

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 # 22: December 2006

Warren Kesselman, Editor

CONTENT

- *WE'VE ENDED A GREAT YEAR WITH MUCH MORE TO COME
- *MARCH 2007 MEETING SERIES
- *SUBCOMMITTEE 1 – TECHNIQUES AND DEVELOPMENT
- *SUBCOMMITTEE 2 – E3 TERMS AND DEFINITIONS
- *SUBCOMMITTEE 5 - IMMUNITY TESTING AND LIMITS
- *SUBCOMMITTEE 6 – LABORATORY ACCREDITATION
- *SUBCOMMITTEE 8 – EMC AND MEDICAL DEVICES
- *STANDARDS PROJECTS STATUS
- *2007 OFFICERS' DIRECTORY

WE'VE ENDED A GREAT YEAR WITH MUCH MORE TO COME

As the year closes, I want to personally thank all the members of ASC C63™, its subcommittees, and its working groups for all their hard work in 2006 and the expectation of that continuing throughout 2007 and beyond.

We have accomplished much this year including not only publication of updates in our standards but in starting new

and exciting projects for the future. Publications of C63.19 on hearing aid compatibility with wireless devices and C63.5 on antenna calibration are two that met the immediate need of industry. Work on new standards and amendments are well underway. Leading that list is the proposed C63.10 on testing wireless device transmitters which will include procedures that are defined in the FCC rules and will then be in one place in the standard. Another is the draft standards C63.9 on the immunity of office conferencing equipment in an active RF environment, i.e. in the presence of cell phones, Blackberries, etc. in a meeting room. But we are not forgetting our other core standards which are being revised including our flagship standard C63.4 which for example will provide greater clarity in emission testing above 1 GHz along and moving towards more harmony with IEC/CISPR standards on similar testing.

Our international focus continues with the work of subcommittee 3 in seeking close coordination and cooperation with the US technical advisory groups of the IEC/CISPR and IEC TC 77 activity in providing comments on documents from these organizations. The other subcommittees are also working on affirming or updating the C63™ standards under their responsibility. You will hear more of this in succeeding Newsletters.

We also had a change in leadership at the October meeting with Joe Morrissey of Motorola taking over as chair of Subcommittee 8 on Medical EMC and Kurt Fischer of NIST

now chairing Subcommittee 6 on Laboratory Accreditation matters. Dan Hoolihan was elected as C63™ vice chair leaving his post as chair of Subcommittees 6 and 8. Along with these internal changes, we are very pleased to announce new members to C63™. They are:

Polycom
Samsung Telecommunications America
Telecommunications Certification Body Council
Cingular

Indeed a very big WELCOME to these new members and their representatives!

Finally, I would like to thank John Lichtig for his work as web master of our web site on www.c63.org. He totally redesigned the site and at this writing we are in the process of updating it as a consequence of the activity at our meeting in late October at ARRL, our gracious host made possible by the work of our ARRL primary representative which is Ed Hare. I encourage our readers to search the website for information you are after and if you see something that is missing or needs amending, please send a message back to the webmaster via the web site link "Feedback" mouse-over button at the top left on the home page.

So in closing, please read the other updates in the Newsletter from our subcommittee chairs. When their meeting minutes are approved at their next meeting, they will appear on the public portion of the web site. So why not join us at our next meeting which is during the period 27-29 March at the IEEE headquarters in Piscataway, New Jersey. The full details on the meeting schedule and transportation/hotels will be posted on the web site. My closing thought is "Let's have a successful 2007!". Of course I also want to wish you the best for the holiday season and see you next year.

Don Heirman
Chairman
ASC C63™

MARCH 2007 MEETING SERIES

The next ANSI ASC C63™ meeting series is scheduled to be held during the period 27-29 March at the IEEE headquarters in Piscataway, New Jersey. The tentative schedule is:

Tuesday -- SC1 & SC2
Wednesday -- SC3, SC5, SC6 & SC8
Thursday -- C63™ Main Committee

(See C63™ website for announcement and details.)

