

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-49
	)	
Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones	)	WT Docket No. 01-309
	)	

**COMMENTS OF THE  
TELECOMMUNICATIONS INDUSTRY ASSOCIATION**

The Telecommunications Industry Association (“TIA”) hereby submits comments in response to the Notice of Proposed Rule Making, Fourth Further Notice of Proposed Rule Making, and Second Further Notice of Proposed Rule Making in the above-captioned proceeding.<sup>1</sup>

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<sup>1</sup> *Notice of Proposed Rule Making, Fourth Further Notice of Proposed Rule Making, and Second Further Notice of Proposed Rule Making*, FCC 06-114 (released August 10, 2006) (“NPRM”).

## I. INTRODUCTION

TIA is the leading trade association for the information and communications technology (“ICT”) industry, with 600 member companies that manufacture or supply the products and services used in global communications across all technology platforms. TIA represents its members on the full range of public policy issues affecting the ICT industry, owns and produces GLOBALCOMM™ - the next-generation global communications marketplace and summit, and is fully accredited by the American National Standards Institute (“ANSI”) to produce industry consensus standards. Among their numerous lines of business, TIA member companies design, produce and deploy a wide array of communications equipment and systems using radio spectrum in the bands that are subject to the issues addressed in this NPRM. As a result, TIA has a substantial interest in current and future Federal Communications Commission (“FCC” or “Commission”) spectrum management decisions and, more specifically, in the outcome of the issues addressed in this NPRM and activities related to the development of service rules in the subject bands. TIA requests that the Commission take into consideration the views expressed below.

In this Notice of Proposed Rulemaking the FCC seeks comment on possible changes to the Part 27 service rules governing wireless licenses in the 698-746, 747-762, and 777-792 MHz bands (“700 MHz Band”) currently occupied by television broadcasters and being made available for new services as a result of the digital television (“DTV”) transition. Seven years have passed since the FCC first initiated a proceeding on the 700 MHz Band and it now seeks to evaluate whether changes to the existing

service rules pertaining to 700 MHz Band licenses may permit more effective use of this spectrum to better meet the needs of today's consumers.

The 700 MHz band includes licenses in 60 megahertz of spectrum in the Upper 700 MHz Band (TV Channels 60 - 69, 746 - 806 MHz) and in 48 megahertz of spectrum in the Lower 700 MHz Band (TV Channel 52 - 59, 698 - 746 MHz). Licenses have already been auctioned in 18 megahertz in the Lower 700 MHz Band while 24 megahertz in the Upper 700 MHz Band has been allocated by Congress to public safety radio services.

Specifically, the FCC inquires on the possibility of revising the size of service areas for the unauctioned licenses in the 700 MHz Band; seeks comment on possibly increasing the overall number of blocks of 700 MHz Band licenses by reconfiguring a portion of the Upper 700 MHz Band or the Lower 700 MHz Band, or both; seeks comment on the FCC's "substantial service" performance standard with regard to these licenses; requests comment on whether to amend its rules to clarify the requirements and procedures of the renewal process; invites comment on extending the license terms of 700 MHz Band licenses to an expiration date beyond 2015; seeks comment on whether the power limits in the existing rules for the 700 MHz Band spectrum should be revised; and seeks comment on its tentative conclusion that services provided in the 700 MHz Band and in other bands subject to Part 27 should be subject to requirements concerning 911/E911 and hearing aid-compatible ("HAC") handsets to the extent that they meet certain criteria.

TIA strongly supports the Commission's desire to promote more efficient use of spectrum and to create opportunities for new and additional uses of wireless

communications by the American public. As wireless platforms are an increasingly popular alternative for business and residential consumers to access services, and have the potential to deliver these services to rural and underserved areas, wireless technologies will compete with existing and future wired broadband technologies. TIA agrees it is important to encourage the deployment of advanced wireless networks and consumer wireless products that can support converged communications services offering consumers competitive choices of voice, video and data applications.

In these comments, TIA addresses areas of particular concern including the size of geographic service areas, the size of spectrum blocks, the rules on power limits, and E911 and HAC requirements.

