

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of )  
 )  
Implementation of Sections 309(j) and 337 ) WT Docket No. 99-87  
of the Communications Act of 1934 as )  
Amended )  
 )  
Promotion of Spectrum Efficient ) RM-9332  
Technologies on Certain Part 90 Frequencies)

To: The Commission

**PETITION FOR RECONSIDERATION**

The Association of Public-Safety Communications Officials-International, Inc. (“APCO”), the International Association of Fire Chiefs, Inc., and the International Municipal Signal Association (“IAFC/IMSA”), International Association of Chiefs of Police (“IACP”), Major Cities Chiefs Association (“MCCA”), National Sheriffs’ Association (“NSA”), Major County Sheriffs’ Association (“MCSA”), and the National Public Safety Telecommunications Council (“NPSTC”)<sup>1</sup>, pursuant to Section 1.429 of the Commission’s rules, hereby seek reconsideration of certain portions of the Commission’s *Second Report and Order*, FCC 03-34 (released February 25, 2003), 68 Fed. Reg. 42296 (July 17, 2003), in the above-captioned proceeding (hereinafter “*Second R&O*”).

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<sup>1</sup> The members of NPSTC include: American Association of State Highway and Transportation Officials, American Radio Relay League, American Red Cross, 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 Association of Fish and Wildlife Agencies, International Municipal Signal Association, National Association of State Emergency Medical Services Directors, National Association of State Telecommunications Directors, and National Association of State Foresters.

## INTRODUCTION AND SUMMARY

The *Second R&O* reflects the Commission's desire to improve spectrum efficiency in the crowded VHF and UHF land mobile radio frequencies below 800 MHz. The goal is to move licensees to narrower channels and, in theory, multiply the number of available channels within the same amount of spectrum. Prior efforts to "refarm" land mobile spectrum have been ineffective, due in part to the absence of a requirement that licensees convert to more efficient narrowband radio equipment by a specific date. Instead, the Commission had merely used its equipment authorization process to force manufactures to offer narrowband equipment, without any concurrent requirement that users purchase or deploy narrowband capabilities.<sup>2</sup>

Now, the Commission has taken a more affirmative step and established ultimate dates by which licensees must implement narrowband (12.5 kHz) equipment for existing systems. For public safety licenses, a deadline of January 1, 2018, was established for VHF High Band (150-170 MHz) and UHF (421-512 MHz) systems.<sup>3</sup> We do not object to a mandatory conversion date, which we agree is necessary to achieve better efficiency in the land mobile spectrum.<sup>4</sup> Indeed, if other aspects of *Second R&O* are modified as

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<sup>2</sup> See *Second R&O* at ¶6.

<sup>3</sup> The deadline for non-public safety systems is January 1, 2013.

<sup>4</sup> While APCO had submitted comments recommending separate deadlines for urban and rural licensees, it does not seek reconsideration of the Commission's adoption of a nationwide deadline. See *Second R&O* at ¶19.

discussed below, we believe that the 2018 deadline can and should be moved “up” to January 1, 2013.<sup>5</sup>

The Commission’s *Second R&O* went well beyond adopting a final date for narrowband conversion. It also mandated that, within just six months of *Federal Register* publication (*i.e.*, January 13, 2004), applications to expand the coverage area of existing systems would only be approved for narrowband (12.5 kHz) operation.<sup>6</sup> The Commission also adopted rules that will terminate the manufacture and importation of radios with “wideband” (25 kHz) capability by 2008, well before the date by which licensees must otherwise cease wideband operations. Finally, the Commission limited licensees’ flexibility to combine channels, while maintaining equivalent throughput efficiencies, for mobile data or multi-bandwidth equipment.

If not changed, the “near-term” dates and requirements adopted in the *Second R&O* will prevent public safety licensees from adding critical capacity and coverage for existing systems, locking them into current channels and equipment supplies, or forcing them to expend scarce resources to replace prematurely their entire radio systems. Therefore, the rules adopted in the *Second R&O* must be modified to ensure that, pending the final conversion date, public safety agencies will continue to have the necessary flexibility to modify and add to their radio systems to accommodate changing public safety operational requirements.

