BEFORE THE
Federal Communications Commission
Washington, D.C

In the matter of	)	
	)	WT Docket No. 01-309
Section 68.4(a) of the Commisson's Rules	)	RM-8658
Governing Hearing Aid Compatible Telephones	)	

Ex Parte Comments of Self Help for Hard of Hearing People, SHHH, on
Cellular Telecommunication & Internet Association's
Petition for Reconsideration and Clarification

ANSI C63.19 standard
CTIA's petition raises a number of concerns about the FCC's decision to use the ANSI standard by which hearing aid compatibility must be achieved. CTIA is unclear whether the standard has to be transformed from a performance measurement standard into a build-to standard; they complain that the standard is still a work-in-progress and that it needs more testing; they state that the record on the proceeding contains no data or analysis to show that the standard could achieve the reduced RF emissions required by the rule; and that the adoption of a single technical standard has left "little or no incentive" for standards groups to consider alternatives to achieve compatibility.

It is not surprising that CTIA is still looking for ways to stay the Order. Throughout the entire HAC/Wireless proceeding, that started with the proposal of the HAC rules in 2001, CTIA has submitted extensive filings. In fact for the past 8 years since the original petition on this issue was submitted to the FCC, CTIA has thoroughly laid out its views to the FCC, including its reservation about the C63.19 standard, through written comments and ex parte meetings. CTIA presents nothing new in its Petition regarding the C63.19 standard that the FCC has not already taken into consideration and rejected.

CTIA argues that the ANSI standard is not an established technology standard and therefore should not be used to support the mandates. CTIA's argument is not well founded. By such flawed reasoning, there could never be an established standard. The work of standard–setting bodies is never finished, but continues subject to an established process for revision and update. Many standards become established when they are approved and adopted by the American National Standards Institute (ANSI). ANSI C63.19 clearly meets this test. ANSI reviews standards regularly to update and incorporate changing technology.

Further, there is a precedent for the FCC using a standard that could very well be revised and updated. In the Telecommunications for the Disabled Act of 1982, the FCC adopted a standard but cautioned that adoption of the standard did not preclude "EIA from developing new standards or revising its recommended standards to reflect changes in technology." Rather than freeze technology by specifying a particular design for hearing

aid-compatibility, in this case inductive coupling, the FCC remained open to technological alternatives to inductive coupling so long as they made the telephones hearing aid compatible by internal means. The fact that the ATIS Technical Incubator is taking place to further refine the standard is insufficient reason to question the Commission's incorporating the standard into the regulations.

The C63.19 committee was represented by 16 participants from 11 organizations of the hearing aid industry, 20 participants from 9 organizations of the wireless industry, and 14 participants of 9 organizations of federal agencies, testing labs, and research, for a grand total of 50 participants from 29 organizations. This diverse committee reached agreement and the standard was published on October 8, 2001.

CTIA complains that the FCC overlooked hearing aid immunity as a solution using the experience in Australia and Europe as an example. SHHH is puzzled by the apparent attempt to differentiate between hearing aids manufactured in the U.S. and those manufactured elsewhere. The hearing aid industry is truly international. Many, perhaps most, hearing aids sold in the U.S. are in fact manufactured in Europe. What constructive purpose would be served by establishing differing standards for hearing aids sold in America?

Moreover, hearing aid immunity does nothing to address the problem of non-RF magnetic interference from phones. A hearing aid may be entirely immunized against RF emissions but still receive excessive interference when it is in telecoil mode, and to a lesser extent, when it is in microphone mode. Such interference comes from some phones' stray magnetic fields in the audio band. The ANSI standard calls this interference "baseband magnetic noise." By design, the telecoil must receive these magnetic fields if they are present. No amount of shielding or immunity in the hearing aid will make a difference; the only solution to enable telecoil use is for phones to be designed to avoid generating baseband magnetic noise.

Another consideration that has nothing to do with hearing aid RF immunity is the amount of inductive signal produced by the phone for inductive coupling with hearing devices. Inductive coupling allows a telecoil-equipped hearing aid user to receive the speech signals electronically, thereby eliminating the otherwise disabling effects of feedback, distortion, and acoustic background noise. If the inductive signal is too weak, the telecoil user is unable to hear the desired acoustic sound adequately. Making hearing aid telecoils stronger is not the answer as overly strong telecoils pick up undesirable noise from nearby magnetic fields not related to the phone, such as those from fluorescent lights, transformers, and computer monitors. The ANSI standard calls the inductive signal the "desired audio band signal." It is thus imperative for phone manufacturers to design their phones with adequately strong inductive signals, bringing those phones on a par with HAC landline phones.

Satisfactory telecoil use depends on these factors:

- Zero or low RF emissions at the phone's speaker
- Low or no baseband magnetic noise, generated by the phone

- Low or no baseband environmental noise
- The presence of desired audio band inductive signal of a specified minimum strength, generated by the phone
- The frequency response of the desired audio band inductive signal, generated by the phone

CTIA routinely tries to shift the responsibility to hearing aid manufacturers and is looking for ways to minimize what phone handset manufacturers should have to do towards a solution. However, this argument has been thoroughly researched, is already clearly spelled out in the record, and has been reviewed by the FCC. Its time to move on.