For reasons detailed below, TIA respectfully urges the Commission to (A) refrain from modifying its existing regulations governing the size of service areas, (B) maintain the current models with respect to the size of spectrum blocks, (C) modify the rules to allow effective isotropic radiated power (“EIRP”) measurements for base stations to transmit at either the current per-emission limits, or a comparable per-MHz power spectral density limit, and (D) establish consistent rules on E911 and HAC that are applied across appropriate technologies.

## **II. DISCUSSION**

### **A. Size of Service Areas**

The size of the geographic service areas for the 700 MHz Band have been divided into a combination of large, regional Economic Area Groupings (“EAGs”) and smaller

Cellular Market Areas (CMAs) composed of Metropolitan Statistical Areas (“MSAs”) and Rural Service Areas (“RSAs”). CMAs are intended to favor smaller business and rural-based providers, affording them meaningful opportunities to seek licenses with smaller initial geographic scope. In contrast, EAGs provide businesses with plans for regional or nationwide networks an optimum opportunity to aggregate spectrum, promote economies of scale, and reduce potential transaction costs to licensees seeking to aggregate additional licenses in the secondary market.

TIA believes that the current licensing regime with respect to geographic service areas appropriately balances the interest of large regional and nationwide carriers seeking to minimize transaction costs, advances the FCC’s goal of promoting the rapid deployment of wireless broadband services particularly to rural America, and facilitates participation in the auction process by small and medium size entrepreneurs along with larger and established enterprises.

Any further partitioning of the geographic service areas into blocks smaller than the current CMAs will only serve to increase transaction costs, including the costs associated with frequency and technology coordination among licensees. The cost of frequency and technology coordination weighs equally on licensees on both side of a geographic border regardless of whether the licensee is a small or large service provider. Further, smaller service areas would require more roaming agreements to enable the type of seamless services customers demand.

In its *Tenth Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, WT Docket No. 05-71, released September 30, 2005, the Commission concluded “....that [Commercial Mobile Radio Service] CMRS

providers are competing effectively in rural areas .... data and statements presented by commenters .... support the conclusion that there is effective competition with respect to CMRS in rural areas.” This high level of competition and service in rural areas was achieved using a geographic licensing scheme similar to the CMAs envisioned in the 700 MHz Band. It follows, therefore, that wireless broadband networks will enjoy a similar level of competition.

Accordingly, TIA respectfully urges the Commission to refrain from modifying its existing regulations governing the size of service areas in the 700 MHz Band.

#### **B. Size of Spectrum Blocks**

The size of the commercial spectrum blocks for the 700 MHz Band have been divided into a combination of Guard Band spectrum plus (1) a 10 megahertz paired block consisting of two 5 megahertz segments, (2) a 20 megahertz paired block consisting of two 10-megahertz segments, (3) three 12 megahertz paired blocks consisting of two 6 megahertz segments, and (4) two 6 megahertz unpaired blocks consisting of contiguous spectrum. The variety of spectrum block sizes are intended to accommodate advanced wireless services, including broadband wireless services, while aligning, in some cases, with existing TV channels.

TIA believes that the current licensing regime with respect to spectrum blocks appropriately balances the interest of large regional and nationwide carriers seeking to minimize transaction costs, advances the FCC’s goal of promoting the rapid deployment of wireless broadband services to rural America, and facilitates participation in the

auction process by small and medium size entrepreneurs along with larger and established enterprises.

Consumer demand for wireless mobility is rapidly transforming networks into truly broadband systems capable of offering converged communications services with competitive choices of voice, video and data applications. Such wireless broadband networks require substantial spectrum block sizes to accommodate the greater throughput needed to provide a broadband experience for the consumer. The history of cellular bandwidth requirements is telling. The initial voice networks for cellular networks used 30 KHz wide channels. That channelization evolved to 200 KHz and then to 1.25 MHz, such as CDMA EV-DO technology of today. Looking into the future, regardless of the wireless broadband technology, bandwidths of 5 MHz will be the minimum needed to support broadband services.

In addition, the spectrum block sizes currently authorized provide economies of scale in the development, design, and manufacture of the communications equipment required to operate advanced wireless broadband networks. The benefits of economies of scale are shared equally by all service providers - large and small – as well as their customers.

Accordingly, TIA respectfully urges the Commission to refrain from modifying its existing regulations governing the size of spectrum blocks in the 700 MHz Band. The current mix of larger and smaller spectrum blocks appropriately balances the needs of small and large service providers, accommodates the high throughput needs of wireless broadband networks, and facilitates economies of scale in the manufacture and deployment of these networks and end-user devices.