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<sup>5</sup> To the extent individual circumstances dictate the need for additional time to convert, and there would be no material impact on communications by or with other jurisdictions, an extension beyond the 2013 date can be handled by rule waiver.

<sup>6</sup> See 68 Fed. Reg. 42296, 42314 (July 17, 2003).

**A. PUBLIC SAFETY LICENSEES MUST BE ABLE TO EXPAND EXISTING SYSTEMS WITH COMPATIBLE EQUIPMENT.**

The Commission has adopted a prohibition, effective January 13, 2004, on any modification application that expands the authorized contour of an existing station if the bandwidth for transmissions specified in the modification application is greater than 12.5 kHz. This new rule is completely at odds with the operation of public safety radio systems, and will effectively bar agencies from building critical expansions of existing systems.

Public safety systems must be able to expand existing operations to accommodate changes in population or jurisdictional boundaries, reconfigure channel allotments, implement multi-agency interoperability systems, improve signal strength, implement improved technologies, and meet other constantly changing operational requirements. Examples include a county system expanding to cover various towns within the county's borders, a municipal system expanding to cover newly annexed and previously unincorporated rural/suburban areas or to add capacity in new residential developments, or a state filling in "holes" in a wide-area system. Such modifications are a natural part of a public safety system's evolution, and must be undertaken in a seamless manner to ensure complete interoperability between new and old equipment within the system. State and local governments cannot afford to discard their entire system and upgrade all of their radios simply because the system's service area is modified in some fashion. Yet that is exactly what would be necessary under the Commission's new rules.

Under the newly adopted rules, a public safety agency that needs to add sites to expand or improve its coverage after January 13, 2004, must do so with 12.5 kHz base

stations, even though its existing system operates with 25 kHz-only base stations. However, that effectively requires that every such applicant replace its entire system with 12.5 kHz equipment, notwithstanding that its existing system may be years away from the end of its normal equipment replacement cycle. Public safety agencies must maintain system-wide equipment compatibility and interoperability. That prevents a single radio system from operating with some 25 kHz base stations and some 12.5 kHz base stations. Thus, the FCC's new rule places state and local government public safety agencies in an untenable situation: either forego vital system expansions, or divert scarce public funds for premature system-wide equipment replacements.

Therefore, we urge that public safety licensees be permitted to modify existing systems, including modifications that expand coverage area, with 25 kHz equipment until such time as they are required to replace their existing networks with 12.5 kHz equipment. That date, as adopted in the *Second R&O*, is January 1, 2018. However, we believe that it can be moved up January 1, 2013, provided that FCC also adopts the rule changes requested herein. Moving the "end-date" to 2013 will provide an incentive for public safety licensees to convert to 12.5 kHz as they expand and modify their systems. However, they will have the necessary flexibility to continue adding 25 kHz capability until such time as they have sufficient resources to do a system-wide conversion or, in some cases, are forced to make the conversion to narrowband to meet the 2013 deadline.

**B. RESTRICTIONS ON NEW APPLICATIONS MUST NOT INHIBIT INTEROPERABILITY.**

The Commission adopted a prohibition on applications for new operations using 25 kHz channels, as of January 13, 2004 (six months after *Federal Register* publication). While intended to encourage new radio systems to use only the most efficient available

technology, this provision could have the unintended consequence of undermining interoperability, as new 12.5 kHz-only radio system would be unable to communicate with existing 25 kHz-only radio systems in overlapping or adjacent jurisdictions.<sup>7</sup>

Cities, counties, regional committees, joint authorities, and state governments across the nation have for many years designated various channels within each frequency band for interoperability or (as it is often referred to in this context) “mutual aid.” Limiting new systems to 12.5 kHz-only operation, as required in the *Second R&O*, will prevent those new systems from communicating with pre-existing licensees who continue to operate 25 kHz channels.

