

**Before the
Federal Communications Commission
Washington, DC**

In the Matter of)	
)	
Section 68.4(a) of the Commission's Rules)	WT Docket No. 01-309
Governing Hearing Aid Compatible Telephones)	
)	
)	

**Hearing Aid Compatibility Compliance Efforts
Status Report #6**

**Submitted by the Alliance for Telecommunications Industry Solutions (ATIS)
on behalf of The ATIS Incubator Solutions Program #4**

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Industry Solutions**
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I. INTRODUCTION

The Alliance for Telecommunications Industry Solutions (“ATIS”), on behalf of its Incubator Solutions Program #4 – Hearing Aid Compatibility (“AISP.4-HAC” or “Incubator”), hereby files this sixth Status Report on the efforts and inputs of wireless device manufacturers and service providers to comply with the Federal Communications Commission’s (“FCC” or “Commission”) hearing aid compatibility (“HAC”) requirements as defined in the Commission’s *Report and Order* in WT Docket No. 01-309 (“*R&O*”).¹ This report, which is filed pursuant to the reporting requirements adopted by the Commission in the *R&O*, is filed on behalf of the members of the AISP.4-HAC. The Incubator membership, detailed in Section I.A. below, includes wireless service providers, manufacturers, as well as, organizations representing hearing aid consumers.

As with the five previous Status Reports filed by the ATIS Incubator, this sixth Status Report represents collective input from Incubator members and, pursuant to the Commission’s *Public Notice*, is being submitted in lieu of individual status reports from those members.² Individual members of the AISP.4-HAC are provided with the opportunity to submit Individual Status Reports to ATIS for inclusion in this report. These Individual Status Reports are included in Attachment A to this report.

The purpose of this sixth Status Report is to summarize the work leading to the completion of the Incubator’s initial objectives, testing methodology, accomplishments, and results for wireless devices that comply with the hearing aid compatibility standard identified by the FCC – ANSI Accredited Standards Committee (“ASC”) C63.19-2006 Standard (“C63.19 Standard”). The ATIS Incubator has been a model for the industry for dealing with the practical implications of technical issues in an expedited and efficient manner. In little more than three years, the wireless industry, working with the FCC, the FDA, the hearing aid industry, and consumer advocates, has made workable HAC regulations a reality. Cooperation between the key stakeholders affected by this issue made it possible to work important issues simultaneously. Defining and resolving technical issues, educating consumers, testing equipment, and where appropriate, seeking changes to the regulations were completed under the Incubator’s fast-track, consensus-based approach. ATIS is proud of the accomplishments made by its Incubator and its members.

As of November 17, 2006, the manufacturers of wireless devices (“WDs”) have more than 108 models with FCC-granted M3 or T3 or higher ratings on the market in the US and service providers offer 93 models with FCC-granted M3 or T3 or higher ratings.

¹ In the Matter of Section 68.4(a) of the Commission’s Rules Governing Hearing Aid Compatible Telephones, *Report and Order*, WT Docket No. 01-309 (rel. Aug. 14, 2003).

² *Public Notice*, WT Docket No. 01-309 (rel. Mar. 8, 2004).

A. General Overview of AISP.4-HAC

ATIS is a technical planning and standards development organization accredited by the American National Standards Institute and committed to rapidly developing and promoting technical and operational standards for communications and related information technologies worldwide using a pragmatic, flexible and open approach. Industry professionals from more than 350 communications companies actively participate in ATIS' open industry committees and other forums. The ATIS membership spans all segments of the industry, including local exchange carriers, inter-exchange carriers, wireless equipment manufacturers, competitive local exchange carriers, data local exchange carriers, wireless providers, providers of commercial mobile radio services, broadband providers, software developers and internet service providers.

AISP.4-HAC is focused on the technical issues addressing interoperability and compatibility of wireless devices with hearing aids, including the evaluation and test methodology of the measurement standard as referenced in the ANSI ASC C63.19 Standard. AISP.4-HAC is composed of technical experts from the wireless industry representing wireless manufacturers and service providers, as well as technical experts representing the hearing aid industry. Representatives from consumer advocacy and disability groups also actively participate in open AISP.4-HAC meetings.

The AISP.4-HAC has the following membership as of November 17, 2006:

MEMBERS

American Cellular Corporation	Hewlett Packard	Samsung Telecommunications America LP
Brookings Municipal Utilities d/b/a Swiftel Communications	Immix Wireless	Siemens Communication
Carolina West Wireless	Key Communications	Sprint Nextel
Cingular Wireless LLC	Keystone Wireless	Sony Ericsson Mobile Communications (USA) Inc.
Corr Wireless Communications, LLC	Kyocera Wireless	Suncom
Cricket Communications	Leap Wireless	T-Mobile USA
Dobson Cellular Systems, Inc.	LG	UTSTARCOM
Epic Touch	Louisiana Unwired	Verizon Wireless
	Motorola, Inc.	
	NEC America, Inc.	
	Nokia	
	Panasonic	
	Qwest Wireless	
	Research In Motion Ltd	

WORKING PARTICIPANTS

Alexander Graham Bell Association for
the Deaf and Hard of Hearing
American Academy of Audiology
American Academy of Dispensing
Audiology
American Speech-Language-Hearing
Association
ANSI ASC C63™
APREL Labs

CTIA-The Wireless Association®
ETS-Lindgren
Gallaudet University – Technology
Access Program and RERC
Georgia Tech- RERC on Wireless
Hearing Industries Association
Hearing Loss Association of America
PC Test Engineering Laboratory, Inc.
Schmid & Partner Engineering AG

B. FCC Hearing Aid Compatibility Regulations

In 2003, the FCC released its *R&O*, which modified the exemption for wireless phones under the Hearing Aid Compatibility Act of 1988 to require digital wireless phones to be capable of being used effectively with hearing aids.³ In modifying the exemption, the FCC explicitly found that it was technically feasible for digital wireless phones to be compatible with hearing aids based on the established technical standard -- the C63.19 Standard.⁴ The FCC also recognized that this standard was a work in progress and revisions would need to be made to the FCC's rules to accommodate changes in the Standard.⁵

The *R&O* also established the reporting requirements for service providers and WD manufacturers. For the first three years following the effective date of the *R&O*, status reports on HAC compliance efforts were to be filed every six months.⁶ In the fourth and fifth year following the effective date, these reports must be filed annually. This sixth report is the last to be filed on a semiannual basis. The next report must be filed by November 19, 2007.⁷

Over the past three years, AISP.4-HAC has respected the willingness of the FCC to listen and react to the concerns expressed by AISP.4-HAC and its members. The result has been clearer and more effective HAC rules that take into account technical issues and address consumer concerns. For instance, when concerned that compliance with the latest version of the ANSI ASC C63.19 Standard may not be permitted under the FCC's HAC rules, the ATIS Incubator recommended that the FCC clarify the ability of the industry to rely on the newer version of the C63.19 Standard. On April 25, 2005, the FCC released its *Public Notice* to allow industry to rely on the newer version.⁸

³ Section 710 of the Communications Act of 1934, as amended, 47 USC § 710(b)(1)(B).

⁴ *R&O* at ¶43.

⁵ *R&O* at ¶63.

⁶ *R&O* at ¶89.

⁷ Public Notice, WT Docket No. 01-309 (Rel. March 8, 2004); *supra* n.2.

⁸ *Public Notice*, WT Docket No. 01-309 (Rel. April 25, 2005).

When the Incubator recommended changes to the labeling requirements to make HAC WD device labels consistent with the newest version of the ANSI ASC C63.19 Standard and therefore easier for consumers to understand, the FCC reacted appropriately. The FCC revised its rules to require service providers and manufacturers to use the new “M” and “T” rating labels found in the newest version of the ANSI ASC C63.19 Standard.⁹

When the Incubator and its members noted unforeseen difficulties relating to GSM WDs operating in the 850 MHz band, the Incubator undertook an aggressive testing schedule to better identify the scope of the problem and brought its results to the FCC. As a result, the FCC agreed to temporarily waive, upon request, its rules for dual-band GSM WDs. These devices could temporarily use their measurement rating from the 1900 MHz band for the purposes of complying with the FCC’s September 2005 HAC deadline¹⁰ until the ANSI ASC C63.19 Standard was updated and approved. The updated standard (“C63.19-2006”) addresses the issue identified by AISP.4-HAC by providing different measurement values for the 850 MHz band.

AISP.4-HAC and its members recognize that there are challenges that still need to be addressed. The FCC’s HAC rules “require 50 percent of all phone models offered by digital wireless phone manufacturers and service providers to be compliant with the requirements for acoustic coupling ... by February 18, 2008, the date on which wireless service providers may discontinue providing analog service...”¹¹ Shortly after three years after the effective date of the *R&O* (November 17, 2006), FCC staff is directed to provide the FCC with a report to assess the impact of its rules in achieving greater compatibility between hearing aids and digital wireless phones, examine the development of new technologies that could provide greater or more efficient accessibility of wireless telecommunications to hearing aid users and examine the impact of the FCC’s compatibility requirements on cochlear implant and middle ear implant users and their ability to use digital wireless phones.¹² The purpose of this report is to provide the FCC with information that can be used to initiate a proceeding to investigate potential changes to its HAC rules.

Finally, the FCC requires WD manufacturers and service providers to include in their 2007 status reports (due November 19, 2007) information to assist the FCC in making an informed decision on whether to extend the requirements beyond the 50% benchmark.¹³

The ATIS Incubator looks forward to working further on technical issues to assist the FCC and industry with ensuring that consumers continue to benefit from the availability of HAC WDs.

⁹ *Order on Reconsideration and Further Notice of Proposed Rulemaking*, WT Docket No. 01-309 (rel. June 21, 2005).

¹⁰ *MO&O* at ¶8.

¹¹ *R&O* at ¶66.

¹² *Id.* at ¶74.

¹³ *Id.* at ¶91.

II. Consolidated HAC Compliance Report

AISP.4-HAC has prepared a HAC compliance report form for use by its members. Completed Compliance Status Report Forms from individual AISP.4-HAC members are included as **Attachment A**. The wireless industry continues to make great progress in developing and offering HAC-compliant WDs. To date, there are 108 HAC models (rated M3 or T3 or higher) offered by WD manufacturers. Service providers are offering 93 HAC models for use in the US.

The tables below summarize the information provided from individual AISP.4-HAC members in their HAC report forms. This sixth Status Report separates information from the individual status report forms into two tables - the first table summarizes information from the reports filed by wireless device manufacturers and the second table summarizes the information provided by service providers. By separating the status report summary information in this way, AISP.4-HAC can provide a more accurate picture of the availability of HAC WDs by minimizing the possibility of “double-counting” devices.¹⁴

As with previous reports, the information on these tables was created from the attached report forms. The information regarding the number of compliant devices offered by air interface was calculated by examining the information in field 2(b) of the status report forms; the information on the total number of HAC compliant devices was also calculated based on the information in field 2(b); and the information regarding the total number of WDs offered in the US was calculated from the information in field 2(c).¹⁵

Table 1- Consolidated Status Report from Wireless Device Manufacturers on HAC Compliance Devices

	<i>Quantity</i>
Total Number of Wireless Device Manufacturers Providing Individual Compliance Status Report Forms in Attachment A	7
CDMA compliant models	69
GSM compliant models	25
iDEN compliant models	11
*TDMA compliant models	--
UMTS compliant models	2
GSM/WCDMA compliant models	1
Total HAC Compliant WD Models offered:	108
Total WD models offered:	209

**Note: The TDMA air interface is undergoing an industry-wide phase out by 2008. TDMA service providers received a blanket waiver in the June 2005 Order on Reconsideration.*

¹⁴ In the last report, AISP.4-HAC summarized all HAC report information on one table for both manufacturers and service providers. However, the numbers of HAC devices reported by manufacturers and service providers were reported separately in the text of the report.

¹⁵ AISP.4-HAC does not independently evaluate the information provided on these forms.

**Table 2- Consolidated Status Report from Service Providers
on HAC Compliance Devices**

	<i>Quantity</i>
Total Number of Service Providers Providing Individual Compliance Status Report Forms in Attachment A	10
CDMA compliant models	53
GSM compliant models	28
iDEN compliant models	9
*TDMA compliant models	--
UMTS compliant models	3
WCDMA compliant models	0
Total HAC Compliant WD Models offered:	93
Total WD models offered:	260

**Note: The TDMA air interface is undergoing an industry-wide phase out by 2008. TDMA service providers received a blanket waiver in the June 2005 Order on Reconsideration.*

III. AISP.4-HAC Working Group Reports

Working Groups have been formed within the AISP.4-HAC to: (1) direct the focus of experts on specific issues; (2) promote effective member collaboration on ideas; and (3) document recommendations for review and discussion by the full incubator membership. The product of the working groups are vetted by the Incubator's voting membership. Since its inception, the HAC Incubator has formed nine working groups. Of these, five have reached their conclusion, one has been tabled pending further work, and three have been active since the last status report. The closed working groups include:

- WG-1: Simpler HA Testing;
- WG-2: Incubator Process;
- WG-3: IEC-60118-13 and C63.19 HA Requirements;
- WG-5: Accreditation Process; and
- WG-7: Incubator Work Plan

Working Group 9 (WG-9) - GSM and Higher Power has fulfilled its objectives with the 2006 revision to the C63.19 Standard. While it has not been active since the last AISP.4-HAC industry report, it has not been officially closed. It remains open pending the successful hand off to ANSI ASC C63™ of technical work related to HAC requirements for the 700 MHz band.

The reports below are from the following open Working Groups: Working Group 4 ("WG4") - Measurement and Test Plan; Working Group 6 ("WG6") - Labeling and Consumer Outreach; Working Group 8 ("WG8") - Articulation Weighting Factor ("AWF").

A. Measurement and Test Plan (WG-4)

WG-4 has been working on a number of technical issues related to the future of HAC. These issues pertain to both the further refinement of the C63.19 Standard and technical challenges posed by future regulatory mandates.

1. Refinement of the C63.19 Standard

WG-4 has completed its original goal of expediting changes to the C63.19 Standard that were necessary in order for the industry to meet the FCC's established HAC regulations. However, several additional issues were identified during the balloting of the standard that were not able to be addressed in the expedited process initiated by ANSI ASC C63™ Sub Committee 8 ("SC8") Working Group 3. The list of technical issues to be further investigated is included in **Attachment B**. This information was incorporated into an existing C63.19 PINS-C and is being evaluated by SC 8 Working Group 3.

2. Technical Issues Surrounding Future Benchmarks

WG-4 has continued to evaluate the technical challenges presented by the FCC's HAC requirements to ensure that compliance with these rules can be achieved. WG-4's work to date has demonstrated the technical difficulties faced by manufacturers and service providers in meeting these requirements and has suggested revisions to the C63.19 Standard to address these challenges. Future requirements, such as the 50% mandate for HAC in February 2008, will pose additional challenges to both manufacturers and service providers in all air interface technologies.

WG-4 has formed a sub-group of service providers and manufacturers to examine these challenges with the goal of expeditiously developing a proposal that could meet the needs of all involved – manufacturers, service providers, and consumers, without creating undue burden on any of the respective stakeholders.

3. T-Coil Test Issues

WG-4 understands that the manufacturers' wireless device Grant Applications for t-coil compliance are being delayed as the result of the FCC's request for additional tests addressing multiple combinations of vocoders implementations, radio configuration (air channel), and service options that the WD could experience during all operations. As a result, there are as many as 76 possible combinations that could be required to be tested with each WD. Given that each test takes approximately an hour to perform, manufacturers are concerned that the FCC's request is creating an undue burden.

To further clarify this matter, WG-4 is creating a master list of all combinations to identify the complexity of the FCC's request. WG-4 will also evaluate whether a particular subset of combinations should be used to ensure t-coil compatibility. As of this Report, the configuration combinations have been identified and the WG is collecting data on these combinations. The intent is to share the working group's findings with the FCC as soon as possible to demonstrate that these additional vocoders test combinations are not applicable to the real world use of WDs by consumers.

