

C63[®]
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Accredited Standards Committee C63[®]
Electromagnetic Compatibility
Accredited by the American National Standards Institute, Inc.
Secretariat: Institute of Electrical and Electronics Engineers, Inc.

NEWSLETTER

Issue # 29: June 2010

MESSAGE FROM THE CHAIR

Don Heirman, Chairman, Accredited Standards Committee C63[®]

Taking off and rarin' to go for 2010!

After a stellar 2009 where C63[®] updated 3 major standards (C63.2-Test Instrumentation, C63.4-Emission Measurements, and C63.14-EMC Definitions) and published a totally new one: C63.10—Wireless Device Testing), our first new publication of 2010 is already on the street (C63.15—Immunity Testing and Associated Instrumentation).

Not to be outdone by the publishing success in 2009, at our April 2010 meeting three new projects were approved and document numbers assigned.

- a. C63.8: Guidance on specifying requirements for the calibration and verification of EMC test equipment
- b. C63.11: Inter-laboratory comparison of EMC testing
- c. C63.20: On-site measurements of the immunity of Instrumentation and Control equipment and systems intended for use in nuclear power stations

Continuing work is also well underway on these standards, some of which we expect to be published in late 2010 or into the new year:

- a. C63.5: Antenna calibration
- b. C63.10: Wireless device testing (adding application to more unlicensed transmitters)
- c. C63.16: ESD test guidance
- d. C63.23: Measurement uncertainty

- e. C63.24: On site immunity testing for non-medical devices
- f. C63.25: Test site validation using time domain techniques
- g. C63.26: Wireless device testing for licensed transmitters

In addition, the WG on C63.4 is starting its review of items that were not included in the 2009 edition and to possible move clauses to other specific application C63[®] standards.

As for the committee itself, we welcome the **Electric Power Research Institute (EPRI)** to add to our other 28 members from manufacturers, trade organization, professional organizations, military, federal agencies, and organizations that perform EMC testing.

So our membership continues to swell which indicates the need and usefulness of our work and the welcoming atmosphere to prepare updates to our existing standards and new ones as noted above.

Depending on the subject, our standards continue to be referenced. The most recognizable notice is by the FCC where C63.4, C63.5, C63.17 (unlicensed personal communication service), and C63.19 (hearing aid compatibility with the use of cellular phones).

For the first time the committee recognized its members with a brief ceremony where the representatives of our member organizations were given a certificate of membership to display in their office or in the lobby of their building. What follows is a selection of the certificate awarding ceremony where the chairman gave out these certificates. The entire ceremony photos will be soon placed on our web site where all

can look at who in general attends our meetings to represent their organization. Those members that could not make the April meeting were sent their certificates. At the same time, the chair established an awards committee to show the appreciation of C63[®] for extraordinary service to the committee. Bob Hofmann was appointed to be the chair. The expectation is that our first awards ceremony will take place at

our next meeting at SAE headquarters in October this year (details are on the C63[®] web site: www.c63.org).

But first enjoy the following photos at the ceremony at the IEEE headquarters in April this year.



Don Heirman, Chair of ASC C63[®] presents the member certificate to Jeff Silberberg who received it for his agency--the Food and Drug Administration. Jeff has served his agency well by keeping ASC C63[®] and its Subcommittee 8 up to date on FDA EMC activity and the work of IEC SC62A which covers EMC aspects of medical electrical equipment



Don Heirman, Chair of ASC C63[®] presents the member certificate to Steve Coston who received it for his company—Sony Ericsson. Steve has served well his company in bringing technical and administrative input into the work of ASC C63[®] on EMC between cellular phones and those which use them and hearing aids.



Don Heirman, Chair of ASC C63[®] presents the member certificate to Ed Hare who received it for his organization—American Radio Relay League. Ed has served the ARRL as chairman of a subcommittee that maintains the ASC C63[®] product immunity standards. He also spends much of his own time to prepare maintenance of the committee website which he then presents to the webmaster for implementation



Dan Hoolihan, Vice Chair of ASC C63[®] presents the member certificate to Don Heirman who received it for his sponsor—The IEEE Standards Association (SA). Don represents the interests of the IEEE SA in chairing the committee and maintaining a close link between the SA and the secretariat which the SA holds



Don Heirman, Chair of ASC C63[®] presents the member certificate to Bill Hurst who received it for his agency—Federal Communications Commission. Bill presents the needs of the FCC that can be satisfied in large part by the standards that the committee publishes and which then is referenced in the FCC Rules.



Don Heirman, Chair of ASC C63[®] presents the member certificate to Marcus Shellman who received it for his agency—US military Joint Spectrum Center. Marcus provides the major link between the military and the committee especially in maintaining the ASC C63[®] dictionary of EMC terms that are used by the US military as well as the committee in its own standards.