We do not object to limiting entirely new public safety radio systems to 12.5 kHz capability as of January 13, 2004. However, the Commission must adopt an exception for “new” applications for systems that must interoperate with 25 kHz-only systems. The least cumbersome method to implement this exception is for the Commission to continue granting applications for new systems with 25 kHz capability, provided that the application indicates an “associated call sign” for a 25 kHz operation. Such applications should be treated the same as modification applications, as discussed above.

**C. RESTRICTIONS ON EQUIPMENT CERTIFICATION, MANUFACTURING, AND IMPORTATION SHOULD COINCIDE WITH RESTRICTIONS ON LICENSEES.**

The Commission also adopted new rules which bar the manufacturing and importation after January 1, 2008, of 25 kHz-capable radios (including dual 12.5/25 kHz equipment) for operation in land mobile bands below 512 MHz. This date must be changed to January 1, 2013, to accommodate ongoing public safety equipment

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<sup>7</sup> See Petition for Reconsideration of the State of Florida (dated March 27, 2003).

requirements of public safety radio systems that continue to operate with 25 kHz systems so long as the FCC's rules permit.<sup>8</sup> Otherwise, state and local governments will be unable to add capacity on an as-needed basis to address vital public safety requirements, blocked from replacing broken and worn-out radio units on a piecemeal basis, and prevented from phasing-in radio system upgrades to accommodate budgetary constraints. A public safety licensee of an existing 25 kHz public safety radio system must be able to add additional 25 kHz-capable radio equipment (*i.e.*, dual 12.5/25 kHz radios) throughout the life of that system.

Public safety systems must often add radio units for new personnel or expanded operational requirements. For example, Federal grant programs such as the Department of Justice COPS ("Community Oriented Policing Services") Program, have encouraged agencies to add law enforcement and other public safety personnel to provide community policing. Since September 11, 2001, police, fire, EMS and other "first responder" agencies have also found it necessary to add (or at least reassign) personnel to address new homeland security requirements. Each of these additions requires new radio equipment acquisitions. Obviously, it is critical that the new radios are fully operational with the licensee's existing radio system.

Agencies must also replace damaged or lost radios on a regular basis. While base stations and radio "systems" have a very long life cycle, portable (and to some extent,

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<sup>8</sup> Similarly, the Commission should also extend the deadline for certification of dual 12.5/25 kHz equipment from 2005 to 2013, so that public safety licensees can continue to acquire fully certified replacement equipment with enhancements so long as 25 kHz equipment is permitted. Of course, the market for such equipment will decline rapidly as 2013 approaches, but whether such equipment remains available until that time should be a function of demand, not an artificial constraint imposed by the Commission's rules.

mobile) radio units do become damaged in the field and may need to be replaced with compatible equipment before the overall system conversion to narrowband operation.

Due to budgetary constraints and procurement cycles, many public safety licensees will find it necessary to transition to narrowband equipment on a gradual basis to meet the enormous financial burdens imposed by their communications systems. Converting to narrowband operation by a date-certain (especially if the date it is moved “up” to 2013) could be a major financial drain for many governmental licensees accustomed to stretching equipment life cycles to well-beyond the norm. That burden can be eased substantially by permitting the gradual acquisition of dual 12.5/25 kHz equipment well past the current January 1, 2008, deadline. Preventing the manufacture or importation of 25 kHz-capable radios after that date effectively moves the mandatory conversion date to within less than five years from now, far too early for public safety (or other licensees) to be able to afford complete system replacements.

Therefore, the Commission’s rules must be modified to permit a public safety agency with an existing 25 kHz radio systems to add new *compatible* radios. Today, that means purchasing dual 12.5/25 kHz equipment, compatible with the existing 25 kHz system, and useable in the future once the agency converts to narrowband operation. That ability to acquire 12.5/25 kHz equipment must remain in place so long as agencies are able to maintain their 25 kHz systems. As discussed above, we believe that date should be January 1, 2013, but only if licensees can continue to phase-in narrowband equipment up until that time.

