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FEDERAL COMMUNICATIONS COMMISSION
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Amendment of Part 90 of the)	PR Docket No. 89-552
Commission's Rules to Provide)	
for the Use of the 220-222 MHz Band)	
by the Private Land Mobile)	
Service)	DOCKET FILE COPY ORIGINAL
Implementation of Sections 3(n) and 332)	
of the Communications Act)	GN Docket No. 93-252
)	
Implementation of Section 309(j) of the)	
Communications Act - Competitive)	PP Docket No. 93-253
Bidding, 220-222 MHz)	
To: The Commission		

**COMMENTS
OF THE
PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION**

The Personal Communications Industry Association ("PCIA"),¹ pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. §1.415, respectfully submits its Comments in response to the Third

¹PCIA is an international trade association representing the interests of both commercial mobile radio service ("CMRS") and private mobile radio service ("PMRS") users and businesses involved in all facets of the personal communications industry. PCIA's Federation of Councils include: the Paging and Narrowband PCS Alliance, the Broadband PCS Alliance, the Specialized Mobile Radio Alliance, the Site Owners and Managers Association, the Association of Wireless System Integrators, the Association of Communications Technicians, and the Private System Users Alliance. In addition, PCIA is the FCC-appointed frequency coordinator for the 450-512 MHz bands in the Business Radio Service, the 800 and 900 MHz Business Pools, 800 MHz General Category frequencies for Business eligibles and conventional SMR systems, and for the 929 MHz paging frequencies.

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Notice of Proposed Rule Making ("Third NPRM") in the above-captioned proceeding.²

I. BACKGROUND

On August 28, 1995, the Commission issued a Second Memorandum Opinion and Order and Third Notice of Proposed Rulemaking. The Third Notice concerns newly proposed rules for the 220-222 MHz band. On August 29, 1995, the Commission issued a Fourth Notice of Proposed Rulemaking. The Fourth Notice concerns newly proposed rules for modifications of existing systems in the 220-222 MHz band.³

II. THIRD NOTICE OF PROPOSED RULEMAKING SUMMARY

In the Third Notice, the Commission seeks comment regarding whether to resolve pending mutually exclusive, non-commercial, nationwide applications by lottery, comparative hearing, or to return the applications and adopt a new licensing scheme for the 30 channels associated with the applications. If the Commission returns the applications, the Commission make the following proposals for Phase II nationwide licensing of these channels:

²60 FR 46566 (September 7, 1995).

³PCIA requested an extension of time to file Comments and Reply Comments in this proceeding, which was denied by the Commission. The 220 MHz industry has waited four years for the Commission to issue a proposal for modifications of existing licensees, therefore it is unclear why the Commission could not wait an additional thirty (30) days to receive Comments on the proposal; particularly in light of the Commission's provision of such a brief time for preparation of Comments. As a result, PCIA will continue to pursue the issues in this proceeding with its various membership Councils and may modify or supplement its Comments at a later date.

- * To license the 30 channels on a nationwide basis to all applicants -- i.e., applicants that intend to use the channels to offer commercial services as the well as applicants that intend to use the channels for their private, internal use.
- * To assign these channels, in the form of three 10 channel authorizations, through competitive bidding pursuant to the Commission's tentative conclusion that the principal use of the spectrum will be for the provision of for-profit, subscriber-based services.

The Commission made the following proposals for Phase II, non-nationwide licensing of the 220 MHz band:

- * To assign 60 channels in the 172 geographic areas defined as Economic Areas by the Bureau of Economic Analysis, Department of Commerce ("EA licenses") and 65 channels in the geographic areas defined by five "220 MHz Regions" ("Regional licenses") in the following manner:

**NON-NATIONWIDE 220 MHz
PROPOSED CHANNEL ALLOCATION PLAN**

<u>EA BLOCK</u>	<u>CHANNELS</u>
Channels 61-70	10
Channels 71-80	10
Channels 91-100	10
Channels 101-110	10
Channels 121-125	5
Channels 126-130	5
Channels 131-135	5
Channels 136-140	5
TOTAL	60

<u>REGIONAL BLOCK</u>	<u>CHANNELS</u>
Channels 171-180	10
Channels 186-200	15
Channels 1-10	10
Channels 11-20	10
Channels 31-50	20
TOTAL	65

- * To allow all applicants to apply for these channels -- i.e., applicants that intend to use the channels for private, internal use as the well as applicants that intend to use the channels to offer commercial services.

