

C63®

www.C63.org

**Accredited Standards Committee C63®
Electromagnetic Compatibility**

Accredited by the American National Standards Institute, Inc.
Secretariat: Institute of Electrical and Electronics Engineers, Inc.

NEWSLETTER

Issue # 25: Spring 2008

Warren Kesselman, Editor

CONTENT

- *NEWS BREAK!!
 - *MESSAGE FROM THE CHAIR
 - *OCTOBER 2008 MEETING SERIES
 - *SUBCOMMITTEE 1 – TECHNIQUES AND DEVELOPMENT
 - *SUBCOMMITTEE 2 – E3 TERMS AND DEFINITIONS
 - *SUBCOMMITTEE 3 – INTERNATIONAL STANDARDIZATION
 - *SUBCOMMITTEE 5 - IMMUNITY TESTING AND LIMITS
 - *SUBCOMMITTEE 6 – LABORATORY ACCREDITATION
 - *SUBCOMMITTEE 7 – UNLICENSED PERSONAL COMMUNICATIONS SERVICES DEVICES
 - *SUBCOMMITTEE 8 – EMC AND MEDICAL DEVICES
 - *STANDARDS STATUS MATRIX
 - *2008 OFFICERS' DIRECTORY
-

News Break!!

By Don Heirman

On 1 May 2008, the FCC published in the Federal Register the acceptance of our C63.19 2006 or 2007 edition for Hearing Aid Compatibility testing to assure that consumers

using hearing aids can obtain wireless phones that meet their needs. This shows the continued acceptance of the good work of our standards writers and researchers in this arena.

Below is the actual citing in clause 48 of the final rule. For the full text, use this URL

<http://edocket.access.gpo.gov/2008/pdf/E8-9855.pdf>

Congratulations to all those on the working group led by Stephen Berger and Joe Morrissey for keeping pace with the needs of the community and the regulatory authorities.

Federal Register / Vol. 73, No. 89 / Wednesday, May 7, 2008 / Rules and Regulations

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 0, 20, 68
[WT Docket No. 07–250; FCC 08–68; FCC 08–117]

Hearing Aid-Compatible Mobile Handsets, Petition of American National Standards Institute

Accredited Standards Committee C63 (EMC) ANSI ASC C63TM

AGENCY: Federal Communications Commission.

ACTION: Final rule.

B. 2007 ANSI C63.19 Technical Standard

1. Adoption of the 2007 Standard and Phase-in 48. Consistent with the Joint Consensus Plan and the unanimous view of commenters, the Commission adopts the 2007 ANSI C63.19 standard as a replacement for the 2001, 2005, and 2006 versions of the standard. The Commission concludes that the use of the most current testing and rating techniques will best ensure that consumers with hearing loss can obtain wireless phones that meet their needs. The Commission also adopts the transition schedule set forth in the Joint Consensus Plan (under which use of either the 2007 or 2006 standard would be permitted immediately, and the 2007 standard would become mandatory for grants of equipment authorization beginning January 1, 2010), agreeing with commenters that this affords manufacturers appropriate time to begin producing phones to the new standard.

MESSAGE FROM THE CHAIR:

We are off to a great start!

On 14-17 April, the ASC C63@ subcommittees and the parent committee met at the IEEE Service Center in Piscataway, New Jersey. There were close to 40 attending meetings that led up to the parent committee meeting on the 17th. The activities of the subcommittees are found in other parts of this Newsletter. So let me focus on the parent committee meeting contents.

First of all, I would like to welcome our latest member—Northwest EMC with principle location in Hillsboro, Oregon. Dean Ghizzone is the president and primary representative on C63@ with Greg Kiemel their director of engineering as the alternate. Let us all welcome them!!

. That now brings the count to 28 organizations, three individual members and three emeritus members. The members represent major trade, military, government and corporation interests that allows us broad participation and the ability of us to serve our constituents. If you are interested in the list, please go to our web site www.c63.org

and click on C63 main committee and then click on “C63@ Members List”.

Continuing on the agenda review, there were as usual the general administrative reviews. One change of note is that the committee now has a new secretary—Mike Kipness—an employee of the IEEE. Mike takes over from Matt Ceglia who served over a year as secretary. So again a warm welcome to Mike and a thank you for the work that Matt did for us!

