

**C63<sup>®</sup>**

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**Accredited Standards Committee C63<sup>®</sup>  
Electromagnetic Compatibility**

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

# NEWSLETTER

Issue 30 December 2010

## MESSAGE FROM THE CHAIR

**Don Heirman, Chairman,  
Accredited Standards Committee C63<sup>®</sup>**

### Congratulations to all that made 2010 a success!!

C63<sup>®</sup> October meeting was hosted by the Society of Automotive Engineers at their headquarters in Troy, MI. Poul Andersen arranged the excellent facilities including call in capability for certain working group meetings. He also pointed out to us the conspicuous location in the main SAE reception area where the certificate of the SAE membership in C63<sup>®</sup> is displayed.



The above photo is the SAE Membership Certificate which has been framed and is located prominently at the reception desk area in SAE Lobby. The C63<sup>®</sup> members and leadership appreciate the importance SAE places on C63<sup>®</sup> by this display.

While we were there, we took the opportunity to have a photo with Poul (Subcommittee 3 chair (International Standardization)) on the left, Don holding the certificate, and Dan Hoolihan (C63<sup>®</sup> Vice chairman).



Host Poul Anderson (left) with Chairman Heirman, and Vice chairman Hoolihan. Note the wall behind with the lettering for SAE International located in the SAE main lobby.

(Above photos and meeting photos below were taken by our committee photographer—Jerry Ramie.)

### First Annual Award for Outstanding Contributions to the success of our Committee

A highlight of the Troy meeting was the first presentation of the C63<sup>®</sup> Outstanding Contribution Award. This was the first time this award has been given as it was put in place at the April 2010 meeting in Piscataway, New Jersey.

(The award also has a \$75 cash bonus.)

The first of the two awardees was  
**Ed Hare, ARRL member**

His citation reads: **In appreciation for making major revisions and improvements to the C63.org web pages.**



Bob Hofmann (right), Awards Committee Chairman, presents certificate to Ed Hare.

The second awardee was  
**Warren Kesselman, member emeritus;**

His citation reads: **Key Contributor to the success of the C63® Committee as newsletter editor**

Warren was unable to attend the meeting. His award was presented to him in person by the chairman of C63®. Warren lives in New Jersey.

Other meeting photos follow that depict those that were at the meeting. The meeting facilities were excellent including the staff of SAE who provided us with internet access, telephone/speakerphone and coffee and cookies throughout the four days of meetings culminating on the last day with the main committee meeting.



Member Ed Hare (left), Subcommittee 5 chair and Victor Kuczynski, Subcommittee 6 chair compare notes.



Ken Joyner (second from left) of Samsung (Australia) points out challenges during a coffee break to Bill Stumpf (ARRL), second from right and Jim Turner (ATIS) far right.



Zhong Chen (ETS-Lindgren, far left, Masud Attaya (RIM), middle, and Bill Stumpf review documents being discussed during the main committee meeting



The meeting room at SAE provided an excellent venue to have all participants heard and to allow the chair Don Heirman to move the agenda along (second to the left on the far side of the photo). To his right is Ed Hare who was in charge of projecting speaker slides while the secretary (Jerry Ramie)—taking the photo kept track of the minutes.



Left to right: Turner (ATIS), Hofmann (member emeritus), and Moogilan (Alcatel-Lucent) and Bob DeLisi (UL)-far right.

### **Review of topics/decisions presented at the October 2010 main committee meeting**

The main committee meeting had a full agenda. What immediately follows is a review of key items that were discussed. Particular details contained in the subcommittee reports follow after this summary.

The standards activity is extraordinary with both maintenance of existing standards and work on a variety of draft standards. At this point, there are several C63<sup>®</sup> standards under active maintenance. The full list of the standards, titles, and status is contained in [http://www.c63.org/documents/misc/matrix/c63\\_standards.htm](http://www.c63.org/documents/misc/matrix/c63_standards.htm)

But here are those published standards in maintenance mode which includes Working Group activity to amend as needed:

1. C63.4 (Emission Measurements).
2. C63.5 (Antenna Calibration)
3. C63.10 (Wireless (unlicensed) device testing)
4. C63.14 (EMC definitions)
5. C63.16 (Electrostatic discharge measurements)
6. C63.18 (On site medical device immunity testing)
7. C63.19 (Hearing Aid compatibility with mobile phones)

