

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

In the Matter of

)
Spectrum Policy Task Force Seeks) DA 02-1311
Public Comment on Issues Related) ET Docket No. 02-135
to the Commission's Spectrum Policies)
)

To: Edmond J. Thomas, Chief
Office of Engineering and Technology

**REPLY COMMENTS OF THE
AMERICAN MOBILE TELECOMMUNICATIONS ASSOCIATION, INC.**

Respectfully submitted,

AMERICAN MOBILE TELECOMMUNICATIONS
ASSOCIATION, INC.

By:

/s/

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The American Mobile Telecommunications Association, Inc. (“AMTA” or “Association”) respectfully submits its Reply Comments in the above-entitled proceeding.¹ The volume of comments filed in response to the Notice is a testament to the significance and complexity of the spectrum policy issues raised by the Federal Communications Commission (“FCC” or “Commission”). AMTA is pleased to endorse the comments of certain parties and to provide its specific perspective on several of the questions posed in the Notice.

I. INTRODUCTION

1. AMTA is a nationwide, non-profit trade association dedicated to the interests of the specialized wireless communications industry. The Association’s members include trunked and conventional 800 MHz and 900 MHz Specialized Mobile Radio (“SMR”) operators, licensees of wide-area SMR systems and commercial licensees in the 220 MHz and 450-512 MHz bands, as well as equipment vendors and entities that provide support services to those engaged in the provision of wireless services. FCC spectrum policy decisions have a direct, essential impact on the business activities of the entire AMTA membership. Thus, the Association and its members have a significant interest in the outcome of this proceeding.

II. BACKGROUND

2. Spectrum is a core asset for most FCC constituents. Even in the extraordinarily difficult economic climate in which the nation finds itself, spectrum in optimal bands remains a valuable, scarce resource with persistent shortages in the more densely populated areas of the country. Therefore, the Association applauds the Commission’s decision to solicit comments on its

3. The Notice requested input in five broad areas: 1) Market-Oriented Allocation and Assignment Policies; (2) Interference Protection; (3) Spectral Efficiency; (4) Public Safety Communications; and (5) International Issues. In AMTA's opinion, at least the first three matters are inextricably intertwined; they are simply different facets of the prism through which the agency's spectrum management activities can be viewed. Their interrelationship may be even more compelling in the services regulated under Part 90 of the Commission's rules, the services in which most AMTA members operate, which historically have supported a combination of shared and exclusive channels authorized for use in both commercial and private, internal systems. This environment presents a particularly complex spectrum management challenge for the agency.
 4. As evidenced by the comments in this proceeding, the FCC's transition to a more market-oriented model for spectrum management, in particular the introduction of auction-based geographic licensing, has had a profound impact on the FCC's spectrum policies generally, and on the management of Part 90 spectrum in particular. The related issues of migration from site-specific to geographic licensing, spectrum as a economic-based commodity, and "flexible" use of spectrum within service areas collectively represent a paradigm shift for the licensees in these services and require a carefully balanced approach to ensure the appropriate allocation of limited spectrum resources.
 5. The Association is particularly pleased to see the Commission's focus on spectral efficiency as an integral part of its spectrum policy responsibility. As detailed below, the need to derive optimal utilization from already allocated Part 90 spectrum has long been a goal of AMTA

III. DISCUSSION

6. One comment common to a number of filings was a recognition that there is no “one size fits all” approach to spectrum policy in this country. The range of spectrum users governed by the FCC, full-power broadcast stations, amateurs, dispatch providers, local government entities, consumer-oriented commercial wireless operators, TV translators, and a panoply of manufacturing, transportation and other business enterprises to name just some, dictate that the agency’s policies be tailored to the specific needs of particular user categories.

7. However, in doing so, the FCC should be guided by common tenets against which individual decisions can be evaluated. The principles enumerated by Motorola appear to AMTA to encompass the foundation on which a sound spectrum management policy could be erected.

Specifically, Motorola identified the following elements of such a policy:

- 1) Based on user requirements;
- 2) Provide users with regulatory certainty;
- 3) Promote efficient operation;
- 4) Make technical sense;
- 5) Flexibility.²

As detailed below, the Association believes that a proper balancing of these elements will prove effective in promoting publicly beneficial policy decisions by the Commission.

1. The Processes by Which the FCC Allocates Spectrum and Awards Authorizations Must Reflect the Broad Variety of Spectrum Users.

