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In the Matter of)	
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Wireless Telecommunications Bureau)	
Request for Comment in the Matter of)	
)	DA 00-2402
Petition for Rulemaking Regarding)	
Hearing Aid Compatibility)	RM-8658
Telephones)	
)	

COMMENTS OF ANSI ASC 63 (EMC)

On behalf of the American National Standards Institute (ANSI) Accredited Standards Committee 63, for Electromagnetic Compatibility (EMC) standards (ANSI ASC 63), I hereby file these comments in response to the Request for Comment in the Matter of the Petition for Rulemaking Regarding Hearing Aid Compatibility Telephones, FCC DA 00-2402. ANSI ASC 63 appreciates this opportunity to provide the FCC with comments in this matter and to present the results of its efforts in support of Hearing Aid Compatibility (HAC) with wireless telephones.

ANSI ASC C63 is asking two actions from the Commission. First, that the Commission encourage the use of the ANSI C63.19 standard so that both wireless telephone and hearing aid manufacturers adopt it and communicate to their customers the ratings assigned to their respective equipment.

The second action-request is that the Commission help consumers be educated in the selection of telephones and hearing aids that work effectively together. This educational effort is the final ingredient for the implementation of the standard.

As the ANSI accredited committee to coordinate EMC standards in the US, ANSI ASC 63 has had a longstanding interest in all issues of electromagnetic interference, including interference involving medical devices and telecommunications products. Further, as the central coordinating body for electromagnetic interference issues in the US, ANSI ASC 63 and its collective membership arguably represent the best technical expertise available in the US on issues of interference and measurement thereof.

As stated in the request for comment by the FCC Wireless Telecommunications Bureau, the recent history of this issue was initiated in 1995 by a petition to the FCC from the HEAR-IT NOW Coalition. The then FCC chairman Reed Hundt responded to this petition by calling the interested parties together in what came to be called the HAC Summit. It was as a result of the HAC Summit-discussions that ANSI ASC 63 became involved in this issue. At this summit meeting, three working groups were formed to find solutions for the issues raised. Subsequently, the Long-Term Solutions User and Bystander Interference Group reached a consensus that a standards development program was needed to establish the equipment requirements, and methods of measurement to determine those requirements are met, for achieving Hearing Aid Compatibility and Accessibility to Wireless Telecommunications. Subsequently, ANSI C63 was asked to undertake this standards effort.

Early in 1996, ANSI ASC 63 was informally approached with a request to initiate a project that would write a standard dealing with the issue of interference to hearing aids in the presence of cellular telephones or other wireless devices. At its April 1996 meeting, ANSI ASC 63 formally established a working group under its subcommittee on medical devices

(Subcommittee 8). The charge to this working group was to carry out its work in cooperation with representatives of organizations representing people with hearing loss, hearing aid manufacturers, the digital and analog wireless telephone industry and other interested parties.

I. We Anticipate Publication of the Standard, C63.19, in January 2001

The working group under Subcommittee 8 has diligently pursued its goal with the result that its standard, *C63.19 – The American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids*, has been completed and approved at all technical levels within ANSI ASC 63. ANSI ASC 63 expects to publish ANSI C63.19 in mid-January 2001, after it completes the final review and editing.

II. The ANSI C63.19 standard establishes compatible EMC requirements for both hearing aids and wireless devices. The standard prescribes tests by which cellular telephones and other wireless products and hearing aids may be evaluated against these requirements. When both hearing aids and wireless telephone devices meet these compatibility requirements they will perform together in an acceptable manner for those who are hearing impaired. **The ANSI standard is a consensus standard validated for effectiveness by multiple research studies.**

Over 100 engineers representing over 60 companies and organizations participated in this work, and it has been monitored by representatives of the FCC laboratory in Columbia, MD. It took more than 4 years for these engineers and researchers to establish a standard, that would serve the needs of the hearing aid user, and simultaneously be technologically achievable by the cognizant hearing aid and wireless device manufacturers. The working group benefited greatly by both government and industry funded research in support of its efforts.

The research included :

1) research supervised by the Rehabilitation Engineering Research Center for Hearing Enhancement, at the Lexington Institute, City University of New York and Gallaudet University. The work of this center identified specific ways interference impacts hearing and word intelligibility and allowed the working group to quantify the requirements that must be accomplished to allow hearing aid wearers to use wireless telephones.

2) research performed by the University of Oklahoma Center for the Study of Wireless EMC (OU Center) was also of great benefit to the committee. The OU Center conducted a number of research projects throughout the course of the committee's work. This work included testing of the effects of cellular phones on hearing impaired individuals based on work by the Hough Hearing Institute in Oklahoma City, OK. Close communication, testing of the efficacy and reproducibility of assessment using ANSI C63.19, assured the validity of the Standard.

Near the end of the Technical Committee's work, the OU Center was commissioned to perform two validation studies of the final draft of the ANSI C63.19 standard. These studies demonstrated that the draft standard had achieved its goals and provided an effective conformance test technique and hence technical solution to assure within measurement uncertainty compatible operation of hearing aids with handheld wireless devices such as cellular telephones. . Equipment that is compliant with the Standard will provide hearing aid wearers the ability to use wireless devices with acceptable performance.

III. To be Effective the ANSI C63.19 Standard must (1) be adopted by Both Concerned Industries and (2) Consumers must be Educated in Equipment Selection

First, for the ANSI C63.19 standard to be effective it is necessary that both wireless telephone and hearing aid manufacturers adopt it and communicate to their customers the ratings

assigned their equipment.. Given that a significant number of companies were represented on the Technical Committee and approved the final draft it is relatively safe to assume that adoption of the final standard will be acceptable. Further, during the final validation studies of the Standard, a number of telephones and hearing aids were found to already demonstrate excellent compliance with the Standard and predictable operation of hearing aids in the presence of wireless products.

The second requirement is that consumers be educated in the selection of telephones and hearing aids, that work effectively together. This educational effort is the final ingredient for the implementation of the standard. Educational efforts are already underway in various venues. For example, ANSI ASC C63 is planning to hold workshops on the ANSI C63.19 standard beginning shortly after the publication of the Standard.

IV. ANSI C63 Encourages the Commission to assist in the Needed Educational Outreach

ANSI C63 believes that at this time the most effective action by the Commission is to assist in the educational efforts needed to support the effective implementation of the ANSI C63.19 standard. The Standard represents the technical consensus of over 100 engineers. The Standard was developed over a 4 year period with great care and significant research support including experiments with actual hearing impaired hearing aid users. At this point educating consumers, audiologists and others involved in equipment selection and sale becomes the final step in the process of implementing an effective consensus solution for the issues of concern in this matter.

ANSI ASC 63 thanks the Commission for this opportunity to comment in this matter.

Respectfully submitted,

ANSI ASC 63

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