B. Labeling and Consumer Outreach Working Group (WG-6)

WG-6 continues to support its mission to ensure recognizable labels for wireless devices, and provide clear information sources for the wireless industry, hearing healthcare professionals and consumers with hearing loss. In anticipation of the September 16, 2006, t-coil deadline, a consumer brochure was updated to include information on labeling and availability of T-rated wireless devices. That brochure, entitled “Catch the Wireless Wave,” is included in **Attachment C** to this report. WG-6 created this brochure to coincide with the HAC Incubator’s participation in the Hearing Loss Association of America (“HLAA”) annual convention held in Orlando, Florida. The Wireless Center of Excellence, made up of ATIS and Incubator members, provided HLAA participants with an opportunity to try phones, to explore service options, and to talk individually with representatives from both wireless carriers and device manufacturers.

WG-6 has also provided examples of labeling and handset manual language for audiologist training and education to support continuing education classes on HAC given by experts from Gallaudet University. WG-6 continues to promote the use of the recognizable graphic and text-based package labeling for “M” and “T” ratings by the wireless industry. WG-6 is also exploring the possible development of a training video originating from the Wireless RERC at Georgia Tech. The non-proprietary video would be available for use by the wireless industry in order to educate sales staff about HAC and customer support for those with hearing loss seeking to find a phone and service they can use.

C. Articulation Weighting Factor and Modulation Effects (WG-8)

Experimental *in vivo* tests were performed to better understand the cause of inconsistencies observed in previous experiments of cell phone users wearing hearing aids. The intent was to obtain data on the performance of telecoil hearing aids relative to the user experience with WDs with a T3 or higher rating.

Four different *in vivo* experiments were conducted by a team of five members of WG-8 with approximately 60 subjects attending the 2006 HLAA annual convention. Each experiment had a test plan (“TP”) with a specific objective:

- TP1 – Measure telecoil user threshold and acceptable use levels in three planes using unique user worn inductive headloops.
- TP3 – Measure telecoil user hearing aid acoustic and telecoil sensitivity using a Fonix 7000.
- TP4 – Measure telecoil user hearing aid susceptibility (immunity) to 1000 Hz 80% AM modulation using a unique RF test table.
- TP5 – Assess telecoil hearing aid user experience with working handsets available from service providers and manufacturers (Most rated M3, T3 or better).

These experiments, and the results obtained, are described in more detail in **Attachment D**. Key observations include:

- (1) Observation of the collected test data indicated that HA immunity and WD emissions – the measurements required by the C63.19 Standard – are not accurate predictors of usability.
- (2) Most of the test subjects whose t-coil hearing aids measured T1 and T2 were able to find phones that were usable.
- (3) Some of the test subjects with t-coil hearing aids measuring T3 and T4 were not able to find a usable wireless device.

The experiments also demonstrate that hearing aid compatibility is a very complex problem. There are several elements that have an impact on compatibility, including the subject's hearing profile, the RF immunity of the HA, the HA audiologist adjustment, and the RF emissions from the WD. In addition, if the consumer uses the T-coil mode, the elements that affect usability include the HA's magnetic coupling strength, the audiologist T-coil sensitivity settings, the T-coil position within the HA, and the WD's magnetic signal strength.

AISP.4-HAC's test data and observations indicate that the majority of hearing aids made after 2004 are more RF immune than previous HAs on the market. Those consumers who use these hearing aids have a greater degree of choice and compatibility with a wide range of wireless devices regardless of their rating. This data raises certain questions that will need to be addressed and that could be the subject of further AISP.4-HAC work, including:

- (1) What, if any, additional regulatory requirements for HAC are necessary when over 90% of the testing participants (during the past three years of AISP.4-HAC's testing at HLAA conferences) report that they currently have a usable WD?
- (2) When there are so many factors that impact HA compatibility, why has the focus only addressed RF emissions of wireless devices?
- (3) Was there any significant statistically or subjective data to substantiate the C63.19 Standard as a gauge for usability?

IV. FUTURE WORK

During September 2006, members of the HAC Incubator initiated a discussion about the future of the Incubator. Specifically, members revisited the initial objectives that were developed in the program's infancy to determine whether they were met satisfactorily and to identify any remaining tasks. The Incubator has been successful in completing most of its objectives, including most importantly, facilitating the delivery of acceptable lower RF-emitting and telecoil-rated hearing-aid compatible handsets to consumers and has served as an efficient forum for the exchange of ideas between representatives of the wireless industry and the hearing impaired community.

In order to preserve its effectiveness, member organizations determined modifications to the existing AISP.4-HAC mission statement and objectives were warranted. As a result, the program's objectives were re-scoped to better coincide with evolving technologies, equipment and needs of the user community. The Incubator is now in a better position to

continue its role in addressing HAC matters through the review of current or future HAC requirements adopted by the FCC or that may be involved in achieving HAC compliance with future wireless technologies.

V. CONCLUSION

AISP.4-HAC is proud of the work that it has accomplished to foster the availability of hearing aid-compatible WDs. In just three years, the wireless industry has managed and worked through various challenges to make HAC equipment widely available to consumers. As of November 17, 2006, manufacturers have more than 108 models with FCC-granted M3 or T3 or higher ratings on the market in the US. Service providers also offer 93 models with FCC-granted M3 or T3 or higher ratings.

Cooperation fostered by the Incubator's fast-track, consensus-based approach made it possible to:

- identify and resolve technical issues -- through the work of the AISP.4-HAC and its members, issues with the C63.19 Standard have been identified and addressed; additional improvements to the standard have also been implemented;
- validate test equipment and labs – AISP.4-HAC has conducted independent tests to understand and evaluate technical issues related to various test equipment and labs and resolve those challenges through an extensive review/assessment process;
- educate key stakeholders – AISP.4-HAC has worked through its members to develop useful tools to educate consumers, HA manufacturers, audiologists, and the wireless industry regarding HAC; and
- work with the FCC to seek necessary regulatory clarification -- AISP.4-HAC has presented the industry's technical concerns relating to the FCC's HAC rules and to the C63.19 Standard, and appreciates the FCC's willingness to listen and respond to these concerns for clarifications.

Despite the overwhelming success of AISP.4-HAC, unresolved issues remain that need to be addressed. The FCC's HAC rules require 50 % of all phone models offered by digital wireless phone manufacturers and service providers to be compliant with the requirements for acoustic coupling by February 18, 2008. The FCC faces the task of assessing the impact of its rules in achieving greater compatibility between hearing aids and digital wireless phones, examining the development of new technologies that could provide greater or more efficient accessibility of wireless telecommunications to hearing aid users and examining the impact of the FCC's compatibility requirements on cochlear implant and middle ear implant users and their ability to use digital wireless phones.

AISP.4-HAC will investigate these matters, along with the most recent improvements of increased immunity in the latest hearing aids, to determine if there are any other

outstanding issues that need to be addressed by the wireless industry regarding compatibility with new wireless devices and technologies.

WHEREFORE, THE PREMISES CONSIDERED, ATIS, on behalf of AISP.4-HAC, respectfully submits this Sixth Report on Hearing Aid Compatibility Compliance Efforts for inclusion on the record in this proceeding.

Respectfully submitted by:

ATIS on behalf of AISP.4-HAC,



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November 17, 2006

Attachment A -- Status Report Forms

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☒ X Device Manufacturer: ☐ I

a. Company Name: Cellco Partnership
d/b/a Verizon Wireless

b. Contact Name: Michael Samsock

c. Address: 1300 I Street, NW; Suite 400 West

d. City: Washington, DC

e. State:

f. Zip Code: 20005

g. Phone: 202-589-3768

h. Fax: 202-589-3750

i. Email:

Michael.samsock@verizonwireless.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models: (see for example Exhibit A, web site description for a compliant model)

Vendor: Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID	Lab
VENDOR: LG					
LG VX1000	800/1900	CDMA	M3	BEJVBX1000	PCTEST Engineering Laboratory, Inc.
LG VX4700	800/1900	CDMA	M3	BEJVBX4700	PCTEST Engineering Laboratory, Inc.
LG VX5200 & LG 5200pp	800/1900	CDMA	M3	BEJAX5000	PCTEST Engineering Laboratory, Inc.
LG VX9800	800/1900	CDMA	M3	BEJVBX9800	PCTEST Engineering Laboratory, Inc.
VX3400	800/1900	CDMA	M4/T4	BEJVBX3400	PCTEST Engineering Laboratory, Inc.
VX3450	800/1900	CDMA	M4/T4	BEJVBX3400	PCTEST Engineering Laboratory, Inc.
VX5300	800/1900	CDMA	M4	BEJVBX5300	PCTEST Engineering Laboratory, Inc.
VX8300	800/1900	CDMA	M4/T4	BEJVBX8300	PCTEST Engineering Laboratory, Inc.
VENDOR: SAMSUNG					
SCH-a870pp	800/1900	CDMA	M4/T4	A3LSCHA870	PCTEST Engineering Laboratory, Inc.
SCH-a930	800/1900	CDMA	M3	A3LSCHA930	PCTEST Engineering Laboratory, Inc.
SCH-a990	800/1900	CDMA	M4/T4	A3LSCHA990	PCTEST Engineering Laboratory, Inc.
VENDOR: MOTOROLA					
Motorola V325	800/1900	CDMA	M3	IHDT56FA1	PCTEST Engineering Laboratory, Inc.
Motorola V3c	800/1900	CDMA	M4/T4	1HDT56FT1	PCTEST Engineering Laboratory, Inc.
Motorola V3m	800/1900	CDMA	M4/T4	1HDT56FT1	PCTEST Engineering Laboratory, Inc.
Motorola V325i	800/1900	CDMA	M4/T4	IHDT56FA1	PCTEST Engineering

					Laboratory, Inc.
Motorola KRZR K1M	800/1900	CDMA	M4/T4	IHDT56GH1	PCTEST Engineering Laboratory, Inc
Motorola Q	800/1900	CDMA	M3	IHDT56FQ1	PCTEST Engineering Laboratory, Inc
VENDOR: AUDIOVOX					
Audiovox 180VW	800/1900	CDMA	M3	PP4TX-180	PCTEST Engineering Laboratory, Inc.
Audiovox CDM8945	800/1900	CDMA	M4	PP4TX-230	PCTEST Engineering Laboratory, Inc.
VENDOR: RIM					
RIM Blackberry 7250	800/1900	CDMA	M4/T4	L6ARAR20CN	RTS
RIM Blackberry 7130e	800/1900	CDMA	M3/T3	L6ARAV20CW	Timco Engineering, Inc.
RIM Blackberry 8703e	800/1900	CDMA	M4/T4	L6ARBF20CW	Timco Engineering, Inc.
VENDOR: PANTECH					
Pantech PN 210pp	800/1900	CDMA	M3	PP4TX-210	PCTEST Engineering Laboratory, Inc.
Pantech PN 215pp	800/1900	CDMA	M4	PP4TX-215	PCTEST Engineering Laboratory, Inc.
VENDOR: UTS					
UTS VX6700	800/1900	CDMA	M3	NM8PA10A	Compliance Certification Services
UTS G'zOne Type-V	800/1900	CDMA	M3	TYKNX9200	PCTEST Engineering Laboratory, Inc.
VENDOR: NOKIA					
Nokia 2366i pp	800/1900	CDMA	M3/T4	QMNRM-155	American TCB, Inc.
Nokia 6215i	800/1900	CDMA	M4/T4	QMNRM-214	HCT Lab, Korea
Nokia 6315i	800/1900	CDMA	M4	QMNRM-215	Compliance Certification Services
VENDOR: PALM					
Treo 700w	800/1900	CDMA	M3	08FJIMI	Aprel Laboratories
b. Total Number of Compliant Models by Air Interface			c. Total Number of Models (US) by Air Interface		
Air Interface	Number of Models		Air Interface	Number of Models	
CDMA	30		CDMA	46	
TOTAL	30		TOTAL	46	

SECTION 3. PRODUCT LABELING INFORMATION

Verizon Wireless has labeled HAC compliant phones in three ways:

- (1) by the call out card;
- (2) by indicating the M rating on the side of the phone's box;
- (3) by including a brief description of the M rating in the phone's user manual or on an insert enclosed in the phone's box.

SECTION 4. CONSUMER OUTREACH EFFORTS

Verizon Wireless's website has been updated to include information relevant to HAC. The website includes: (1) a description of the ANSI Standard (M and T (where applicable) ratings); (2) a series of six common questions and their answers (3) links to those phones that are HAC compliant.

Sales personnel at stores owned and operated by Verizon Wireless have been trained with an understanding of HAC and the phones offered by Verizon Wireless. Sales personnel may also access from the stores via the internet the information contained on Verizon Wireless's web site (as described above).

Verizon Wireless has employees that are dedicated to disabilities issues including HAC. Those employees (1) regularly interact with customers who require additional assistance due to a disability; (2) participate in trade shows where they educate attendees on the HAC phones offered by Verizon Wireless; and (3) participate in national conventions offered by HLAA.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

Verizon Wireless offers all of the models listed above as HAC compliant in Section 2(a) on a nationwide basis at its brick and mortar locations and via the internet. Some locations that have restricted display space; kiosks for example, may not offer all of the models of a larger store. However, sales personnel at these locations have been trained to direct customers to the web site or to larger, nearby Verizon Wireless locations.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Verizon Wireless continues to work with its OEMs to ensure that new models will be HAC compliant. Verizon Wireless and its OEMs are currently testing multiple new models. Additional HAC compliant models will be launched in 2007.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Verizon Wireless is an active member of the Alliance for Telecommunications Industry Solutions ("ATIS"). Verizon Wireless is also a member of the balloting committee for the C63.19 revisions. As such, Verizon Wireless has contributed to the update being filed by ATIS on behalf of all of its member companies.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

As part of its efforts described in Section 6, Verizon Wireless continues to test new models for HAC compliance.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

Verizon Wireless offers all of the models listed above as HAC compliant in Section 2(a) on a nationwide basis at its brick and mortar locations and via the internet. Some locations that have restricted display space - kiosks for example - may not offer all of the models of a larger store. However, sales personnel at these locations have been trained to direct customers to the web site or to larger, nearby Verizon Wireless locations.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 17, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☒ Device Manufacturer: ☐

a. Company Name: Cingular Wireless LLC

b. Contact Name: Mike Roden

c. Address: 5565 Glenridge Connector

d. City: Atlanta

e. State: GA

f. Zip Code: 30342

g. Phone: 404-236-5894

h. Fax: 404-236-6116

i. Email: mike.roden@cingular.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
Nokia 6102h	850,1900	GSM	M3	PPIRM-77XH
Nokia 6061	850,1900	GSM	M3	QTLRH-74
LG CG 300	850,1900	GSM	M3	BEJC300
LG C2000	850,1900	GSM	M3,T3	BEJC2000
Motorola V3i/V3r	850,1900	GSM	M3,T3	IHDT56GW1
Samsung ZX20	850,1900	GSM, UMTS	M3,T3	A3LSGHZX20
Samsung A707	850,1900	GSM, UMTS	M3	A3LSGHA707
LG CU400	850, 1900	GSM, UMTS	M3, T3	BEJCU400

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
GSM/UMTS(dual mode)	3	GSM/UMTS (dual mode)	5
GSM	5	GSM	35
TOTAL	8	TOTAL	40

SECTION 3. PRODUCT LABELING INFORMATION

HAC certified products are labeled on the exterior of the box with the appropriate M or M and T rating(s). Information describing the ratings is included either as an insert in the box or as a part of the user manual. Cingular has HAC information available on its website, on feature cards located next to phones on display at store locations, and on call-out cards provided at the point of sale.