### **C. Power Limits**

For the Upper 700 MHz Band, the Commission adopted a power limit for base and fixed stations in all services of 1 kilowatt (kW) effective radiated power (“ERP”). For the Lower 700 MHz Band, the Commission adopted a power limit of 50 kW ERP subject to specific requirements regarding non-interference.

TIA agrees with the CTIA proposal to supplement current EIRP limits for Part 24 Broadband PCS and Part 27 AWS, as articulated in its May 3, 2006 *Ex Parte* filing in the 2002 Biennial Review Proceeding (WT Docket No. 03-264) that the FCC rules should be modified to allow EIRP measurements for base stations to be made using either the currently specified per-emission limits, or a comparable per-MHz power spectral density limit. Such a change in the rules, if extended to the 700 MHz Band, would encourage improvements in coverage and facilitate cost-effective deployment of wireless broadband systems. By adopting CTIA’s proposed EIRP rules in the 700 MHz Band, service in rural and urban areas can be improved and network deployment and operations costs will be reduced, encouraging further innovation in wireless broadband technology and networks.

Thus, TIA urges the Commission to allow the use of either the currently specified per-emission limits, or a comparable per-MHz power spectral density limit, whichever technique best suits the needs of the individual networks, providing much needed flexibility for operators and encouraging increased efficiency and innovation. Further, this change will enable commercial licensees to implement mobile and fixed systems



without causing harmful interference to adjacent band Public Safety and Guard Band operations.

**D. E911 and Hearing Aid Compatible Wireless Handsets**

The Commission has tentatively concluded that certain services offered using both unauctioned and previously auctioned spectrum in the 700 MHz Band should be subject to the 911/E911 and hearing aid-compatibility requirements. 911 and E911 service enables critical public safety benefits while hearing aid compatibility ensures access to telecommunications services by individuals with hearing disabilities.

TIA is a long-standing supporter of efforts to increase access to, and ease of use of, information and communications technology products and services by people with disabilities. TIA and our member companies are committed to ensuring that communications equipment and customer premises equipment are designed, developed and fabricated to be accessible to and usable to the disability community. Moreover, TIA recognizes the public safety benefits of, and wide-spread consumer demand for, 911/E911 services.

TIA agrees with the FCC's policy that a service or device provider should be subject to E911 rules based on whether: (1) it offers real-time, two-way voice service that is interconnected to the public switched network on either a stand-alone basis or packaged with other telecommunications services; (2) the customers using the service or device have a reasonable expectation of access to 911 and E911 services; (3) the service competes with traditional CMRS or wireline local exchange service; and (4) it is technically and operationally feasible for the service or device to support E911. TIA also agrees with the FCC's tentative conclusion that services provided in the 700 MHz Band

that meet these criteria should be subject to the 911/E911 requirements and should also be subject to hearing aid-compatibility requirements. We caution, however, against the application of 911/E911 and HAC requirements to all services in the 700 MHz band, as some services may not meet the criteria above. In addition, there might be future cases in which consumers use interconnected voice services from a provider other than the network access provider. In those cases, the 911 obligation should be placed on the interconnected voice services provider pursuant to the FCC's requirement for VOIP providers.

### **III. CONCLUSION**

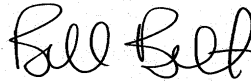
TIA applauds the Commission's desire to promote more efficient use of spectrum and to create opportunities for new and additional uses of wireless communications. TIA has long believed that sound spectrum management is critical to the future success of the communications industry and to maximize benefits to consumers. TIA strongly supports Commission consideration of mechanisms that allow more efficient use of spectrum for wireless services, including the use of the 700 MHz Band.

As a result TIA respectfully urges the Commission to (A) refrain from modifying its existing regulations governing the size of service areas, (B) maintain the current models with respect to the size of spectrum blocks, (C) modify the rules to allow EIRP

measurements for base stations to transmit at either the current per-emission limits, or a comparable per-MHz power spectral density limit, and (D) establish consistent rules on E911 and HAC that are applied across appropriate technologies.

Respectfully submitted,

**Telecommunications Industry Association**



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