**ANSI ASC C63[®] ORGANIZATIONAL
MEMBERSHIP CERTIFICATE PRESENTED
AT TELCOM CERTIFICATION BODY
(TCB) COUNCIL MEETING**



Dan Hoolihan (left), ANSI ASC C63[®] Committee Vice-Chair, presented a Membership Certificate to Chris Harvey (center), TCB Council Secretary. Dan also took the opportunity, in front of 100 people, to thank Art Wall (right) for his leadership of the Working Group on C63.10 and also thanked the TCB Council for their participation in the development of C63.10. Dan also encouraged them to continue supporting future work on C63.10 and C63.26.

NEW STANDARD APPROVED

**ANSI C63.15-2010 Recommended Practice for
Immunity Measurement of Electrical and
Electronic Equipment**

(Approved: 2/5/2010, Publication Date: 2/12/2010)

Abstract: This immunity measurement and measurement instrumentation specification document complements the recommended procedures for making emission measurements as specified in ANSI C63.4. The immunity methods are alternative methods that might be of use to manufacturers who want to ensure a reliable product and reduce customer complaints by adding some additional immunity into their products beyond that required by law or by correcting problems experienced in the field not related to regulatory requirements. This document generally covers the frequency range of 30 Hz to 10 GHz.

Keywords: electromagnetic compatibility, EMC, immunity, RF immunity

Still room to attend!!

**Workshop on ANSI C63.10 Testing
Unlicensed Wireless Devices**

15-16 June 2010 at UL in Northbrook, IL

(Visit www.narte.org for more information and to register go to top of home page)

This is the second workshop covering ANSI C63.10 which contains procedures for testing compliance of a wide variety of unlicensed wireless devices. The new standard, for the first time, has in one place all the reference material needed for performing such tests which are now in a plethora of documents, e.g. FCC Rules, Knowledge Data Base (KDB), rulemaking documents, ANSI C63.4, etc. The devices covered in the standard include: remote control and security transmitters, Frequency Hopping and Digital Communication Spread Spectrum devices, anti-pilferage devices, cordless telephones, wireless medical transmitters, Unlicensed National Information Infrastructure Devices, Intrusion Detectors, Unlicensed Wireless Devices below 30 MHz, Automatic Vehicle Identification Systems and other devices authorized under Part 15 of the FCC Rules and Regulations. The workshop will be combination of classroom presentations and actual laboratory demonstrations of selected measurements in a semi anechoic chamber using test instrumentation that is needed for such tests. The lab demos are intended to highlight the nuances of making some of the more challenging measurements with emphasizes on the application and practical use of the standard.

Taking registrations NOW!

Workshop on Emission Measurements (ANSI C63.4), Antenna Calibration (ANSI C63.5) and Time Domain (TD) Applications

23-24 July at the venue for the IEEE EMC Symposium in Ft. Lauderdale, FL

(Visit <http://www.c63.org/workshops.htm> for more information and registering)

This workshop is presented in three parts over a two day period: (1) review of the 2009 edition of ANSI C63.4 (now accepted by the FCC for use), (2) review of ANSI C63.5-2006 and proposed changes for the next edition and (3) application of TD for test site validation and antenna calibration. These workshops are designed to increase your understanding of these standards and the TD approach. For the C63.4 workshop, there will be an analysis of the test site validation including using the CISPR SVSWR method or arranging absorber material on the ground plane for use above 1 GHz. The C63.5 portion of the second workshop will lead the user through the document, highlighting which technique should be used based on the type of antenna being calibrated and how it is changed from the 1988 and 1998 editions. This is essential to ensure that the right antenna factor is obtained, especially when validating semi-anechoic chambers. Proposed application of the same TD method to validating test sites will also be presented. As time permits, attendees will get a chance to apply what they learned by solving real world applications.

OCTOBER 2010 ANSI ASC C63® MEETING SERIES

The October 2010 meeting series is scheduled to be held during the week of 25 October at:

Society of Automotive Engineers Headquarters
755 W. Big Beaver, Suite 1600, Troy MI 48084
(Poul Andersen, host).

The Main Committee meeting is on 28 October.

Schedule

Meeting	Mon 25Oct	Tues 26 Oct	Wed 27 Oct	Thurs 28 Oct
C63® Parent Committee				0830-1500
WG meetings	0830-1200; 1300-1650	0830-1200		1515-1650
SC1 Measurement			0830-1050	
SC2 Definitions			1400-1450	
SC3 International			1100-1350	
SC5 Immunity		1500-1650		
SC6 Lab Accreditation		1300-1450		
SC8 Medical			1500-1650	
C63® Steering Committee		1700-1900*	1700-1900*	
US EMC Standards Corp Board of Directors	1700-1900**			

* Members only of the Steering Committee.

