

APCO REPORTS

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NATIONAL PLAN: The FCC's National Public Safety Planning Advisory Committee, set to assist the Commission with recommendations for the best use of the 821-824 and 866-869 megahertz bands being allocated nationwide for public safety communications uses, concluded its second full scale meeting the last week in February and appeared to be well on its way to meeting its scheduled submission of an initial report to the Commission by the end of March.

NPSAC Chairman Joseph Y. Nasser called generally for final initial reports to the Committee by March 9, after which the various reports are to be edited into a consolidated version answering the questions the Commission has posed for the group. The third meeting of NPSAC -- on March 24 -- will include a review of the material at that point, late changes to reflect the consensus of the participants, and submission to the Commission.

The Commission is to issue a Notice of Proposed Rulemaking proposing rules for use of the new channels, and is expected to ask comments on the NPSAC recommendations and conclusions as well as on its own NPRM. The Advisory Committee is to resume its meetings in June and meet monthly thereafter until it submits its final report to the Commission by the end of September, 1987.

Questions which the Commission has posed for the group were contained in the January issue of the APCO Reports.

Regional planning efforts are underway concurrently in several areas of the country --most notably Southern California, the Northeast Corridor and the Dallas/Fort Worth area--and are expected to be submitted for approval in at least some areas as they can be conformed to the guidelines of the National Plan. The objective is to get the new frequencies turned loose by the Commission for actual licensing and use in the more frequency congested areas as quickly as possible.

The Advisory Committee is made up of individuals from all sectors of the Public Safety communications community who have volunteered their time and efforts in the planning process.

DETROIT, CLEVELAND AND BUFFALO: The FCC on February 13, 1987 released its Report and Order in PR Docket No. 86-163 setting forth service rules for the segments of the 421-430 megahertz band which had been allocated for private land mobile communications use in the Detroit, Cleveland and Buffalo areas in September, 1985. The Commission had proposed service rules last May, and comments have been filed by about a dozen parties, including APCO.

The newly adopted rules, which are effective March 30, 1987, provide 56 new channel pairs and 10 single channels in the Detroit and Cleveland areas, and 24 new channel pairs

and 10 single channels in the Buffalo area--for use by eligibles in the police, fire, local government, highway maintenance, forestry conservation, and special emergency radio services.

A generally equivalent "pool" had been proposed to provide channels for assignment to eligibles in the business, power, petroleum, forest products, motion picture, relay press, special industrial, manufacturers, telephone maintenance, motor carrier, railroad, taxicab, and automobile emergency radio services.

In adopting its Report and Order in the proceeding, the Commission departed somewhat from its original proposals. In one such departure, the agency designated APCO as the single coordinator for the public safety/special emergency "pool" of frequencies; the National Association of Business & Educational Radio as a single coordinator for the business radio "pool"; and the Special Industrial Radio Service Association as a single coordinator for a special industrial/land transportation "pool".

"These entities," the Commission said, "have established a record of service in providing coordination at 800 MHz. Moreover, they already have procedures in place for handling applications in the various services under a pool structure and applicants are familiar with those procedures. The comments revealed no information that would lead us to conclude that other entities would be more capable of coordinating the three pools in the 421-430 MHz spectrum."

In their comments, some of the other organizations had objected to the Commission's proposal to divide the channels approximately in half, with half going to the public safety pool and the other half going to other services. APCO and the Public Safety Communications Council, however, the Commission said, "concurred with the proposal to assign half the available channels to a public safety pool. Both commenters stated that the proposed apportionment of the channels is consistent with Congressional direction concerning the priority of public safety communications. PSCC commented that the 421-430 MHz channels would be particularly useful for intercommunication between various public safety officials, or for common use by several departments or agencies in each of the three urban areas."

In response to the comments from other parties that the 800 MHz spectrum being allocated for public safety use would warrant a reduction of the space being marked for public safety in Detroit, Cleveland and Buffalo, the Commission said the 800 MHz allocation "will form the basis for a national plan addressing the particular communications requirements of public safety entities. However, the 800 MHz bands may not be fully available and delays may be encountered due to the need to coordinate operations in Detroit, Cleveland and Buffalo with Canada. The current agreement between the United States and Canada concerning the 806-890 MHz band states that use of the 821-851 MHz and 866-890 MHz reserve spectrum is subject to further discussion between the two countries.

