

Finally, APCO urges that the Commission consider the allocation of additional microwave spectrum for public safety facilities which provide the backbone for expanding mobile radio operations. There is currently a shortage of microwave frequencies, made worse by the reallocation of the 2 GHz band. (See Spectrum Requirements Report at App. I.)

E. TRANSITION

1. Increased Use of Commercial Services

APCO is concerned that the Commission may be greatly overstating the potential role of commercial services in meeting the future spectrum requirements of public safety. This issue was the topic of extensive discussions and analysis within PSWAC, which concluded that only a small portion of public safety needs can be met by commercial services.¹² Public safety agencies already use commercial services for non-critical, primarily administrative, communications. That usage is likely to expand as commercial radio services become more prevalent and offer new services to the public. Cellular service and pagers, in particular, have proven to be valuable adjuncts to many public safety communications systems. However, it is highly unlikely that commercial services will ever be able to meet the special needs of “mission-critical” public safety communications, which account for the overwhelming majority of the public safety spectrum requirements.

The PSWAC Final Report and its subcommittee reports explain that mission-critical public safety communications demand a level of reliability, interference protection, ubiquitous

¹² See, e.g., Final Report at 24, Spectrum Requirements Subcommittee Report at 31 and App. B (Motorola White Paper), Transition Subcommittee Report at 35, Technology Subcommittee Report at 54.

coverage, user control, excess capacity (for major emergencies), immediacy (i.e., without waiting for a dial tone), and security that commercial providers are unlikely to provide in a competitive environment. A commercial system designed to provide service to the largest number of users possible at the lowest possible cost has little incentive to meet the exacting requirements of public safety agencies. For example, a police department must be confident that its officers can be reached with a clear signal no matter where they may be in that department's area of jurisdiction. There is no room for "white areas" where signals fade, calls are dropped or voice communications become unintelligible. In contrast, commercial providers can afford isolated "white areas," especially where there are few inhabitants. Indeed, economics are likely to prevent them from placing facilities in locations unlikely to generate a significant number of customer calls.

Public safety also needs immediate, one-to-multiple "push to talk" communications for most applications. The seconds that it might take for a commercial switch to open or for the call to go through on a commercial system could be the difference between life and death. Public safety users also need sufficient capacity to ensure that there will always be available channels, even in times of emergency. It would be uneconomical for a commercial provider to leave that much capacity unused. Priority access is not a solution, as the frequency of day-to-day emergencies in many jurisdictions would cause constant use of priority access, rendering the commercial system useless for other customers. Commercial systems also lack the reliability necessary for public safety agencies, which have no tolerance for outages that suddenly leave police and other public safety personnel in the field without communications capability. The hardened, redundant and highly reliable systems built by and for public safety agencies are far

more than is necessary to meet the requirements of most commercial system customers, who will tolerate occasional outages and, at most, experience some level of inconvenience as a result.

These are just a few of the problems that suggest that commercial providers are unlikely to offer services that meet public safety requirements. Even if these hurdles are overcome, however, there is still a serious problem with exposing public safety communications to the whims of the marketplace. What is a public safety agency to do if its service provider imposes a sudden price increase, reduces coverage area, allows maintenance to lapse, requires customers to purchase new equipment on short notice (as has recently occurred in the SMR market), or goes out of business? The cost and disruption of such changes may be an acceptable risk for certain non-mission critical communications. However, networks that transmit emergency information to and from police officers, firefighters, EMS teams and other public safety personnel cannot operate with such risks.

In short, commercial systems may offer new communications opportunities for certain public safety agency communications. However, the majority of their needs will still need to be met through their own, dedicated public safety systems.

2. Funding for Spectrum Migration

The Commission is correct in noting that state and local governments will face substantial costs in any migration to new spectrum bands. However, the Commission should not assume that those costs are an insurmountable barrier. Public safety is, appropriately, the top priority for most local governments. If the spectrum is available, and if the agency has a substantial need for greater communications capability, the funds will be found in most cases to

acquire the equipment, whether through general funds or issuing revenue bonds. During the past ten years, thousands of agencies throughout the country have provided funds for the development of new 800 MHz systems, despite the tight financial constraints faced by most local governments. We believe that there will be a similar commitment from most agencies to building new systems on UHF channels 60-69 or on other frequencies that the FCC makes available for public safety. That being said, public safety agencies obviously have far less ability than commercial entities to construct communications systems under short time frames. Thus, the Commission must continue to allow public safety agencies adequate time to plan, license, fund, and construct their radio communications systems (e.g., the current extended implementation rules in Part 90).

