

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

In the Matter of)
)
Implementation of Sections 309(j) and 337)
of the Communications Act of 1934 as Amended) WT Docket No. 99-87
)
Promotion of Spectrum Efficient) RM-9332
Technologies on Certain Part 90)
Frequencies)

To: The Commission

**COMMENTS
OF THE
ENTERPRISE WIRELESS ALLIANCE**

The Enterprise Wireless Alliance (“EWA” or “Alliance”), in accordance with Section 1.425 of the Federal Communications Commission (“FCC” or “Commission”) Rules and Regulations, respectfully submits its comments in the above-entitled proceeding.¹ The FNPR is the most recent phase of the Commission’s multi-decade proceeding involving the “refarming” of the Part 90 Private Land Mobile Radio (“PLMR”) bands below 512 MHz. For the reasons detailed herein, EWA urges the FCC to abandon its effort to promote migration to 6.25 kHz capability through the equipment certification process. Moreover, the Alliance recommends that the FCC **not require** a migration to 6.25 kHz bandwidth technologies in the affected bands at all. Instead, the Commission should adopt a permissive, flexible approach to further efficiency improvements that will encourage users of this spectrum to implement advanced technologies for their own benefit and for the benefit of all PLMR licensees.

¹ Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended/Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, WT Docket No. 99-87, *Third Memorandum Opinion and Order and Third Further Notice of Proposed Rule Making*, 19 FCC Rcd 25,048 (2004) (“Spectrum Efficient Technologies Third MO&O”).

I. INTRODUCTION

EWA represents a broad alliance of business enterprise users, service providers, radio dealers and technology manufacturers, all of which use or provide wireless telecommunications products or services. The Alliance is the successor organization to the Industrial Telecommunications Association, Inc. (“ITA”) and the American Mobile Telecommunications Association, Inc. (“AMTA”) which have consolidated their operations within EWA. Both organizations have represented the interests of their respective constituencies before the Commission for many years. The breadth of EWA’s collective membership and its longstanding experience in wireless matters, in particular those relating to the Part 90 services, qualifies the Alliance to provide the following comments.

II. BACKGROUND

It has been more than a decade since the FCC embarked upon its ambitious effort to maximize the efficient use of the PLMR bands below 512 MHz.² The basic premise of the initiative was that a migration to increasingly narrower bandwidths would promote more intensive use of this spectrum. Among other steps, the Commission adopted rules that provided for full power 12.5 kHz bandwidth interstitial channels in the 450-512 MHz bands and full power 7.25 kHz bandwidth interstitial channels in the VHF band. The Commission also provided for a future narrowing of operations on this spectrum to 6.25 kHz bandwidth. Of course, these actions did not create “new” PLMR spectrum; instead they were intended to provide additional capacity in existing bands by creating more communications paths on the same spectrum.

² See Replacement of Part 90 by Part 88 to revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket No. 92-235, *Report and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 10076, 10092 (1995).

There already has been substantial progress toward the widespread use of 12.5 kHz bandwidth equipment in the “refarmed” bands. Although initial reliance on the equipment certification process to promote the initiative proved less than optimal and, therefore, should not be attempted in respect to 6.25 kHz, equipment with 12.5 kHz voice capability has been routinely available for a number of years.³ It has been disseminated broadly in the marketplace such that the number of legacy systems incapable of operating at 12.5 kHz continues to shrink. Thus, the January 1, 2013, date certain adopted by the Commission as a mandatory deadline for conversion to 12.5 kHz capability should not present difficulties for the vast majority of PLMR systems in these bands.⁴

EWA’s predecessor organizations, ITA and AMTA both were vocal supporters of a date certain for mandatory conversion to 12.5 kHz operation. However, both expressed strong reservations about adopting a similar approach for 6.25 kHz capability. In their September 2003 comments on that subject, each organization noted that 6.25 kHz bandwidth equipment was not yet available, that such equipment was not likely to be developed until a standard for 6.25 kHz interoperability had been adopted, and that it would be prudent to evaluate the results of the ongoing 12.5 kHz migration before further bandwidth narrowing was required.

As explained in the FNPR, subsequent to the submission of comments on that issue, a joint Petition to Defer the then-applicable January 1, 2005, deadline after which only equipment capable of supporting 6.25 kHz bandwidth would be certificated by the FCC was submitted by EF Johnson Company, Kenwood U.S.A. Corporation and Motorola, Inc.⁵ The Order notes that

³ The Commission recently reaffirmed its intention to permit continued use of broader bandwidth equipment for paging systems and for data operations with defined levels of spectrum efficiency. Spectrum Efficient Technologies Third MO&O at ¶’s 28-32.

