



DOCKET FILE COPY ORIGINAL

July 2, 2001

RECEIVED

JUL - 2 2001

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

BY HAND DELIVERY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: WT Docket No. 01-108: In the Matter of Year 2000 Biennial Regulatory Review - Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service And other Commercial Mobile Radio Services

Dear Ms. Salas:

The Telecommunications Industry Association (TIA) hereby submits the enclosed comments in the above-captioned proceeding. Pursuant to Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415 and 1.419, and paragraph 74 of the Notice of Proposed Rulemaking, an original and nine (9) copies are enclosed.

If you have any questions concerning this filing please contact the undersigned.

Respectfully Submitted,

Derek R. Khlopin
Director, Law and Public Policy

Enclosure

No. of Copies rec'd _____
List ABCDE _____

049

1300 Pennsylvania Ave., NW
Suite 350
Washington, DC 20004
USA
+1.202.383.1480
FAX +1.202.383.1495
TTY +1.202.383.1499
www.tiaonline.org

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

RECEIVED
JUL - 2 2001
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Year 2000 Biennial Regulatory Review -)
Amendment of Part 22 of the Commission's)
Rules to Modify or Eliminate Outdated Rules)
Affecting the Cellular Radiotelephone Service)
And other Commercial Mobile Radio Services)

WT Docket No. 01-108

COMMENTS OF THE
TELECOMMUNICATIONS INDUSTRY ASSOCIATION

The Telecommunications Industry Association (TIA), pursuant to Sections 1.415 and 1.419 of the Commission's Rules,¹ hereby comments in response to the Notice of Proposed Rulemaking (*NPRM*) in the above-captioned proceeding.²

I. INTRODUCTION

TIA is the leading trade association representing the communications and information technology industry, with approximately 1,000 member companies that manufacture or supply the products and services used in global communications. Among their numerous lines of business, TIA member companies design, produce and deploy commercial wireless network and terminal equipment. TIA wholeheartedly supports and

¹ See 47 C.F.R. §§ 1.415, 1.419.

² Notice of Proposed Rulemaking, FCC 01-153 (released May 17, 2001) (*NPRM*).

applauds the Commission's efforts in this proceeding to eliminate or streamline the numerous regulations contained in the Part 22 service rules³ that are no longer needed nor continue to serve the public interest.

TIA targets its comments to address only those areas in which it believes that the Commission's deliberations might be aided with input from the communications equipment manufacturing industry. TIA does not comment herein on the remaining sections, believing instead that service providers are best suited to address these issues. TIA does support, however, aligning the Part 22 service rules with, for example, the Part 24 service rules,⁴ in order to make consistent the regulatory obligations imposed upon providers of similar commercial services.

II. DISCUSSION

A. General Cellular Rules: Cellular Service Requirements and Limitations

TIA fully supports the Commission's proposal to delete the current Section 22.901(d),⁵ which addresses alternative cellular technologies, and instead add the following language to the introductory paragraph: "In providing cellular services, each cellular system may incorporate any technology that meets all applicable technical

³ 47 C.F.R. Part 22.

⁴ 47 C.F.R. Part 24.

⁵ 47 C.F.R. § 22.901(d).

requirements in this part.”⁶ The current language in Section 22.901(d) clearly is outdated in that digital technology is not referenced explicitly in the rule and therefore falls within the rule’s classification of “alternative technologies.” As the Commission notes, the various forms of digital network architectures are the state-of-the-art technologies being used in wireless networks today. The Commission is correct in its assessment that the current rule should be revised to avoid characterization of particular technologies as primary or alternative.

B. Cellular Technical Rules

1. Analog Cellular Compatibility Standard

TIA supports the FCC eliminating reference to OET Bulletin No. 53 (“OET 53”) in its rules.⁷ In the first place, the current version referenced and incorporated in the rules is overwhelmingly out of date. As the Commission notes, the AMPS standard has been extensively enhanced by TIA to incorporate advances in technology, changes in algorithms, new features, and anti-fraud countermeasures.⁸ Moreover, now that AMPS is a mature, competitive service, a reference to the industry standard is no longer necessary. TIA of course recognizes the distinction between on the one hand removing from the Commission’s Rules OET 53 and its reference of the industry standard, and, on the other,

⁶ *NPRM* at ¶13.

⁷ *Id.* at ¶¶23, 31.

⁸ *Id.* at ¶31.

eliminating the analog service compatibility requirement. The Commission should carefully consider the views of service providers and consumers in reaching a decision on the latter issue.