- * To assign these channels through competitive bidding based on the Commission's tentative conclusion that the principal use of the spectrum will be for the provision of for-profit, subscriber-based services.
- * To permit EA and Regional licensees to operate stations anywhere within their geographic borders, provided that their transmissions do not exceed a predicted field strength of 38 dB μ V/m at their border and they protect Phase I licensees in accordance with existing co-channel separation criteria.
- * To provide a 10-year license term for EA and Regional licensees and require EA and Regional licensees to meet five and ten-year construction benchmarks.
- * To eliminate existing channel use restrictions, i.e., the "data-only" and "non-trunked" channel designations.
- * To continue to assign, on a single-station basis, 10 channels exclusively to applicants eligible in the Public Safety Radio Service (the "Public Safety Pool") and five channels exclusively to applicants eligible in the Emergency Medical Radio Service (the "EMRS Pool").
- * To continue to assign channels in the Public Safety and EMRS Pools on a first-come, first-served basis and resolve mutually exclusive applications by random selection procedures.

The Commission proposes modifications to its existing rules with regard to fixed operations, paging operations, and the use of 5 kHz-wide channels. Specifically, the Commission proposes:

- * To allow fixed and paging operations for all 220 MHz licensees without the requirement that such use be on an ancillary basis to land mobile operations.
- * To allow licensees, under certain conditions, to aggregate any and all of their authorized channels to operate on channels wider than 5 kHz.

The Commission proposes to adopt definitions for initial applications, amended applications, and applications to modify authorizations in the following manner:

- * To define initial applications for 220 MHz licenses as applications for the nationwide, EA, and Regional licenses to be assigned in Phase II.
- * To adopt the same procedures for amending applications and modifying authorizations for Phase II 220 MHz

licenses that are established for other Part 90 CMRS services.

- * To require non-grandfathered CMRS 220 MHz licensees to obtain STAs under the same restrictions applicable to other non-grandfathered Part 90 CMRS licensees.
- * To extend to all 220 MHz licensees the Part 22 renewal standards adopted in the CMRS Third Report and Order for Part 90 CMRS services.

The Commission proposes competitive bidding procedures to resolve mutually exclusive initial applications filed in Phase II.

III. COMMENTS

A. Nationwide Channels

It is PCIA's view that the Commission should process the pending nationwide applications through the lottery process. The applications were filed consistent with the Commission's rules and based upon representations made by the Commission regarding the processing of the nationwide, non-commercial applications. It is not the fault of the applicants that the Commission has taken four years to get around to processing the applications. Minor discussions regarding the showings which were required by applicants were resolved years ago. Rather, it is strictly the Commission's inaction which has resulted in the delay.

Processing the nationwide applications as originally intended is also important for another reason. If the Commission returns these applications and conducts an auction, there will be significant concern throughout the wireless industry that the Commission cannot be relied on when it adopts rules and accepts applications. As a result, auction participants in other services will be concerned that the Commission, despite current

representations to the contrary, may decide not to renew auction winner's licenses at the end of the license term, but rather conduct a new auction. This fear may significantly impact whether applicants participate in auctions and what price applicants will be willing to bid. The wireless community must have confidence in the Commission's representations if the industry is to invest billions of dollars in auctions and infrastructure. For this reason, the Commission must process the applications as filed.

The Commission may ultimately find that numerous nationwide applicants may no longer have a need for an internal, nationwide 220 MHz system. Indeed, the Commission's delays caused some applicants to utilize cellular systems to satisfy their communications needs. As a result, the Commission may in fact have fewer nationwide applications which are grantable than nationwide frequencies. Therefore, PCIA requests that the Commission solicit the amended application information necessary to process the applications, conduct lotteries (if necessary) and auction any nationwide channels which may remain vacant after processing the initial applications.