Subcommittee 1 – Techniques and Development

Mike Windler Chair (Report on 24 October 2006 meeting)

Project 1-1.1 C63.15 Immunity Measurements and Project 1-1.3 C63.15 Immunity Instrumentation (combined with Project 1-1.1)

This project has been completed in SC1 and the draft Guide has been balloted in C63. The ballot closed March 22 with comments but approved. The comments have been addressed and this standard can proceed to ANSI ballot at the Chair and Secretaries discretion.

Project 1-8.1 C63.22 Guide for Automated EMI Measurements

This document was published in December 2004. Since that time, the working group is working on adding text to address radiated and conducted immunity measurements, in accordance with IEC 61000-4-3 and IEC 61000-4-6, respectively. However, no members or other interested parties have volunteered to assist in development. Based on this lack of interest in the community the chair of the working group proposed the project be dropped. SC 1 voted in concurrence with this proposal to ASC C63™.

Project 1-8.3 C63.2 to Include CISPR 16-1-1 with US Foreword

This document was balloted in June of 2006. The ballot passed with comments. The comments have been addressed on September 7th and this standard can proceed to ANSI ballot at the Chair and Secretaries discretion.

Project 1-13.2 C63.4 Site Acceptability above 1 GHz

Previous work focused on a frequency domain method that required a special calibration of horn antennas (antenna pattern calibration). The Working Group then pursued a pattern comparison method using signal generators and spectrum analyzers or vector network analyzers, but many users in the EMC community found this to be a difficult method. The Working Group thus continues to pursue the time domain method. The time domain method provides excellent diagnostic information on areas of a site that are not meeting the conventional performance specified using the VSWR method. Research demonstrates excellent reproducibility (<2 dB) using the time domain method. The method also seems to be faster than the current site VSWR method. Proposed text to include both methods was provided to the C63.4 maintenance working group to address item A of that working groups PINS.

Project 1-15.5 C63.23 Measurement Uncertainty

This work is in C63. A significant re-write of the guide is underway. This group will address the comments received through the balloting process, which were mainly editorial in nature, by the end of Q1 in 2007.

Project 1-15.6 C63.5 Antenna Calibration

A new working group chair, Dennis Camell has been nominated. The working group has been reformed with new members to begin working on proposals to address various calibration issues including calibration of loop antennas, clarifications in section 5, clarification of horn calibrations with respect to ground plane influences, minimum frequency resolution, and limits on ground plane influences in the vertical polarity.

Project 1-15.7 C63.4 Fully Absorber Lined Room (FAR)

The effort of this work is to assess the impact of using FARs instead of test facilities with a reflecting ground plane. Based on this lack of interest in the community the chair of the working group proposed the project be dropped. SC 1 voted in concurrence with this proposal to ASC C63™.

Project 1-15.9 Maintenance of Revision to C63.4-2003

Text is being prepared to insert into C63.4-2003 by the first half of 2007 for the following issues:

- a) Site validation and measurement procedures > 1 GHz
- b) GTEM validation and measurement procedures for intentional radiators and for frequencies >1 GHz and harmonization with IEC 61000-4-20 and related TIA standards
- c) Video display issues
- d) Define cable loss as a function of temperature
- e) LISN calibration procedures
- f) Figure 2 (LISN impedance) equation
- g) TV signal peak-to-peak voltage reading for measurements
- h) Harmonize where possible test setups with 5th edition of CISPR 22
- i) Cite C63.5-2004 to replace 1988/1998
- j) Add requirement for taking into account pulse desensitization when making pulse measurements

The existing standard is also being formatted into the new ANSI format.

Project 1-15.10 C63.2 and C63.4 Use of Spectrum Analyzers for Emissions Testing

This effort will develop a procedure to be included in ANSI C63.4 and instrument requirements for C63.2. The working group chair reported that the work is proceeding well and

revised clauses for the standards should be available by the end of the year.

Project 1-15.11 Measurement of Broadband Emissions Associated with Digital Technology

The effort of this work is to assess the interference potential of digital transmission technology. Based on this lack of interest in the community the chair of the working group proposed the project be dropped. SC 1 voted in concurrence with this proposal to ASC C63™.

