergency Medical Services Officials

National Association of State Foresters

National Association of State Telecommunications Directors

Several federal agencies are liaison members of NPSTC. These include the Department of Agriculture, Department of Homeland Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office of Interoperability and Compatibility and the SAFECOM Program), Department of Commerce (National Telecommunications and Information Administration), Department of the Interior, and the Department of Justice (National Institute of Justice, CommTech

Program). NPSTC also has a liaison relationship with the Telecommunications Industry Association.

Paging Capability Should Not Be Eliminated

The Commission notes that VHF public safety frequencies (150-160 MHz) are used primarily for two-way voice communications yet current rules allow for paging operations on these frequencies.[3] It affirms that paging and voice operations can coexist on the same channel in the same area. The Commission relates concern that the potential for paging to interfere with voice operations increases as paging traffic increases. It states that two-way voice communications and high volume paging on the same channel often are not compatible. It relates that over the years, the Commission has received informal complaints about VHF paging systems interfering with public safety two-way voice communications.

NPSTC strongly recommends against eliminating paging capability in the VHF or any other band. To do so will cause serious disruption to public safety communications and eliminate an effective and efficient means to summon and notify personnel. Disruption to voice communications can be avoided through the normal frequency coordination efforts that are integral to the shared spectrum environment public safety operates in.

Paging is a prevalent means to dispatch personnel and resources over a wide area. This use and accompanying efficiency relieves crowded voice capacity. The portability and resiliency of paging units and their low cost are unique and have been enhanced by

[3] *See* 47 C.F.R. § 90.22.

recent technical advances.

Paging remains a critical communications path used by the range of public safety services—law enforcement, fire, emergency medical, transportation, and others. It is of particular importance where public safety relies upon volunteers who must be summoned from work or residence, often across wide geographic areas. It is a means used across all services to alert specialized units to a particular incident. To eliminate paging in the VHF band will not simply impose the additional costs associated with full voice communications. It will eliminate communications ability entirely. The Commission must recognize that by eliminating paging there will be no alternative. There are no resources for the more expensive voice equipment.

To the degree difficulties are encountered between voice and paging operations, it has been the experience of NPSTC's members that such incidents are consistent with the challenges of administering shared spectrum resources with many users. These challenges can be resolved by the cooperative efforts of licensees, the frequency coordinators, and, if necessary, by the Commission. These responsibilities must remain. The choice cannot be to remove paging services because difficulties, which are not pervasive, must on occasion be confronted and resolved. To do so would forfeit a valuable communications service relied upon by public safety and undermine emergency response.

Frequency Coordination and Related Matters.

While applications for new and modified Part 90 stations require frequency coordination before the application is submitted to the Commission, certain applications are exempt from the requirement. The Commission proposes to expand the

circumstances where coordination is not required. NPSTC believes that one area proposed, that of applications to modify a license to reduce the authorized bandwidth, should not be exempt from coordination.

The proposal ignores the realities and complexities of the Universal Licensing System (ULS) application process and the role frequency coordinators undertake in reviewing and correcting applications prior to submission to the Commission. The format to alter bandwidth is not readily discernible; the errors that will follow will burden both Commission and applicant. More significantly, there is a crucial need to distinguish between merely a bandwidth reduction and the addition of a new emission type. Overall, all coordinators provide a comprehensive review of the application fields to ensure adherence to Commission policy and form. NPSTC urges the Commission to retain the requirements that modifications to bandwidth and other areas where there is potential for error continue to be subject to coordination.

Cross Banding

The Commission's rules state that public safety medical service systems operating in the 150-160 MHz band are permitted to cross band operations to communicate with systems operating in the 450-470 MHz band.[4] The Commission proposes to make clear that all public safety licensees may operate cross band repeaters under the general mobile relay rules in Section 90.243. NPSTC agrees with the Commission's proposal to state specifically that cross band repeaters are permitted for all public safety systems.

[4] *See* 47 C.F.R. § 90.243(b)(1).

