

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

In the Matter of )  
 )  
Establishment of an Interference Temperature ) ET Docket No. 03-237  
Metric to Quantify and Manage Interference and )  
To Expand Available Unlicensed Operation in )  
Certain Fixed, Mobile and Satellite Frequency )  
Bands )

To: The Commission

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

The American Mobile Telecommunications Association, Inc. (“AMTA” or “Association”), in accordance with Section 1.415 of the Federal Communications Commission (“FCC” or “Commission”) rules and regulations, respectfully submits its Reply Comments in the above-entitled proceeding.<sup>1</sup> The record in this proceeding, if anything, heightens the concerns raised by AMTA and others in comments on the Commission’s Spectrum Policy Task Force Report (“SPTF”).<sup>2</sup> It is at best premature and may prove entirely unproductive for the FCC to devote resources to the investigation of the potential utilization of an interference temperature metric as a viable spectrum management tool. AMTA recommends that the FCC terminate this broad proceeding and, if appropriate, devote its resources to more tailored efforts to explore this concept in bands and for applications where it may prove optimally suited.

**I. INTRODUCTION**

AMTA is a nationwide, non-profit trade association dedicated to the interests of the specialized wireless communications industry. The Association’s members include trunked

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<sup>1</sup> *Notice of Inquiry and Notice of Proposed Rulemaking*, ET Docket No. 03-237, FCC 03-239 (rel. Nov. 28, 2003) (“Notice”).

<sup>2</sup> *See* Spectrum Policy Task Force Report, ET Docket No. 02-135 (Nov. 15, 2002).

and conventional 800 MHz and 900 MHz Specialized Mobile Radio (“SMR”) operators, and commercial licensees in the 150-174 MHz, 220 MHz and 450-512 MHz bands. AMTA’s members provide third party telecommunications service to a wide variety of users, including those responsible for vital public safety or public service activities. The integrity of their operations is essential if they are to continue to offer service to the public. Accordingly, AMTA and its members have a significant interest in the outcome of this proceeding.

## **II. THE RECORD IS UNAMBIGUOUS: IT IS PREMATURE FOR THE FCC TO ADOPT AN INTERFERENCE TEMPERATURE METRIC AS A SPECTRUM MANAGEMENT TOOL OF GENERAL APPLICABILITY**

The Commission has an ongoing responsibility to explore all credible approaches for enhancing use of the spectrum over which it has stewardship. That is one of its fundamental responsibilities, and ambitious efforts such as its recent SPTF are to be commended. The instant Notice was a product of the SPTF and posited that introduction of an interference temperature matrix “could represent a fundamental paradigm shift in the Commission’s approach to spectrum management....”<sup>3</sup> The FCC initiated this proceeding to generate comment “on the potential of this new approach to interference control and management to promote more efficient use of the spectrum and to possibly create opportunities for new and additional use of radio communications by the American public.”<sup>4</sup>

The two objectives articulated in the Notice both are important. It is essential that the FCC manage interference to promote efficient spectrum utilization. It also is important for the Commission to explore potential opportunities for additional radio use. However, those two aspects of the FCC’s responsibility must be complementary. It cannot undermine ongoing interference management in favor of expanded spectrum utilization. The record in this

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<sup>3</sup> Notice at ¶ 1.

<sup>4</sup> *Id.*

proceeding is unambiguous; even parties that fully support the goal of the Notice caution the Commission that its proposed metric likely would not be broadly applicable. Those with significant expertise with mobile wireless systems raise substantial questions about the use of the concept in that environment.

For example, the Wi-Fi Alliance, whose members' low-power, unlicensed operations presumably would be well served by Commission adoption of an interference temperature metric, expressed the following reservation:

Analysis of propagation effects and the need to accommodate a variety of usage and deployment, along with the need to assure an adequate margin of protection to the incumbent users, suggests that the benefits of a broad measure like interference temperature are limited to cases where large scale aggregates determine that interference.<sup>5</sup>

The Alliance went on to state:

The consequences of introducing [interference temperature] on a large scale are likewise little short of revolutionary in their impact on systems design, deployment, provisioning and management. It would imply an enormous change in the way interference is detected, communicated and acted upon....Operational consequences would include much higher demands on network management resources and therefore higher operating costs. Even assuming that the underlying technical issues could be solved, the Alliance would strongly recommend that the Commission carefully analyze the cost of a major change on transmitting systems design in relation to the expected benefits.<sup>6</sup>

For these reasons, the Alliance recommended that the Commission “give priority to pursuing regulatory activity which identifies and opens fallow spectrum to use by licensed and unlicensed operation.”<sup>7</sup>

The bases for the concerns expressed by the Alliance are detailed in Motorola's comments. It noted that, “The technology necessary for widespread implementation of this

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<sup>5</sup> Comment of the Wi-Fi Alliance at ¶ 6.

<sup>6</sup> *Id.* at ¶ 8.

<sup>7</sup> *Id.* at ¶ 11.

concept is beyond current state of the art, is prohibitively expensive, and would have a significant and unacceptable impact on primary services.”<sup>8</sup>

More specifically, Motorola described the even more troubling issues that would arise should an interference temperature metric be considered for the type of mobile environment in which the Association’s members operate:

Implementing the interference temperature in frequency bands used by land mobile services is particularly challenging. Four characteristics of land mobile services would make it difficult to implement an interference temperature metric in these bands. First, as described below, the mobility of land mobile users makes it impossible to adequately model the interference environment on a dynamic basis. Second, certain technologies operating in bands allocated for land mobile services require significant bandwidth, particularly those that are designed to provide data services. Third, different technologies often operate in the land mobile bands. Fourth, the critical nature of public safety communications warrants the exclusion of any measure such as interference temperature being implemented in frequency bands used for public safety.<sup>9</sup>

The concerns expressed by the Wi-Fi Alliance and Motorola were echoed by parties such as the Telecommunications Industry Association, the leading trade association representing the communications and information technology industry, the Cellular Telecommunications & Internet Association, the broadband wireless industry representative, the United Telecom Council, the national representative on communications matters for the nation’s electric, gas and water utilities, natural gas pipelines and other critical infrastructure entities, and the New York State Office for Technology. While all applaud the Commission for initiating an investigation into the potential of this new spectrum management approach, all have concluded that it is premature to consider implementing it and have urged the Commission to terminate this proceeding. AMTA agrees. There are many issues of significance before the FCC that must be addressed as expeditiously as possible. The record in this proceeding does not warrant further

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<sup>8</sup> Motorola Comments at p. i.

<sup>9</sup> *Id.* at p. 7.

Commission expenditure of time or resources on the interference temperature concept at this time.

### **III. CONCLUSION**

AMTA urges the Commission to terminate this proceeding with the understanding that as the state-of-the-art advances, there will be future opportunities to assess whether the problems identified by Motorola or others can be addressed successfully, consistent with the Commission's overall spectrum management responsibilities.

Respectfully submitted,

**AMERICAN MOBILE TELECOMMUNICATIONS  
ASSOCIATION, INC.**

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