In paragraph 92, the Commission raises the possibility that current public safety spectrum that may be vacated as part of a migration to new spectrum blocks could be sold at auction, with the revenues used to underwrite the cost of the migration. As a preliminary matter, it is unclear how much public safety spectrum, if any, can be vacated. The demand for public safety communications capability and capacity is growing at a dramatic rate, as documented in the PSWAC Final Report and the Spectrum Requirements Subcommittee Report. Therefore, it is likely that most current public safety spectrum allocations will still be needed far into the future. Part of the new spectrum allocations are to provide new wide-band communications capability that will supplement, but not replace, current narrow-band voice communications on existing frequencies. Certainly, there will be some migration away from current bands by some public safety licensees. However, the “give-back” channels are likely to be needed by other agencies now facing overly congested operations.

To the extent that public safety users are ever required to vacate a frequency band, their costs of moving to new allocations must be paid by the new users of their current spectrum. That process has worked to a limited degree in the context of the 2 GHz microwave frequencies, on which hundreds of public safety agencies maintain operations which must now be relocated to higher bands at the expense of PCS licensees. However, moving the relatively small number of microwave systems on 2 GHz is far less complicated and far less expensive than the massive upheaval that would be caused by the relocation of any of the thousands of public safety land mobile systems operating in each of the public safety bands. That would pose extraordinarily complex technical, safety, logistical, financial, and political problems. APCO views any such relocation approach with great skepticism and concern.

While public safety is unlikely to be in a position to release spectrum, there is considerable merit to the concept of devoting a portion of auction revenue from other frequency bands for public safety operations. There has been recent discussion regarding use of auction revenue to promote educational programs, a worthy goal that APCO supports. However, another use of some of that revenue--which would also greatly benefit the public--is to set aside funds for federal, state, and local governments to implement new public safety communications networks that would promote the safety of life and property.

3. Improving Public Safety Spectrum Administration

The Commission proposes to alter the frequency coordination and licensing process to provide for frequency coordination to occur after the FCC grants a license application.

Presumably, such a grant would be expressly contingent upon receiving frequency coordination

from the appropriate coordinator. This is an issue of great concern to APCO, as it is the coordinator for 80% of all current public safety channels. The Commission's proposal would shift to frequency coordinators obligations (such as maintaining a universal database) that should properly remain with the Commission. That would be a major new undertaking for frequency coordinators, imposing substantial costs that would need to be passed on to license applicants through higher coordination fees. Such fees would be a new--and unwelcome--financial burden for state and local governments.

Shifting responsibility for the database to coordinators would be made more difficult by the fact that each coordinator needs information not only on channels in the service that it coordinates, but also in all other services containing adjacent channels.¹³ Another major problem with the Commission's proposal is that coordinators, most of which are non-profit associations, would suddenly be subject to liability for alleged database errors or coordination decisions which prove to cause interference.¹⁴ Therefore, APCO opposes the Commission's proposal. APCO also notes that the PSWAC Transition Committee and all of the other public safety coordinators support maintaining the current frequency coordination procedures. (See Transition Subcommittee Report at 2 and 17.)

¹³ The problem would be even more serious to the extent that the Commission allowed more than one coordinator to coordinate applications for a particular radio service or frequency block (a concept that APCO and other coordinators have opposed for public safety radio services).

¹⁴ This could be a particular problem for coordinators such as APCO that rely heavily on volunteer local frequency advisors to assist in the coordination process. APCO's local volunteer advisors help keep APCO's coordinator fees low, while providing valuable local knowledge of spectrum requirements and unusual propagation characteristics (e.g., terrain shielding that may allow for greater channel reuse.)

F. COMPETITION IN THE SUPPLY OF GOODS & SERVICES

APCO, as the representative of consumers of public safety radio equipment, shares the Commission's concern that there be a competitive marketplace for that equipment. Competition leads to greater choices and lower costs for agencies and taxpayers. One way to promote competition is to ensure that agencies will not be tied to a single vendor for all of their equipment, and that they will be able to communicate with neighboring agencies that may have chosen different vendors. That freedom of choice will open the door for competition. However, that can only be accomplished to the extent that equipment from different vendors is interoperable.

It was with this in mind that APCO joined with the National Association of State Telecommunications Directors, and the Federal Government to establish Project 25 to develop interoperability standards for digital public safety radio equipment. The goal was to adopt standards reflecting the requirements of public safety agencies, rather than the needs of manufacturers alone. To provide a user perspective, Project 25 is governed by a Steering Committee of federal, state, and local government officials chosen by each of the sponsoring organizations. While the Telecommunications Industry Association (TIA) provides technical assistance to Project 25 (and reserves the right to adopt parallel TIA Standards) pursuant to a written agreement, all final decisions regarding the Project 25 standards are made by the Project 25 Steering Committee.