SECTION 4. CONSUMER OUTREACH EFFORTS

In addition to participation in the Wireless Center of Excellence (WCE) at the Hearing Loss Association of America (HLAA) National convention, Cingular Wireless led outreach efforts in the ATIS AISP.4-HAC Incubator including working with the Wireless Rehabilitation Engineering Research Center (RERC) at Georgia Tech on a proposal to develop a training video to assist customers who use telecoils and personnel who provide sales support in wireless stores. ATIS HAC Incubator companies agreed to provide matching funds for this outreach tool. When developed, it is expected the video will be available for download by any organization working with people who have a hearing

loss, wireless carriers and manufacturers and those interested in hearing aid compatibility with wireless technologies. Cingular Wireless also worked with HLAA to develop and conduct Mystery Shopping with people who use hearing aids at Cingular stores to assess how information about hearing aid compatibility is shared with the public.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

HAC certified compliant models are available in company owned or operated locations within each region and are available online at www.Cingular.com. There are also compliant models for demonstration at company owned or operated locations. In some locations, such as kiosks, handsets may be shipped via overnight courier due to a limited availability of space for stock on hand.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Cingular Wireless is committed to providing its customers with hearing aid compatible wireless devices. Cingular Wireless has dedicated resources at every level for meeting our commitments for HAC. Cingular is participating in HAC standards developments, hosting frequent (often weekly) calls with handset manufacturers and engaging in executive level discussions with leaders from hearing disability groups and handset manufacturers. Cingular Wireless is focused on improving wireless accessibility for all its customers, including deaf and hard of hearing consumers.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Cingular Wireless continues its involvement in the balloting of the C63.19 standard. In May 2006, Cingular Wireless was invited by ANSI ASC C63™ to participate in the balloting of the amendment to C63.19-2006. Cingular Wireless worked with many ATIS HAC Incubator members to arrive at proposed comment resolutions that were submitted for balloting which concluded on November 10, 2006. Cingular Wireless expects the ANSI public review process of the amendment to ANSI C63.19-2006 to begin soon with pending publication to follow this public review cycle.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Cingular Wireless was a major participant in the ATIS HAC Incubator WG-8 testing at the 2006 HLAA convention in Orlando, FL during the week of June 29th 2006. Cingular Wireless had a booth at the Wireless Center of Excellence which was staffed by several Cingular Wireless personnel who interfaced with many hearing aid users during the 2006 HLAA convention. As part of WG-8 testing, Cingular Wireless tested many GSM and UMTS phone models for Telecoil (T-Coil) coupling capability with hearing aid users who visited the booth over the three days of the HLAA Convention exhibit. Participating at the 2006 HLAA convention provided valuable first hand knowledge of the needs of many hearing aid users when selecting wireless handsets for coupling with their hearing aid.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS (Service Providers Only)

HAC certified handsets are offered for sale at company owned and operated locations, Cingular's National Center for Customers with Disabilities (NCCD) and online at www.Cingular.com.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 10, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: *X* Device Manufacturer: ☐

a. Company Name: *Corr Wireless Communications, L.L.C.*

b. Contact Name: *Tom Buchanan*

c. Address: *P.O. Box 1500*

d. City: *Oneonta*

e. State: *AL*

f. Zip Code: *35121*

g. Phone: *205-237-3581*

h. Fax: *205-237-3525*

i. Email:
tbuchanan@corrwireless.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
6101h	800 / 1900	GSM	M3	PPIRM76
6102h	800 / 1900	GSM	M3	PPIRM77XH
RAZR V3c	800 / 1900	GSM	M3	IHDT56EU1
RAZR V3i	800 / 1900	GSM	M3 / T3	IHDT56EU1
LG1400	800 / 1900	GSM	M3	

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
<i>GSM</i>	<i>5</i>	<i>GSM</i>	<i>17</i>
TOTAL	<i>5</i>	TOTAL	<i>17</i>

SECTION 3. PRODUCT LABELING INFORMATION

Only the manufacturer's labeling. No additional labeling used

SECTION 4. CONSUMER OUTREACH EFFORTS

In store product information.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

An adequate supply of all above models are in stock and available for purchase. In addition to the above models, we have the Eli Bluetooth headset which is HAC and works with any Bluetooth phone.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Corr Wireless tests many handsets as they become available from the manufacturers but only stocks the models that have above average RF functionality. The company incorporates as many HAC handsets as possible into its inventory without sacrificing quality.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

None

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Corr Wireless relies on the handset manufacturer's product testing and reports.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

All handsets listed above are available to all of the company's retail locations.

**American Cellular Corporation
Dobson Cellular Systems, Inc.**
STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES
(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION		Service Provider: <input checked="" type="checkbox"/> Device Manufacturer: <input type="checkbox"/>	
a. Company Name: Dobson Cellular Systems, Inc. ("Dobson") & American Cellular Corporation ("ACC")*		b. Contact Name: Herbert Kenney	
c. Address: 14201 Wireless Way			
d. City: Oklahoma City	e. State: OK	f. Zip Code: 73134	
g. Phone: 405-529-8336	h. Fax: 405-529-8765	i. Email: Herbert.Kenney@Dobson.net	

SECTION 2. COMPLIANT PHONE MODEL INFORMATION				
a. Compliant Phone Models				
Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
Motorola V3i	800/1900	GSM	M3/T3	IHDT56GW1
LG 2000	800/1900	GSM	M3/T3	BEJC2000
Motorola V3	800/1900	GSM	M3**	IHDT56EU1
Nokia 6061	800/1900	GSM	M3**	QTLRH-74
b. Total Number of Compliant Models by Air Interface			c. Total Number of Models (US) by Air Interface	
Air Interface	Number of Models		Air Interface	Number of Models
GSM	4 (M3 or T3 or higher)		GSM	19
TOTAL	4 (M3 or T3 or higher)		TOTAL	19

SECTION 3. PRODUCT LABELING INFORMATION

Handset units contain a label affixed to the unit's packaging indicating the M-rating of the phone (and T-rating where applicable), and an owner's manual addendum is included in the packaging that discusses the rating system.

SECTION 4. CONSUMER OUTREACH EFFORTS

In addition to the outreach efforts undertaken by the ATIS HAC Incubator group in which Dobson and ACC are members (the "Incubator Group") that are discussed in the consolidated ATIS Hearing Aid Compatibility Status Report #6 ("Joint Report"), Dobson and ACC have instructed their sales personnel on the availability of HAC-compliant phone models and have instructed sales staff to direct

* Dobson and ACC are wholly-owned subsidiaries of Dobson Communications Corporation ("DCC") and are the two entities through which DCC provides wireless services to the public.

** M-rating certification originally obtained pursuant to waiver relief granted in *Cingular Wireless LLC*, 20 FCC Rcd 15108 (2005). Also Dobson and ACC are in the process of phasing out the Nokia 6061 and are not ordering any additional units of this model. Until inventory is depleted, the Nokia 6061 may still be available at certain retail locations.

those looking for such phones to these models. Dobson and ACC have also made available consumer outreach pamphlets, titled “Get the Buzz Out,” available to consumers through their website and have updated their website to provide consumers with additional information on HAC-compliant phones that are offered by Dobson/ACC. See www.celloneusa.com (hyperlink under “Stay Connected”). The handouts and website material provide consumers with information on the FCC’s requirements and the HAC rating system. To the extent that additional information is developed by industry or the hearing impaired community on the compatibility of certain phone models with particular hearing aids, Dobson/ACC will endeavor to make such information available to consumers.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

With the exception of the Nokia 6061, the HAC-compliant models identified herein are available in the more than 200 retail stores and outlets that are owned and operated by Dobson/ACC. HAC models are also on-hand in each store for live in-store testing. Finally, HAC compliant phones are available on-line at Dobson/ACC’s website, see www.celloneusa.com. Dobson and ACC are in the process of phasing out the Nokia 6061 and are not ordering any additional units of this model. Until inventory is depleted, the Nokia 6061 may still be available at certain retail locations.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Dobson and ACC are not manufacturers of handsets and lack the buying power of a national provider to influence handset design. Given the level of its purchasing needs, neither Dobson nor ACC is able to buy directly from manufacturers; rather, each company buys all of its handsets from third party vendors. Accordingly, Dobson and ACC are unable to dictate or otherwise persuade manufacturers to include certain HAC design elements in new models. However, participation in the Incubator Group does provide a forum by which Dobson/ACC along with other regional, national, and smaller service providers can provide suggestions and feedback to manufacturers as to design elements needed for the production of viable handsets that are HAC compliant.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Efforts undertaken by the Incubator Group, in which Dobson and ACC are voting members, are detailed in the Joint Report and are incorporated herein by reference.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

There is nothing to report at this time.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

There are only minor differences in handset offerings among regions. Most notably, certain high-end handset models are not available in all locations. The HAC-compliant handsets, however, are available in all retail locations. Also Dobson and ACC are in the process of phasing out the Nokia 6061 and are not ordering any additional units of this model. Until inventory is depleted, the Nokia 6061 may still be available at certain retail locations.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 17, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☒ Device Manufacturer: ☐

a. Company Name: EPICTOUCH

b. Contact Name: Troy Barnett

c. Address: P.O. Box 817

d. City: Elkhart

e. State: KS

f. Zip Code: 67950

g. Phone: 620.360.0001

h. Fax: 620.697.4262

i. Email: Tbarnett@epictouch.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
V555 Motorola	1900/850	GSM		IHDT56EA1
6230 Nokia	1900/850	GSM		QTKRH-28
3100 Nokia	1900/850	GSM		PPIRH-50
V3 Motorola	1900/850	GSM		IHDT56EU1
6061 Nokia	1900/850	GSM		QTLRH-74

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
GSM	5	GSM	13
TOTAL	5	TOTAL	13

SECTION 3. PRODUCT LABELING INFORMATION

Point of Sale Collateral.

SECTION 4. CONSUMER OUTREACH EFFORTS

Local Customer Service Assistance.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

In stock.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS
Consideration of variety, price, and availability.
SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS
Compliant.
SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS
Compliant.
SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS <i>(Service Providers Only)</i>
Local Customer service assistance.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☐ Device Manufacturer: ☒

a. Company Name: Kyocera Wireless Corp.

b. Contact Name: C. K. Li

c. Address: 10300 Campus Point Drive

d. City: San Diego

e. State: CA

f. Zip Code: 92121

g. Phone: 858-882-3945

h. Fax:

i. Email: cli@kyocera-wireless.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
KX1	800/1900	CDMA	M3	OVFKWC-KX1
KX5	800/1900	CDMA	M3	OVFKWC-KX5
KX5-5X0	800/1900	CDMA	M3	OVFKWC-KX5-5X0
KX9	800/1900	CDMA	M3	OVFKWC-KX9
K24-2V5	800/1900	CDMA	M4 T4	OVFKWC-K24B
K24-2X0	800/1900	CDMA	M4 T4	OVFKWC-K24B
K24-2W0	800/1900	CDMA	M4 T4	OVFKWC-K24B
K24-2J0	1900	CDMA	M4 T4	OVFKWC-K24-2J0
K322	800/1900	CDMA	M3	OVFKWC-K24
K132	800/1900	CDMA	M3	OVFKWC-K27

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
CDMA	10	CDMA	10
TOTAL	10	TOTAL	10

SECTION 3. PRODUCT LABELING INFORMATION

- Package label listing the HAC rating
- Instruction manual

SECTION 4. CONSUMER OUTREACH EFFORTS

Web pages to provide HAC and Accessibility information.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

HAC phones are available at Carrier Stores, retail and online.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

HAC is part of the design/development specifications. Kyocera is equipped with HAC testing equipment.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Participate in activities related to the HAC standards through the ATIS HAC Incubator and TCBC meetings.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

- Participate in HAC interop testing through the ATIS HAC Incubator.
- Data comparison with external commercial test lab.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: x Device Manufacturer: ☐

a. Company Name: Leap Wireless (dba Cricket)

b. Contact Name: Laurie Itkin

c. Address: 10307 Pacific Center Court

d. City: San Diego

State: CA

f. Zip Code: 92121

g. Phone: 858-882-6226

h. Fax: 858-882-6370

i. Email: litkin@leapwireless.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
Motorola RAZR V3c	800D/1900D	CDMA	M3/T4	IHDT56EU2
Nokia 6265i	800D/1900D/800A	CDMA	M3/T4	QMNRM-66
UT Starcom CDM7025	800D/1900D/800A	CDMA	M3	O6Y-CDM7025SP
Kyocera KX9e	800D/1900D/800A	CDMA	M3	OVFKWC-KX9D
Kyocera Slider Remix	800D/1900D/800A	CDMA	M3	OVFKWC-KX5

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
CDMA	5	CDMA	7
TOTAL	5	TOTAL	7

SECTION 3. PRODUCT LABELING INFORMATION

The HAC compliant ratings are messaged on the exterior of the packaging and in the phone box booklet for each handset.

SECTION 4. CONSUMER OUTREACH EFFORTS

The product details page for each of the compliant handsets on mycricket.com identifies the rating and connects via hyperlink to the ATIS consumer brochure.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

HAC compliant handsets are available thru all Cricket retail stores and thru mycricket.com.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS
With all aspects considered, Cricket will place preference on the HAC compliant handset in the selection process. Also, Cricket will be identifying HAC compliance in our handset technical specification document and will continue to meet the FCC requirement for compliant handsets.
SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS
SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS
SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS <i>(Service Providers Only)</i>
The HAC complaint handsets currently in our handset portfolio are available in all Cricket retail markets.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☐ Device Manufacturer: ☒

a. Company Name: LG Electronics Inc.

b. Contact Name: Eui Soon, Park

c. Address: 60-39, Kasan-dong, Kemchun-ku

d. City: Seoul

e. State:

f. Zip Code: 153-023

g. Phone: 82-2-2033-1110

h. Fax: 82-2-2033-1222

i. Email: espark@lge.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
LG-VX3300	835/1900	CDMA	M3	BEJVB3300
LG-VX4700	835/1900	CDMA	M3	BEJVB4700
LG-VX9800	835/1900	CDMA	M3	BEJVB9800
LG-VX5200	835/1900	CDMA	M3	BEJAX5000
LG-VX8100	835/1900	CDMA	M3	BEJVB8100
LG-VX1000	835/1900	CDMA	M3	BEJVB1000
LG-VX3400	835/1900	CDMA	M4/T4	BEJVB3400
LG-VX8300	835/1900	CDMA	M4/T4	BEJVB8300
LG-VX5300	835/1900	CDMA	M4	BEJVB5300
LG-VX9900	835/1900	CDMA	M3	BEJVB9900
LG-VX8600	835/1900	CDMA	M3	BEJVB8600
LG-VX9400	835/1900	CDMA	M4	BEJVB9400
LG-LX225	835/1900	CDMA	M3	BEJLX125
LG-LX350	835/1900	CDMA	M3/T3	BEJLX350
LG-LX550	835/1900	CDMA	M4/T4	BEJLX550
LG-AX490	835/1900	CDMA	M3	BEJAX490
L1400i	850/1900	GSM	M3	BEJL1400
C2000	850/1900	GSM	M3/T3	BEJC2000
CE500	850/1900	GSM	M3	BEJCE500
CG300	850/1900	GSM	M3/T3	BEJCG300
CU400	850/1900	GSM/WCDMA	M3/T3	BEJCU400

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
CDMA	16	CDMA	18
GSM	4	GSM	9
GSM/WCDMA	1	GSM/WCDMA	3
TOTAL	21	TOTAL	30

SECTION 3. PRODUCT LABELING INFORMATION

Mark and M/T-Rating indications on the Gift Box and HAC Statement on the User's Manual.

SECTION 4. CONSUMER OUTREACH EFFORTS

We have updated the information about HAC on our company's homepage.
(<http://us.lge.com/experience/hac/compatibility.jsp>)

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS**SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS**

For RF emission

Table 7-4 new RF limit in ANSI C63.19 R3.12 was applied to LG product, and all models are satisfying over M3 rate. Additionally LG is trying to improve HAC for GSM1900 band. LG is investigating near field antenna pattern and channel power tuning.