Project 1-10.1 C63.10 Standard for Testing Wireless Devices

This project was proposed at the March 2006 ASC C63™ meeting. A PINS was proposed and balloted in June of 2006. The purpose of the working group was to:

- To develop a standard to document the procedures for testing wireless devices to show compliance with FCC Rules in a timely manner
- To establish a forum for manufacturers, test labs, TCB and government representatives to discuss compliance testing of wireless devices

The first edition of the standard will be a consolidation of the existing requirements (no new requirements). The working group is targeting the first quarter of 2007 for completion of the first draft. Later editions will clarify methods and provide improved techniques. Additionally, this standard will eventually address licensed transmitters.

Subcommittee 2 – E3 Terms and Definitions

Dave Southworth, Chair

This subcommittee is moving forward with the update to the ANSI C63.14 document, cited in MIL-STD-461E and MIL-STD-464A which are the E3 performance standards for equipment and systems, respectively, by recommending several additions and some deletions. These proposed changes are being reviewed by the chairs of the other subcommittees before the next meeting to provide an initial check before the changes become formal.

Standardization is crucial in both the industrial and military acquisition and test fields to ensure the meaning of terms, definitions do not become vague and confusing. Clear understanding of E3 terms is important to those that write test plans, reports and specifications.

Subcommittee 5 - Immunity Testing and Measurements

Ed Hare, Chair (Report on October 25, 2006 meeting)

The meeting was called to order at 1:35 PM by Ed Hare, Subcommittee 5 Chairman.

The following SC5 members were present:

Ed Hare, SC-5 Chairman
Joe Morrissey, SC-5 Secretary, WG2 Chairman
Steve Berger, WG1 Chairman
Jon Casamento
Don Heirman
Dan Hoolihan
Victor Kuczynski
Jeff Silberberg

The following members were absent:

Bob Hofmann
Herb Mertel
Werner Schaefer

The agenda and minutes from the last meeting were approved.

SC-5 considered applications for subcommittee membership by Steven Whitesell, VTech, Vivek Talwar, Goldman-Sachs and Joseph Liguori, Avaya. The consensus of the subcommittee was to recommend them to C63™ for membership.

Mr. Hare initiated a discussion about the need for a subcommittee Vice Chairman and new Secretary. No one was identified to serve in either role, so the subcommittee will continue without a Vice Chairman and Dr. Morrissey will continue to serve as Secretary.

Mr. Berger, the chair of WG1, Office Equipment Immunity, gave a brief oral presentation on the status of C63.9. At this point, the standard is in subcommittee vote to determine if the WG and SC believe it is ready for ballot. When that consensus is successful, the SC-5 Chair will forward this to C63™ for a vote on whether the document is ready for ballot, along with a request to form a balloting group. SC-5 discussed the steps SC-5 can take with the C63™ Secretary to help ensure that minimal calendar time is taken through the steps of the balloting process.

ANSI C63.9 RF Immunity of Office Equipment

Focus of Standard

- Std. that, where desired, provides high confidence of excellent RF immunity
- Specifies repeatable test methods with strong correlation to field performance

Timeline

- Oct. 23 - Draft delivered for simultaneous review by WG/SC
- Draft to be advance for C63 ballot upon successful completion of WG/SC review
- SC request ballot group be formed so as to not delay ballot when draft is ready

WG2, chaired by Dr. Morrissey, reported on the status of C63.24, the standard on ad hoc, in-situ testing of immunity of installed systems. In general, SC-5 will continue to support SC-8's work on a similar standard for medical devices, then use that work to complete C63.24.

SC-5 discussed ongoing changes to the C63™ website and ways that SC-5 can use that site to help manage its work.

The action-item list was reviewed and updated.

The meeting was adjourned at 3:10 PM.

Subcommittee 6 – Laboratory Accreditation

Dan Hoolihan, Chair (Report on October 25, 2006 meeting)

A meeting of Subcommittee 6 was held on Wednesday, October 25th at ARRL Headquarters. Approximately 12 attendees were present at the meeting. The meeting was run as per the published agenda on the web page.

There were no changes to the membership and the Minutes of the last meeting were reviewed and were approved with some changes.