"In view of the likely delay in providing public safety relief at 800 MHz in these three areas, and of the relative priority of public safety services," the Commission said, "we are not persuaded that it would be in the public interest to reduce the number of channels in the public safety pool at 421-430 MHz. We recognize that the limited area within which this spectrum has been allocated for land mobile use may hamper intercommunication with public safety entities in the outlying areas surrounding the three cities. However, based on the comments, it appears that this spectrum will provide valuable relief to these important services. Accordingly, we are apportioning 50% of the available channels to the public safety pool, 25% to the business pool, and 25% to the industrial/land transportation pool."

The Commission said it will allow inter-category sharing between the business and

industrial/land transportation pools after a one-year period, but it declined to give business or industrial/land transportation users access to the public safety channels under a similar agreement, noting that ". . .we will withhold interpool sharing of these new public safety channels for at least five years," after which "We intend to review the utilization of this band, as well as public safety spectrum needs...to see if interpool sharing would be appropriate at that time."

The agency also departed from its original proposals in adopting rules governing the locations of stations and operations on the new frequencies. As adopted, the rules specify, in part: "Base or control stations shall be located within 30 miles of the center of Buffalo or 50 miles of the center of Detroit. In Cleveland, base or control stations will be allowed at locations north of line A that are within 30 miles of the city center. In addition, low power (2 watts or less) base stations may locate within 50 miles of the center of Buffalo..." Further, the rules specify that "Mobile operation shall be confined to within 50 miles of the centers of Detroit, Cleveland or Buffalo."

Further, the rules specify Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limitations for base stations; limit transmitter power output for control stations to 20 watts; specify that "Except for control stations, operational fixed facilities will not be authorized in the 421-430 MHz band" (except for secondary fixed tone signaling and alarm operations) and provide that "Control stations associated with one or more mobile relay stations will be authorized only on the assigned frequency of the associated mobile station," and that "Use of a mobile service frequency by a control station of a mobile relay system is subject to the condition that harmful interference shall not be caused to stations of licensees authorized to use the frequency for mobile service communications."

FCC LOOKS TO 220-222 MHZ FOR ACSB: As had been anticipated for some time, the FCC February 12 issued a new Notice of Proposed Rulemaking in Gen. Docket No. 87-14 proposing, in part, to allocate "the 220-222 megahertz band on an exclusive basis to the land mobile service for both Government and nongovernment operations," and slanted the proposal as being responsive to petitions asking that a portion of the 216-225 MHz band be marked for narrowband voice operations (6 kilohertz channels).

The other two portions of the NPRM propose to "maintain the existing 216-220 MHz band allocation" and to "allocate the 222-225 MHz band on an exclusive basis to the amateur service."

The Commission emphasized that the NPRM "addresses only the allocation of this spectrum. A subsequent proceeding will address the necessary service rules for the new allocations that may result from this proceeding." (The Commission followed a similar two-step approach with respect to the 421-430 channels for which land mobile service rules were just adopted in Cleveland, Detroit and Buffalo.)

In its discussion the Commission noted that the propagation characteristics of the 220 MHz band "make it useful for land mobile operations. Further, a land mobile allocation in this region of the spectrum would provide an opportunity for the further development of narrowband technologies. . ."

The 216-220 MHz band is currently allocated to the maritime mobile service on a primary basis, and telemetry operations in the aeronautical mobile, fixed and land mobile services are permitted on a secondary basis. The NPRM does not propose to change this. The Commission said it feels it would be "premature to permit additional services in the 216-220 MHz band before the inland waterways communication system in this band has had a chance to develop as planned," and "It is also our belief that the geographical limitations on land mobile operations at 216-220 MHz necessary to protect broadcast TV Channel

13 operations would be so restrictive that an allocation in this portion of the spectrum would provide little relief for land mobile. This would be especially the case in the major cities where land mobile demand is greatest. . ."