Other standards work being drafted and assigned a publication number that will be used when published are:

1. C63.8 (Calibration of EMC test equipment)
2. C63.11 (Inter-laboratory comparison of EMC measurements)
3. C63.20 (Nuclear power plant immunity testing)
4. C63.23 (Measurement uncertainty)
5. C63.24 (On-site generic immunity testing)
6. C63.25 (Time domain applications for radiated emission test sites)
7. C63.26 (Licensed transmitter testing)

More details will be contained in the minutes of the meeting which will be available when the committee approves them. This occurs as an agenda item at the next C63<sup>®</sup> meeting. Presentations will be posted on our website prior to the next meeting. Check [www.c63.org](http://www.c63.org) from time to time.

The FCC representative provided information on which standards are referenced in the FCC rules or in the Knowledge Data Base (KDB) and even in public notices. FCC referenced standards to be used in showing product compliance with their Rules include C63.4, C63.5, C63.10 and C63.19. Be sure to check on the FCC web site which dates of these standards are referenced as there is usually a transition time before the FCC cites only the latest editions.

A short review of all the interpretations/explanations of our standards was made. You can see all these on this

[http://www.c63.org/explanations\\_interpretations\\_request.htm](http://www.c63.org/explanations_interpretations_request.htm)

***Note that this is the authoritative location for this information, not on an ANSI or IEEE web site.***

Finally, the tentative workshop activity for 2011 is as follows.

#### **First quarter 2011:**

C63.10 (wireless unlicensed device testing)

#### **Second Quarter 2011:**

C63.19 (Hearing Aid Compatibility)

C63.23 (Measurement uncertainty)/C63.25 (Time domain emission test site validation)—provided these are published by then.

#### **Third Quarter 2011:**

C63.4 (Emission measurements)/C63.5(Antenna calibration) (immediately before the start of the Long Beach IEEE EMC Symposium at the same venue

We are looking for an exiting year in furthering our standards activity. We ask that you consider joining this activity by contacting the secretary—Jerry Ramie on [jramie@arctechical.com](mailto:jramie@arctechical.com) or Don on [d.heirman@ieee.org](mailto:d.heirman@ieee.org)

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## MOMENT OF SILENCE

A moment of silence was observed at the October meeting in memory of Hugh Turnbull and Dr. Paul Cardinal.



**Hugh Turnbull**

ARRL Honorary Vice President Hugh Turnbull, W3ABC, of Silver Spring, Maryland, died September 14, 2010 at age 93. Turnbull served the ARRL as Atlantic Division Vice Director (1980-1982) and Director (1982-1996). The ARRL Board named him Vice President in 1996 and Honorary Vice President in 2000. Hugh's engineering career included employment with the FCC, the Voice of America and NASA.

Aside from his long and distinguished service to the ARRL, Hugh was actively involved in several DC-area Amateur Radio clubs and organizations, including the [Foundation for Amateur Radio](#), a group of clubs from the Maryland, Washington, DC and Northern Virginia area that awards scholarships to deserving radio amateurs. In 2005, the [Quarter Century Wireless Association](#) awarded Turnbull a special plaque recognizing his "exceptional contributions to Amateur Radio in general and for outstanding work in the selection of recipients for the QCWA scholarship awards." He was also a charter member of the Goddard Amateur Radio Club.

Hugh served C63® for a number of years as a primary representative for ARRL and as an active member of Subcommittee 5, Immunity, helping the FCC and the Electronic Industries Association track the immunity of consumer equipment.



**Dr. Paul Cardinal**

Paul Cardinal passed way on August 31, 2010 at the age of 56.

Paul achieved his BSc Hons. in physics from the University of Ottawa in 1976, followed by a Masters and PHD from the University of Toronto Institute for Aerospace Studies in laser physics. Although he was initially employed developing lasers for industrial and educational purposes, the highlight of Paul's career was working with Research in Motion (RIM). Paul began his career with RIM in 2000 and thrived with the challenges of being the Director of RIM Testing Services. He considered himself to be extremely fortunate to have the opportunity to grow with this dynamic company Paul pursued personal interests in history and genealogy, music, and was an avid reader of science fiction novels. A keen traveler, Paul's goal was to visit the 100 Wonders of the World.