Expired Licenses

NPSTC agrees with the recommendation of the Land Mobile Communications Council (LMCC) that the practice of all Part 90 frequency coordinators not to coordinate frequencies associated with an expired license until the frequency becomes available for reassignment in the public database be reflected in the Commission's rules. The challenge is presented by the gap in time between the frequency becoming available when a license expires and its deletion from active status in the Commission's ULS. NPSTC agrees with LMCC that coordination should not proceed until a frequency is deleted from the ULS database. The Commission's rules and enforcement of this policy will promote a more transparent application and frequency coordination process.

Transit Systems and Toll Roads

The *NPRM* notes that under current rules, publicly operated transit systems as governmental entities are eligible to hold authorizations in the Public Safety Pool.[5] It recognizes that not all metropolitan transit systems are publicly owned; some are privately owned non profit entities that operate under contract or other arrangement with a governmental entity and are ineligible to use Public Safety Pool frequencies. The Commission seeks comment on whether Section 90.20 should be amended to allow privately run transit systems to use frequencies in the Public Safety Pool and whether any conditions should be imposed to ensure that licenses are used for the benefit of public safety.

The Commission also notes that government entities enter into agreements to lease or sell toll roads to private entities. The *NPRM* seeks comment on how best to

[5] *See* 47 C.F.R. § 90.20(a).

administer licenses associated with toll roads that are transferred from government to private operation and whether these entities should be provided access to Public Safety Pool channels.

NPSTC believes that the better practice, and what should be reflected in the Commission's rules, is that any access to Public Safety Pool frequencies be through the appropriate government entity. The private entities referred to in the *NPRM* should not have independent access to the Public Safety Pool. It is important that access to public safety frequencies and the responsibilities that flow from a Commission license remain with state and local agencies or entities closely affiliated with core emergency response.

Whether involving transit, toll road, or other operations, an underlying element of the relationship with state or local government is who provides public safety services, of which communications is a subset. These parameters are established in the context of the contract, legislative, or regulatory relationship between the parties. Access to radio frequencies should be left to these instruments. The Commission's rules should not dictate automatic access by a private party.

Within the Public Safety Pool, the norm is for public agencies, as part of agency comity and the frequency coordination process, to accommodate the needs of other agencies. Public agencies comprehend the benefits of making adjustment to individual systems and this discretion should remain with local public officials. There is also the need to ensure that the important relationships underlying the expansion of interoperable communications remain with a region's public officials and not private entities. Moreover, while the Commission appears to reserve access to non profit entities, those

providing transit and toll road services, are not so limited. Profit making entities should not have access to the Public Safety Pool unless it is under the supervision of a public agency.

NPSTC urges the Commission to make no changes to the eligibility requirements of Section 90.20 to afford automatic access to the Public Safety Pool by a private entity. The Commission's rules should allow current eligible Public Safety Pool entities to enter into agreements with non profit entities performing transportation, toll road, or similar responsibilities to use channels that are licensed to the entity. The eligible entity should remain responsible for adherence to the Commission rules.

Industrial/Business Pool Eligibility

The *NPRM* concludes that state and local government entities are eligible to apply for licenses in the Industrial/Business Pool for commercial enterprises, e.g., golf courses, electrical utilities, etc., that are government operated. NPSTC agrees that Section 90.35 of the Commission's Rules permits licensing of, *inter alia*, entities engaged in "[t]he operation of a commercial activity,"[6] and does not restrict government entities from holding licenses in the Industrial/Business Pool for these activities. NPSTC urges that Section 90.35 state explicitly that government entities engaged in commercial enterprises are eligible for Industrial/Business Pool frequencies.

NPSTC also urges the Commission amend its rules to permit government surveying operations to use Industrial/Business Pool itinerant frequencies.[7] As the

[6] *See* 47 C.F.R. § 90.35(a)(1).

[7] *See* 47 C.F.R. § 90.35(c)(17).

Commission notes, this proposal reflects NPSTC's *Petition for Rulemaking*[8] that seeks to enable government entities to use modern surveying equipment.

