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Accredited Standards Committee C63[®]
Electromagnetic Compatibility
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NEWSLETTER

Issue 32 December 2011

WISHING ALL A HAPPY HOLIDAYS AND A PROSPEROUS NEW YEAR!

MESSAGE FROM THE CHAIR

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

It's been a great 6 years!

It was September of 2005 when there was a change in the chairmanship of C63[®]. Dr. Showers who had been chairman for over 40 years stepped down and I as vice chairman and chairman of Subcommittee 1 (taking over from Ed Bronaugh several years earlier) took over the reigns starting my 6-year term of office.

At the time, here were the other subcommittee chairs:

SC2 (Definitions): Dave Southworth
SC3 (International): John Lichtig
SC5 (Immunity): Ed Hare
SC6 (Accreditation Support): Dan Hoolihan
SC7 (UPCS): Stephen Berger
SC8 (Medical Immunity): Dan Hoolihan

The secretary—Bob Pritchard-- was provided by the IEEE.

I thought it would be fun to reminisce about what the committee had on its plate at that time and see what we have done since then. So here goes. The published C63[®] standards list in September 2005 was

C63.2 (1996)-Measurement Instrumentation
C63.4 (2003)-Emission Measurements
C63.5 (2004)-Antenna Calibration
C63.6 (1996)-Tolerance for Site Validation
C63.7 (1992)-Construction of OATS
C63.12 (2000)-EMC Limit Setting
C63.16 (1993)-ESD Test Methods
C63.17 (2005)-Unlicensed Personal Communication Services Devices (Just went on sale)
C63.18 (1997)-On Site Medical Device Immunity testing
C63.19 (2001)-Hearing Aid Compatibility
C63.22 (2004)-Automated EMI Measurements

The first thing that strikes you is that we had only 11 standards published and that 5 of them were from the previous decade and were approaching or passed the 10 year withdrawal time.

Here are a few tidbits on interest from the September 2005 meeting which was held at Northwest EMC in Irvine, CA. This was the first time the committee was fully introduced to using time domain techniques for test site validation in NWEMC's large semi-anechoic chamber. Another new discussion was measurement of power line communications. So these topics are not just discovered a year or so ago, but were on our radar screen way back in 2005.

And so there was a lot of work to be done and a major challenge for me.

Today, C63.6 and C63.16 have been withdrawn (C63.14 on RF filter testing was withdrawn years earlier). We have currently these standards added to our library of active standards:

- C63.9 (2008)-Office Equipment Immunity
- C63.10 (2009)-Unlicensed Transmitter Measurements
- C63.14 (2009)-EMC Definitions
- C63.15 (2010)-Immunity Measurements and Instrumentation

Then there are the new documents currently being drafted

- C63.8 – Calibration of EMC Test Equipment
- C63.11-Inter-lab Comparisons
- C63.20-Nuclear Power Plant Immunity
- C63.23-Measurement Uncertainty
- C63.24-On Site Generic Immunity Testing
- C63.25-Test Site Validation (introducing Time Domain techniques)
- C63.26-Licensed Transmitter Testing

So with the new publications since 2005 and the very active work on new standards, we have essentially doubled our more intense output/activity in 2011 from that in 2005.

Other highlights showing what the committee was deliberating in and around the September 2005 meetings include:

- C63.15 had been balloted and failed. It would take another 5 years to get it published.
- The first interpretation panel was formed to address two interpretation requests.
- Work on the use of fully anechoic rooms (FARs) was started only later to be dropped as the subject was taken up by the CISPR resulting in a specification in its publication 16-2-3
- Maintenance of C63.4-2003 started. It was never expected to be another 6 years to have the next edition published
- Measurement of broadband sources associated with digital technology continued to be discussed well before this meeting and even now.
- The draft of revision of C63.14-1998 was gaining momentum. It was noted that 70 new terms from published C63 standards as well as the Department of Defense sources.
- Work progressed on immunity test methods and test levels to be used for audio based office equipment and accessories used with wireless devices in an office environment (C63.9). This was brought to the attention of the committee by Goldman Sachs that was concerned with disruption of audio conferences due to the fields from such devices as cellular phones. This is the first time a large company executive joined a Working Group and was its vice chairman

- Reverberation chamber immunity testing was first discussed. This did not lead to any further standards work though.
- Checklists for assessing test laboratories conducting FCC testing was under review. It was noted that the late Ken Hall of HP was one of the checklist commentors.
- The next edition of the medical device on-site immunity test method (C63.18) was progressing. However it took until this year to get to ballot for a variety of reasons.
- Extensive discussions were held on the successfully balloted C63.19 standard on Hearing Aid Compatibility in the presence of the use of a cellular phone. Interestingly, the ANSI public review process got 4 responses. These were taken into account but three responders did not accept the comment resolutions. In all the time of producing standards, this was the second time that there were public comment needing to be resolved. The other time was for an issue affecting C63.5 (antenna calibration).
- A report was given on the C63® training at the Chicago EMC Symposium. This time Don Heirman presented an added topic on comparing C63.4 with CISPR 22 on Information Technology Equipment emission testing. The use of C63.4 by itself was then presented. That training was given by Don Heirman, Bob Hofmann, and Bill Hurst.