8. Unquestionably, the most significant governmental spectrum policy decision in the past decade has been the Congressionally-mandated substitution of auctions for other spectrum assignment approaches in the vast majority of licensed services. AMTA's members, like most FCC constituents, did not embrace the concept of paying for channels that previously had been available for "free" from the FCC.³ Moreover, since most are small, indeed very small businesses, the typical auction structure used by the FCC, a limited number of large spectrum blocks each covering a very broad geographic area, was ill-suited to their requirements or the needs of their customers, primarily dispatch users with a need for group call over a defined market area. Their inability to achieve any "meaningful" level of participation in the auction process was further exacerbated when the FCC abandoned the use of installment payments. Thus, even those that accepted the logic of paying for this asset, like the equipment and other components of a telecommunications system⁴, often found the auction model used by the Commission entirely unsuited to the more geographically and spectrally limited requirements of their customers. To the extent these operators effectively were priced out of the auction marketplace because of the way spectrum was packaged for sale, there was a concomitant reduction in competition and in the service options available to telecommunications users.

³ As noted in other proceedings, applicants often needed to engage the services of legal,

9. Yet it is apparent that this anti-competitive, market-skewing result is not inherent in the competitive bidding concept. For example, the Commission's recent auction of Part 22 upper and lower band paging channels produced a significant number of small business winners, both incumbents that bid successfully on their own site-specific channels and new entrants. Its success was attributable to a confluence of factors that might be replicated in other auctions.⁵ First, there was a limited amount of spectrum in play and it was encumbered by existing operations thereby diminishing its utility for large-scale, consumer-focused offerings. Second, although the amount of auctioned spectrum was limited, the band was not new and did not require new product development. Third, the spectrum was auctioned channel-by-channel; participants did not have to bid on spectrum they didn't want just to get the spectrum they needed. Fourth, the licenses were awarded in appropriate geographic packages; even if they did not correspond exactly to the applicant's desired coverage, the excess was a manageable percentage of the whole. Fifth, the upfront payments were non-exclusionary and largely proved accurate predictors of the value of the licenses as evidenced by the final bid prices.
10. The result was an auction with a large number of large and small winning bidders, most of which seemingly had targeted specific channels and markets of interest and rarely bid outside those parameters. Those who view auctions as a Treasury-funding mechanism might have considered the auction a disappointment. Its small and often rural participants, and even non-participants, considered it a resounding success. Moreover, because most successful bidders had a specific business plan for their acquisitions, rather than acquiring channels principally for

11. AMTA recognizes that these factors will not be replicated in all auctions, and particularly not in those involving largely unencumbered spectrum in bands optimally suited for consumer-oriented commercial wireless services. Sound spectrum management does not demand that all potential eligibles have a chance to participate successfully in each competitive bidding situation. However, the broadest range of user requirements will be served at the lowest cost if the Commission's policies do not inherently discriminate against smaller and often more rural entities, but instead permit all qualified applicants a meaningful opportunity to secure spectrum appropriate to the systems they wish to operate.

2. The FCC's Spectrum Management Policies Must Actively Promote and, if Necessary, Require Appropriate Levels of Spectrum Efficiency

12. Although technological advances continue to expand the boundaries of useable spectrum, there are certain immutable laws of physics that determine the optimal bands for different types of transmissions. Mobile wireless systems with a need to cover a market area generally are best served with spectrum below 3 GHz.⁶ Not surprisingly, because spectrum within that range has been in use for many decades, it typically is the most heavily encumbered, often with what euphemistically is called “legacy” equipment, making it difficult even for motivated licensees to deploy more efficient technologies.

13. The 450-470 MHz band allocated to the Part 90 services is emblematic of such spectrum. The band has been a Private Land Mobile Radio (“PLMR”) workhorse for decades, supporting countless private internal and third party systems. Until recently, there was no provision for exclusivity in the band; channels were shared on a party-line basis with all users required to monitor before transmitting.⁷ The band was, and still is, intensively spectrum efficient if efficiency is calculated solely on the basis of number of transmitters per channel. However, most notably in the congested urban markets in which spectrum scarcity is particularly severe, it is doubtful that this type of shared use promotes the most efficient use of the band. It certainly does not permit the implementation of more technically advanced systems that could offer the benefits of improved communications quality and more feature-rich offerings while maintaining a high level of spectrum utilization.
14. The Commission attempted to promote the use of more efficient equipment in this band in its long-standing “refarming” proceeding.⁸ However, that effort relied on the equipment certification process to encourage a migration to more advanced technologies, an approach that largely has been unsuccessful. Not only do incumbents continue to use twenty- or even thirty-year old 25 kHz equipment despite the ready availability of 12.5 kHz bandwidth and other more efficient technologies, the Commission continues to license new 25 kHz systems, thereby perpetuating the problem.
15. AMTA believes that this failure to implement improved equipment relates directly to the absence of efficiency incentives in the band. The rules do not award an incumbent that moves