Next came the reports of progress of our battery of standards. We have 18 standards with others under development. The ones that are in ballot or about to be in ballot or about to be published are (short and illustrative titles)

1. C63.2 Measurement instrumentation specifications
2. C63.4 Emission measurement and site validation requirements
3. C63.9 Office equipment Immunity
4. C63.10 Consolidation of FCC measurement procedures for wireless devices
5. C63.14 EMC definitions
6. C63.18 On site ad hoc medical device immunity testing
7. C63.23 Measurement uncertainty worksheets

The actual titles for each are shown on the ASC C63@ web site (www.C63.org) under the subcommittee buttons and then under “Standards”.

Each subcommittee then gave their reports which contained the list of members they are proposing for ASC C63@ approval as this is a requirement for the first meeting of each year per our operating procedures. The full citing of the operating procedures is also contained on the web site in the main committee area. For more information on what happened in each subcommittee meeting, read the SC chair reports in this Newsletter.

The committee then launched into a discussion on ways to keep the web site updated. Shannon Archambeault is the web master. To facilitate this activity, each subcommittee named a web site coordinator and that group is chaired by Ed Hare, SC 5 chairman. So we hope to keep up with the committee information this year as we have volunteers available to do that. So please look to the web site first for answers to your questions before contacting the parent committee officers or those of the subcommittees.

The FCC representative then presented an update of Commission activities that may impact ASC C63@ activity including what ASC C63@ standards are referenced in their rules. This is always a well received presentation and one that is important to ensure that the committee is aware of the needs of the FCC of our work.

We are also pleased to report that we now have legal representation for both committee activities as well as protecting our “C63” logo by registering it as a trademark for both our publications and official use such as on the web site or in correspondence. Terry Mahn of Fish and Richardson (Washington DC) has now joined us as our committee activity attorney.

Finally, it was announced that ASC C63® is planning to hold two workshops the Friday and Saturday before the start of the IEEE EMC Symposium in Detroit in August. The topics are a review of the application of ANSI C63.4 (emission measurements) and the new draft ANSI C63.23 (measurement uncertainty). For further information and a copy of the registration form, please contact Janet O’Neil on janet.o’neil@ets-lindgren.com. Note that this announcement was also in the advance program for the symposium on page 20.

Bottom line: We conducted an amazing amount of work in the 4 days committees met in April culminating in the readout at the parent committee meeting on 17 April. For those of you interested in participating or observing, see the application forms on the web site for the main committee as well as subcommittees. The registration fees are contained on the web site under the main committee button and then “2008 Fee Schedule”. I look forward to seeing you at our next face to face meeting the week of 6 October at Underwriters Labs in Northbrook, IL. The schedule is contained on the main committee site and then under “upcoming meeting schedule and logistics” button.

Don Heirman
Chair, ASC C63®

OCTOBER 2008 MEETING SERIES

The next ANSI ASC C63® meeting series is scheduled to be held in October at UL in Northbrook, ILL.

Details are on C63®’s website www.c63.org . (Please log onto web site and go to the “C63® main committee” page. Then click on “Upcoming meeting schedule & logistics”.)

Subcommittee 1 – Techniques and Development

Mike Windler Chair

PROJECT STATUS SUMMARY

Project 1-13.2 C63.4 Site Acceptability Above 1 GHz
Chair: Mike Windler

This project was part of the maintenance revisions to C63.4. The PINS for that project was revised at the October meeting of ASC C63® and that revision removed this item from the changes to be made. At the request of the Chair of C63®, a new PINS was proposed for a standard to address test site requirements including the existing requirements in C63.4 and new requirements for sites above 1 GHz. This PINS was approved. This working group is now be re-formed to propose a new standard and volunteers are welcome to assist in drafting this new standard.

Project 1-15.5 C63.23 Measurement Uncertainty
Chair: Bob DeLisi

A new outline was developed to expedite completion of the draft standard. This new standard will focus on practical instruction on how to determine the actual measurement uncertainty contributor values from calibration data and other sources. In addition the standard will provide guidance on the means to use type A assessments of contributors and overall systems, including nested studies.