While we do not otherwise address non-public safety licensees in this Petition, we urge that restrictions on the manufacturing and importation of 25 kHz-capable equipment



be uniform for equipment for use in both the Public Safety Pool and the Industrial/Business Pool. The public safety marketplace for 25 kHz-capable radios must not be marginalized, which would limit supply, eliminate competition, and raise equipment prices for state and local governments.

**D. THE COMMISSION MUST PERMIT 25 KHZ BANDWIDTH OPERATION FOR MOBILE DATA AND EQUIVALENT VOICE PATHS.**

The Commission previously adopted “spectrum refarming” rules that permitted continued type-acceptance after January 1, 2005, of radios with 25 kHz bandwidth for “multi-bandwidth mode equipment...capable of operating on channels of 6.25 kHz or less” (*e.g.*, TDMA), or for other 25 kHz equipment that meets an efficiency standard of at least 4.8 bps/6.25 kHz (*e.g.*, for mobile data). *See* 47 C.F.R. §90.203(j)(4)(iii) and (iv). These provisions allowed important flexibility in equipment design, while maintaining the Commission’s goal of improving spectrum efficiently. However, the Commission repealed those provisions in the *Second R&O* without explanation.

TDMA and other multi-bandwidth mode equipment can provide important efficiencies for certain types of public safety radio systems. Mobile data systems also provide critical functionality to modern public safety communications operations, but generally require wideband (25 kHz) channels for current technologies. Such mobile data systems are spectrum-efficient as they provide equivalent throughput as “narrowband” voice channels.<sup>9</sup> Thus, the Commission should reinstate rules that permit spectrum efficient operations on 25 kHz channels.

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<sup>9</sup> The *Second R&O* did include such flexibility for 12.5 kHz operation. *See Second R&O*, Appendix B, amended Section 90.203.

## CONCLUSION

For the reasons set forth above, the Commission must reconsider its *Second R&O* so that state and local government licensees are able to meet the critical radio communications requirements of their public safety personnel.

Respectfully submitted,

ASSOCIATION OF PUBLIC-SAFETY  
COMMUNICATIONS OFFICIALS-  
INTERNATIONAL, INC.

Robert M. Gurs  
Director, Legal & Government Affairs  
APCO International  
1725 DeSales Street, NW  
Suite 808  
Washington, DC 20336  
202-833-3800

INTERNATIONAL ASSOCIATION OF  
CHIEFS OF POLICE

Chief Joseph Samuels, Jr., President  
515 N. Washington Street  
Alexandria, VA 22314  
703-838-6767

INTERNATIONAL ASSOCIATION OF  
FIRE CHIEFS (IAFC) AND  
INTERNATIONAL MUNICIPAL SIGNAL  
ASSOCIATION (IMSA)

Martin W. Bercovici, Esq.  
Keller and Heckman LLP  
1001 G Street, NW, Suite 500 W  
Washington, DC 20001  
202-434-4144  
Their Attorney

MAJOR CITIES CHIEFS ASSOCIATION  
(MCC)

Chief Harold L. Hurtt, President  
c/o Phoenix Police Department  
620 West Washington Street  
Phoenix, AZ 85003  
602-262-6747

MAJOR COUNTY SHERIFFS'  
ASSOCIATION (MCSA)

Sheriff Kevin E. Beary, President  
c/o Orange County Sheriff's Office  
2400 West 33<sup>rd</sup> Street  
Orlando, FL 32839  
407-836-3701

NATIONAL SHERIFFS' ASSOCIATION  
(NSA)

Sheriff Wayne V. Gay, President  
1450 Duke Street  
Alexandria, VA 22314-3490  
703-836-7827

NATIONAL PUBLIC SAFETY  
TELECOMMUNICATIONS COUNCIL

Marilyn Ward, Chair  
2050 E. Iliff Avenue  
Denver, CO 80208

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