Surveyors employed by government agencies perform the same functions as surveyors employed by private entities. They need the same equipment, have the same requirements for accurate measurements, and work in the same geographic areas. Their equipment requirements are those of privately employed surveyors. Surveyors employed by government agencies represent a small portion of the market providing surveying technology, equipment, and services. There is no separate market devoted to the government sector.

Manufacturers of land surveying equipment design their products to serve the needs of the larger marketplace—private sector surveyors. These systems' radios transmit on UHF and VHF channels designated as "itinerant" under the Commission's rules in the Industrial/Business Service.[9] These frequencies are intended for operation at temporary locations for limited periods of time and for which the area of operation could change frequently (daily or even hourly) such as surveying operations. The channels are specifically reserved for these types of usage. The challenge for government surveyors is that private sector surveyors are eligible to be licensed on these channels while government agencies are not.

[8] *See* Petition for Rulemaking of the National Public Safety Telecommunications Council (filed August 23, 2006) (NPSTC Petition).

[9] Section 90.35(c)(17) of the Commission's rules. The frequencies include 43.04 MHz, 151.5050 MHz, 151.5125 MHz, 158.4000 MHz, 158.4075 MHz, 451.8000 MHz, 451.80625 MHz, 451.8125 MHz, 451.81875 MHz, 456.8000 MHz, 456.80625 MHz, 456.8125 MHz, 456.81875 MHz.

It is technically feasible for government radio equipment to be adjusted to frequencies authorized under the Public Safety Pool. Yet such an alternative is neither practical nor cost effective. It denies government agencies the innovation and efficiencies the market has produced with regard to modern surveying equipment. It imposes an enormous cost on public agencies that will stifle if not deny the technology to the public sector.

No channels within the Public Safety Pool have similar operational characteristics to the itinerant channels of the Industrial/Business Pool under Note 17 of Section 90.35(c). These Industrial/Business frequencies comport with the capabilities of the GPS RTK [Global Positioning Systems/Real Time Kinematic] survey technology. The investment and design of this equipment was built around the character of these channels. NPSTC recommends that the Commission amend its rules to permit government surveying activities to be authorized to conduct operations on the itinerant channels in the Industrial/Business Service.[10]

Disturbance of AM Broadcast Station Antenna Patterns

The *NPRM* notes that Part 90 lacks provisions to protect AM broadcast stations

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[10] NPSTC recommended the following changes to Commission's rules:

Section 90.35(c) (17) is amended to state: This frequency will be assigned only to stations used in itinerant operations. A station operated by an entity eligible under Section 90.20 may be assigned a frequency for purposes of carrying out geographic survey operations.

Section 90.20(c) (3), the Table of Allotments for Public Safety Pool frequencies, is amended to enumerate that the itinerant frequencies of the Industrial Business Pool may be assigned to an eligible entity for purposes of carrying out geographic survey operations and a paragraph shall be inserted in section 90.20(d) explaining the assignment.

with antenna patterns that can be altered by the proximity of new land mobile towers and antennas. The Commission's rules for other services contain requirements for detuning antenna structures constructed near an AM transmitting antenna[11] and the Commission proposes to extend these rules to Part 90 operations. The Part 22 rules addressing the Public Mobile Service require licensees constructing or modifying towers in the vicinity of an AM broadcast station to correct disturbances to the broadcast antenna pattern. Specific notification and cooperative efforts are enumerated for AM non directional and directional antenna facilities.

It is uncertain what obligations Part 90 licensees would need to perform. The record reflects objection to the Commission's methodology, a debate that Part 90 interests have had no opportunity in which to participate. AM interests claim that current rules reflect outdated magnetic field measurement techniques to determine whether construction or modification of a facility will affect AM antenna patterns and recommend the "moment method numerical analysis" be substituted.[12]

NPSTC believes that the obligation to protect AM operations should be imposed on tower owners, not Part 90 licensees. The responsibilities should be reflected in Part 17 of the Commission rules. The tower owner or operator is in a better position to ensure compliance than the individual licensee who may be one of several entities using the facility. As to the merits of particular methodology that tower owners would implement, the LMCC has submitted a proposal that appears more straightforward and brings clarity

[11] *See* 47 C.F.R. §§ 22.371, 27.63, 73.1692.