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## **Subcommittee 1 – Techniques and Development**

### **Dennis Camell, Chair**

This subcommittee has a total of twenty-two members with no new members and one dropped member at this meeting. This subcommittee is responsible for nine standards; of which, three were published in the last year, two are in revision, and three are totally new standards being developed at the working group level. Any interested parties are encouraged to contact the working group chair shown below. Nine new requests for interpretation or explanation were received since the April 2010 meeting. Two standards documents were involved (C63.4-2009, C63.5-2006). Six have been resolved and are posted on the website 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**

This working group has an active PINS on file. A new draft document is now expected by end of 2010. This revision will contain several suggested changes that arose from the last revision. Some of the topics being revised are:

- \* Improved harmonization with IEC and VCCI with reworded/additional text
- \* Finalize the frequency step size requirements across bands
- \* Finalize the changes with reference antenna section
- \* 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
- \* Adding comparison of GSCF to site comparison methods
- \* 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. Target date is mid 2011. For this next edition, work is progressing in the following:

- Measurements above 1 GHz
- Broadband system measurements
- MIMO
- EIRP and ERP measurements
- 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 draft of this new standard has been reviewed and inserted into the latest IEEE format. This document 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. A target date is now set to February 2011.

#### **Project on Site Requirements C63.25**

##### **Chair: Greg Kiemel**

This working group has an active PINS on file. A new chair was assigned to this project with the same members. 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.

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## **Subcommittee 2 – E3 Terms and Definitions**

### **Marcus Shellman, Chair**

The ASC C63 Main Committee approved project initiation for the SC2 to begin maintenance and update of ANSI C63.14-2009. The PINS was subsequently approved by ANSI Standards Review Action. The goal of the SC2 is to maintain an up-to-date draft of the standard that includes emerging terminology and definitions from C63 publications and other technical resources. The committee will also stress emphasis on harmonization with international standards.

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## Subcommittee 3 International Standerization

### Poul Andersen, Chair

#### Membership Review:

- \* Wayne Hunter has retired and will be removed from the roster.
- \* Andy Griffin is now a TA and will be formalized at the May, 2011 meeting.
- \* It was decided in the meeting that the Secretary duty would be rotated among the Main Committee and SC chairs. Dennis Camell will serve as secretary for the May, 2011 meeting.
- \* Poul Andersen's term expires 31 Dec 2010. It was recommended to the Main Committee that Poul continue as Chair for another 3 year term. (Note-Poul was confirmed as Chair by Main Committee)

#### Project Review:

SC3 is working on harmonizing this list of C63<sup>®</sup> Standards with the related international standards.

C63 <sup>®</sup> Document	Subject	International Document
C63.2	Test Instruments	16-1-1
C63.4	Measurements	16-2-X
C63.5	Antenna Calibration	16-1-6
C63.14	Definitions	IEV
C63.15	Immunity	TBD
C63.16	ESD	61000-4-2
C63.18	Medical Equip On-Site Meas.	None
C63.24	Generic On-Site Meas.	None
C63.19	Hearing Aid Compatibility	IEC60118-13
C63.3	Emission Meas Uncert	16-4-2
C63.25	Test Site Validation1	6-1-4

C63.2 (2009) vs. CISPR 16.1.1(2010) Don Heirman pointed out that C63.2 already calls out CISPR 16.1.1 and he felt this work was already completed in 2009 version. Victor pointed out that CISPR 16.1.1 was already in the normative references of the 2009 version.

C63.4 vs. CISPR 16.2.x. Don Heirman reported that they are "simply different." He felt harmonization would take "a decade" and he will write a report to Poul on this topic. CISPR A&I are changing Stds that were the basis of 16.2, so this item is in flux.

C63.5 vs. CISPR 16.1.6 Dennis said that our document is similar to this CISPR draft, he didn't see problems or conflicts. The SC agreed to keep this item alive for one more meeting.

C63.14 vs. IEV Poul received an email asking for what definitions are potential candidates for SC2 harmonization. Don stated that all the IEV definitions are from C63 and Marcus was already comparing these documents.

C63.15 is now under SC5. An Action Item was assigned to Ed Hare to find a new Review Leader.

C63.16 (withdrawn) vs. IEC 61000-4-2: Don Heirman reported that the review is almost complete. The Document should be ready by the end of the year.

C63.18 vs. none: Mr. Silberberg reported that IEC SC-62A-MT23 is working on a test method that could be applied in similar situations. Publication is not expected for several years. The close-distance RF immunity test is something that might be considered for future C63.18 release.

