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July 12, 1994

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Ex Parte

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. Room 222
Washington, D.C. 20554

Re: PR Docket No. 92-235

Dear Mr. Caton:

Pursuant to Section 1.1206 of the Commission's Rules, this is to notify you that the following individuals, representing the organizations indicated, met yesterday with the Chief of the Private Radio Bureau and his staff to discuss several of the issues in PR Docket No. 92-235 on the "refarming" of the Private Land Mobile Radio bands below 512 MHz:

Association

Representatives

American Petroleum Institute

Wayne Black, Esq.

Association of American Railroads

Hugh Henry and Thomas Keller, Esq.

Association of Public-Safety Communications Officials-International, Inc.

Robert Gurss, Esq.

National Association of Business and Educational Radio, Inc.

Jay Kitchen and Alan Tilles, Esq.

Utilities Telecommunications Council

Carl Greenway and Jeffrey Sheldon, Esq.

Attached to this notification is a copy of an outline which was hand-delivered to the Bureau and which summarizes the issues discussed during this meeting.

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The original and one copy of this notification are being filed for the record. If there are any questions concerning this notification, please communicate with the undersigned.

Very truly yours,



Jeffrey L. Sheldon
General Counsel

Attachment

cc (w/o attachment):

Ralph Haller, FCC
Joseph Levin, FCC
Doron Fertig, FCC
Edward Jacobs, FCC

**COST/BENEFIT ANALYSIS OF
12.5 kHz RECHANNELIZATION**

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I. General Benefits of Adopting a Standard 12.5 kHz Channel Bandwidth

A. Equipment Availability

12.5 kHz and dual-mode 25/12.5 kHz equipment is currently available in analog mode which is comparable in price to the current 25 kHz analog radio equipment (mobiles, portables and base stations).

12.5 kHz equipment will be readily available in all product tiers.

According to at least one equipment manufacturer, a dual-mode radio can incorporate 25 kHz and 12.5 kHz bandwidth, even on different frequencies.

B. Ease of Transition

Ready availability of equipment will provide users with confidence to move to 12.5 kHz.

Availability of dual-mode 25/12.5 kHz radios will allow most users to convert systems gradually on normal equipment replacement cycles; e.g., over a reasonable 10-year period.

C. Better Quality Service at Little Cost to Users

Estimated costs for 12.5 kHz equipment will be closer to normal cycle costs for today's 25 kHz equipment; estimated costs of very narrowband (VNB) equipment with comparable features is expected to be much greater than today's equipment costs.

12.5 kHz channelization will provide immediate channel relief, especially in areas with greatest frequency congestion.

12.5 kHz channelization will permit interoperability with Federal users.

Adoption of this plan will maintain consistency with the work of APCO Project 25, thereby supporting a transition to 12.5 kHz digital equipment.

D. Flexibility

Standard 12.5 kHz channelization will not preclude use of VNB equipment; if adequate VNB equipment is developed at reasonable cost, users will be free to use this equipment at any time.

Standard 12.5 kHz channelization offers a smooth migration path from current technology to future technology.

II. Specific Benefits of 12.5 kHz Channelization at 450-512 MHz

A. New Channels at 470-512 MHz

Because the 470-512 MHz band does not have any offset channels, moving to 12.5 kHz channelization will create a 2 for 1 split or approximately 220 new, "clean" channels in the eleven urban areas in which 470-512 MHz channels are available.

If trunking is used on new exclusive-use channels created in the 470-512 MHz band, an additional efficiency improvement of as much as 50% could be achieved.

The 470-512 MHz band is heavily used in New York, Los Angeles and other major metropolitan areas that already face severe spectrum congestion. Therefore, there will be immediate and substantial relief where it is needed the most.

B. Conversion of 450-470 MHz Secondary Offset Channels to Primary

Utilizing 12.5 kHz equipment will eliminate overlap between adjacent channel signals, thereby reducing adjacent channel interference and promoting a "cleaner" environment. This will facilitate the co-location of the current primary and offset channels, thus increasing the number of usable channels at any one location.

This conversion will provide a partial solution to the existing low-power offset dilemma. The FCC will be able to convert a significant portion of low-power offset stations to primary status site-specific systems, producing additional primary channels.

With a portion of the low-power systems converted to site-specific primary status, the licensees of these systems could consider converting to exclusive-user systems and implementing local area trunking, thereby achieving additional spectrum efficiencies of as much as 50%.

This will provide an environment in which the FCC, over a reasonable period of time, would be able to consolidate "true" secondary low-power offsets; e.g., biomedical devices and other non-stationary transmitters, in a discrete segment of the band. This would afford these low-power systems protection from systems operating at regular power.

III. Specific Benefits of 12.5 kHz Channelization in the 150-174 MHz Band

There are two principal proposals on the appropriate channel separation in the 150-174 MHz band. These proposals are not mutually-exclusive, and each could be applied to the radio service(s) for which it is most appropriate.

A. "Offset Overlay" Plan Developed by the Railroads (i.e., 12.5 kHz equipment with 7.5 kHz channel spacing)

Channel centers remain the same throughout the transition; lessens confusion to users.

Trunking pairs can be created:

1. Radio services with a contiguous block of spectrum can pair up the offset channels to create repeater pairs for trunking.
2. For radio services without contiguous blocks of spectrum, coordinators could organize trunking pairs across service pool boundaries to form a "general" pool of channels for trunking.

As systems convert to 12.5 kHz equipment, adjacent channel interference will be eliminated for users on the current 15 kHz channel centers.

Channel assignments on the current 15 kHz adjacent channels can be co-located, thus increasing the number of channels available at each site.

In areas where the adjacent 15 kHz channel assignment does not belong to the user wishing to co-locate a channel, a consolidated coordination effort could be done to re-pack channels in the area for optimum channel usage. This might be necessary in only a few major urban areas.

At any time, users could apply to use the adjacent channel (7.5 kHz offset) and utilize VNB equipment in a co-located format. This would place the decision of whether to convert to VNB in the hands of the users, who could make this change based on business reasons and not government fiat. Users could evaluate the features available in VNB equipment and determine if it will be satisfactory for their operations. Equipment developed for the 220 MHz band might be adapted for this purpose.

12.5 kHz equipment on 7.5 centers will comply with the APCO-25 specification.

B. APCO/LMCC "Option A" Plan (i.e., 12.5 kHz equipment with 12.5 kHz channel separation obtained through a slight frequency shift)

Mileage separations for adjacent channels would be eliminated immediately, allowing closer channel assignments and frequency reuse.

Once conversion to 12.5 kHz is complete, it is estimated there would be one new channel for every five current channels in this band. This would produce benefits in addition to the elimination of adjacent channel interference. The total gain, while difficult to quantify, would provide significant relief. In Public Safety radio services, the FCC should provide a time period for coordinators to develop specific channel plans to implement 12.5 kHz channels.

This plan is consistent with APCO Project 25 and will provide for federal government interoperability.