The next 6 years was filled with continuing activity much of which was to support the FCC need for good measurement procedures that were accepted by industry.

For my last meeting, we had an excellent venue right in the middle of a county park. It was the New Jersey Monmouth County Park headquarters in Lincroft, NJ. Here is a photo of the meeting place which was a replica of the home of Geraldine Thompson, a local philanthropist, who left her home and the surrounding extensive land to the Park system as part of her estate.



October 2011 meeting venue—can this be the “home” of C63



Andrew Spears (left), Superintendent of Recreation, and Don Heirman, Chair of C63®

The meeting location was ideal as the venue was well appointed with A/V as well as internet connectivity not to mention comfortable seating and adequate capacity. Down the hall was a second meeting room with similar accommodation. In between the rooms was a smaller room that was used for food functions including breaks and lunch which was provided by C63® (Coffee was provided all day by the Park).



Committee members view Power Point presentations in main meeting room.

During the meeting, there were several certificates presented for a variety of reasons. First, C63® awarded the outstanding contributor award to two that really earned the award. Awards chairman Bob Hofmann could not attend the meeting and he asked Don Heirman to stand in for him during the award presentations. Here are the photos of the two awardees being given by chairman Heirman.



Art Wall (left) receives award certificate from chairman Don Heirman



Steve Berger (left) is handed award certificate from Chairman Don Heirman

There were other recognitions that C63® made. First there was membership certificates handed out.



C63® welcomes with a membership certificate Dave Zimmerman (left) presented by Chairman Don Heirman



Mac Elliott (left), Motorola Solutions, receives M-S membership certificate from Chairman Don Heirman

Then a special certificate was given to Alcatel-Lucent and its representative—Dheena Moongilan as A-L helped defray part of the cost of the food functions.



Dheena Moongilan (left) is presented a thank you certificate to Alcatel Lucent from Chairman Don Heirman.

As the meeting days went on, the various committee and working group members mingled and enjoyed the venue, even having lunch outside on a park bench and walking in the pleasant Fall days. Here are some candid photos showing happy campers.



Art Wall (left), TCB Council rep, enjoys a conversation with Bill Stumpf ,ACIL rep.



Andy Griffin (left), CISCO rep waves his “signature” cap next to Dave Zimmerman, Individual member.



Ed Hare (right), ARRL rep and web site coordinator is hard at work sitting next to Steve Whitesell, consultant who assume chairmanship of Subcommittee 5 as Ed left that role.



Warren Kesselman, Newsletter Editor, stopped by to keep track of our committee activity

At a break in the main committee meeting, there were special photos taken. First the IEEE Standards Association was well represented by Sue Vogel and Erin Spiewak (serving as the committee secretariat).



IEEE SA rep Sue Vogel (left), chairman Don Heirman, and Erin Spiewak (IEEE SA secretariat) pose for a photo. Don also is the IEEE SA voting member on C63@

There was a rare opportunity to have Dr. Showers photographed with Don Heirman and Dan Hoolihan. This represents close to an aggregate of 50 years of leadership in C63@/



Dan Hoolihan (left), Hoolihan EMC Consulting and vice chairman of C63@, Dr. Ralph Showers, first chairman of C63@, and Don Heirman, chairman on C63@ represent a half century of C63@ leadership.

Finally as I sign off as your chairman, my colleague and vice chairman, Dan Hoolihan, was elected to be the new chairman of C63@ for a three year term. Dan has been associated with C63@ in many positions including technical expert, working group chairman, subcommittee chairman, and vice chairman of the main committee. His unanimous approval shows that the committee truly believes he is the best qualified to take the reigns starting 1 January 2012. The photo below was Don's congratulation hand shake with Dan.



Don Heirman, C63@ chairman congratulates Dan Hoolihan for his being elected as the new C63@ chairman starting in 2012.

I wish Dan great success as I turn over the committee to his leadership. The committee is in very good shape with strong technical activity, excellent subcommittee leadership, and sound financials. We look to continue the value of C63@ as a continuum from the days Dr. Showers served as chairman to Don's tenure, and now Dan's. Let's all wish Dan great success for our C63@ future.

Subcommittee 1 – Techniques and Development

Dennis Camell, Chair

This subcommittee has a total of twenty-two members with four new applications at this meeting. This subcommittee is responsible for eight standards; one inactive, three in revision process, and three totally new standards being developed at the working group level. There is also one standard up for reaffirmation. Any interested parties are encouraged to contact the appropriate working group chair shown below. Lately, interpretation requests seem to be on the increase. Six interpretations requests were received and answered since the May 2011 meeting. Two standards documents were involved (C63.4-2009, C63.5-2006). All resolved interpretations are posted on the website.

Here is the status of the current working groups:

Project on EM Noise & Field Strength Instrumentation, C63.2

Chair: none

This is an active standard that was published in 2009. Currently there is no working group.