[12] Comments of the AM Directional Antenna Performance Verification Coalition in this proceeding, WT Docket No. 07-100 (July 23, 2007) and Comments of Hatfield & Dawson Consulting Engineers, LLC (filed July 23, 2007.

to the responsibility. NPSTC believes it is worthy of favorable consideration.[13]

It is important that any Part 90 facility currently coexisting with AM operations be considered as complying with any new rule and that any standards imposed on Part 90 licensees be clear. While AM interests advocate that the methodology be developed and articulated in other pending proceedings, it is important to ensure that Part 90 licensees have adequate opportunity to participate and comment. If the Commission moves forward with its intention to impose such responsibilities under Part 90, additional comment on a proposal with greater clarity should be afforded.

Reorganization of Part 90

The Commission notes that its current Part 90 rules cover both the Private Land Mobile Radio (PLMR) and the Commercial Mobile Radio Services (CMRS). These include services licensed on a site-by-site basis, services licensed by geographic area, and public safety services on frequencies ranging from 530 kHz to 4990 MHz. The *NPRM* seeks comment on separating CMRS from PLMR into separate rule parts, including establishing a separate section for the Public Safety Pool. It also suggests reorganizing Part 90. The *NPRM* states that the objective is to minimize confusion and reduce regulatory burdens.

NPSTC opposes strongly any separation of Part 90 services into different rule parts or any reorganization or restructuring. What Part 90 now reflects is a requirement that separate and varied services examine their operations in the context of coexisting with other users of the radio spectrum. Licensees, frequency coordinators, and the range

[13] Comments of the Land Mobile Communications Council, In the Matter of An Inquiry Into the Commission's Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification, MM Docket No. 93-177, DA 07-2143 (July 23, 2007).

of interests who rely on Part 90 services must comprehend the parameters of other services. The Commission staff, with two Bureaus holding primary responsibility over different sections of Part 90, must also reconcile decisions and efforts with each other. To separate these rules will dilute the implicit comity and coexistence that the present structure promotes. The efforts of private and public interests are more effectively understood under the current structure.

The reality is that the Commission's rules, as reflected by Part 90, are technical in character, have a history not readily revealed, and are not intuitively understood. There should be no misapprehension that the rules governing wireless services are anything if not complex. Reorganization, even within Part 90, will not render them less so and will present a more likely result of adding substantial confusion if current provisions are dispersed throughout the Code of Federal Regulations. The lure of reorganization to reduce burdens will be quickly tarnished by the confusion spawned. NPSTC urges the Commission to make no organizational changes to the structure of Part 90 or its rules.

Clarification of 4.9 GHz Rules

The Commission seeks comment on the request of M/A-COM, Inc. that it clarify the 4.9 GHz rules to state that licensees in the 4.9 GHz band have authority to operate point-to-point and point-to-multipoint fixed links using directional antennas on a primary basis.[14] Because the Commission authorized permanent fixed links only on a secondary basis, M/A-COM believes that the rules are ambiguous regarding the status of permanent

[14] *See* Petition for Clarification or, in the Alternative, Petition for Rulemaking of M/A-COM, Inc. (filed July 22, 2005) (Petition); *see also* Amended Petition for Clarification or, in the Alternative, Petition for Rulemaking of M/A-COM, Inc. (filed Aug. 23, 2005) (Amended Petition).

fixed links that operate as part of an integrated network with hot spots and mobile links.[15] M/A-COM proposes that the Commission amend its Part 90 rules and grant primary allocation status to point-to-point and point-to-multipoint fixed links that are part of a 4.9 GHz public safety network.[16]