A DRAFT checklist for the Basic IEC Immunity tests had been circulated to the Subcommittee members. It was decided to give reviewers until 1 December to review and submit comments to the chair of the subcommittee. A New PINS will be generated for this document.

Proficiency (inter-lab comparison) testing was discussed. It was decided to advertise the proficiency testing on the web page of C63. A discussion of the available sources was held and HP (Ken Hall) agreed to do some testing in the program.

Reports were received from NIST/NVLAP and A2LA on the status of their accreditation programs in EMC, Telecom, and Calibration Labs with RF/Microwave capabilities.

Bill Hurst gave a report from the FCC perspective on the status of CABs, TCBs, and MRAs.

A report was given by Don Heirman on the National Cooperation for Laboratory Accreditation (NACLA). Check the NACLA web site (www.nacla.net) for further details on other aspects of NACLA.

Kurt Fischer was nominated and elected to be the next Chair of SC-6 for 2007-2008-2009. (Note – This nomination was approved by the main committee the following day).

Subcommittee 8 – EMC and Medical Devices

Dan Hoolihan, Chair (Report on October 25, 2006 meeting)

A meeting of Subcommittee 8 was held on Wednesday, October 25th at ARRL Headquarters. Approximately twenty-five attendees were present at the meeting. The meeting was run as per the published agenda.

The membership of SC8 was reviewed. Dan Ahlers, Nokia, requested membership in the subcommittee. His credentials were reviewed and the committee agreed to recommend him for membership in SC8.

C63.18 - Work is continuing on the second edition of C63.18. Jeff Silberberg, the working group chair, reported that progress is dependent on some feedback from SC5. The second edition would like to use a field strength meter for measurements and there was an extended discussion of peak and average measurements using field strength meters. Numerous ideas were suggested to get around this issue including using IQ Files, vector signal generators, and/or controlled outputs of typical cell phones. A task force of Steve Berger, Jeff Silberberg, Joe Morrissey, and Don Heirman was formed to explore the possibilities introduced at the SC8 meeting.

C63.21 – The FDA informed the WG chair, Bob DeLisi, they are no longer interested in this project and they recommended the final report generated previously could be published as a technical report. Jon Casamento will double-check with the FDA personnel on publishing the report under the C63.21 number.

C63.19 – Steve Berger reported on the progress of this working group. The Amendment to the Second Edition is in its second circulation in the working group; it is due to be completed by November 10. Jim Turner, representing ATIS, presented a number of issues for future modifications to C63.19. Steve Berger added these issues to an existing PINS-C and reviewed them with the committee. He agreed to send this proposed PINS-C to the existing working group and to the Subcommittee 8 members for review and comments. Matt Bakke presented an outline of some research he is going to start doing at Gallaudet University, he asked for comments from the individuals around the table on the proposed research study.

New Chair for SC-8

Joe Morrissey was nominated and elected as the Chair of SC-8 for 2007-2009. (Note – This nomination was approved by the full committee the following day).

Liaison Reports – Liaison reports were given on IEC SC62A Maintenance Team 23, the AAMI/EMC Committee, the FDA EMC activities, and IEEE 11073/ISO TC 215 Working Group on Wireless in Health Care (Status of the ISO TC 215 Technical Report # 21730 – First Edition - 2005[Health Informatics – Use of Mobile Wireless Communication and Computing Technology in Healthcare Facilities – Recommendations for the Management of Unintentional Electromagnetic Interference with Medical Devices]). In addition, Steve Whitesell gave a presentation on TIA 1083 which is out for vote within TIA and ANSI.

STANDARDS PROJECT UPDATE

The update of the Status Report of all the ASC C63™ Standards Projects is done on, or slightly after, the first of each month and incorporated into the Project Matrix on the website. Look for an updated Report on, or about the fifteenth of each month – **Click on “Project Matrix” on the C63™ page.**

WISHING ALL A HAPPY AND PROSPEROUS NEW YEAR!

C63™ 2007 OFFICERS' DIRECTORY

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

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

Robert Pritchard, Secretary (r.pritchard@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)

John Lichtig, Chair SC-3 International Standardization (JFL@LichtigEMC.com)

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

Kurt 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.

© 2006 **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.