Project 1-15.6 C63.5 Antenna Calibration
Chair: Dennis Camell

This revision will include:

- Clarification of Section 5 and Annex G on the uses of Free Space Antenna Factors and the uses of Near Free Space Antenna Factors
- Improvements to the horn calibration methods (remove the ground) response
- Clarify minimum frequency resolution for calibrations
- Editorial Revisions

Under consideration for this next edition are several other issues including:

- Adding the time domain method for free space antenna calibrations
- Add an annex on the complex fit NSA method
- Add limits to the ratio of 1-meter transmitting height vertical vs. horizontal calibrations (minimize error from ground coupling in emissions tests)

Project 1-10.1 C63.10 Standard for Testing Wireless Devices
Chair: Art Wall

This project was to develop a standard to document the procedures for testing wireless devices to show compliance with FCC Rules in a timely manner. The first edition of the standard will be a consolidation of the existing requirements (no new requirements). This effort is now complete and a draft standard has been provided for balloting.

A PINS has been proposed for the second edition to this standard which will address:

- (a) Instrumentation requirements (dynamic range, signal conditioning) and procedures (distance correction, reporting requirements and antenna pointing) above 1 GHz;
- (b) MIMO – to reduce testing requirements;
- (c) Band edge measurements – to distinguish between wideband and narrow band modulation and develop suitable techniques for each class;
- (d) Broadband system measurements;
- (e) Dynamic Frequency Selection testing – to update and document current procedures;
- (f) ERP/EIRP – to improve and document current procedures.
- (g) Polar plots and antenna characteristics
- (h) Maintenance of Edition 1
- (i) FM modulators – document current procedure and develop an equivalency procedure
- (j) Measurements below 30 MHz

Subcommittee 2 – E3 Terms and Definitions

Dave Southworth, Chair

The review ballot for C63.14, “Dictionary of Electromagnetic Compatibility including E3,” routed during the first quarter of this year was successful! Six organizations provided meaningful comments that will be resolved by the SC2 members prior to publication. Minor revisions of the document are anticipated after comments are adjudicated. Some of the comments that require additional research will be addressed during the next maintenance phase of the document which will start in 2009. It is planned to publish C63.14 this summer prior to the IEEE EMC Symposium which will be held this August 2008 in Detroit, MI.

Subcommittee 3 – International Standardization

Poul Andersen, Chair

SC3 of ASC C63® “International Standardization” met April 16, 2008. This was the first meeting after the adoption of the new scope focusing on standardization with international documents. It was the first meeting with Poul

Andersen as the chairman. Werner Schaefer was selected as the vice-chairman and Ed Hare was designated as the web coordinator. Check the SC3 section of the C63.org website for the scope, approved minutes, future agendas and committee members.

www.c63.org/documents/sc_3/sc_3.htm

In the April 16th meeting, all of the existing C63® documents were evaluated for potential harmonization with international documents. Of those, 4 were selected for analysis of potential for harmonization. It was noted that two IEEE standards have already been submitted to CISPR for consideration of information to be included in CISPR documents.

SC3 is still looking for additional persons interested in the work of the subcommittee. Interested persons should contact the chairman and the C63® website for further details. The e-mail from a person who responded to Don Heirman’s earlier invitation to participate in SC3 inadvertently got deleted. Please contact the chairman again.

The next SC3 meeting will be held in conjunction with the other C63® meetings in October, 2008.

Subcommittee 5 - Immunity Testing and Measurements

Ed Hare, Chair

SC5 met in April at the IEEE Headquarters in Piscataway. Steve Berger, the Chair of WG1, reported that the C63.9 standard, RF Immunity of Audio Office Equipment to General Use Transmitting Devices with Transmitter Power Levels up to 8 Watts, had been forwarded to ANSI by C63®. He reports that this standard addresses an important need, providing a standard that will assure that compliant equipment has a high degree of immunity to wireless transmitters. The effort began when several high profile incidents of interference to conference call and public address systems occurred, created by common wireless transmitters. As a result of these incidents a strong desire was created for a standard that could be used by organizations that wanted to make sure their conference call equipment and other office equipment would have a high degree of immunity to the increasingly ubiquitous wireless devices.