For T-coil

LG is concentrating on two major parts. The one is installation of internal measurement system. LG installed the measurement system and operating now. The other is improvements of T-Coil performance, LG is investigating receiver itself and mechanical part around receiver.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

We are acting as AISP.4-HAC Members.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

We did the interoperability test between Handsets and Hearing Aids.
In conclusion, we didn't feel any different between M1 and M3 Handsets.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 17, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☐ Device Manufacturer: ☒

a. Company Name: Motorola

b. Contact Name: Mary Brooner

c. Address: 1350 "I" Street NW Suite 400

d. City: Washington

e. State: DC

f. Zip Code: 20005

g. Phone: 202-371-6899

h. Fax: 202-842-3578

i. Email: mary.brooner@motorola.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	U.S. Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
V710	800/1900	CDMA	M3	IHDT56EC1
V323	800/1900	CDMA	M3	IHDT56FA1
V325	800/1900	CDMA	M3	IHDT56FA1
V262	800/1900	CDMA	M3	IHDT56ET1
W315	800/1900	CDMA	M3	IHDT56GE1
E815	800/1900	CDMA	M4,T4	IHDT56EL1
E816	800/1900	CDMA	M4,T4	IHDT56EL1
Q	800/1900	CDMA	M3	IHDT56FQ1
V3c	800/1900	CDMA	M4,T4	IHDT56FT1
V3m	800/1900	CDMA	M4,T4	IHDT56FT1
K1m	800/1900	CDMA	M4,T4	IHDT56GH1
L7c	800/1900	CDMA	M4,T4	IHDT56GQ1
V323i	800/1900	CDMA	M4,T4	IHDT56GS1
V325i	800/1900	CDMA	M4,T4	IHDT56GS1
V360	1900	GSM	M3	IHDT6FF1
ic402	800/1900	CDMA	M4	AZ489FT7019
ic502	800/1900	CDMA	M4	AZ489FT7019
V220	800/1900	GSM	M3**	IHDT56ER1
V3*	800/1900	GSM	M3**	IHDT56EU1, IHDT56EU2
V3	1900	GSM	M3	IHDT56EU3
V220	1900	GSM	M3	IHDT56ER2
V3e	800/1900	GSM	M3,T3	IHDT56GL1
V3i	800/1900	GSM	M3,T3	IHDT56GW1
i836	800/1900	iDEN	M3	AZ489FT5828
i760	800/1900	iDEN	M3	AZ489FT5844
i560	800/1900	iDEN	M3	AZ489FT5844
i450	800/1900	iDEN	M3	AZ489FT5844
i875	800/1900	iDEN	M4	AZ489FT5846
i870	800/1900	iDEN	M4,T4	AZ489FT5846
i580	800/1900	iDEN	M3,T3	AZ489FT5848
i850	800/1900	iDEN	M3,T3	AZ489FT5844
i670	800/1900	iDEN	M3,T3	AZ489FT5844

i880	800/1900	iDEN	M3	AZ489FT5853
i885	800/1900	iDEN	M3	AZ489FT5853
b. Total Number of Compliant Models by Air Interface			c. Total Number of Models (US) by Air Interface	
Air Interface	Number of Models	Air Interface	Number of Models***	
CDMA	M=16; T=8	CDMA	15	
GSM	M=7; T=2	GSM	23	
iDEN™	M=11; T=4	iDEN™	25	
UMTS	M=0; T=0	UMTS	0	
TOTAL	M=34; T=14	TOTAL	63	

* The V3 that is listed under these two FCC ID numbers is a single consumer model offering.

** These products were granted via the 850 MHz waiver.

*** The count of total models only includes current shipping models in the U.S. For the purpose of this report, the count does not include live models offered in the U.S. but are not currently shipping in the U.S.

SECTION 3. PRODUCT LABELING INFORMATION

All compliant models have the M- and T-category ratings marked on the exterior of the package.

SECTION 4. CONSUMER OUTREACH EFFORTS

Category ratings and a detailed explanation of the HAC system rating is available for iDEN products at http://idenphones.motorola.com/iden/products/products_home.jsp and for others at <http://www.motorola.com/accessibility>. As mentioned in our previous report, microphone and telecoil listening tests to compare different technologies (CDMA, GSM, iDEN) were conducted at the 2006 annual Self Help for the Hard of Hearing convention. Further testing is planned for the 2007 Hearing Loss Association of America convention. In addition, Motorola attended the 2007 Convention for the Association of Late Deafened Adults (ALDA) and gave a workshop on wireless technology and hearing aid compatibility.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

While all major service providers and multiple retail stores offer Motorola products, it can not be guaranteed that all HAC models offered above are available through the carrier channels.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Several staff-years of engineering effort have been consumed in designing the HAC new models to meet FCC compliance requirements. Numerous computer simulations and special test systems have been developed to predict and evaluate the performance of design possibilities for both RF and Telecoil HAC. It was found that both RF and Telecoil HAC compatibility are more sensitive to product physical design than SAR or ERP performance.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Motorola continues to participate in Working Group 3 that is responsible for the standard. In addition, during this period one of our C63 participants became vice chairman of ANSI C63 Subcommittee 8, Medical Devices. Motorola also is participating in ATIS working groups dealing with C63.19 issues.

- WG-4 – Test Plan (Motorola – chair)
- WG-6 -- Labeling
- WG-8 – Articulation Weighting Factor (Motorola – chair)

Motorola has led the industry to examine the interpretation of how T-Coil measurements are made, and significant inputs have been given via ATIS WG-4 as inputs to the recent Amendment to C63.19.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Motorola chairs the ATIS Working Group 8 which conducted subjective listening tests that are described in Attachment D. Motorola also developed a unique RF testing fixture used in that experiment to assess hearing aids.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

n/a

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 06, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☐ Device Manufacturer: ☒

a. Company Name: Nokia inc.

b. Contact Name: David J. Dzumba

c. Address: 6000 Connection Drive

d. City: Irving

e. State: Texas

f. Zip Code: 75039

g. Phone: +1 469-231-3125

h. Fax: +1 972-894-5140

i. Email: david.dzumba@nokia.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
6255i	800/1900	CDMA	M4	QMNRM-19
6015i	800/1900	CDMA	M3	QMNRM-55
3155i	800/1900	CDMA	M4	QMNRM-41
6155i	800/1900	CDMA	M3	QMNRM-59
6265i	800/1900	CDMA	M3	QMNRM-66
6305i	800/1900	CDMA	M3	QMNRM-142
2115i	1900	CDMA	M3	QMNRM-89
6215i	800/1900	CDMA	M4/T4	QMNRM-214
6315i	800/1900	CDMA	M4	QMNRM-215
2865i	800/1900	CDMA	M3	QMNRM-193
2365i	800/1900	CDMA	M3/T4	QMNRM-155
6165i	800/1900	CDMA	M4/T4	QMNRM-125
6101h	850/1900	GSM	M3	PPIRM-77XH
6102h	850/1900	GSM	M3	PPIRM-77XH
6061	850/1900	GSM	M3	QTLRH-74
6126h	850/1900	GSM	M3/T3	PPIRM-126H
6133h	850/1900	GSM	M3/T3	PPIRM-126H
6085	800/1900	GSM	M3/T3	LJPRM-198H

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
CDMA	12	CDMA	17
GSM	6	GSM	31
UMTS	0	UMTS	0
TOTAL	18	TOTAL	48

SECTION 3. PRODUCT LABELING INFORMATION

Compliant models include M and/or T ratings on the box. HAC language in the user's guide.

SECTION 4. CONSUMER OUTREACH EFFORTS

Printed materials for carriers and retail outlets, and individuals, and product information online. Awaiting ratings from hearing aid manufacturers to assist customers in determining probability of usability with digital wireless devices.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

Retail availability of devices at the discretion of Carriers.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Nokia continuously evaluates our product portfolio and future product roadmaps in an effort to incorporate HAC into the widest possible array of models in order to meet the needs of consumers and our carrier customers.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Nokia is an active participant in the ATIS AISP.4-HAC incubator, which, among other activities, addresses interoperability and compatibility of wireless device with hearing aids as referenced in the 63.19 standard.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Testing conducted with consumers at the 2006 HLAA show. Direct contact with hearing aid manufacturers is part of process.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: *X* Device Manufacturer:

a. Company Name: Qwest

b. Contact Name: Craig Kaiser

c. Address: 1801 California St.

d. City: Denver

e. State: Co

e. State: Co

g. Phone: 303-308-5632

h. Fax: 303-672-5999

h. Fax: 303-672-5999

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
UTStarcom CDM-7025	800, 1900	CDMA	M3	O6Y-CDM7025
Sanyo SCP-2400	800, 1900	CDMA	M4 / T4	AEZSCP-24H
Sanyo SCP-3100	800, 1900	CDMA	M4 / T4	AEZSCP-31H
Nokia 6165i	800, 1900	CDMA	M4 / T4	QMNRM-125
Samsung SPH-A640	800, 1900	CDMA	M3	A3LSPHA640S
UTStarcom PPC-6700	800, 1900	CDMA	M3	NM8PA10A

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
CDMA	6	CDMA	13
TOTAL	6	TOTAL	13

SECTION 3. PRODUCT LABELING INFORMATION

Qwest is taking a multi-prong approach to labeling of the hearing aid compatibility rating. In cooperation with the device manufacturers, the HAC rating will be printed on the box of compliant handsets. The Sanyo SCP-2400, SCP-3100, and Nokia 6165i all have the M3 rating printed on the box as the class 2 change was issues after the printed materials where created for these models. Qwest does not feel that this impacts the ability of the customer to be informed of the rating as the consumer only has access to the box after purchasing the handset. At Qwest company owned retail locations the rating is printed on the feature summary placed next to the phone on the merchandizing display. The final labeling component is on the Qwest corporate website both on the disability outreach page (<http://www.qwest.com/residential/disabled/index.html>) and on the Qwest.com web site under wireless phones. The rating of the compliant models will be listed among the individual handset features.

SECTION 4. CONSUMER OUTREACH EFFORTS

Qwest Wireless continues to work on the outreach aspects of the Commission's Order. As Qwest Wireless obtains and offers qualifying handsets that meet the specifications of the Order, it intends to communicate this information to customers in a variety of ways. These communication activities may include posting the hearing aid-compatibility ratings of the qualifying digital wireless phones on Qwest's corporate website; incorporating similar rating information in written material targeted to consumers; training sales personnel on the ratings of the handsets so that this information can be shared with customers as appropriate; and communicating the rating information to consumer and other advocacy groups.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

HAC phones are available at Qwest direct retail locations located in many shopping malls throughout our geographic region, online at Qwest.com, and through our call centers reachable through multiple toll free numbers.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Qwest continues to work with device manufacturers to ensure ongoing support of hearing aid compatibility in new future devices. Additionally, The packaging will also bear the HAC rating for future models. Qwest expects to have additional handsets in a variety of price points and handset categories by the end of the year.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Qwest encourages our suppliers to be actively involved with the standards bodies that are relevant to hearing aid compatibility as well as other wireless communication standards bodies.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Qwest believes that our handset providers are better equipped to perform interoperability testing with hearing aids.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

The compliant handsets are available in all of the areas where wireless service is offered by Qwest.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 17, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☐ Device Manufacturer: ☒

a. Company Name :Research in Motion Limited

b. Contact Name: Dave Dougall

c. Address:295 Phillip Street

d. City: Waterloo

e. State: ON

f. Zip Code: N2L 3W8

g. Phone: (519) 888-7465 x 5380

h. Fax: (519) 880-8193

i. Email: ddougall@rim.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
BlackBerry 7250	800/1900	CDMA	M4/T4	L6ARAR20CN
BlackBerry 7130e	800/1900	CDMA	M3/T3	L6ARAV20CW
BlackBerry 8703e	800/1900	CDMA	M4/T4	L6ARBF20CW
BlackBerry 8705	850/1900	GSM	M3/T3	L6ARBH40GW
BlackBerry 8705g	850/1900	GSM	M3/T3	L6ARBH40GW

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
CDMA	3	CDMA	3
GSM	2	GSM	5
iDEN	0	iDEN	2
TOTAL	5	TOTAL	10

SECTION 3. PRODUCT LABELING INFORMATION

All compliant devices are marked on the product box label with the M-rating according to the labeling recommendations from ATIS WG-6. Within the box, the manual contains an outline explaining the HAC ratings which is based on the recommended description from WG-6.

SECTION 4. CONSUMER OUTREACH EFFORTS

This year, RIM exhibited at the ATIS Wireless Center of Excellence at the 2006 HLAA Convention in Orlando allowing conference attendees to try various BlackBerry models. RIM also participated in the NAD Conference in July 2006, and in the CHHA National Conference in Charlottetown (Prince Edward Island) in June 2006. Models that have been HAC rated have their rating information listed on their product data sheets on the BlackBerry.com site, and a reference page is provided outlining the rating information.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

N/A - Contingent on Carrier retail plans for these particular HAC models.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

RIM is actively investigating approaches for providing hearing aid compatibility in future models, both in terms of reducing RF emissions and for telecoil coupling.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

RIM is an active participant in the ATIS HAC Incubator, including AISP.4 – WG4 Test & Measurement Group, AISP.4 – WG6 on Product Labeling, AISP.4 – WG8 on AWF, and AISP.4 – WG9 on 850 MHz and Higher Power Technology Challenges. RIM also participates in the ANSI C63.19 subcommittee addressing HAC.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

RIM products are tested with the consuming public, including persons with disabilities. RIM provided hearing aid users with an opportunity to test its wireless devices at the 2006 HLAA Conference in Orlando.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 01, 2006)

SECTION 1. COMPANY INFORMATION		Service Provider: <input type="checkbox"/> Device Manufacturer: X		
a. Company Name: Samsung Telecommunications America		b. Contact Name: Kendra Green		
c. Address: 1301 Lookout Drive				
d. City: Richardson		e. State: TX		f. Zip Code: 75082
g. Phone: 972-761-7123		h. Fax: 972-761-7678		i. Email: k.green@samsung.com
SECTION 2. COMPLIANT PHONE MODEL INFORMATION				
a. Compliant Phone Models				
Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
SCH-U420	800/1900	CDMA	M3	A3LSCHU420
SCH-U520	800/1900	CDMA	M4	A3LSCHU520
SPH-M500	800/1900	CDMA	M4/T4	A3LSPHM500
SCH-A645	800/1900	CDMA	M3	A3LSPHA645
SCH-A930	800/1900	CDMA	M3	A3LSPHA930
SCH-A870	800/1900	CDMA	M4/T4	A3LSPHA870
SCH-A990	800/1900	CDMA	M4/T4	A3LSCHA990
SPH-A640	800/1900	CDMA	M3	A3LSPHA640S
SPH-A580	800/1900	CDMA	M3	A3LSPHA580
SPH-A840	800/1900	CDMA	M3	A3LSPHA840
SPH-A120	800/1900	CDMA	M4	A3LSPHA120
SGH-ZX20	GSM 850/900/1800/1900 WCDMA 850/1900	GSM/WCDMA	M3/T3	A3LSGHZX20
SPH-M610	800/1900	CDMA	M4	A3LSPHM610
SGH-A707	GSM 850/900/1800/1900 WCDMA 850/1900	GSM/WCDMA	M3	A3LSGHA707
b. Total Number of Compliant Models by Air Interface			c. Total Number of Models (US) by Air Interface	
Air Interface	Number of Models	Air Interface	Number of Models	
CDMA	12 ¹	CDMA	15	
GSM	2 ^{1 and 2}	GSM	13	
UMTS	2	UMTS	2	
TOTAL		TOTAL		

¹ Samsung notes that, in addition to the models listed above, it offered the SPH-A720, SGH-D407, and SGH-D347T to carriers during 2006. SPH-A720 CDMA model has a rating of M4/T4, SGH-347 and SGH-407T GSM models are both rated M3/T3 under C63.19-2006.

²Other models that are HAC compliant but not listed include SGH-P207, SGH-D307 and SGH-T809. While these models are no longer in production, Samsung did obtain recertification of the handsets as M3 under C63.19-2006. As these models may remain in distribution channels and end users may continue to use these handsets for some time, Samsung is providing this data for informational purposes.

SECTION 3. PRODUCT LABELING INFORMATION

Samsung provides the M- and T-rating information (as applicable), on the packaging and in the user guide.

Two dual-band handset models not listed above that achieved an M3 rating under the terms of the Cingular Waiver Order prior to August 1, 2006 were not recertified as M3-or-higher at both bands. A number of these handsets were delivered to a carrier customer after that date labeled as M3-rated. Samsung is no longer labeling such handsets as M3-rated. Samsung and its carrier customer are in the process of relabeling all handsets still within the carrier customer's possession. Samsung has also offered to send new labels to the carrier customer's independent agent retailers. In the unlikely event that a hearing aid user has purchased one of these models and found it unusable, Samsung will work with that customer to resolve the situation, and has posted a notice on its website so informing consumers. This would include arranging for another HAC handset (whether or not manufactured by Samsung) at no charge, or a refund, as appropriate, after discussion with the consumer.