C63.24 vs. None: Ed Hare reported that we won't be able to compare until IEC completes their work.

C63.19 vs. IEC60118-13: Don Heirman reported that this IEC Std. uses a TEM waveguide for immunity testing. The question is if this method yields similar results to C63.19 methods. (As an alternate, TC-29 Electro-Acoustics will be investigated)

C63.23 vs. CISPR 16.4.2: Mr. DiLisi reported that the Type A portion is under development for submittal to SC3.

C63.25 vs CISPR 16.1.4: Mr. Camell reported that this is still in draft, and can incorporate verbage from 16.1.4. New text introduced to CISPR.

#### Head of Delegation Reports:

CISPR/A HoD report Summary: Test lab or customer can pick the level of uncertainty. Reference site method of C63.5 uses the same antennas and cables on two sites, a reference site and an unknown one. Emissions have been measured in the frequency domain in the past. We can now take emissions scans in time domain and FFT them into the frequency domain. Instrumentation, methods and techniques/reports are well along in the IS stage.

CISPR/D HoD Report Summary: Minimal-absorber chambers Std. is moving forward with an annex to CISPR 25. CISPR A has joined with TC77 in comparison of OATS and chambers and TEMs. FAR for radiated emissions & radiated immunity is being considered.

A new task force in SAE is looking at testing high voltage components in vehicles. (PHEV) Certification of autos also addressing PHEVs. (CISPR12) no conflicts.. Chargers to be included in the test. US autos digital electronics are exempt to FCC conducted & radiated requirements, but chargers should comply, according to Bill Hurst. (Engine noise is an incidental radiator, not regulated in the US.)

CISPR/I HoD Report Summary: PLT will not be addressed in CISPR-I until other inputs come in from CISPR. Double insulated devices need special testing setups? Radiated emissions limits under 30MHz from plasma sets?

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## **Subcommittee 5 Immunity Testing**

### **Edward F. Hare, Chair**

The new standard being written for Nuclear Power Plant Immunity is getting underway. Chaired by Steve Berger, this standard will provide immunity test methods, levels and recommended acceptance criteria for instrumentation and control equipment intended for use in nuclear power plants. The Working Group is being formed, so if you are interested, contact Steve Berger at [http://www.c63.org/documents/rosters\\_public/roster\\_public.htm#Berger.Stephen](http://www.c63.org/documents/rosters_public/roster_public.htm#Berger.Stephen).

Work on the C63.24 Recommended Practice for on-site immunity testing of installed devices is also getting underway. This project is building on the C63.18 Recommended Practice for the on-site immunity testing of medical devices, specifying ways that purchasers of equipment can test the immunity and function of the equipment when installed, using transmitters and radiated levels similar to what is expected to be found in that particular environment. The project is also chaired by Steve Berger.

The big news of the meeting, though, is the growing interest in the developing Smart Grid technology. EMC and immunity will play a strong role in the success of the Smart Grid, so C63<sup>®</sup> has formed an ad hoc group to explore what role C63<sup>®</sup> can play to help ensure the success of smart-grid technology.

Those interested in participating in this important work should contact the Subcommittee 5 Chair, Ed Hare at [http://www.c63.org/documents/rosters\\_public/roster\\_public.htm#Hare.Ed](http://www.c63.org/documents/rosters_public/roster_public.htm#Hare.Ed).

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## **Subcommittee 6 Laboratory Accreditation/ Conformity Assessment**

### **Victor Kuczynski, Chair**

#### **October Meeting Summary:**

**C63.11 WG 3** is working to develop proficiency testing program based on IEC guide 17043. (Bob Delisi, Dean Ghizzone, Dan Hoolihan, Werner Schaeffer, Victor Kuczynski, Zhong Cheng, Colin Brench)

**C63.8 WG 4** is working to address traceability and calibration requirements for "key" emc equipment such as LISNs, Antennas, Spectrum Analyzers, coaxial cables, preamps, filters, etc. (Bob Delisi, Dean Ghizzone, Dan Hoolihan, Werner Schaeffer, Victor Kuczynski, Zhong Cheng, Colin Brench)

**WG2** is headed by Dean Ghizzone including Dan Hoolihan, Bob DeLisi, Brad Moore, Victor Kuczynski and is exploring idea to drop dates from scope of accreditations list to minimize amount of entries. PINS in process

A Representative of another Accreditations Body – ACLASS-- joined SC-6. There is now three ABs representing the major ABs with EMC lab assessments (A2LA, NIST NVLAB and now ACLASS).

