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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

JUN 18 1997

Public and Administrative
Inquiries

In the Matter of)
)
)
Amendment of Part 90 of the)
Commission's Rules to Provide)
for the Use of the 220-222 MHz Band)
by the Private Land Mobile)
Radio Service)
)
Implementation of Sections 3(n) and 332)
of the Communications Act)
Regulatory Treatment of Mobile Services)
)
Implementation of Section 309(j) of the)
Communications Act -- Competitive Bidding)

PR Docket No. 89-552
RM-8506

GN Docket No. 93-252 ✓

PP Docket No. 93-253

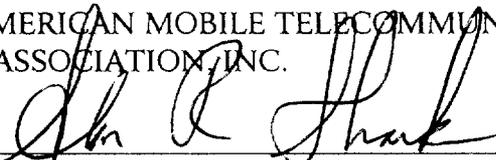
To: The Commission

REPLY TO COMMENTS
IN RESPONSE TO
PETITIONS FOR RECONSIDERATION

Respectfully submitted,

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ASSOCIATION, INC.

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June 18, 1997

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1. The American Mobile Telecommunications Association, Inc. (“AMTA” or the “Association”), in accordance with Section 1.429 of the Federal Communications Commission (“FCC” or the “Commission”) Rules and Regulations, 47 C.F.R. § 1.429, respectfully submits its Reply to Comments on Petitions for Reconsideration in the above-entitled proceeding.¹ AMTA notes that all those commenting on the issue of incumbent system protection raised in Petitions for Reconsideration agree that greater protection is needed to prevent harmful co-channel interference, both between Phase I and Phase II licensees and between adjacent Phase II licensees. The Association also herein provides further data concerning the appropriate level of incumbent protection and the necessary separation of co-channel base station facilities.

I. THE CO-CHANNEL PROTECTION RULES SHOULD BE MODIFIED TO PROTECT STATIONS’ 28 dBu CONTOURS.

2. AMTA concurs with those commenters urging the FCC to modify co-channel protection rules to better reflect existing 220 MHz service areas, including Police Emergency Radio Services (PERS), INTEK Diversified Corp. (INTEK), SMR Advisory Group (SMR Advisory), US Mobilcomm, Inc. and SEA, Inc.² As the 220 MHz industry as a whole has stated repeatedly, the 38 dBu contour or 120 km minimum separation protection proposed in the *Third Notice of Proposed Rulemaking*, and later adopted in the Order over unanimous opposition, will not adequately protect existing systems. Real-world performance of 220 MHz systems has shown propagation substantially exceeding that envisioned by the FCC when initially crafting rules for the service. Retention of the current standard will lead inevitably to areas of harmful co-channel

¹ *Third Report and Order and Fifth Notice of Proposed Rulemaking*, PR Docket No. 89-552, FCC 97-57, 12 FCC Rcd ___ (released March 12, 1997)(the “Order”).

² See Comments of PERS at 3-4; Comments of INTEK at 7; Comments of SMR Advisory at 2-3; Comments of US Mobilcomm at 2; Comments of SEA at 12-13.

interference between Phase I and Phase II licensees, as well as between adjacent Phase II licensees.

3. Thus, as recommended by AMTA and the 220 MHz industry in general, co-channel protection in this band should be extended to stations' 28 dBu contours, with a 10 dBu buffer, to reflect actual performance. The Association specifically refers the Commission to the Comments of PERS, which include actual field studies of three base station locations in New England. In all three analyses, the 28 dBu contour comes closest to the actual coverage of the stations.³ Moreover, as PERS points out, and as had been noted by AMTA,⁴ the potential for interference between base stations is exacerbated by the single sideband technology in general use in this band. This technology does not provide the signal "capture" effect of FM, in which the strongest signal received by the mobile unit captures the frequency. Competing 220 MHz signals will produce interference rendering all transmission unintelligible unless there is sufficient separation between stations.

4. Other members of the 220 MHz industry have also engaged in field and engineering studies over recent weeks to determine the appropriate level of station protection. AMTA has requested and received pre-filing copies of these studies, which are being simultaneously filed in this proceeding.⁵ Results of the studies are consistent. If the FCC wishes to equalize existing station protection of 220 MHz facilities with that in the 800 and 900 MHz

³ While PERS's data was prepared using actual antenna power levels, AMTA again urges the Commission to calculate protected areas using maximum permissible power, consistent with other land mobile services.

⁴ Comments of AMTA at ¶ 15.

⁵ See, Exhibits to Replies of INTEK Diversified Corp. and SMR Advisory Group, being filed on June 18, 1997.

SMR bands (*i.e.*, F(50,50)), the 28 dBu contour is the appropriate level of protection, “at a service area boundary of 40 dBu at 855 MHz, the same level of performance can be expected as at a service area boundary of 28 dBu at 220 MHz.”⁶ Thus, the recommended protection contour for this service does not represent an advantage for 220 MHz systems over those in other services. 220 MHz signals simply carry farther. Parity between this service and those operating on higher frequencies dictates a larger service area in this band.

5. The studies are also consistent in their recommendation for a revised minimum co-channel separation between base stations. As provided in the Order, the minimum standard separation would be 120 km, although lesser separations could be authorized if the licensee can show protection of the 38 dBu contour. However, the superior propagation of 220 MHz stations virtually guarantees interference at 120 kms. With the appropriate protection of the 28 dBu contour, and maintaining the FCC’s 10 dBu buffer between the signal strength of two co-channel stations (the newer station’s 18 dBu contour), the minimum distance separation should be modified to 170 km.⁷

6. As various commenters in this proceeding have discussed, the potential for interference affects not only Phase I incumbent systems, but prospective Phase II licensees as well. Should the FCC not modify its co-channel protection criteria, the reliable service areas of both incumbent and future licensees will be compromised by areas of interference between

⁶ Exhibit to Reply of INTEK, at 2.

⁷ See, e.g., *Comment of the American Radio Relay League*, filed 1/11/01, at 11.

stations, including at the borders of adjacent Phase II systems. Such disruption to service of both existing and potential customers of 220 MHz systems can hardly be in the public interest.

II. CONCLUSION

7. Real-world operation and growth of 220 MHz systems provides significant evidence that original projections of coverage areas for the service were inaccurate. AMTA again applauds the Commission for its efforts in providing reasonable new rules for the service. However, it urges the FCC to adopt the recommendations of the industry in modifying co-channel station protection criteria to reflect actual performance, with a 28 dBu protection contour between existing and new, and adjacent new, stations and/or a minimum geographic separation of 170 kms between stations. The Association respectfully requests that the Commission move expeditiously to complete this proceeding in accordance with these recommendations and others in AMTA's Petition for Reconsideration in this docket.

CERTIFICATE OF SERVICE

I, Linda J. Evans, a secretary in the law office of Lukas, McGowan, Nace & Gutierrez, hereby certify that I have, on this 18th day of June, 1997, caused to be mailed a copy of the foregoing Reply to Comments in Response to Petitions for Reconsideration to the following:

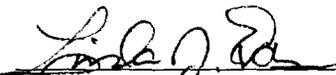
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