CTIA claims: "There is no regulatory safe harbor for manufacturers or carriers if they choose other alternatives or develop proprietary solutions that provide a different yet viable approach than the ANSI C63.19 standard."

SHHH's response to that statement is that the ANSI C63.19 standard is a measurement standard. It does not specify how a manufacturer achieves the performance, so there may be many solutions that meet the requirements. Directional antennas may be one solution to the emissions criteria. There may be more, such as innovative ways to move the components that emit radiation farther away from the hearing aid, or shield the area where a hearing aid needs to be.

The ANSI C63.19 standard specifies measurements that are done with instruments, base station simulators, etc., therefore the human subjectivity factors are removed. To correlate and verify the validity of in situ measurements, a study was conducted by the University of Oklahoma using typical phones and hearing aid users and it was related to the emissions performance specifications. This study gives very strong evidence that usability will be achieved when wireless devices and hearing aids conform to the standard.

Benchmark Requirements

CTIA questions the benchmarks of 25% and 50% created by the new rules stating that the FCC failed to provide a rationale for this requirement and that they did not use "reasoned decision making." CTIA further argues that it is in violation of the Administrative Procedure Act that requires agencies to provide explanations for their actions, including "rational connections" between the facts available and the choices made.

SHHH advocated all along for full removal of the exemption for wireless telephones from the HAC Act. The FCC came through with a partial lifting of the exemption and a phased-in timeline to get to 25% and 50%. Did we consider submitting a Petition for Reconsideration for a 100% benchmark? Absolutely we did. However, we believe that the FCC used reasoned decision making to come up with the benchmarks in a difficult proceeding with many conflicting interests to take into consideration and that our energies would be better spent working with industry to implement the new Order and

make the requirements work for everyone. The proceeding has already dragged on for 8 years since the HEAR-IT-NOW Petition was filed with the FCC in 1995.

Setting benchmarks is typically what the FCC does in disability proceedings. There are many examples of line-drawing that the FCC has done including for wireline phones and captioning where benchmarks were established over an 8-10 year period. The FCC is faced with considering the public interest versus the burdens on industry that will result from fulfilling the needs of the disability population in question. We believe the FCC did due diligence in balancing the various interests in this proceeding. In considering the burdens that might be placed on industry, in particular a disproportionate impact on small phone manufacturers, the FCC adopted a de minimis exception so that if a manufacturer or carrier offers two or fewer digital wireless handset models in the U.S. it is exempt from the compatibility requirements of the Order. Similarly, the FCC allowed three years until the first implementation benchmark for the U3T rating. This was based on consideration of handset design cycles that can take one year or more whereby the FCC concluded that three years should be sufficient time for manufactures to make design changes, if necessary, and begin delivering phones that comply with the telecoil coupling requirements.

Labeling Requirements

CTIA objects to and seeks reconsideration of the Commission's HAC Order requiring manufacturers to place a label on the exterior packaging of wireless phones indicating the U-rating of the digital wireless phone, and expresses concern that providing the U-rating on the exterior packaging is meaningless to a consumer who is not technically savvy and familiar with the U-rating system.

SHHH cannot see how an exterior packaging indication of the U-rating of the phone would be an undue burden, unless a manufacturer had a need to conceal that information from the consumer. There are "technically savvy" consumers who may wish to purchase a phone with a U-rating appropriate to their hearing aid. Requiring that one first purchase the phone, open the package, and read the documentation to ascertain this information is truly an undue burden on the consumer.

SHHH agrees that for some consumers the ratings will be new information. However, with time and education from hearing health professionals, the wireless industry, consumer groups and the FCC and FDA, we are confident that U and UT will become understood and part of telecommunications access "lingo" among consumers. The FCC has committed to a consumer education campaign together with the FDA. SHHH is ready to play its part to ensure that consumers become savvy about wireless phones and how to recognize if they are accessible to hearing aid and cochlear implant wearers. There is no reason why we could not include both the U ratings and a more general statement along the lines suggested by CTIA on the packaging. Reading the statement and the rating together will speed up consumers' education. A more detailed explanation of the U rating can be posted to carrier, supplier, and industry websites, and included in the telephone's manual.

It is important to note that the ATIS Technical Incubator has put together a committee to study the issue of labeling and we can expect creative ideas to come out of that effort. SHHH has representation on that committee.

Live Testing Requirement

CTIA contends the Commission's live testing requirement is not necessary in view of the recent implementation of the CTIA Voluntary Consumer Information Code, and claims the Voluntary Consumer Information code, that allows for a minimum 14-day trial period, provides a more consumer-friendly approach than the FCC's live testing requirement. This program allows consumers to try out phones in a variety of weather, traffic and location conditions before confirming a contract for a particular service. SHHH applauds CTIA for introducing the program. However, consumers have told us repeatedly that they want to test the effectiveness of a product before buying it, and not go through the hassle of returning it. Even though testing in the store is limited, for everyone, irrespective of hearing ability, it does give consumers with hearing loss a way to evaluate the volume and interference levels. For a more thorough test in different environments they can then use the 14-day trial period to see if they will keep the phone. SHHH urges the FCC to keep the live testing requirement.

SHHH appreciates the opportunity to submit these comments regarding the FCC's rules governing hearing aid compatible phones.

Respectfully submitted,

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