SECTION 4. CONSUMER OUTREACH EFFORTS

Samsung has engaged in the following efforts: posting product information on Samsung's website; participation in ATIS Working Group 6 - Labeling to develop uniform labeling for HAC compliant phones; and participation in the HLLA convention to educate consumers

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

13 out of 14 HAC compliant models are currently commercially available via carriers, with the other HAC-compliant model to be available commercially through a carrier in the near future.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Samsung has purchased HAC testing equipment for internal testing to determine potential HAC compliant products. Samsung has incorporated the HAC requirements into product roadmaps.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Samsung is an active participant in ATIS HAC Main Working group. Samsung is a member of C63 and participates in WG8 and WG4.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Samsung has provided test equipment for the last two years to assist in testing the usability of HAC compliant models through its membership in ATIS at HLLA convention. Consumers were able to try phone models and user experience data was collected.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

Not applicable.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 17, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☒ Device Manufacturer: ☐

a. Company Name: Sprint Nextel

b. Contact Name: Charles Anderson

c. Address: 2001 Edmund Halley Drive

d. City: Reston

e. State: Virginia

f. Zip Code: 20191

g. Phone: 703-433-8052

h. Fax: 703-433-4035

i. Email:
Charles.Anderson@Sprint.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
i450	800/900 MHz	iDEN	(M3)	AZ489FT5844
i560	800/900 MHz	iDEN	(M3)	AZ489FT5844
i760	800/900 MHz	iDEN	(M3)	AZ489FT5844
i836	800/900 MHz	iDEN	(M3)	AZ489FT5828
i850	800/900 MHz	iDEN	(M3)	AZ489FT5844
i580	800/900 MHz	iDEN	(M3/T3)	AZ489FT5848
i670	800/900 MHz	iDEN	(M3/T3)	AZ489FT5844
i855	800/900 MHz	iDEN	(M3)	AZ489FT5844
i870	800/900 MHz	iDEN	(M4/T4)	AZ489FT5846
PM-225	800/1900 MHz	CDMA	(M3)	BEJLX125
LX350	800/1900 MHz	CDMA	(M3/T3)	BEJLX350
LX550 Fusic	800/1900 MHz	CDMA	(M4/T4)	BEJLX550
c290	800/1900 MHz	CDMA	(M3)	IHDT56FX1
SPH-A420	800/1900 MHz	CDMA	(M3)	A3LSPHA420
SPH-A580	800/1900 MHz	CDMA	(M3)	A3LSPHA580
SPH-A640	800/1900 MHz	CDMA	(M3)	A3LSPHA640S
SCP-2400	800/1900 MHz	CDMA	(M4/T4)	AEZSCP-24H
SCP-3100	800/1900 MHz	CDMA	(M4/T4)	AEZSCP-31H
SCP-8400	800/1900 MHz	CDMA	(M3)	AEZSCP-84H
7250	800/1900 MHz	CDMA	(M3)	L6ARAR20CN
8703e	800/1900 MHz	CDMA	(M4)	L6ARAV20CW

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
CDMA	12	CDMA	26
iDEN	9	iDEN	17
TOTAL	21	TOTAL	43

SECTION 3. PRODUCT LABELING INFORMATION

Sprint Nextel labels HAC-compliant products by working cooperatively with its equipment vendors to print hearing aid compatibility information on the original packaging, as well as in user guides and manuals of HAC-compliant handsets. Additionally, Sprint Nextel is continuously updating, as well as

developing new "Call-out cards" that are available in company retail stores with the appropriate HAC ratings and information. Sprint Nextel also prints materials for shelf displays that include hearing aid compatibility information as new products are introduced in the marketplace that are hearing aid compatible.

SECTION 4. CONSUMER OUTREACH EFFORTS

Sprint Nextel posted information regarding hearing aid compatibility with digital wireless phones on its website, including a list of HAC-compliant handsets and their respective ratings. Sprint Nextel also worked with its handset vendors to revise user guides to include a section containing helpful consumer information about the ratings and interoperability with the consumer's hearing aid. Through its membership in ATIS and CTIA, Sprint Nextel also participates in several events that allow interaction between consumers, service providers and manufacturers. Specifically, Sprint Nextel regularly participates in conventions, such as the Hearing Loss Association ("HLA"). Sprint Nextel also assists in other outreach activities, including producing consumer handouts to be distributed at various events, including HLA and the American Academy of Audiologists events.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

Compliant models are available for viewing and testing at Sprint Nextel owned-and-operated retail stores. These handsets are also available via the company's website and telesales.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Sprint Nextel works with its various handset manufacturers to develop device roadmaps that include multiple HAC handsets to ensure its handset line-up includes the requisite number of compliant HAC handsets.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Sprint Nextel is an active member of the ATIS AISP.4-HAC Incubator and has participated in several Incubator working groups. Moreover, Sprint Nextel participated in the amendment process of C63.19 that established the newest version of the standard. Additionally, Sprint Nextel has participated in efforts to explore the feasibility of a third party certification process.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Sprint Nextel, in cooperation with its handset manufacturers, continues to assist and monitor hearing aid and wireless handset interoperability test efforts through active participation in technical forums. Sprint Nextel teamed with the ATIS Incubator to test hearing aid handset interoperability at the HLA conventions. In addition, Sprint Nextel conducted its own informal tests with individuals wearing hearing aids at various industry conventions.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS (Service Providers Only)

None.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☐ Device Manufacturer: ☒

a. Company Name: Sony Ericsson Mobile Comm.

b. Contact Name: Steven G Coston

c. Address: 7001 Development Drive

d. City: RTP

e. State: NC

f. Zip Code: 27709

g. Phone: 919-472-7527

h. Fax: 919-472-7451

i. Email:
steve.coston@sonyericsson.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
W712a	800 / 1900	GSM	M3 T3	PY7AF042011
Z712a	800 / 1900	GSM	M3 T3	PY7AF042012
Z502a	1900	GSM	M3	PY7AF061011
T292a	1900	GSM	M3	PY7A1061011

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
GSM	4	GSM	18
TOTAL	4	TOTAL	18

SECTION 3. PRODUCT LABELING INFORMATION

Sony Ericsson mobiles are labeled (ex. 'Rated for Hearing Aids: M3 T3') on the DPY packaging label in compliance with the FCC requirements for box labeling. The in-box documentation for HAC compliant models also has the supportive text providing info on HA compatibility, the rating, and the general information on Sony Ericsson Special Needs Center for the consumer.

SECTION 4. CONSUMER OUTREACH EFFORTS

Sony Ericsson products are available through either the web sites www.sonyericsson-snc.com or www.sonyericsson.com. SEM-SNC has met with various Audiologists and HA manufacturers, through HITEC, to provide information, brochures, and FAQ's to assist them in their direct conversations with consumers regarding available and compatible HAC wireless devices. HITEC continues to support over 2,000 audiologists and special needs equipment dealers nationally. Information on HAC is also being circulated to these groups. Additional wireless / HAC information can be found on the CTIA www.accesswireless.org web site.

Sony Ericsson continues to participate as an exhibitor in all HLAA Exhibitors Conferences allowing consumers to try wireless devices with their hearing aids worn. SEM provided mobile products at the HLAA 2006 (Hearing Loss Association of America) conference held in Orlando. Sony Ericsson has

an ongoing dialogue with various consumer advocacy groups through its Special Needs Center partnership with HITEC Group International. HITEC has been in business for over 22 years and is a nationally and internationally recognized provider of assistive technology. Sony Ericsson combined with HITEC'S experience are able to reach a larger group of consumers, advocacy groups, and consult with audiologist and professionals on the latest hearing aids, in our outreach efforts.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

Retail Availability of compliant models is contingent on Carrier Retail Plans for these particular HAC models. SEM HAC models offered are available on the following web sites:

www.sonyericsson-snc.com

www.hitec.com

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

Sony Ericsson is continuing an active investigation in its design efforts to provide hearing aid compatibility in future models. SE is also a Full Corporate Member of ANSI, and has been accepted as an industry member of C63 Sub Committee (SC-8) and Working Group (WG3). SE has also participated in all scheduled mobile tests to assist in identifying and documenting changes submitted to ANSI C63 Std. SE has participated in multiple Carrier coordinated test events to support band differentiation between 850 and 1900 MHz. SE has also worked closely with HA manufacturers, testing HA products, evaluating compatibility to mobiles, and documenting these findings into submissions for the ANSI C63.19 STD and design guidelines for our Development Engineers to consider in early stages of product design.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

Sony Ericsson is co-chair and an active participant in the ATIS HAC Incubator, including AISP.4-WG4 Testing Group, AISP.4-WG6 on Product Labeling, and AISP.4 – WG8 on AWF. All of these groups are recognized contributors into the C63.19 Standard through the ATIS AISP.4 HAC Incubator.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

Sony Ericsson mobiles are evaluated by consumers wearing hearing aids at various exhibitor shows, walk-in Show Rooms, and technology conferences. Although this user experience is subjective, it provides a 'litmus test' for the products and initial consumer impressions. Sony Ericsson has also purchased various hearing aids and conducts interoperability tests in-house on major suppliers of HA devices. Consultation with Audiologists and Hearing Aid manufacturers is allowing our products to be tested with some of the latest HAC devices worn by consumers.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS (Service Providers Only)

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 15, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: ☒ Device Manufacturer: ☐

a. Company Name: SunCom Wireless, Inc.

b. Contact Name: Charles Kallenbach

c. Address: 1100 Cassatt Road

d. City: Berwyn

e. State: PA

f. Zip Code: 19312

g. Phone: 610-722-4280

h. Fax: 610-722-4488

i. Email: ckallenbach@suncom.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
Motorola V3	800/1900	GSM	M3	IHDT56EU1
Nokia 6061	800/1900	GSM	M3	QTLRH-74
LG 1400i	800/1900	GSM	M3	BEJL1400

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
GSM	3	GSM	27
TOTAL	3	TOTAL	27

SECTION 3. PRODUCT LABELING INFORMATION

Compliant products are labeled through the use of labels affixed to the exterior of handset packaging. Additionally, informational material explaining the HAC rating system to consumers is included inside the packaging.

SECTION 4. CONSUMER OUTREACH EFFORTS

SunCom has undertaken outreach efforts to inform consumers about the hearing aid compatibility of the available handsets. For example, in-store displays of the HAC handsets are accompanied by feature cards which indicate that the handsets are hearing aid compatible, with an M3 rating. SunCom has distributed information to its sales associates to educate them about HAC issues and to enable them to better assist consumers seeking a HAC-compliant handset. Consumers may "demo" the HAC handsets by making a live call from the store to assess the compatibility of the handsets with their own hearing device.

If shopping on SunCom's website, www.suncom.com, consumers may quickly and easily "filter" SunCom's handset inventory by selecting an option that will display only the available HAC-compliant handsets. The handset feature descriptions clearly indicate that they are hearing aid compatible,

with an M3 rating. The website's "Help" section provides consumers with general background information about HAC and the HAC rating system.

SunCom is committed to a flexible return policy for hearing aid users who purchase a M3-compliant handset. Hearing device users who purchase one of these handsets, but later experience compatibility problems, have 30 days in which to return the handset for a refund and/or cancel their service without incurring an early termination fee.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

SunCom's HAC-certified handset models are available in SunCom's retail stores and most are also available on SunCom's website, www.suncom.com.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

SunCom must rely on manufacturers to incorporate hearing aid compatibility into new models, and SunCom is dependent on its handset vendors to make compliant handsets available to SunCom. On September 15, 2006, SunCom filed a petition for waiver requesting a four month extension of time to comply with the requirement that service providers offer customers at least two handset models per air interface that satisfy the "T3" rating for telecoil compatibility. As stated in the waiver request, SunCom's handset vendors were unable to provide SunCom with T3-rated handsets by the September 18, 2006 compliance deadline. SunCom plans to offer the M3/T3-rated versions of the Nokia 6126 (the "6126H") and the Sony Ericsson W710, both of which were originally expected in 4Q 2006. SunCom continues to query its vendors regarding the availability of these handsets, and the latest information obtained indicates that there will be additional delays in the shipping dates. Specifically, SunCom has been told that Nokia now expects to make the 6126H available by mid-January 2007, and Sony Ericsson expects to make the W710 available by the end of January 2007. SunCom plans to amend its pending waiver request as needed to reflect the continuing vendor delays.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

SunCom is a member of the ATIS HAC Incubator (AISP.4-HAC), which has been actively involved in assessing and recommending changes to the ANSI C63.19 standard. Also, SunCom will continue to seek information from its vendors regarding the availability of fully compliant handsets.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

SunCom expects handset testing to be performed by the manufacturers.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

The LG 1400i is offered only in SunCom's mainland U.S. markets; it is not offered in Puerto Rico.

STATUS REPORT ON HEARING AID COMPATIBLE WIRELESS DEVICES

(as of November 1, 2006)

SECTION 1. COMPANY INFORMATION

Service Provider: **X** Device Manufacturer: ☐

a. Company Name: **T-Mobile USA, Inc.**

b. Contact Name: **Harold Salters; Shellie Blakeney**

c. Address: **401 Ninth Street, NW, Suite 550**

d. City: **Washington**

e. State: **DC**

f. Zip Code: **20004**

g. Phone: **(202) 654-5900**

h. Fax: **(202) 654-5963**

i. Email: Harold.Salters@T-Mobile.com;
Shellie.Blakeney@T-Mobile.com

SECTION 2. COMPLIANT PHONE MODEL INFORMATION

a. Compliant Phone Models

Model	Band(s)	Air Interface(s)	ANSI C63.19 Rating	FCC ID
RIM 7230	1900	GSM	M3	L6AR6230GE
RIM 8705G	850/900/1800/1900	GSM	M3/T3	L6ARBH40GW
Nokia 6133H	850/900/1800/1900	GSM	M3/T3	PPIRM126H
Samsung X495H	1900	GSM	M3	A3LSGHX495H
Samsung T809	850/1900	GSM	M3	A3LSGHT809
MotorolaV3T	850/900/1800/1900	GSM	M3/T3	IHDT56GW1

b. Total Number of Compliant Models by Air Interface

c. Total Number of Models (US) by Air Interface

Air Interface	Number of Models	Air Interface	Number of Models
GSM	6	GSM	35
TOTAL	6	TOTAL	35

SECTION 3. PRODUCT LABELING INFORMATION

Product labeling information has been included with T-Mobile HAC compliant handsets. Further, T-Mobile continues working closely with its vendors to ensure that HAC information is included on its products, as appropriate. T-Mobile is currently working with one of its vendors to rectify an inadvertent product labeling mistake by the vendor, for two of its handsets. Neither of these handsets is among those sold by T-Mobile as HAC handsets after August 1, 2006.

SECTION 4. CONSUMER OUTREACH EFFORTS

In addition to product labeling as mentioned above, T-Mobile provides customers current information on HAC compliant products through various other means. T-Mobile's price/feature cards ("call out cards") in its retail stores provide the M-rating, and where appropriate the T-rating, for HAC-compliant handsets. HAC product information can also be found on T-Mobile's web page (at T-Mobile.com),

which provides customers information on disabilities access. In addition to these efforts, T-Mobile is developing additional collateral for distribution to consumers. Further, T-Mobile's customer care and retail representatives stand ready to assist customers with any questions on hearing-aid compatible products.

SECTION 5. RETAIL AVAILABILITY OF COMPLIANT MODELS

T-Mobile currently makes all of its HAC compliant handsets available via its retail stores. Customers are able to test HAC handsets at retail stores that are owned and operated by the company.

SECTION 6. EFFORTS TO INCORPORATE HEARING AID COMPATIBILITY INTO NEW MODELS

T-Mobile works closely with its vendors to incorporate hearing aid compatibility into new product offerings. In the FCC's recent Advanced Wireless Services auction, T-Mobile was the top bidder and acquired a total of 120 licenses. Once licenses are granted by the FCC, T-Mobile plans to aggressively deploy a UMTS overlay network at 1.7/2.1 GHz. UMTS handsets will be backward-compatible with T-Mobile's existing GSM infrastructure. T-Mobile will continue to work with vendors to ensure the Company's continued compliance with applicable HAC requirements as its dual-mode UMTS/GSM handsets are introduced into the market.

