Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets	)	WT Docket No. 15-285
	)	
	)	
Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets	)	WT Docket No. 07-250

American Cochlear Implant Alliance Comments Regarding Hearing-Aid Compatible Mobile Handsets NPRM

American Cochlear Implant Alliance (ACI Alliance) appreciates the opportunity to comment on the NPRM regarding hearing-aid compatible handsets. ACI Alliance is a new non-profit organization of clinicians, scientists, and educators who work in the field of cochlear implantation, as well as parent and consumer advocates. We are the only membership organization in the US focused on cochlear implantation. Our mission is to advance the gift of hearing provided by cochlear implantation through research, advocacy and awareness.

Background on Cochlear Implants and Telephone Use

Cochlear implant devices provide access to meaningful sound for adults and children who have severe to profound hearing loss and wish to communicate by listening and talking. A cochlear implant is an electronic medical device designed to restore the ability to perceive sounds and understand speech by individuals with severe to profound hearing loss. Cochlear implants bypass damaged hair cells in the cochlea and stimulate the remaining nerve fibers directly through the application of electrical current.

While hearing aids help the majority of individuals with hearing loss, even the most advanced hearing aids cannot provide meaningful access to sound for those with hearing difficulties associated with cases of severe to profound hearing impairment. As of December 2012, the National Institutes of Health estimated that the total number of cochlear implant recipients (children and adults) in the United States was 96,000.[1] With the expansion in FDA adult candidacy criteria in 2014 to include individuals with more low frequency residual hearing, this number will continue to grow rapidly. At present, fewer than 10% of individuals in the US who have an audiological profile allowing them to benefit from a cochlear implant have one.[2] This information on the size of the population and the likelihood of continued rapid growth is relevant to the issue of

[1] http://www.nidcd.nih.gov/health/hearing/pages/coch.aspx.

[2] Sorkin DL, Buchman CA. Cochlear implant access in six developed countries. *Otology & Neurotology*. 2015, 37:e161–e164.

personal hearing technology and compatibility with mobile handsets as it demonstrates that this is a large and growing population of motivated hearing technology users. With the expansion in candidacy criteria, the proportion of hearing technology users who are cochlear implant recipients will increase in the years ahead. We must consider their needs as well alongside those of hearing aid users.

Two studies, one published in 2004 and a second in 2006 estimated that 70% and 71%, respectively, of cochlear implant recipients were regular telephone users initiating and receiving telephone calls[3],[4]. The 2004 study found that a higher number of cochlear implant recipients (95%) used voice telephones with family and friends. This is due to the fact that individuals who pursue cochlear implants are aggressively seeking the opportunity to hear. In addition, unlike hearing aid use by individuals with a severe to profound hearing loss, cochlear implants provide access to the full range of voice tones and environmental sounds(low frequency to the highest pitches), allowing most CI recipients to understand speech—to a great degree—without visual clues.

Suggestions to Improve Consumer Access to Mobile Telephones

We appreciate the opportunity to comment on the Proposal regarding the ways in which consumer organizations and the wireless industry might work together to improve access.

We support the Consumer Groups' Comments led by Hearing Loss Association of America urging the FCC to expeditiously move forward with a framework that would facilitate the 100% proposal without delay.

We have several concerns and comments that we would like to share regarding consumer access by those who use cochlear implants and other implantable hearing technologies such as Auditory Osseointegrated Devices (sometimes called Bone-Anchored Hearing Aids).

1. These specialized implanted hearing devices provide valuable options for the range of hearing impairments that exist in the population. Hearing loss varies as to the type and severity and there are now a range of hearing devices that specifically address the type and level of hearing loss of an individual.

   Though the FCC and industry has assumed that the needs of cochlear implant users are the same as those of hearing aid users, it appears that neither industry (nor any researcher) has rigorously compared the effect of mobile telephone interference on users of hearing technologies other than hearing aids. We wonder if the interference issues are worse, better, or approximately the same for cochlear implant users. Given the large and growing number of individuals using cochlear implants and other implanted hearing technologies, we respectfully suggest that compatibility be explored and better understood for these related but different hearing technologies especially given their growing numbers.

[3] Cray JW et al. An investigation of telephone use among cochlear implant recipients. *Am J Audiology*, 2004 Dec; 13, 200-12.

[4] Anderson I et al. Telephone use: what benefit do cochlear implant recipients receive*? Int J Audiology* 2006 Aug; 45(8) 466-53.

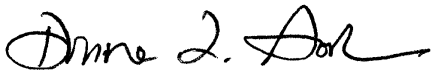
2. At the present time there are three cochlear implant manufacturers that have FDA approval for sale of their devices in the United States. All three companies offer products that have built-in telecoils in their external sound processors, which are worn on the ear similar to a BTE hearing aid. Many recipients rely upon the telecoil to provide them with a satisfactory signal-to-noise ratio on their landline and mobile telephones. Anecdotal reports from cochlear implant recipients indicate that a decreasing number of mobile telephones offer M4/T4 ratings (the lowest amount of interference in both acoustic and telecoil mode). Rather what people are seeing are mobile phones with ratings of M3 and T3. Some cochlear implant recipients report that M3/T3 provide them with degraded sound and a poorer outcome, particularly in business settings when the information is detailed and often fastpaced.

   Since there is no data on the decline in M4/T4 offerings (though recipients feel that this has occurred over time), we urge the FCC to monitor these changes and also to put in place mechanisms that would require manufacturers to produce phones that provide the highest level of hearing access. Given the amount of time that manufacturers have had to improve their products for people who use hearing technology, mobile telephone companies should be required to provide handsets that meet these needed usability standards.

One final comment mirrors the discussion in the Consumer Groups' Comments; this relates to need for greater availability of information for consumers and audiologists. We find that neither hearing care professionals nor individuals with hearing loss are aware of the requirements on phone manufacturers for producing compatible handsets, for labeling, and for providing policies that allow "try before you buy." Signage and information in phone stores as well as knowledge of hearing technology compatibility issues by sales staff is unsatisfactory. Given that most consumers and the clinicians who serve them don't understand the labeling (or even that labeling exists) nor the requirements for accessibility, better information is needed until such time that all mobile phones are fully accessible.

Thank you for the opportunity to provide these comments.

Sincerely,



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