The 220-225 MHz band is currently allocated to the amateur, fixed, mobile and radiolocation services, but used by the amateur and radiolocation services, with the amateur use mainly for base/mobile repeater operations, along with some special operations. The Commission said it is cognizant of the services performed by the amateur community in this band, as well as in other bands, and is also aware of the investment by the amateur community in equipment in this band. "However," it said, "the loading of this band is light in comparison with the 144-148 MHz amateur band, which supports similar operations," and "reallocating 2 megahertz (of the band) to the land mobile service would have minimal impact on current amateur operators and would provide much-needed spectrum for land mobile operations."

The agency invited public comments on its proposals by April 6, 1987, and "reply" comments on or before April 21. Staff contact for further information is Fred Thomas, of the FCC's Office of Engineering and Technology. Phone 202-653-8112, in Washington.

UHF TV SHARING: The further sharing of UHF television spectrum by the land mobile radio services, which is being explored in the FCC's Docket No. 85-172, has been the subject of a flurry of late activity by the television broadcast industry, which on February 13 filed a "Petition for Notice of Inquiry" and a "Petition for Special Relief" with the Commission seeking to derail the UHF TV sharing proceeding and set the stage for "emergence of high definition television (HDTV)", as the broadcasters put it.

As the group noted, the FCC "is now actively considering a proposal to reallocate to land mobile radio an average of 21 MHz of UHF spectrum in each of eight of the top markets in this country, including 30 MHz in New York City and 36 MHz in Los Angeles." The broadcasters arguments are that "These are precisely the markets where additional television channel capacity will be most difficult to obtain," and "Without these markets, which contain one-third of the nation's television households, no HDTV system could succeed."

The key points in the Petition for Special Relief are:

- The FCC should postpone consideration of further "sharing" of the UHF band by land mobile radio.
- The Commission should take steps toward preserving at least part of the 12 gigahertz band for use by local broadcasters.

A principal contention is that: "Local broadcasters, unlike cable systems, direct-to-home satellite broadcasters, videotapes and discs, and other competing home video delivery systems, have a transmission channel bandwidth limit which may make it impossible for local broadcasters to convey a true 'high definition' television picture in their current narrow channels. Moreover, even if an HDTV picture could be transmitted in broadcasters' current channels, the signal would not be receivable on existing NTSC television sets. Local broadcasters would then obtain the ability to carry HDTV signals on their current channels only at the cost of losing their ability to reach all existing NTSC television sets. By comparison, competing home video suppliers, e.g., cable systems, can simply simulcast in NTSC and HDTV on two separate channels."

The petitions were filed by the Association of Maximum Service Telecasters, the National Association of Broadcasters, the Association of Independent Television Stations, and 55 other broadcast organizations and companies.

The Land Mobile Communications Council and its constituent members quickly filed statements with the Commission in opposition to the broadcasters' attempt to stop the UHF TV Sharing proceeding, and the FCC is expected to take its next step in the sharing rulemaking shortly, possibly in March.

APCO's opposition statement, filed with the Commission on February 24, states: "In Gen. Docket 85-172, the Commission has proposed to allocate additional spectrum in the UHF-TV band in the eight largest metropolitan areas for shared land mobile use, including vitally needed frequencies for public safety use. The proceeding was instituted almost two years ago and the record is complete following extensive comments and replies by interested parties. AMST's request at this late stage to defer further action in unwarranted and should be denied.

"APCO is not opposed to the study of advanced television technologies by the Commission and, indeed, would welcome the introduction of advanced technology which would make television service more spectrally efficient. If anything, such a study is long overdue. For over 50 years, television broadcast technology has used the same 6 MHz wide television channel with no real improvement in efficiency. In stark contrast, over the same period, other spectrum users such as the land mobile radio community have significantly improved their spectrum utilization through several reductions in needed bandwidth.

"By the same token, however, APCO strenuously opposes any delay in the completion of proceedings in Docket 85-172 at this late date. No justification for such as extraordinary action has been advanced by AMST. Current Commission rules provide for the shared land mobile use by approximately 12 percent of all UHF-TV channels. The proposals now under consideration in Docket 85-172 would cause this figure to rise from approximately 16 to 23 percent depending on the particular metropolitan area. We fail to see how this modest increase in shared use would have a substantial impact on the Commission's future options insofar as the development and introduction of advanced television technologies are concerned.