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## **Subcommittee 8 Medical Equipment Testing**

### **Bob DeLisi, Chair**

SC8 met on Wednesday October 27, 2010 at the SAE Headquarters. There were 19 attendees at the meeting 14 of which were SC8 members. Stephen Berger was announced as the new Vice Chair of SC8.

Jeff Silberberg (WG#1) provided an update on the C63.18 ballot responses. The ballot closed on 10/22/2010. Response to comments were completed on 10/27/10. Mr. Silberberg reported that a third recirculation of C63.18 will take place shortly.

Stephen Berger (WG#3) provided an update on the ballot for draft C63.18. The ballot closed on September 1, 2010. All comments were addressed by the working group. A recirculation ballot was sent out to the ballot group on October 27, 2010.

A new PINS-C was presented to the Subcommittee by WG3 for C63.19. The PINS-C proposes to study the test methods in ANSI C63.19-2010 and to seek opportunities to improve their efficiency and correlation to the desired outcomes, specifically as it applies to simultaneous transmitters.

Liaison reports were provided for AAMI, the FDA and IEC SC 62A. Don Heirman, reporting on AAMI activities, reported that AAMI TIR18:2010, Guidance on electromagnetic compatibility of medical devices in healthcare facilities, is one of the top 10 standards requested from the vast number of AAMI standards. TIR18:2010 references C63.18 in many locations for the methods of ad-hoc testing. It was recommended that SC8 WG#1 (Working Group maintaining C63.18) should incorporating certain aspects of TIR18 into future issues of C63.18. Jeff Silberberg, reporting for the FDA, reported on its ongoing activities including: Testing effects of RFID on implantable neurostimulators; investigating interference between left ventricle assist devices (LVADs) and implantable pacemakers and Implantable cardiac defibrillators(ICDs); development of IEC 60601-1-2 4th Edition; an invitation by NAS to discuss medical device problem reporting and surveillance, medical device EMI and medical EMC standards; and possible work with Oklahoma University to develop a wireless coexistence test method. Jeff Silberberg, reporting on IEC SC62A, reported on the status of the next edition of IEC 60601-1-2 which included a review of a questionnaire, 62A/700/Q, developed by MT23 to provide more information on the work of MT23. The questionnaire was aimed at finding out what requirements National Committees would be willing to support . 217 comments were received as a result of the questionnaire and are currently being addressed by MT23.

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## MAY 2011 ANSI ASC C63<sup>®</sup> MEETING SERIES

The May 2011 meeting series is scheduled to be held during the 2nd week of May at: ETS-Lindgren, 1301 Arrow Point Drive, Cedar Park, TX 78613

**The Main Committee meeting is on Thursday 5 May.**

Meeting Schedule	Mon 2May	Tues 3May	Wed 4May	<b>Thurs 5May</b>
<b>C63<sup>®</sup> Parent Committee</b>				<b>0830-1500</b>
<b>WG meetings</b>	<b>0830-1200; 1300-1650</b>	<b>0830-1200</b>		<b>1515-1650</b>
<b>SC1 Measurement</b>			0830-1050	
<b>SC2 Definitions</b>			1400-1450	
<b>SC3 International</b>			1100-1350	
<b>SC5 Immunity</b>		1500-1650		
<b>SC6 Lab Accreditation</b>		1300-1450		
<b>Sc7 Unlicensed PCS</b>		1100-1200		
<b>SC8 Medical</b>			1500-1650	
<b>C63<sup>®</sup> Steering Committee</b>		1700-1900*	1700-1900*	
<b>US EMC Standards Corp Board of Directors</b>	1700-1900**			

\* Members only of the Steering Committee.

\*\*US EMC Standards Corp Board members only.

**(Please double check schedule on C63<sup>®</sup>'s website: [www.c63.org](http://www.c63.org) - "C63<sup>®</sup> main committee", "Upcoming meeting schedule & logistics".)**

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# WISHING ALL A HAPPY AND PROSPEROUS NEW YEAR!

## ANSI ASC C63<sup>®</sup> 2010 OFFICERS

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