SECTION 7. ACTIVITIES RELATED TO ANSI C63.19 OR OTHER STANDARDS

T-Mobile is a charter member of and an active participant in the ATIS HAC Incubator (Incubator). One issue the Incubator recently identified, which is of particular interest to certain consumer groups, involves the ANSI standard for labeling of T-Coil rated GSM handsets. A HAC T4 rating is the highest attainable T-Coil rating. As noted below, some GSM handsets labeled as T3 rating may actually be at T4.

For technical reasons, an M4 rating is not achievable on GSM handsets at this time. The ANSI C 63.19 standard provides that the M rating must be consistent with the T rating. Hence, GSM handsets that achieve a T4 rating are labeled T3, solely for the purpose of consistency with the current highest achievable rating of M3. An amendment is pending before ANSI C63.19 to modify the requirement to allow coupling of an M3/T4 rating, which may result in the increased availability of T4-rated GSM handsets.

SECTION 8. EFFORTS TO TEST INTEROPERABILITY WITH HEARING AIDS

T-Mobile participated with the Alliance for Telecommunications Industry Solutions, in live testing of the interoperability of handsets with hearing aids at the Hearing Loss Association of America's annual convention. The convention was held in Orlando, Florida from June 29, 2006 to July 2, 2006.

SECTION 9. INFORMATION REGARDING DIFFERENCES IN HANDSET OFFERINGS AMONG REGIONS IN SERVICE AREAS *(Service Providers Only)*

None. As a national carrier, there are no differences in T-Mobile's handset offerings

Attachment B -- C63.19 Standard: Remaining Technical Issues

Date: 10/26/06

This form may be submitted via E-mail to mweldon@ansi.org

PINS-C: COMMITTEE PROJECT INITIATION NOTIFICATION SYSTEM FORM

(Effective 1/07/05)

*NOTE: Adoptions of an ISO or IEC standards require compliance with ANSI's Sales & Exploitation Policy.

1. Designation of Proposed Standard:	ANSI C63.19 Amendments
2. Title of Standard:	American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids
3. Project Intent: (Check the applicable box below)	3a. Supersedes or Affects: (Specify designation of approved ANS standard(s) to be superseded and/or ISO or IEC standard(s)* to be adopted)
Create new standard	<input type="checkbox"/>
*Adopt ISO or IEC standard (3.0 Expedited Procedures for the Identical Adoption of an ISO or IEC standard as an ANS)	<input type="checkbox"/>
*Adopt modified ISO or IEC standard (2.0 Requirements Associated with the Identical or Modified Adoption of an ISO or IEC Standard as an ANS)	<input type="checkbox"/>
*AND this adoption revises this current ANS	<input type="checkbox"/>
Revise current standard	<input type="checkbox"/>
Revise and Redesignate current standard	<input type="checkbox"/>
Revise, Redesignate and Consolidate current standard	<input type="checkbox"/>
Revise and Partition current standard	<input type="checkbox"/>
Reaffirm current standard	<input type="checkbox"/>
Reaffirm and Redesignate current standard	<input type="checkbox"/>
Addenda to a current standard under Continuous Maintenance: (this document relates to/updates the following base document that is registered under Continuous Maintenance)	<input type="checkbox"/>
Supplement to a current standard	<input checked="" type="checkbox"/>
Withdraw current standard	<input type="checkbox"/>
4. This standard contains excerpted text from an ISO or IEC standard, but is not an ISO or IEC adoption.	Check here if this standard includes excerpted text from an ISO or IEC standard but is not an identical or modified adoption of an ISO or IEC standard.
5. Provide a brief explanation of the need for the project:	<p>During the revision of ANSI C63.19-2006 and amendment 1 to that version several topics were identified that require study for possible introduction to the next revision:</p> <ol style="list-style-type: none"> 1. To extend the upper frequency limit to 700 MHz to 8 GHz. 2. To receive and evaluate new research on the impact of various types of interference on intelligibility and user annoyance.

- | | |
|--|--|
| | <ul style="list-style-type: none">3. To review test method improvements such as:<ul style="list-style-type: none">a. Probe scan increment set based on a formula that is calculated on the probe's width.b. Review T-Coil measurement of intended and unintended signal.c. Provide guidance for technologies not listed like VoIP.d. Review test equipment specifications, specifically Annex D.3, D.4 and D.7.e. In 6.1.1.1.2 and 3 the term "bandpass filter" is used. The application and characteristics of the filter needs further study.f. Articulation Weighting Factors are needed for the newer technologies – e.g., VoIP on CDMA2000 1xEV-DO, UMTS (HSPA), 802.11 (WiFi), and 802.16 (WiMAX) and 802.20.g. Study the positional need for 3 T-Coil positions relative to user needs would be a subject of further study.h. The addition of new frequency bands to the C63.19 standard needs to be included and calibration values need to be assigned. For example, Design/Testing/Simulation of 700, 1700 (AWS) MHz dipole and 2500 (BRS) MHz dipole (thick vs. planar).i. Determine the power measurement that is most closely linked to user experience, peak, RMS or other parameter of power.j. The continuing need for the manual test method.k. The RF probe separation distance is 1.5 cm and the calibration values in table 4.2 were made at 1.0 cm. These calculations need to be redone to the 1.5 cm distance.l. Investigation of the potential for the creation of a square law detector or fast probe test procedure would eliminate the need to determine articulation weighting factors for the current procedures. However this creates two issues:<ul style="list-style-type: none">i. Universality of the square law assumption.ii. What changes would be needed in test equipment to support fast probes and detectors.m. Study application to devices with multiple simultaneous transmissions and multi- |
|--|--|

		frequency transmissions, e.g. MIMO.			
		4. To review any editorial improvements necessary for ease of use.			
6. Identify the stakeholders (e.g., telecom, consumer, medical, environmental, etc.) likely to be directly impacted by the standard:	Manufacturers of cellular phones and hearing aids, service providers, hearing aid wearers, regulators				
7. This PINS revises a previous PINS submittal:		Note: A revised PINS is only required if the previously identified stakeholders have changed substantively (see item 6 on this form.).			
8. Description of Contents of Standard: (Provide a one paragraph description, not to exceed 500 characters.)	This PINS-C proposes the study of the listed topics for possible impact on the ANSI C63.19 standard. Depending on the results of these studies proposals for PINS to either revise or develop amendments will be brought to the committee.				
9. Canvass Developers: (This request must include a statement of how to obtain a copy of the canvass list.)		Check here to request Canvass Initiation Announcement.			
10. Obtain a Copy of the Canvass List: (Specify name of contact or a URL address.)					
11. Consumer Product or Service:		Check here if standard covers Consumer Product or Service			
12. Accredited Standards Developer Acronym:	ANSI ASC C63				
13. Procedure Used for Consensus: (check one)		Canvass	<input checked="" type="checkbox"/>	Committee	<input type="checkbox"/> Organization
14. Submitter: (Specify Accredited Standards Developer submitter's name and complete contact information, address, phone, email, etc.)	Name:	Stephen Berger			
	Title:	President			
	Organization:	TEM Consulting			
	Address:	140 River Rd.			
	City, ST, Zip:	Georgetown, TX 78628			
	Phone:	512-864-3365			
	Fax:	512-869-8709			
	Email:	stephen.berger@ieee.org			

Attachment C -- “Catch the Wireless Wave” Brochure

Try before you buy. It's best to try several phones before making your purchase to find the best match with your hearing aid.

Q. Can I return the phone if it does not work for me after purchase?

A. Be sure to understand the return policy and early termination fees before signing up for any cell phone or service. Since a cell phone's performance with your hearing aid can change depending on your location, your listening experience outside the store may be different.

Q. Do the FCC HAC regulations guarantee that I will be able to use a cell phone with my hearing aid?

A. While there is no guarantee, phones that comply with Hearing Aid Compatibility (HAC) regulations should improve usability for hearing aid users. Hearing loss and hearing aids are highly individualized so it is still advisable to try a cell phone with your hearing aid in the store before making your cell phone purchase.

Q. How do I know if my hearing aids will work with my cell phone?

A. Most new hearing aids contain RF immune circuitry and about half contain a telecoil. These digital hearing aids are designed to be usable with wireless devices with lower RF emissions and magnetic coupling ability. Your hearing healthcare professional will be able to tell you if your hearing aid is immune to RF interference and may need to contact the manufacturer of your hearing aid to determine its immunity rating. Your hearing healthcare professional will also be able to tell you if your hearing aid contains a telecoil.

Q. What if I cannot find a cell phone that works with my hearing aid?

A. You can check with your hearing healthcare professional to determine if there is a hearing aid option for you that may work better with cell phones. Some users may find that accessories such as neckloops may further assist with their use of HAC-rated wireless devices and for using non-rated cell phones.

Resources for Consumers

Many people and organizations contribute to ensuring accessible communication is equally available for all individuals with disabilities, including consumers who have a hearing loss.

For more information, visit:

<http://www.accesswireless.org>

"Catch the Wireless Wave" is courtesy of the ATIS Hearing Aid Compatibility Incubator and CTIA- The Wireless Association™.



CATCH THE WIRELESS WAVE



Hearing Aid Compatibility with Wireless Phones and Services

www.accesswireless.org

The Federal Communications Commission ("FCC") has approved standards and passed regulations for digital wireless device use with hearing aids. In 2001, the FCC modified the exemption for wireless phones under the Hearing Aid Compatibility (HAC) Act of 1988 in light of the rising number of wireless calls to emergency services and the growing trend among wireless carriers to move away from analog services in favor of more efficient and feature-rich digital services. The FCC's HAC requirements for wireless devices include rating and labeling phones for RF emissions for use with hearing aids in the microphone mode and magnetic coupling ability for use with hearing aids in the telecoil mode.

Q. What wireless devices are covered in the HAC requirements?

A. The FCC's HAC requirements include devices used in digital "commercial mobile radio services," more commonly referred to as cellular phone service or wireless phone services. These devices include digital cell phones, mobile phones, and handheld PC's and PDA's that include telephone functionality. Throughout this brochure, all of these types of phones are called wireless devices, cell phones, or phones.

Q. When will hearing aid compatible cell phones be available?

A. The FCC required that nationwide carriers offer a range of phones that comply with HAC regulations for rating and labeling for microphone mode (RF interference) as of September 2005 and for telecoil mode (magnetic coupling) as of September 2006. Many regional carriers also offer phones and support.

Q. Who manufactures wireless devices that have been approved by the FCC?

A. All major handset manufacturers are required to offer HAC-compliant devices and may also offer hands-free accessories to improve usability.

Q. How will I know if a phone is HAC-compliant?

A. HAC-compliant device packages are marked with "M" or "T" ratings to reflect how the wireless device will work with the hearing aid in microphone mode ("M") and in telecoil mode ("T"). Only phones that are tested and meet the minimum rating for HAC, "M3" or "T3," and higher will be labeled. If you see an "M3," "M4," "T3" or "T4" on the box, then the phone has been designated as HAC-compliant. Information about phones that are rated for HAC also will be shown on the display card by the phone in service provider operated retail stores and in the product's manual or packaging insert. If you have questions about the rating of a wireless device or service, ask your service provider or device manufacturer for more information. The higher the "M" rating on the phone, the more likely it is you will be able to use the phone with your hearing aid on the microphone setting. The higher the "T" rating, the more likely you will be able to use the phone with your hearing aid on the telecoil setting.

Q. Do HAC-compliant cell phones look any different from other cell phones?

A. No.

Q. Are HAC-compliant phones more expensive than phones without hearing aid compatibility?

A. No. The range of features and functions of cell phones will impact the price, but hearing aid compatibility will not. Service provider owned and operated stores will offer a range of phones with varying features and prices.

Q. Are there phones I can use with my hearing aid on the microphone setting?

A. As of September 2005, FCC regulations have required that nationwide manufacturers and service providers make available cell phones for use with hearing aids on the microphone setting. These phones have reduced RF interference. Phones that have been tested for microphone mode and are HAC-compliant will be labeled on the box with ratings of "M3" or "M4." There are also phones on the market that work with hearing aids in the microphone setting but they may not be labeled.

Advancements in cell phones and hearing aids offer consumers with hearing loss more freedom to use digital wireless devices, increasing the likelihood consumers will be able to find a cell phone they are **able to use**.

Q. What is a telecoil?

A telecoil is a small device that is built into some hearing aids for use with the telephone as well as assistive listening devices. Not all hearing aids have telecoils. To use the telecoil, generally either the hearing aid is switched to the "T" position or a button on the hearing aid is pushed to select the telecoil setting. The telecoil picks up magnetic fields generated by telephones and converts these fields into sound. Telecoils are particularly useful for telephone communication because they permit the volume control of a hearing aid to be turned up without creating feedback or "whistling," and background noise can be reduced, especially when using cell phones in noisy places.

Q. Are there phones I can use with my hearing aid on the telecoil setting?

A. There may be phones on the market that work with telecoils but they are not labeled. The FCC regulations require that manufacturers and service providers make available two cell phones for use with hearing aids on the telecoil setting as of September 2006. Phones that have been tested for telecoil and are HAC-compliant will be labeled on the box with ratings of "T3" or "T4." There are already phones on the market that work with hearing aids in the telecoil setting but they may not be labeled.

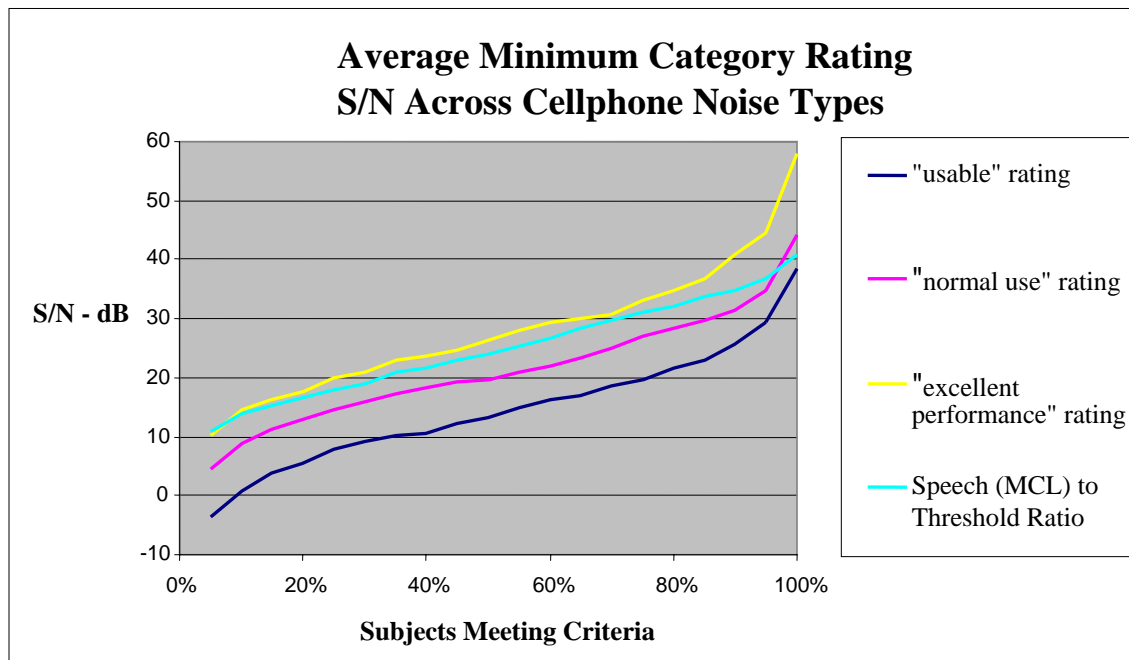
Q. May I try the phone before I buy?

A. It's best to try several phones before buying to find the best match with your hearing aids. Visit a full-service store owned and operated by a service provider and ask to try phones that have been designated as "hearing aid compatible." Since September 2005, stores owned and operated by a wireless service provider are required to provide you with an opportunity to try out phones in the store.

Attachment D – WG-8 Experimental in vivo Tests

Test Plan 1

This test was conducted to obtain greater statistical significance for a similar test conducted earlier in the year and reported upon in the May 2006 report. HA users were subjected to telecoil coupled emulated cellphone interference while listening to a speech signal. The results confirmed the earlier result that 20 dB S/N minimum can be expected to provide about 50% of hearing aid users the FCC mandated C63.19 “normal use” requirement as evident in the following figure independent of the modulation protocol utilized by a cellphone.