"The additional frequencies which the Commission in Gen. Docket 85-172 has proposed to make available for the Private Land Mobile Radio Services (including the Public Safety Services) are needed immediately, particularly in the largest metropolitan areas. As recognized in P.R. Docket 84-232, even with the newly made available 800MHz frequencies, public safety users still face substantial shortages which need to be satisfied.

"Under the Communications Act, the Commission is obligated to accord priority to the vital needs of public safety agencies. This statutory priority commands that needed relief not be unreasonably delayed through the deferral of action in Gen. Docket 85-172, particularly where the relief should have no substantial impact on the Commission's ability to act upon AMST's requested inquiry concerning advanced television technologies."

MICROWAVE RULE CHANGES: The FCC on February 23 released a "Third Report and Order" in Gen. Docket No. 82-334 -- Establishment of a Spectrum Utilization Policy for the Fixed and Mobile Services' Use of Certain Bands Between 947 MHz and 40 GHz -- in which it adopted revised rules summarized as follows:

- o "We are expanding eligibility for licensing in the 1880-1990 MHz and 6525-6875 MHz bands to include persons engaged in a commercial activity and persons seeking to establish systems solely to provide private carrier communications service to other persons eligible under Part 94." (Public safety entities are so eligible.)
- o "We are expanding eligibility in the 1990-2110 MHz and 6875-7125 MHz bands to include cable system operators and networks for the transmission of mobile tele-

vision program materials."

- "We are expanding eligibility in the 6425-6525 MHz band to include, on a primary basis, private users, cable system operators, and network entities for the transmission of mobile television programs."
- "We are establishing minimum path length requirements for bands below 13,250 MHz to promote more efficient use of the spectrum."
- "Finally, we are imposing antenna pointing restrictions in accordance with Article 27 of the International Telecommunication Union Radio Regulations to protect receivers on board spacecraft in the geostationary orbit from harmful interference."

Gen. Docket No. 82-334 had been initiated in 1982 mainly to accommodate licensees who may be displaced from the 12,200-12,700 MHz band by its reallocation to the broadcasting satellite service, and the Commission noted that it also felt it appropriate, while finding new frequencies for displaced licensees, to re-examine frequency utilization policy regarding other bands between 947 MHz and 40 GHz "with a view towards deleting unnecessary regulations, permitting better use of frequencies by the fixed and mobile services, and accomodating future growth."

BALTIMORE CONFERENCE UPDATE: As of March 1, more exhibit space had been sold for APCO's 53rd Annual National Conference, set for August 23-27 in downtown Baltimore, Maryland, than had been sold for any previous national conference. A limited number of booth spaces remain for the show, and companies wishing to take part in the conference are urged to make their plans as soon as possible.

The program for the Conference is shaping up to appeal to all sectors of the Public Safety community and will be highlighted by a presentation of the Integrated Emergency Management System seminar by the International Association of Fire Chiefs. This all-day, management-oriented seminar is set for Sunday, August 23.

Individual presentations already firmed for the program include: "use of specialized volunteer units by public safety"; "equal pay and comparable worth in the communications center"; "computer use in public safety telecommunications"; "emergency alert radio systems"; "use of portable microcomputers in public safety vehicles"; "in-car terminals--the Las Vegas experience"; "liability--where public safety stands"; "intermodulation prediction using a personal computer"; "eliminating interference from AM radio broadcast stations"; "digital data transmission in public and private land mobile radio"; "comparisons of analog and digital microwaves"; "9-1-1 and cellular calls--need for a national policy"; "9-1-1, CAD and geographic data bases"; "why can't I get through?--analyzing the loading on a mobile digital data network"; and "teleconferencing systems for public safety systems".

APCO Committees and Chapters are being asked for their program time requirements; a video theater will be running full-tilt with programs assembled by the APCO Chapters on a variety of subjects; a variety of technical workshops will be available; telecommunicator training at several levels will be conducted; 9-1-1 panel discussions from both users' and vendors' standpoints will be conducted; and computer-aided dispatching will be approached from several angles.

Rooms at the seven downtown hotels booked by APCO were being reserved at a record rate, and APCO is urging its members to make their hotel reservations as soon as possible.