In the Commission's decision adopting service and licensing rules for the 4.9 GHz band,[17] it indicated that it would permit broadband mobile services; "hot spot" operations, i.e., automatic high speed file transfers from hot spots to mobile units, such as transfers of maps, building layouts, emergency medical service files, and wanted or missing person images; and operation of temporary fixed links (i.e., operations lasting 1 year or less) on a primary basis.[18] The Commission also permitted permanent fixed operations to optimize flexibility and promote spectral efficiency in areas where there may be a greater need for public safety operations covering larger distances.[19] Such operations were permitted only on a secondary non interference basis, however, so that traditional or backhaul microwave operations would not exhaust available 4.9 GHz frequencies and relegate safety operations to unlicensed bands that are shared with other uses.[20]

Specifically, Section 90.1207 provides that "base and mobile units (including portable and handheld units) and . . . temporary (1 year or less) fixed stations" may

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[15] *Id*. at 3.

[16] *Id.* at 5.

[17] *See* 4.9 GHz Band Transferred from Federal Government Use, *Memorandum Opinion and Order and Third Report and Order*, 18 FCC Rcd 9152 (2003) (*4.9 GHz Third Report and Order*).

[18] *Id.* at 9165-66 ¶ 33.

[19] *Id.* at 9166 ¶ 34.

[20] *Id.*

operate on a primary basis,[21] but "permanent fixed point-to-point stations" will be authorized only on a secondary basis.[22] M/A-COM contends that the rule does not fully implement the Commission's intent, or is at least ambiguous, because it does not clearly indicate that fixed links using directional antennas that operate as part of an integrated network with hot spots and mobile links are authorized on a primary basis, and that secondary status attaches only to permanent fixed links used for traditional or backhaul microwave operations. It proposes that the Commission amend its Part 90 rules to grant primary status to fixed links that are part of a 4.9 GHz public safety network.

NPSTC supports a clarification in the rules for 4.9 GHz operations. Today's networks are increasingly utilizing mesh networking technology and other **inter-connected** technologies to form a broadband area wide network. These networks are consistent with public safety needs and the band characteristics of the 4.9 GHz band. However, the current rules can be interpreted to require that any base station to base station links be secondary. These **necessary** links can be configured as direct access point base station to access point base station with the access points also serving subscriber units. They can also be direct point-to-point links using separate station equipment to provide a link between access point stations.

In both of these cases, the links are an integral part of the 4.9 GHz system and NPSTC supports a clarification or rewording of the rules to insure consideration as primary under the rules. We stress the links must directly support the 4.9 GHz network to serve subscriber units (mobiles). NPSTC also believes the current licensing rules for

[21] *See* 47 C.F.R. § 90.1207(c).

[22] *See* 47 C.F.R. § 90.1207(d).

fixed point-to-point links be retained but those links directly supporting a 4.9 GHz system as described above be primary stations. **In the end, we feel primary status should be afforded to all functions that support and contribute to the overall development of delivering 4.9 GHz user-based service as envisioned by the implementing agency.**

Other point-to-point links not **resulting in the direct deliverance of 4.9 GHz service to support broadband public safety user applications** should remain secondary under the rules and require separate licensing as currently required by the rules.

Conclusion

NPSTC urges the Commission to reject any elimination or restriction on paging capability in public safety pool frequencies. Paging remains a crucial cost efficient element to expedite emergency response. Frequency coordination should continue to be required in any modifications to channel bandwidth. Protecting AM broadcast operations should be the responsibility of tower owners. The Commission should not reorganize or restructure the Part 90 rules.

NPSTC agrees with the Commission's proposal to clarify that cross banding capability in the 150-160 MHz band is applicable to all public services and its embrace of

the Land Mobile Communications Council proposal regarding treatment of expired licenses. Non government transit and toll road operators should only be allowed access to Public Safety Pool spectrum when a currently eligible licensee remains responsible for and consents to such authorization. The Commission should clarify its 4.9 GHz rules so that links constituting an integral part of a 4.9 GHz system receive primary status.

Respectfully submitted,

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