From the beginning, Project 25 recognized that it may be necessary to adopt standards that incorporate proprietary technologies. While Project 25 could have limited its consideration to technologies in the public domain, that might have excluded superior technologies. Therefore,

to promote competition in the manufacture of Project 25 compliant equipment, all of the manufacturers involved in the early stages of Project 25 agreed in a Memorandum of Understanding (MOU) to ensure that any intellectual property rights (IPR) essential to the standards would be licensed on fair and reasonable terms. As of this date, the MOU has been signed by 27 companies (including E.F. Johnson, Ericsson, and Motorola). Additional companies are free to sign the MOU at any time.

Project 25 has been a success so far in that seven companies have reportedly obtained sufficient license agreements to produce Project 25 equipment: E. F. Johnson, Motorola, Daniel's Electronics, BK Radio, Garmin International, Stanilite, and Transcrypt International.¹⁵ In August 1996, four of those companies demonstrated fully interoperable Project 25 equipment at the APCO Conference & Exposition in San Antonio. Many of these are companies that are relatively new to the public safety market and would not be attempting to compete against the likes of Motorola and Ericsson were it not for Project 25. For the first time, public safety agencies will have real choices in procurement decisions.

The Commission also cites and seeks comments on an Ericsson-sponsored report prepared by Charles Jackson.¹⁶ The separate comments of the Project 25 Steering Committee will be addressing this point in detail. APCO defers to Project 25's expertise on this matter, and fully supports its conclusions.

¹⁵ See "Project 25 Vendors Stake Claims," Wireless Week (September 30, 1996).

¹⁶ Notice at n.51. Unfortunately, the Commission failed to note the origin of the paper, which is clearly stated therein.

G. GUIDELINES FOR PUBLIC SAFETY STANDARD-SETTING ORGANIZATIONS

On October 9, 1996, (just seven business days before the deadline for filing comments) the Commission issued a Public Notice seeking comments in this proceeding as to whether it can and should adopt a requirement that future standards for public safety wireless equipment and systems be adopted through fair and open processes such as those set forth in Section 273(d)(4) of the Communications Act of 1934, as amended. 47 U.S.C. §273(d)(4). The Commission correctly notes that the specific requirements of Section 273(d)(4) are not applicable to public safety wireless equipment and systems. Nevertheless, the Commission asks whether it otherwise has authority to adopt similar guidelines for public safety standards.

APCO believes that the Commission would have authority in this regard only to the extent that it intends to adopt or otherwise give official recognition to a public safety standard developed by an outside party. If so, it would be appropriate--and indeed desirable--for the Commission to ensure at that time that the standard being considered had been developed through a fair and open process. APCO does not believe, however, that it is necessary or desirable to establish specific guidelines in advance of such Commission consideration. Moreover, in the absence of FCC intention to adopt a standard, we know of no specific authority under the Communications Act allowing FCC intervention into an otherwise independent standards effort.

Should the Commission nevertheless attempt to adopt guidelines for public safety standard-setting organizations, those guidelines must accommodate user-driven standards developed by entities such as Project 25. Traditionally, standards were established by equipment

manufacturers, with little or no input from end users. The resulting standards often reflected the commercial desires of the participating companies, not necessarily the public safety users' operational requirements. This is especially undesirable for public safety equipment standards as the subject equipment is at the "front-line" of efforts by police, fire, and other personnel to protect the safety of life and property. Project 25, as discussed above, is one effort to reverse that trend and to encourage the development of competitive sources of public safety radio equipment that provide necessary functionality and interoperability. Thus, APCO hopes that the Commission will not take any steps that would undermine Project 25 or similar efforts to adopt user-oriented equipment standards for public safety.

The Commission's Public Notice does not seek comment as to whether Project 25 itself is a fair and open process or whether it would meet guidelines similar to those in Section 273. APCO notes, however, that Project 25 has in fact been an extremely fair and open process, with equal opportunities for participation by all manufacturers, users, and other interested parties. In addition, the Telecommunications Industry Association (TIA), an ANSI-accredited organization, has been a key player in the Project 25 process, and all Project 25 actions have been based on the recommendations of TIA committees. This has provided manufacturers with the additional benefit of TIA procedures and protections.

CONCLUSION

For the reasons set forth above and in the PSWAC Final Report and subcommittee reports, APCO urges the Commission to take immediate steps to address the communications requirements of public safety agencies.

Respectfully submitted,

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