



**MOTOROLA**

January 23, 2003

**VIA ELECTRONIC DELIVERY**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Room TW-A325  
Washington, D.C. 20554

Re: Ex Parte Notice; WT Docket No. 01-309

Dear Ms. Dortch:

On January 22, 2003, Mary Brooner, Tim Harr and Scott Kelley of Motorola, Inc. met with Bryan Tramont, Senior Legal Advisor to Chairman Michael Powell, and Joel Taubenblatt, Deputy Chief of the Policy Division, Wireless Telecommunications Bureau, to discuss the results of research conducted by Motorola on digital wireless phones and hearing aids.

The goals for Motorola's research were to understand better the real-world experience of digital wireless phones for users with hearing aids and to understand better the ability of ANSI C63.19 to predict such results.

The research that was discussed was conducted with volunteer participants who attended the Self-Help for Hard of Hearing (SHHH) convention in June of 2002. Each participant wore an aid device and listened to speech over 9 different digital handsets. The digital handsets were connected to live networks. There were 3 digital handsets tested for each air interface – GSM, TDMA and CDMA. All tested handsets were designed with dynamic loudspeakers, were turned on to maximum volume and had the backlights turned off. The research participants rated 4 aspects of the experience: understandability, interference noise, listening effort and overall quality.

The conclusions drawn from the research were that two types of emissions impact hearing aid usability: intentional cellular RF transmissions (electric and magnetic fields) and other emissions and fields (electric and magnetic fields). Some hearing aids performed very well across all air interface technologies, but others suffer significant interference even with digital wireless phones that score well under C63.19.

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In conclusion, Motorola discussed whether further research needs to be conducted to assess what additional emissions and fields are significant sources of interference and to attempt to characterize these emissions and fields and identify their sources, and to understand why some hearing aids appear to be largely immune to all of these sources of interference. Lastly, Motorola recommended that the analog mode measurement of C63.19 should be eliminated for purposes of rating handsets for performance in the digital mode.

Respectfully submitted,

/s/ Mary E. Brooner

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cc: Bryan Tramont, Office of the Chairman  
Joel Taubenblatt, Deputy Chief, Policy Division, Wireless  
Telecommunications Bureau