**US EMC Standards Corp Board members only.

(Please double check schedule on C63®'s website: www.c63.org - "C63® main committee", "Upcoming meeting schedule & logistics".)

Subcommittee 1 – Techniques and Development

Dennis Camell, Chair

This subcommittee has a total of twenty-three members with five newly approved and two dropped at this meeting. This subcommittee is responsible for seven standards; two recently published, two in revision process, and three totally new standards being developed at the working group level. Any interested parties are encouraged to contact the working group chair shown below. A revised scope was proposed at this meeting and it was accepted. It will be posted on the website. A flurry of interpretations requests were received since the October 2009 meeting, six in all. Three standards documents were involved (C63.4-2009, C63.5-2006, C63.10-2009). Three have been resolved and are out for vote and the other three will be resolved shortly.

Here is the status of the current working groups:

Project on Antenna Calibration C63.5

Chair: Dennis Camell

A new PINS was approved at the last meeting and is awaiting ANSI approval. A new draft document is expected mid 2010. This revision will contain several suggested changes that arose from the last revision. These changes brought varied discussion during the subcommittee meeting. Some of the topics are:

- * Improved harmonization with IEC and VCCI with reworded/additional text
- * Finalize frequency step size requirements across bands
- * Finalize changes with reference antenna choices
- * Revise uncertainty table for SSM and provide table for SAM
- * Adding the time domain method for free space antenna calibrations
- * Adding annex for dipole corrections for free space antenna calibrations
- * Highlight site requirements for antenna calibration sites

Project on Standard for Testing Unlicensed Wireless Devices C63.10

Chair: Art Wall

This working group has an active PINS on file. They are regularly meeting with large turnouts at each meeting. Work is just beginning for Edition 2. For this next edition, work is progressing in the following:

- *Measurements above 1 GHz
- *Broadband system measurements
- *MIMO
- *EIRP and ERP measurements
- * Polar plots and antenna characteristics
- *Multiple transmitters
- *Antenna array testing
- *Measurements below 30 MHz
- *Edition 1 maintenance items

Project on Measurement Uncertainty C63.23

Chair: Bob DeLisi

This working group has an active PINS on file. The first edition of this new standard is nearing completion and 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. The draft was out for review and comments are being addressed. A target date is presently set as August 2010.

Project on Site Requirements C63.25

Chair: Mike Windler

This working group has a PINS that is awaiting ANSI approval This project was approved for the development of site requirements for both above and below 1 GHz. The working group is copying the requirements below 1 GHz (NSA) from C63.4 and adding requirements above 1 GHz. The expected completion date is late 2011.

Project on Standard for Testing Licensed Wireless Devices C63.26

Chair: Art Wall

This working group has an active PINS on file. The working group met regularly with a large turnout at each meeting. The work is just beginning for this standard. Roadmap developed and key tasks have been identified. A target date is set of 2012.

Subcommittee 2 – E3 Terms and Definitions

Marcus Shellman, Chair

SC2 has commenced project initiation to begin the 5-year revision cycle for the next update of ASC C63.14. The committee will begin working immediately with emphasis on harmonization with international standards and identifying emerging terminology.

Subcommittee 3 International Standardization

Poul Andersen, Chair

By Don Heirman on behalf of Poul Andersen

SC 3 met and reviewed--and took action as appropriate on--the following:

1. Recommended its membership to the parent committee which subsequently approved the list
2. Recommended a revision of its scope to the parent committee which also approved the text

3. The main meeting activity was to review the list of C63® standards that have subjects that are similar to those in the IEC. The purpose is to see what can be done to harmonize these two separate set of standards. The actions are for the subcommittee chairman to assign subcommittee members to review similar documents to see what from our C63® standards can be submitted to the US National Committee of the IEC (USNC) technical advisory group (TAG) for considering submissions to the appropriate IEC committee. There was limited progress and hence the review activity continues.
4. The SC3 web site was reviewed and found that it is very close to being up to date.
5. The last area was to review any head of delegation reports that were submitted by the technical advisors for the US TAGs

Subcommittee 5 Immunity Testing

Edward F. Hare, Chair

Subcommittee 5 met on April 20 in Piscataway. At the meeting, the Subcommittee approved sending a PINS (Project Initiation Notification System which is an ANSI process to approve new work) documents to the Main Committee to initiate work on developing a standard for the on-site measurement of the immunity of control instrumentation at nuclear-power-plants. The project has been assigned the number C63.20. More information is on the www.C63.org web site. SC5 also recommended a PINS to approve the work being done on C63.24, a Recommended Practice for on-site measurements of the immunity of installed equipment. Both projects were approved by the Main Committee. Don Heirman agreed to undertake an analysis of C63.16, a withdrawn standard on ESD test methodologies that contains some unique information not available in other international standards.