The standard breaks new technical ground by requiring that testing be performed using real-world waveforms. I&Q files are fed to a vector signal generator to recreate a typical complex modulation, such as that from a cellphone. The device under test can be illuminated either in the far field, similarly to an IEC 61000-4-3 test, or in the near-field, using a dipole antenna. Using complex, real-world waveforms was adopted by the committee writing the standard to

improve the correlation between test results and field performance. It is believed that equipment that passes the standard will have a high degree of immunity to common wireless transmitters.

SC5 is also looking at C63.16-1993, American National Standard Guide for Electrostatic Discharge Test Methodologies and Criteria for Electronic Equipment . Although parts of this standard are obsolete, there are other parts that are unique, SC5 is considering recasting this standard as a recommended practice or guide.

Work on C63.24, a standard on ad-hoc immunity testing of in-situ non-medical devices is ramping up. This standard will be a parallel effort to the work of SC8 on C63.18, American National Standard Recommended Practice for an On-site Ad Hoc Test Method for Estimating Radiated Electromagnetic Immunity of Medical Devices to Specific Radio-Frequency Transmitters. This is reported in more detail in the SC8 portion of this newsletter.

Information about Subcommittee 5 can be found on the C63 page at <http://www.c63.org>. People who would like to participate in this work should contact Ed Hare, the subcommittee Chair at ehare@arll.org.

Subcommittee 6 – Laboratory Accreditation

Kurt B. Fischer, Chair
(Victor Kuczynski reporting)

1. Need to form ballot group and push forward on Immunity Checklist Guide(C63.11) for the associated PINS. Is there a copyright issue?
2. Formed a study group to look at the traceability and calibration requirements for "key" emc equipment such as LISNs, Antennas, Spectrum Analyzers, coaxial cables, preamps, filters, etc. (Bob Delisi, Dean Ghizonne, Dan Hoolihan, Werner Schaeffer, Kurt Fischer, Victor Kuczynski).
3. Motion past to invite A2LA and ANSI to join SC-6. SC-6 Lab Accreditation Meeting – Wednesday – October 24th

Subcommittee 7 Unlicensed Personal Communications Services Devices

Stephen Berger, Chair

No current activity

Subcommittee 8 – EMC and Medical Devices

Joseph Morrissey, Chair

ASC C63® subcommittee 8 has made significant progress in the last few months, and at the face-to-face meeting in Piscataway we were successful in bringing a significant revision of the ANSI C63.18 standard (ad hoc medical device testing) to ballot. We also had several presentations during working group and subcommittee meetings relevant to ANSI C63.19 (hearing aid compatibility standard). Of note, ASC C63® presented an update of activities, including those of HAC, to the FCC OET and WTB just before the meeting in Piscataway that was reviewed at the Piscataway meeting.

STANDARDS STATUS MATRIX

The current status of all active ANSI ASC C63® Standards Projects may be found on C63®'s web page www.c63.org. Click on "**C63 Main Committee**" and then on "**Standards Status Matrix**".

ANSI ASC C63® 2008 OFFICERS' DIRECTORY

Donald N. Heirman, Chairman (d.heirman@ieee.org)

Daniel D. Hoolihan, Vice Chair (d.hoolihan@ieee.org)

Michael D. Kipness, Secretary (m.kipness@ieee.org)

Michael J. Windler, Chair SC-1 Techniques and Development (michael.j.windler@us.ul.com)

David Southworth, Chair SC-2 Terms and Definitions (d.southworth@ieee.org)

Poul Andersen, Chair SC-3 International Standardization (anderpoul@COMCAST.NET)

Edward F. Hare, Chair SC-5 Immunity Testing and Measurements (ehare@arrl.org)

Kurt B. Fischer, Chair SC-6 Accreditation/Conformity Assessment (kurt.fischer@nist.gov)

Stephen Berger, Chair SC-7 Unlicensed Personal Communications Services Devices (stephen.berger@ieee.org)

Joseph Morrissey, Chair SC-8 Medical Device EMC Test Methods (EJM037@motorola.com)

ANSI ASC C63®, ELECTROMAGNETIC COMPATIBILITY, NEWSLETTER is published approximately forty-five days after Committee meetings and is available on the web site www.c63.org. That site also contains much information about ANSI ASC C63® and its subcommittees.

© 2008 **ANSI ASC C63®**, Articles may be reproduced in whole or in part provided that the source “ANSI ASC C63®” and Newsletter edition and date are mentioned in full.