As part of its discussion of whether to eliminate the analog service requirement, the Commission seeks comment on the potential effect on people with hearing disabilities.⁹ Two basic issues arise in this discussion: the use of TTY devices and hearing aid compatibility. TTY devices are used for people who are deaf and/or who have severe speech difficulties. Hearing aids are used by people who have varying degrees of hearing loss but who are not deaf.

In the case of TTY compatibility with wireless phones, the wireless industry has made great strides in developing standards for each digital air interface that are backward compatible with Baudot code TTY devices. TIA expects that, with few exceptions, the remaining issues will be resolved and service providers will have the necessary equipment upgrades available to deploy in their networks in order for them to be TTY compatible by June 30, 2002, the Commission's deadline by which digital wireless service providers must transmit 911 calls made from TTY devices.¹⁰

TIA and its members continue to address the issues associated with hearing aid compatibility with digital wireless phones. The wireless industry and the hearing aid

⁹ *Id.* at ¶30.

¹⁰ *Id.*, fn. 43.

industry have today a much better understanding of the root causes of the lack of compatibility for many hearing aids with many wireless handsets. The wireless industry worked with the hearing aid manufacturers in the development of ANSI C63.19. ANSI C63.19 is an important evaluative tool for both industries in providing information to users of hearing aids and mobile phones. It is a significant step in evolving toward fuller and more precise solutions for compatibility.

Wireless carriers and manufacturers continue to address the issues for hearing aid compatibility, to improve equipment and provide enhancements to products to meet the needs of people with hearing (and other) disabilities. TIA believes that removal of the analog standard in Part 22 will not in itself impact TTY (Baudot) compatibility nor hearing aid compatibility. The wireless industry's efforts to support these compatibilities are not focused on addressing improvements to the analog standard, but rather, to developing strategies, standards and tools that will enhance performance with digital standards.

2. Electronic Serial Number Rule

TIA believes that the FCC should modify the Electronic Serial Number (ESN) requirements set forth in Section 22.919.¹¹ The current requirements prevent the use of newer, yet equally secure, identification methods, such as SIM cards. Carriers are prevented from deploying advanced technologies that utilize identification methods

¹¹ *Id.* at ¶¶32-36. See 47 C.F.R. § 22.919.

inconsistent with the mandates of Section 22.919. As a result, consumers are unable to enjoy cutting edge, enhanced technologies in cellular services. For this reason, TIA recommends that the reference to the “hardened” ESN be removed.

3. Channelization Requirements

TIA agrees with the Commission that it is unnecessary for its rules to retain the channelization plan used by the original analog cellular technology.¹² TIA therefore supports the Commission's proposal to amend Section 22.905 by removing the channelization plan and to reword the remainder of that section such that it specifies only which portions of the electromagnetic spectrum are allocated to the Cellular Radiotelephone Service and what frequency ranges within that allocation make up the two initial blocks (A and B).

4. Modulation Requirements and In-band Emissions Limitations

As an initial matter, TIA supports the Commission’s proposal to remove the in-band emissions limits.¹³ Furthermore, TIA encourages the Commission to modify its out-of-band emissions requirements set forth in Section 22.917¹⁴ to mirror the requirements contained in Section 24.238.¹⁵ The current rules favor analog technologies and prevent the deployment of advanced technologies. Further, they effectively regulate in a different

¹² *NPRM* at ¶38.

¹³ *Id.* at ¶41.

¹⁴ 47 C.F.R. § 22.917.

manner cellular and PCS providers who provide similar services. To remedy this disparate treatment and to facilitate the full-scale use of enhanced technologies in the cellular frequencies, the Commission should modify its current rules to “match” its Section 24.238 requirements to the greatest extent possible.

TIA does not believe that the specific changes for “Measurement Procedure” in paragraph (b) of the Proposed Changes to the Commission's Rules¹⁶ are appropriate and instead believes that the existing Section 24.238 can be extended to include the Part 22 services.

The International Telecommunications Union – Radio Communications Sector Study Group 1 (“ITU-R SG1”) has been analyzing the problems of out-of-band emissions and spurious emissions for many years. The general philosophy for most services has been to define the emission spectrum into three areas:

- *In-band* – this is typically from the carrier center frequency up to 50% of emission bandwidth (e.g. the point at which emissions are 26 dB below the main carrier level).
- *Out-of-Band* – this is typically from the 50% emission bandwidth point up to 250% of emission bandwidth. The emission limits in this area are typically slightly relaxed from requirements for spurious emissions.
- *Spurious* – this is typically any emission that is greater than 250% of emission bandwidth. For services such as Part 22 and Part 24, the Category A limits in ITU-R SM.329 are specified as an “attenuation of $43+10\log(P)$ or 70 dBc, whichever is less stringent.” The measurement bandwidth is specified as “100

¹⁵ *NPRM* at ¶42. See 47 C.F.R. § 24.238.