⁴ Id. at ¶ 13.

⁵ Joint Petition for EF Johnson, Kenwood U.S.A. and Motorola, Inc. Petition to Defer Enforcement of Section 90.203(j)(5) of the Commission’s Rules, WT Docket 99-87, RM-9332 (filed July 14, 2004) (“Manufacturers’ Petition”). Motorola had filed an earlier Petition urging the FCC to eliminate the same rule.

the Manufacturers' Petition asserted that the rule would place undue burdens on manufacturers and would jeopardize the promotion of interoperability between users without a 6.25 kHz equivalent efficiency standard.⁶ The Order seeks comment on whether there is a distinction between requiring "equipment-based technologies that are specifically manufactured to utilize 6.25 kHz channel bandwidth as opposed to reconfigured 12.5 kHz equipment or software-defined 12.5 kHz equipment made capable of operating on channel bandwidths with an equivalent efficiency of 6.25 kHz."⁷

EWA welcomes the Commission's request for further information on this subject. As discussed below, technology changes in recent years support a more flexible regulatory approach, one that will maximize efficient use of these bands through genuine marketplace initiatives.

III. THE RULES SHOULD PROMOTE IMPROVED EFFICIENCIES, HOWEVER DERIVED, THAT CREATE CAPACITY ENHANCEMENTS FOR PLMR USERS

There have been dramatic technical advances in the wireless world in the more than ten years since the Commission initiated its efforts to "refarm" the PLMR bands below 512 MHz. One of the most significant has been the shift toward wideband and even broadband technologies as the optimal approach for maximizing capacity. CDMA and other broadband techniques have won international favor for a multiplicity of wireless uses. The inherent flexibility offered by wider channel allocations has become viewed as an essential element for today's and tomorrow's wireless networks.

EWA recognizes that the below 512 MHz PLMR bands are not well-suited for truly wideband technologies at this stage of their utilization. The very high levels of incumbency and the concomitantly reduced opportunities for channel exclusivity, particularly in urban markets

⁶ Order at para 40.

⁷ *Id.*

where increased capacity is most needed, limit the ability of licensees to secure sufficient bandwidth to deploy wideband equipment. Nonetheless, they should be encouraged to take advantage of these efficiency improvements to the extent possible. Since this spectrum is likely to remain the workhorse bands for a significant number of users, with no new PLMR mobile allocations in the offing and availability of the 800/900 MHz bands compromised by a variety of licensing freezes, it is imperative that the regulatory environment not inhibit the deployment of any and all technologies capable of meeting the 12.5 kHz migration deadlines that promise to increase capacity without causing interference.

The Alliance believes that objective is most likely to be advanced by rules that allow users to select whatever advanced techniques will best suit their individual requirements. Those in geographic areas where spectrum availability is limited will be motivated to invest in more efficient equipment, assuming, of course, that they are permitted to enjoy the capacity increases that they create. Users in areas where spectrum remains plentiful also may elect to upgrade their equipment if their operating needs so dictate. Some users may choose 6.25 kHz bandwidth equipment as best suited for their purposes when it becomes available. Others may select different approaches, perhaps, but not necessarily, based on 6.25 kHz equivalent efficiencies derived from TDMA or SDR techniques. That choice should be left to the users themselves within a regulatory framework that promotes technical improvements yet continues to protect against destructive interference.

The PLMR community is part of a wireless marketplace in which technical advances are driven relentlessly by consumer demand and in which the path to those advances has proven resistant to regulatory prediction. EWA believes firmly that the best approach to achieving the capacity improvements desired by this community and the FCC is to allow PLMR users the same technical flexibility available to other wireless industry segments in an environment that rewards

increased efficiency.⁸ If licensees are allowed to sub-divide their authorized spectrum through the use of more advanced techniques and retain full use of the resulting capacity increases, no further regulatory incentives or dictates will be needed to promote intensive use of the “refarmed” bands.

IV. CONCLUSION

The Commission and the industries it represents have been well-served by an overall shift from detailed regulatory structures to more flexible environments in which the dynamic marketplaces of users and equipment determine how spectrum is used. This approach generally has worked well in promoting efficient use of scarce spectrum resources. The FCC should trust the PLMR industry to achieve those same results within a regulatory framework that permits them to enjoy the capacity enhancements derived from deployment of advanced technologies, but without demanding that they follow a rigidly narrowband migration path in an increasingly wideband wireless world.

Respectfully submitted,

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⁸ For example, the Commission permits 800 MHz licensees to operate on multiple channels within exclusive bandwidth. See 47 C.F.R. § 90.645(f).