channels generally are shared, no capacity can be created unless all incumbents convert simultaneously. Even in the unlikely event they agree to do so, the resulting spectrum likely has been assigned already to an adjacent channel licensee operating a 12.5 kHz system and living with the interference from its 25 kHz neighbor. Eventually that 25 kHz neighbor itself may migrate to a 12.5 kHz system, not for improved efficiency but in self-defense as its wideband system becomes subject to increasing interference from now full-power, adjacent channel 12.5 kHz systems. Even then, only rarely will the rules permit either party to deploy trunking or another advanced technology because of the continued presence of co-channel or adjacent channel licensees. Migration, at best, occurs on a haphazard and uncoordinated basis and does not produce the spectrum efficiencies that otherwise might be available.

16. The rules governing the 450-470 MHz band are not an adequate incentive even for commercial incumbents to implement more efficient equipment voluntarily. Non-commercial entities with sufficient capacity to satisfy their internal requirements using legacy 25 kHz equipment have even less reason to upgrade. The results are not surprising: there has been only limited deployment of trunking or other technology advances in this band and almost none in the markets where such improvements are most urgently needed.

17. Licensees should be free to continue to use inefficient equipment except when doing so prevents other parties from converting to more advanced technologies. At some point, the fact that legacy equipment still functions cannot outweigh the importance of maximizing the utility of this highly limited resource for the benefit of multiple parties.

for a radical restructuring of the band.⁹ The approach recommended would create opportunities for both private internal and commercial systems to acquire the exclusive overlay licenses that would permit the deployment of more efficient technologies, but also would preserve spectrum for licensees that preferred to retain their old equipment and continue operating on shared channels.¹⁰ Although AMTA's proposal was limited to non-public safety spectrum in the band, public safety's interest in 450 MHz spectrum for inter-operability uses might also benefit from the Association's proposal since it is unlikely that other spectrum in this band, a band that is the backbone of many public safety systems, can be made available for that purpose.¹¹

19. The FCC has acknowledged the failure of its current policies in this instance:

...we are inclined to agree with AMTA that the current pace of migration to more spectrally efficient technology is not rapid enough.¹²

⁹*Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 99-87, FCC 00-403, ___ FCC Rcd ___ (2000) ("BBA FNPR").

¹⁰See AMTA Petition for Rulemaking (RM-9705) (filed July 30, 1999). This proposal was opposed by a number of PLMR representatives as unnecessarily disruptive of a heavily encumbered band and skewed in favor of commercial providers. The Association disagrees. This band is too critical to the interests of all PLMR eligibles, including, but not limited to, AMTA members, to

This conclusion was endorsed by the PLMR industry generally with industry representatives at least urging the Commission to adopt a date certain for migration to more efficient technology as recommended by AMTA.¹³ A number of those organizations also supported AMTA’s recommendation that the Commission stop licensing new 25 kHz systems as soon as practically possible so that the issue of “stranded investment” is not perpetuated indefinitely. While different parties suggested different time periods, the industry spoke with a highly unified voice in support of both actions.

20. The refarming proceeding, intended to promote more efficient use of this valuable spectrum, was initiated a decade ago. Industry comments recognizing the failure of that proceeding to achieve the desired results and recommending a more proactive FCC position were filed most recently more than a year ago. Yet the FCC continues to license new systems proposing the use of 25 kHz bandwidth equipment and has taken no steps to adopt a date certain for 450-470 MHz migration. AMTA again urges the Commission at least to respond to this industry consensus, if not to the broader AMTA proposal, and take immediate steps to address this evident marketplace failure of Part 90 licensees in the 450-470 MHz band to implement more spectrally efficient equipment voluntarily.

IV. CONCLUSION

21. AMTA applauds the Commission’s initiative in undertaking an examination of its spectrum management policies and looks forward to working with the FCC on this vital issue.