¹⁶ See Proposed Rules 22.917(b) and 24.238(b) in *NPRM* Appendix A: Proposed Rule Changes.

kHz for emissions below 1 GHz” and “1 MHz for emissions above 1 GHz.”

Note that the out-of-band area starts at the channel edge and not at the carrier center frequency. However, in the proposed *NPRM* revisions to Part 22,¹⁷ the out-of-band area is defined as “within 1 MHz of the center of the main emission bandwidth.”

When the Commission drafted the Part 24 Rules, they decided that the Rules should be largely technology neutral and therefore the boundary between out-of-band and spurious regions needed to be determined absolutely rather than depend on an emission bandwidth. TIA supports this technology neutral aspect of the current Part 24 Rules and the Measurement Procedure used, which effectively re-defined the “out-of-band” region as extending for 1 MHz from the edge of the licensed frequency block and using a measurement bandwidth of 1% of emission bandwidth up to this edge.

TIA notes that Recommendation ITU-R SM.329 (Spurious Emissions) specifies the measurement bandwidth as “100 kHz for emissions below 1 GHz” and “1 MHz for emissions above 1 GHz.” TIA believes that the Part 24 Rule should be modified by changing only this measurement bandwidth and that it also should be applied in Part 22.

TIA also notes that in the discussion of measurement accuracy, ITU-R SM.329 (Annex 2 section 1.1.2) suggests:

To improve measurement accuracy, sensitivity and efficiency, the resolution bandwidth can be different from the reference bandwidth. For

¹⁷ *Id.*

instance, narrower resolution bandwidth is sometimes necessary for emissions close to the center frequency. When the resolution bandwidth is smaller than the reference bandwidth, the result should be integrated over the reference bandwidth.

TIA suggests that both Part 22 and Part 24 should be modified to explicitly permit use of integration to improve measurement accuracy.

Accordingly, TIA suggests the following language for Section 24.238(b):

§ 24.238 Emission limitations for Broadband PCS equipment.

* * * * *

(b) *Measurement procedure.* Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or more. However, a narrower resolution bandwidth is permitted provided the measured power is integrated over a 1 MHz bandwidth. In addition, in the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Either peak or average measurements may be used, provided that both the emissions and referenced transmitter power are measured the same way. When measuring emissions, the transmitter must be set to operate as close to each of the upper and lower channel block edges as design permits for normal operation.

In addition, TIA suggests the following language for Section 22.917(b):

§ 22.917 Emission limitations for cellular equipment.

* * * * *

(b) *Measurement procedure.* Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, a narrower resolution bandwidth is permitted provided the measured power is integrated over a 100 kHz bandwidth. In addition, in the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1% of the emission bandwidth of the fundamental

emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Either peak or average measurements may be used, provided that both the emissions and referenced transmitter power are measured the same way. When measuring emissions, the transmitter must be set to operate as close to each of the upper and lower channel block edges as design permits for normal operation.

TIA believes that the above changes will not increase potential interference to adjacent band licensees.

5. Wave Polarization Requirement

TIA agrees with the FCC's proposal to amend Section 22.367 of its Rules¹⁸ to provide that cellular licensees are not limited to vertical wave polarization.¹⁹ The rule was intended to reduce the likelihood of interference from cellular transmitters to broadcast television reception on the upper UHF channels. As the Commission noted in the *NPRM*, however, it has since reallocated the adjacent television channels 60-69 for land mobile use. The proposed rule change would allow the use of dual polarization antennas for base stations, resulting in smaller antenna arrays and eliminating additional associated equipment.

¹⁸ 47 C.F.R. § 22.367.

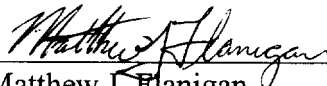
¹⁹ *NPRM* at ¶47.

III. CONCLUSION

TIA applauds the Commission for initiating this much-needed proceeding. The commercial mobile wireless industry continues to evolve at a breakneck speed and regulations with origins at the introduction of cellular service have become obsolete or desperately in need of an upgrade. TIA asks that the Commission consider its above recommendations as it moves ahead in adopting its final changes to the service rules governing the cellular radiotelephone service and other commercial mobile radio services.

Respectfully submitted,

**TELECOMMUNICATIONS INDUSTRY
ASSOCIATION**


Matthew J. Flanigan
President

Grant E. Seiffert
Vice President, External Affairs and Global Policy

Derek R. Khlopin
Director, Law and Public Policy

Bill Belt
Director, Technical Regulatory Affairs

1300 Pennsylvania Ave., NW
Suite 350
Washington, DC 20004
202.383.1480

July 2, 2001