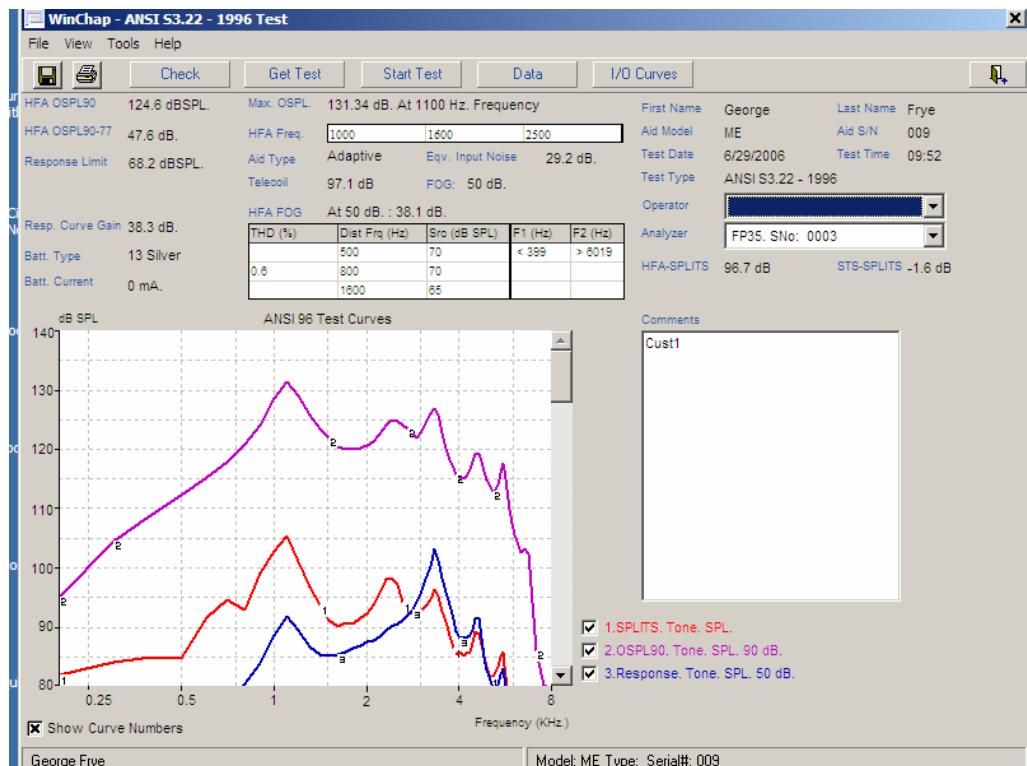


Nearly all users tested were found to have hearing aids with nearly vertical telecoil orientation, emphasizing the importance of testing handset field strength in the radial orientation. It was also found that the inductive field strength to achieve the output sound level equivalent of the acoustic sensitivity varied substantially albeit hearing aid standards suggest consistency.

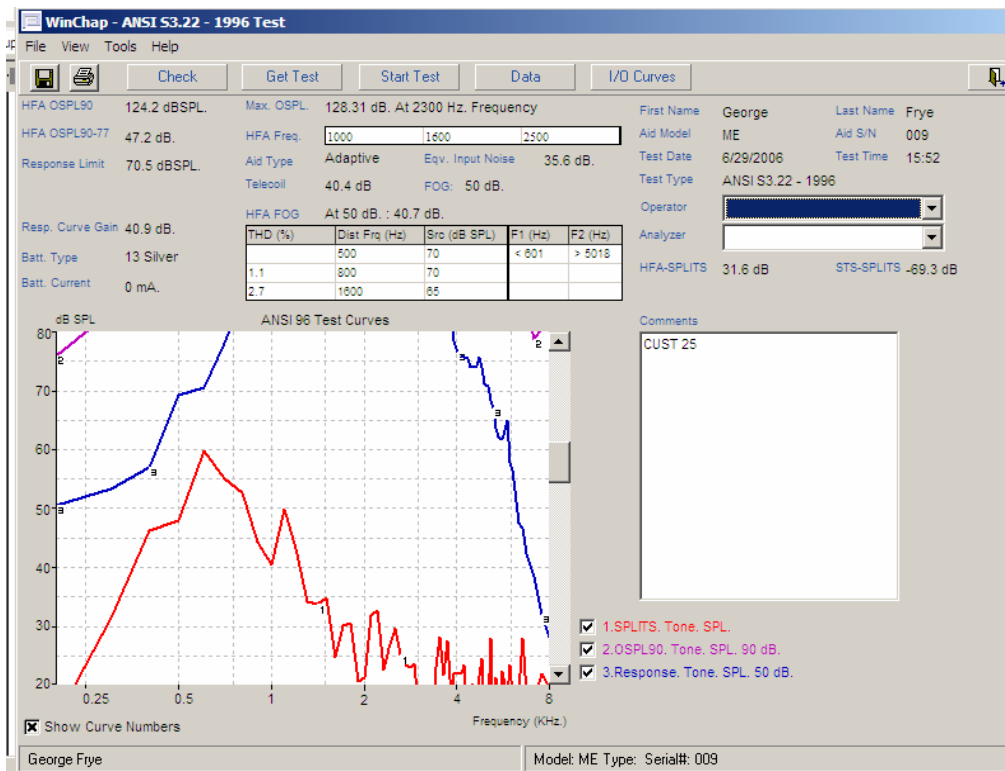
Test Plan 3

It was suspected that a cause of the previously observed inconsistency was due to the hearing aids not having balanced T-coil and microphone sensitivity. This was confirmed using the Fonix test system to objectively measure, per the ANSI 3.22 1996 hearing aid standard, the acoustic and telecoil sensitivity of the hearing aids removed from their users ear. It was found the 87% of the hearing aids tested failed by at least 10 dB the T-coil sensitivity recommended in the ANSI 3.22 hearing aid standard, thus confirming the low telecoil sensitivity observed in TP1 as these were the same hearing aids.

One attendee that used a neck loop with his hearing aid had the following characteristics measured on the Fonix test system.



Also measured with the following result was a HA from a set of hearing aids recently purchased from an audiologist, for \$6,000, that he refused to wear.

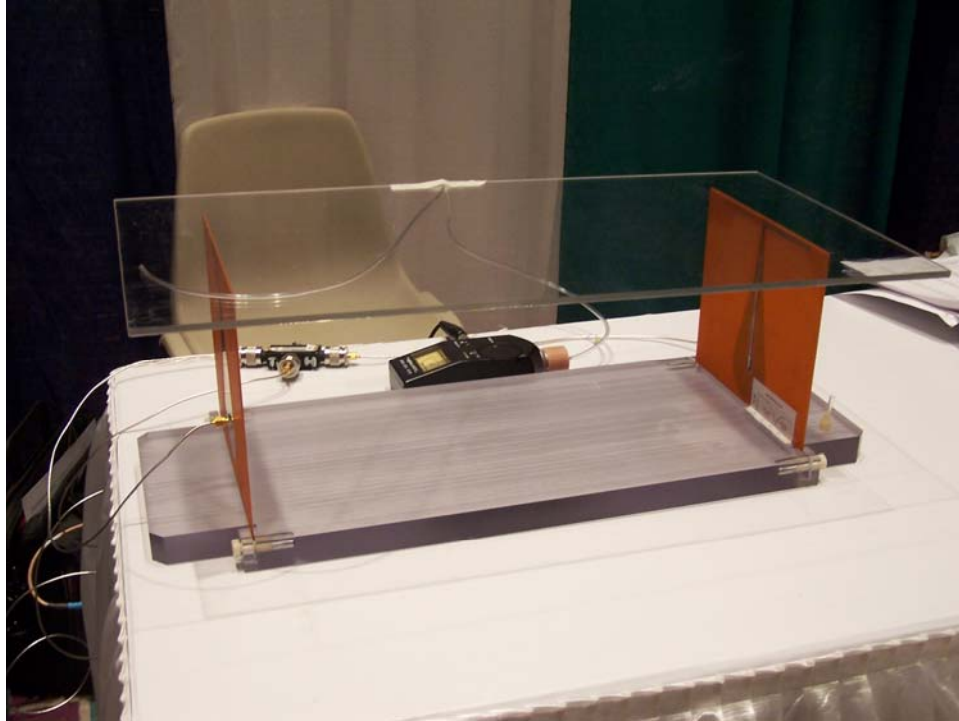


Notice the acoustic frequency response (blue line) of the new HA resembles the old aid's profile while the T-Coil curve (red line) is more than 30 dB lower. Together with a copy of these graphs the attendee took his new aids to the manufacturer's booth. The manufacturer adjusted the T-coil sensitivity setting and the subject returned wearing his new aids, and stated they exhibited less interference than his older aids, but would not wait to enable re-measurement.

Clearly, audiologists need to be made aware of the importance of proper T-coil setting and need to use the commercially available test equipment to test HA telecoil settings.

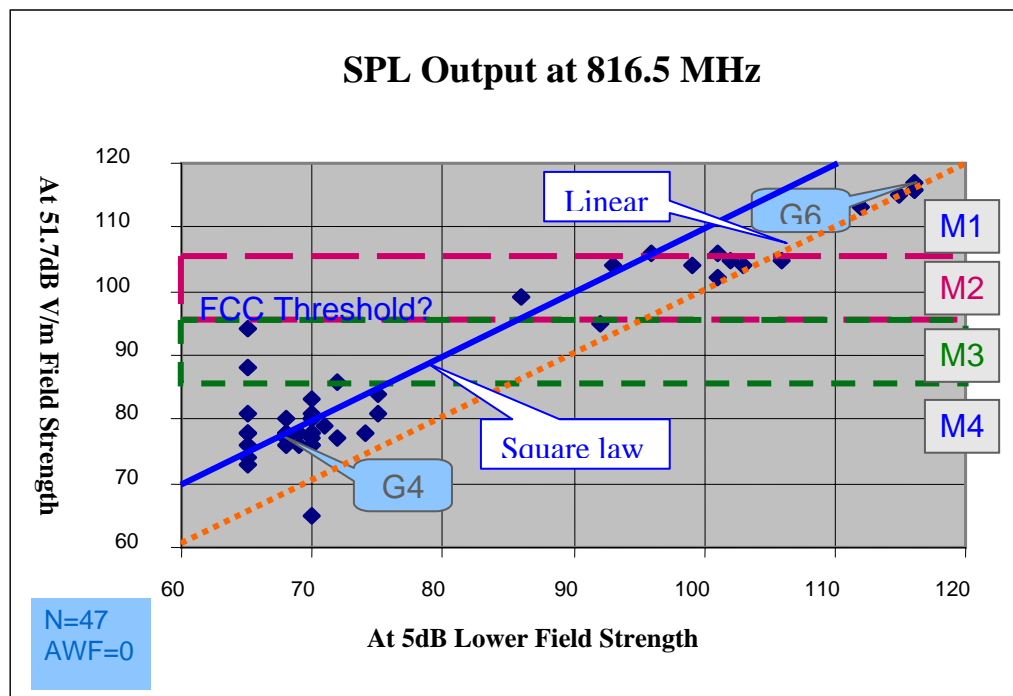
Test Plan 4

A unique test table utilizing 2 planar dipoles for the legs and a clear plastic top was built to measure the RF interference immunity of the same hearing aids measured with the Fonix test system. The dipoles were sequentially excited with a 1000Hz 80% AM signal at 816.5 and 1880 MHz at a level close to the maximum acceptable level permitted for a HAC compliant cellphone. The SPL output from the HA was measured when the user's HA was positioned over the dipole to produce the loudest output level while set for telecoil coupling. This basically enabled this test table to assess a hearing aid for C63.19 Standard Section 5 compliance on the convention floor much more practically than using a GTEM.

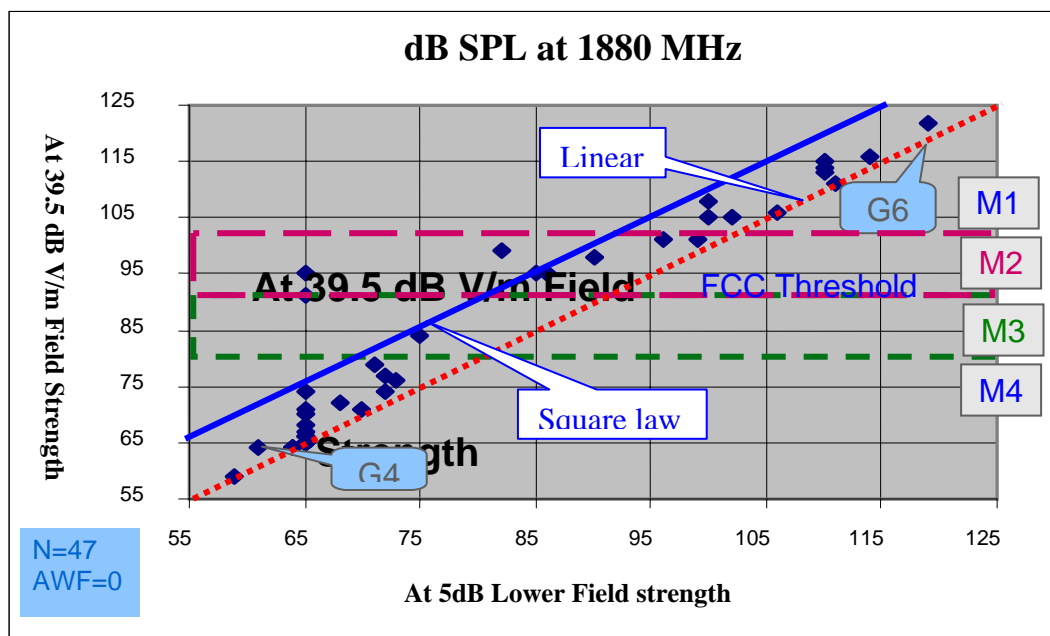


The field strength at the test table surface was subsequently measured on a Speag DASY 4.5 system just as done for a cellphone. To “calibrate” the test table, two “extreme” reference HA units from Gallaudet University were measured and the results placed in the following figures which contain the user HA data. One unit had been measured in a GTEM with a M4 rating, and the other with a M1 rating. The SPL output spread between these two reference units is substantially greater at 1880 MHz than at 816.5 MHz. These units are respectively noted as G4 and G6 in the following data distribution graphs. The distribution is also seen to be highly bimodal.

An additional “calibration” was to measure the SPL output at two RF levels 5 dB apart with the expectation that per the square law the SPL would be 10 dB different between the two RF level conditions. It can be seen that except for low output “good” units at 816.5 MHz the slope is less than square law and perhaps closer to first order.