Subcommittee 6 Laboratory Accreditation/ Conformity Assessment

Victor Kuczynski, Chair

April. 20 2010 Meeting Summary:

Officer Update:

Victor Kuczynski chair & web coordinator
Adam Gouker vice-chair
Dave Zimmerman Secretary

WG 1: Due to the copyright issue, the C63.11 WG1 ceased to exist.

WG 2: Headed by Dean Ghizzone including Dan Hoolihan, Bob DeLisi, Brad Moore, Victor Kuczynski looks to explore the idea to drop dates from scope of accreditations list to minimize amount of entries. No activities for this period,

WG 3: (Related to proficiency testing.) Created and provided initial draft. Pins has been revised and approved.

WG 4 is working on a guide that would offer guidance to testing laboratories requiring calibration of EMC equipment.(Bob Delisi, Dean Ghizonne, Dan Hoolihan, Werner Schaeffer, Victor K, Zhong Cheng, Colin Brench, Denise Camell). PINS has been developed and approved.

Website update: The Scope has been modified and approved.

Subcommittee 8 Medical Equipment Testing

Bob DeLisi, Chair

Leadership Changes:

- *A new Chair (B. DeLisi) was approved
- *A new Secretary (D. Zimmerman) was named
- *A SC8 Web Coordinator(E. Hare) was named
- *Vice Chair – Still Vacant at this time.

Revised Scope approved: Subcommittee 8 is responsible for writing and maintaining existing and proposed C63® standards for medical devices as assigned by the main committee ASC 63®.

C63.18 Update – WG#1:

- *Editorial review of C63.18 completed
- *All remaining comments accommodated except one on Testing with Wireless LAN equipment. Assistance from the wireless LAN community is being sought to help resolve this issue.
- *Recirculation ballot draft will be submitted to IEEE Secretariat approximately May 2010.

C63.19 Update:

A motion to form a balloting group for C63.19 was approved by SC8 for presentation to the Parent Committee. The Document will be ready for final ballot by the end of the second quarter 2010. Working Group #3 will be finalizing the remaining 6 issues and then send the final document to SC8 members for approval to send to the balloting group; will finish the Round Robin test data analysis; review the analysis and publish the test results for all members for review and assessment; and, confirm, that the test box is reproducible for determining the (MIF). Also, WG#3 will confirm that the STD supports reproducible MIF test results

without the test box, by following Section 5 in the step by step instructions; will review and resolve all of the comments and concerns raised from the Round Robin; review the edit changes in the C63.19 Ver 1.18; validate all edits and changes noted; and WG#3 will consider "cordless," be deleted from the second sentence of the C63.19 scope and that a footnote be added at the end of the sentence:

*That the TIA-1083 standard should be added to the list of references.

*That TIA/EIA TSB31-A be included in the references

Liaison Reports:

***IEC SC62A** provided an updated on the status of the next edition of IEC 60601-1-2 and the proposed changes and document restructuring.

***AAMI** reported that the draft of TIR18:2010, *Guidance On Electromagnetic Compatibility Of Medical Devices In Healthcare Facilities*, will be published within the next couple of months and C63.18 is a referenced method in that document.

***FDA** reported on ongoing activities including a joint meeting with the FCC and the RFID industry.

***NIDRR** provided an update on the work being conducted at the Rehabilitation Engineering Research Center on Hearing Enhancement at Gallaudet University. There are 2 parts to the study. The first part is a subjective assessment of cochlear implants users' S/N requirements. The second part, in general terms, is to test the ability of hearing RF immunity and wireless device RF emissions measurements

to predict the audio frequency interference resulting when a hearing aid and a wireless device are combined in use.

***FCC** has issued 2 KDBs with respect to medical devices:

1. **771134** D01 Pwr Meas Part 95 I MedRadio Device v01 is a procedure for measuring output power of a Part 95 Subpart I MedRadio device.
2. **17965** Testing Procedures for medical implant devices authorized under the MedRadio rules, Section 95.628(g)

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® 2010 OFFICERS' DIRECTORY

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

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

Jerry Ramie, Secretary (jramie@arctechnical.com)

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

Dennis G. Camell, Chair SC-1 Techniques and Development (dennis.camell@nist.gov)

Marcus Shellman, Chair SC-2 Terms and Definitions (marcus.shellman@jsc.mil)

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

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

Victor Kuczynski, Chair SC-6 Accreditation/Conformity Assessment (victor.kuczynski@ieee.org)

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

Bob DeLisi, Chair SC-8 Medical Device EMC Test Methods (Bob.Delisi@us.ul.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.
Warren Kesselman, Editor (w.kesselman@ieee.org)

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