B. Non-Nationwide Channels

Although PCIA does not oppose the Commission's tentative decision to allocate the non-nationwide frequencies in BEA and Regional blocks, there are a number of problems which will occur with the proposal which must be resolved.

First and foremost, since the Commission proposes to allocate the licenses in contiguous channel blocks, incumbent licensees may

need to "negotiate" with multiple BEA/Regional licensees in order to relocate their systems, if necessary. In addition, incumbent licensees will not be able apply for a single BEA or Regional license for the frequencies on which they are already constructed. Rather, incumbent licensees will need to bid on multiple channel blocks.

Several other problems with assignment of contiguous channel block are technical in nature. Combining equipment can be significantly different depending upon the channel spacing, and there are some channels that may not be constructed at the same site due to interference issues. This is an issue even when combining the current channel designations in more than one 5-channel block, because the channel spacing becomes odd and irregular, creating the need for some special filtering. Combining any number of contiguous channels together can result in significant power loss in the system using the required hybrid combiners, with little power radiating from the antenna. This is increased by two factors - the number of channels being combined, and the number of antennas for the system. The fewer antennas used at the site (such as two antennas - one for transmitting, one for receiving) the greater the penalty in radiated power, since each combining couple adds about a 3 dB loss to the system. A 20 channel system would have a combined loss of approximately 14 dB. If the operator wishes to increase the number of antennas to compensate for combiner power losses, then a 20 channel system could ultimately have 4 transmit antennas and 1 receive antenna.

If this happens, then there are wind-loading issues for the tower as well as a space issue for existing towers.

For this reason, adoption of contiguous channels for the BEA/Regional blocks may result in larger build-out expenses for BEA/Regional licensees.⁴ One advantage of using contiguous channels, however, is that licensees can use alternative transmission technologies and combine channels. PCIA does not support this approach, however. The band was licensed for the specific purpose of developing AND implementing narrowband technologies. Throughout the course of this proceeding, the Commission has repeatedly refused to permit the aggregation of channels for fear that such authorization would limit the development of narrowband transmission techniques. To permit the combining of channels for wider-band technologies at this point threatens to strand millions of dollars of equipment design and development by equipment manufacturers who relied upon the Commission's representations.

For the reasons stated above, PCIA requests that the Commission structure the BEA and Regional channel blocks to conform to the existing channel blocks as currently assigned. Applicants should not be precluded from combining blocks as they deem appropriate.

⁴Although the same technical problems exist with the nationwide channels, the fact that the allocation is nationwide gives licensees significant flexibility in strategically locating adjacent channels over large areas to achieve nationwide coverage. The smaller sizes of the BEA and Regional geographic areas limit flexibility, particularly for BEA licensees, who may be able to cover the entire BEA with a single transmitter site.

If the Commission decides to allocate the nationwide channels via lottery, as requested by PCIA, it is suggested that the remaining channels be assigned in blocks of the following sizes:

**NON-NATIONWIDE 220 MHz
PROPOSED CHANNEL ALLOCATION PLAN**

EA BLOCK CHANNELS

	20
	15
	10
	10
	5
TOTAL	60

REGIONAL BLOCK CHANNELS

	20
	20
	15
	10
TOTAL	65

Finally, with regard to the ability of incumbent licensees to modify their licenses, PCIA refers the Commission to PCIA's Comments in response to the Fourth Notice. In that document, PCIA recommended that the use of the 28 dB μ V/m **interference** contour (based upon full power for the antenna height authorized) as an appropriate standard for determining the extent to which incumbent licensees may modify their authorizations.

IV. CONCLUSION

For the foregoing reasons, PCIA respectfully requests that the Commission act in accordance with the views expressed herein.

Respectfully submitted,

**PERSONAL COMMUNICATIONS
INDUSTRY ASSOCIATION**

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Date: September 27, 1995