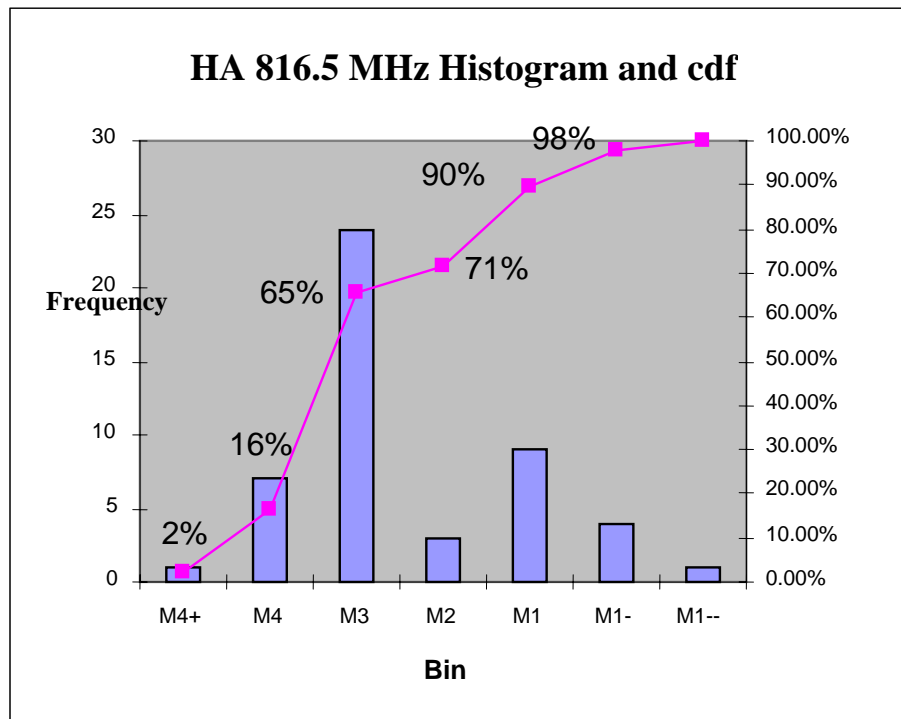


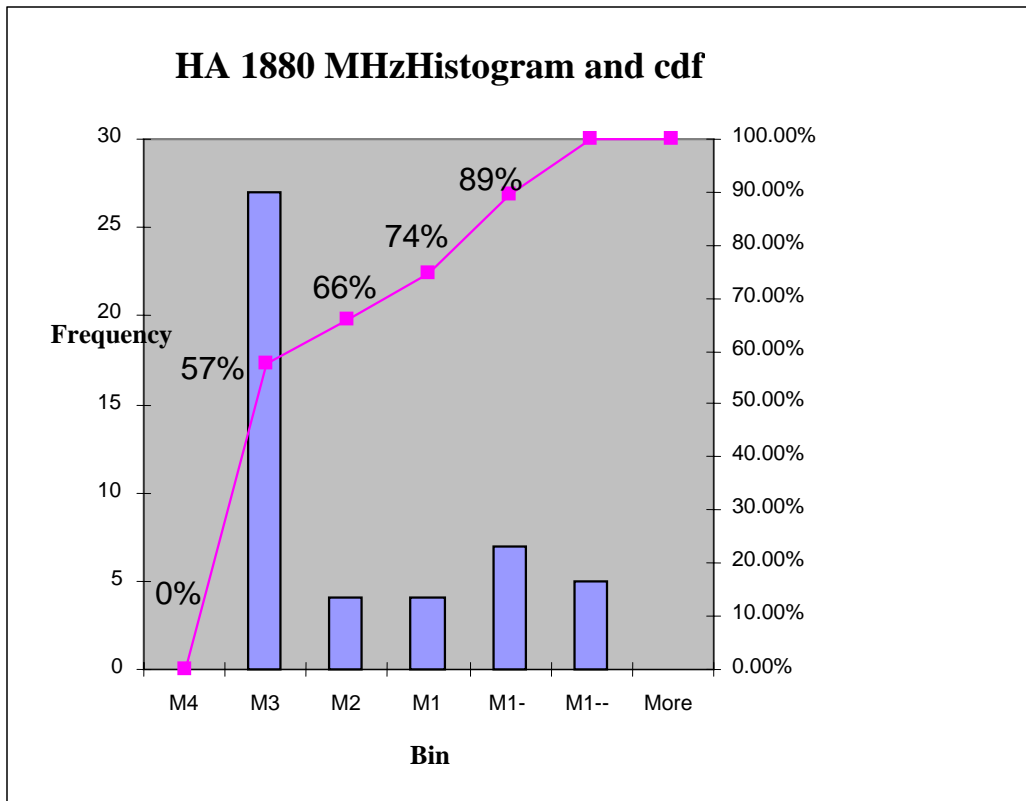
G4 is 39dB better than G6



G4 is 58 dB better than G6

Based on the C63.19 square law assumption two 10 dB wide SPL bands are incorporated in the preceding graphs corresponding to the two C63.19 5 dB wide RF level bands for the M2 and M3 hearing aid rating categories. These SPL bands are positioned to visually estimate the threshold audio SPL level corresponding to the FCC RF level threshold. The threshold levels appear to be about 96 and 92 dB SPL respectively at 816.5 and 1880 MHz. Based on those levels and band widths histograms were made to represent the interference output SPL distribution of the hearing aids measured, and the results are provided in the following graphs. The associated cdf plots based on these estimated bands lead to the expectation that due to the wide variation of hearing aid susceptibility to RF interference only about 57% to 65% of these users would experience normal use with a T3 handset, depending upon the RF frequency band used for a phone call.





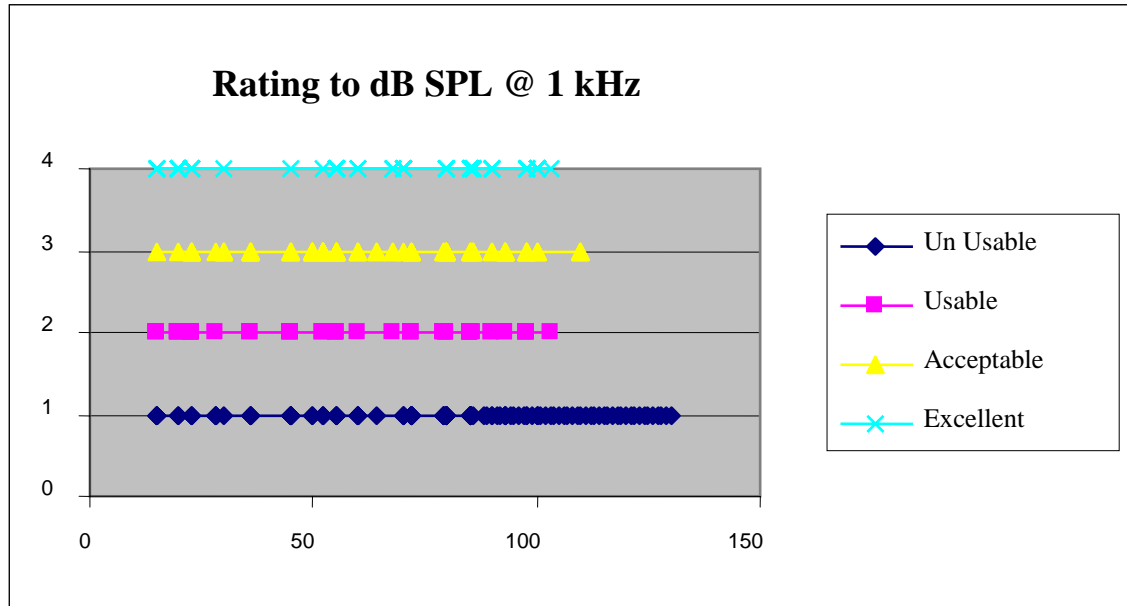
It is important to note that the RF exposure levels used to assess the hearing aids were those based on C63.19-2006 which permits handsets to have a 0 dB greater field strength at 816.5 MHz than at 1880 MHz. To assess the effect of that change the user experience cdf curves were plotted for comparison in the same graph that follows. The similarity of those plots make it apparent that the 10 dB difference is justifiable as the expected user experience is very similar for the two bands under the conditions of this experiment. In fact the user experience is somewhat more favorable even with the difference.

Test Plan 5 User Experience

The selections that participants have selected are analyzed against the objective tests that have been performed. The intent was to see how the C63.19 measurement correlates with the subjective test data.

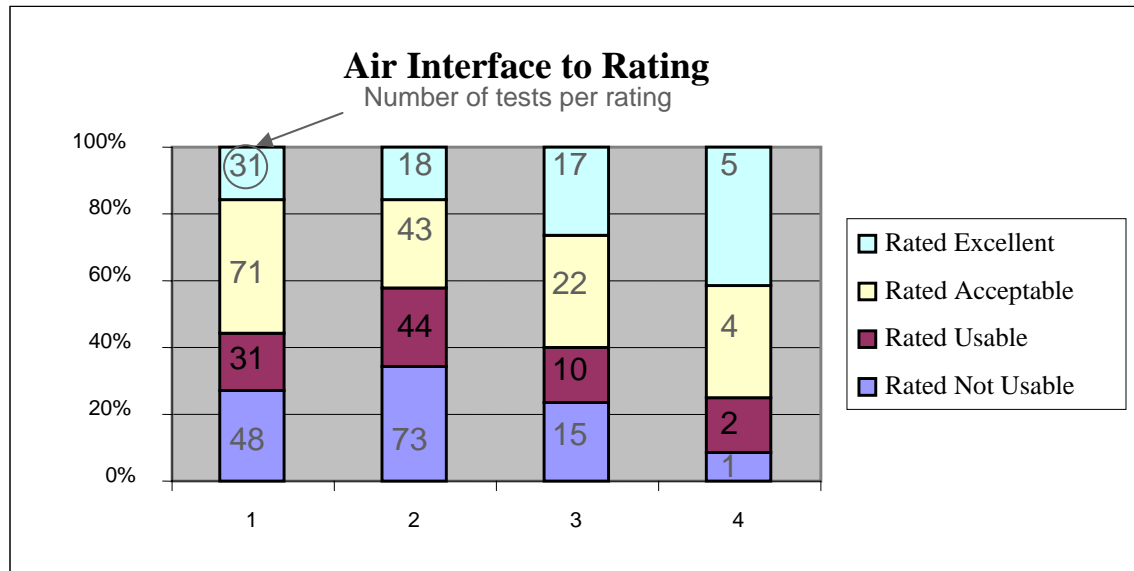
A) Dependence on Audio Signal Strength

Consumers have been asking for louder WDs at the SHHH and HLAA shows for years. Does the Sound Pressure Level (SPL) affect consumer usability? The test data below shows it does not:



B) Dependence on Air Interface

GSM is penalized 5 dB in C63.19 and it is believed the air interface is a predictor of usability. The data below conflicts with this assumption.



1 = CDMA

2 = GSM

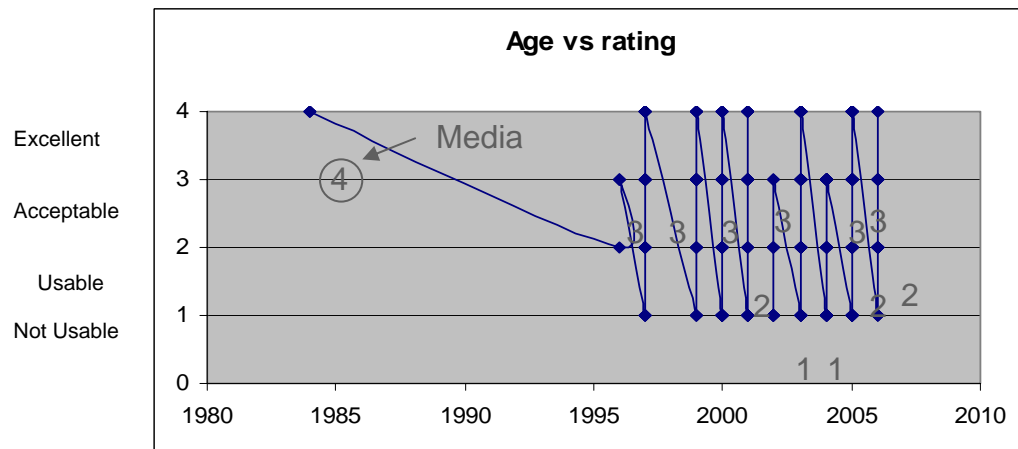
3 = iDEN

4 = UMTS

C) Hearing Aid Age

It is assumed that newer hearing aids will perform better than older hearing aids. The data questions this assumption:

HA Age and Rating



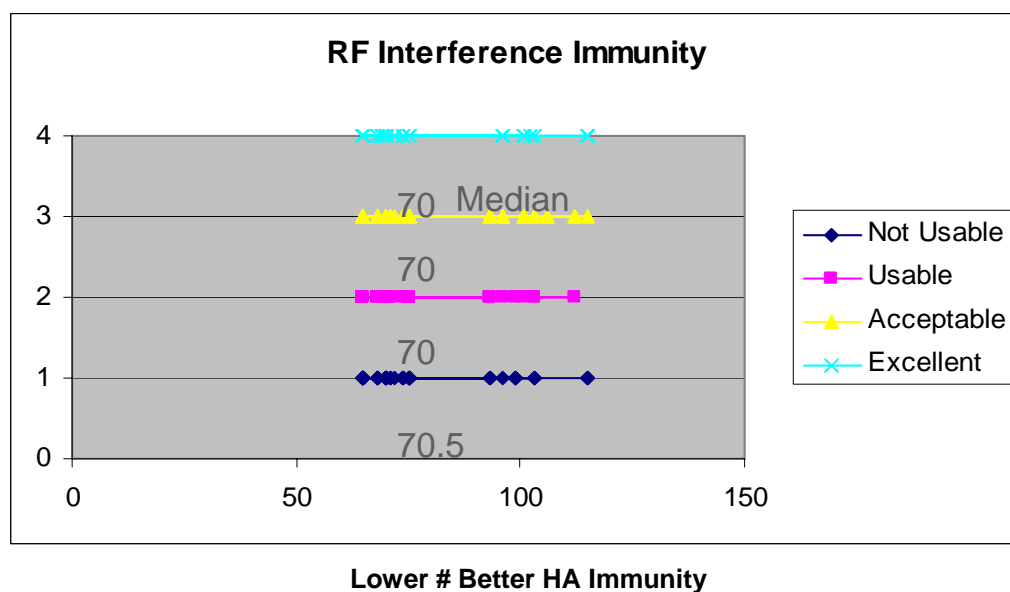
Median/# of tests

1984 = 4/3 1996 = 3/3 1997 = 3/33 1999 = 3/24 2000 = 2/43 2001 = 3/31 2002 = 1/14 2003 = 3/47 2004 = 2/37 2005 = 3/67 2006 = 2/21

D) Dependence on Mobile RF Emission

It has been assumed a lower emitting WD would improve the users' experience. This is one of the measurements used in C63.19. Again the data challenges this assumption

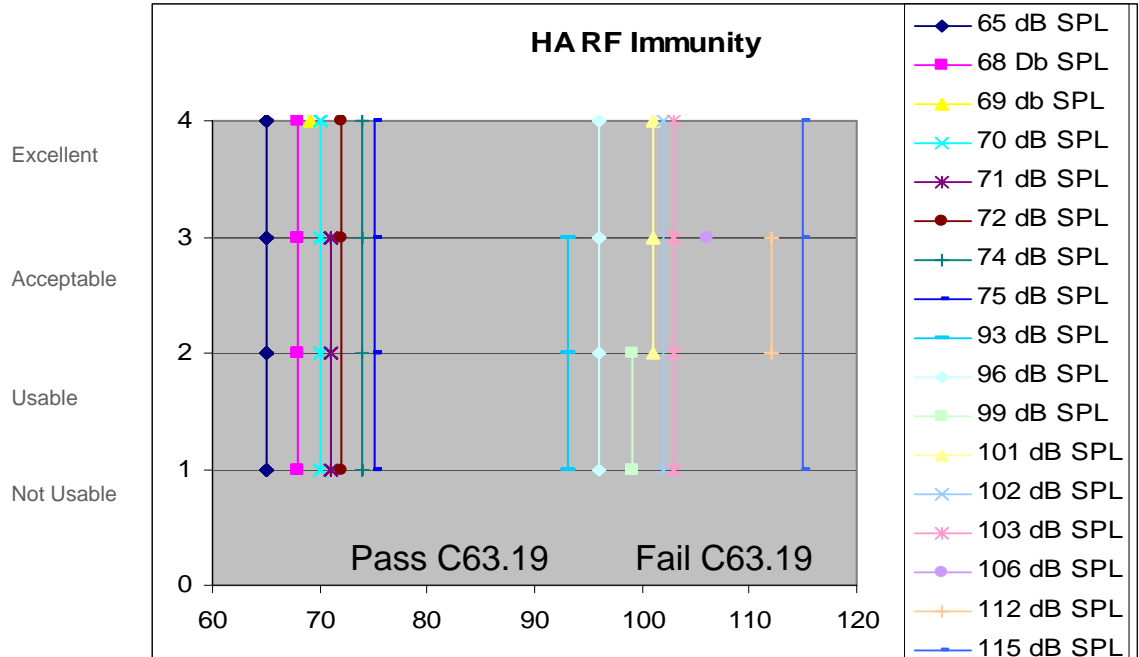
RF Interference to Rating



E) Dependence on HA Immunity

It has been assumed an immune HA would result in good performance. The data below challenges that assumption. This is another measurement made in C63.19. The data is displayed in two different ways.

HA RF Immunity



ALL HA After 2004 Pass RF Immunity Tests, Yet Have Some Failing Ratings