Project on Emissions Measurements, C63.4

Chair: Don Heirman

This is an active standard that was published in 2009. A draft revision is in the works and plans are to have it to the sub-committee by the end of the year. Revisions in the draft that will be considered include but are not limited to the following topics:

- Remove measurement methods for intentional radiators (clause 13) since they are now covered by C63.10
- Revise the measurement method for emissions above 1 GHz; this would be limited to unintentional radiators
- Revisit site validation methods above 1 GHz
- Further describe scrolling H pattern requirements for large screen TV receivers as well as those used as computer monitors
- Add measurement uncertainty based on C63.23 if published
- Move antenna calibration requirements to C63.5
- Move site validation requirements to new standard if one is published covering different approaches (potential publication is C63.25)
- Average detector. Add information on average detectors and review average measurement method using a reduced VBW.

Project on Antenna Calibration, C63.5

Chair: Dennis Camell

This is an active standard that was published in 2006. A new draft document is delayed but expected around the beginning of 2012. This revision will contain several suggested

changes that arose from the last revision as well as new techniques.

New topics discussed

- Need to have all new items in scope; specifically something on each section including the time domain gating.
- Continue to tie into C63.4 and other C63® documents; make sure sections flow from one document to the other.
- Mention of 'reference site' needs to be clarified that it is the SACS, throughout the document.
- Data received from Liberty Labs and ETS-Lindgren on section 5.1.3, above 1 GHz heights, showing practical heights for several antennas.
- Change section 4.3, paragraph 2; 'attenuators should' to 'attenuators shall' for VSWR above 2:1.
- Also, fix grammar in some of the SSM sections.
- The uncertainty section on SSM only covers SA measurements; it needs to be expanded to cover all SSM variables.
- RAM section review and add uncertainty section.
- Better define a statement that the same test site cannot be used for calibrations and product testing. However, at the same site, different areas on a can be used for the two.

Project on Standard for Testing Unlicensed Wireless Devices, C63.10

Chair: Art Wall

This is an active standard that was published in 2009. They are meeting regularly with large turnouts at each meeting. Work is in process for the next revision and a draft to the sub-committee is expected in November 2011. Work is progressing in the following areas:

- 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
- maintenance items

Project on Guide for Automated EMI Measurements, C63.22

Chair: none

This is an active guide that was published in 2004. It is in the process of being reaffirmed.

Project on Measurement Uncertainty, C63.23

Chair: Bob DeLisi

This is a draft standard with an active PINS. The draft of 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. This draft is out for vote in the sub-committee.

Project on Validation Methods for EMC Radiated Emissions Test Sites, C63.25

Chair: Dennis Camell

This is a draft standard with an active PINS. 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 draft completion date is June 2012.

Project on Standard for Testing Licensed Wireless Devices, C63.26

Chair: Art Wall

This is a draft standard with an active PINS. The working group meets 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 late 2012.

Subcommittee 2 – E3 Terms and Definitions

Marcus Shellman, Chair

SC2 Summary Report. SC2 Working Group (WG) 1 continues to update and maintain the draft ANSI C63.14-201X. SC2 WG1 has developed an Informative Annex to the draft which is intended to be a repository of EMC terms from the IEC 60050, “International Electrotechnical Vocabulary (IEV) and, perhaps, other documents as well.

Also, the term of the current SC2 Chairman, Mr. Marcus Shellman, expires 31 December 2011. A special ballot was conducted to elect a new chairman; however, the results of the ballot were unavailable at the time of this publication.

SC2 Membership List

NAME	TITLE
Mr. Marcus Shellman	Chair, SC2 (WG1)
Ms. Janet O’Neil	Vice-Chair, SC2
Mr. Michael Duncanson	Secretary, SC2 (WG1)
Mr. Chris Dilay	Web Coordinator, SC2 (WG1)
Mr. Don Heirman	Chair, C63 [®]
Mr. Dan Hoolihan	Vice-Chair, C63 [®]
Mr. Dennis Camell	Chair, SC1
Mr. Colin Brench	Vice-Chair, SC1
Mr. Poul Anderson	Chair, SC3
Mr. Ed Hare	Web Master, C63 [®]
Mr. Steve Whitesell	Chair, SC5

Mr. Victor Kuczynski	Chair, SC6
Mr. Stephen Berger	Chair, SC7
Mr. Bob DeLisi	Chair, SC8
Dr. Ralph Showers	Member
Mr. Bob Hofmann	Member
Mr. Harry Hodes	Member, WG1
Mr. Steve Koster	Member, WG1
Mr. Jerry Ramie	Member, WG1
Mr. Dave Schaefer	Member, WG1
Mr. Joe Snyder	Member, WG1

Subcommittee 3 International Standardization

Poul Andersen, Chair

Subcommittee 3 met Oct 5.

Steven Whitesell was added as a member as he has assumed the chairmanship of Subcommittee 5.

List of documents as discussed in the SC3 meeting:

C63 [®] Doc-ument	SC	Subject	Inter-national Document	Review Leader
C63.2	SC1	Test Instruments	16.1.1	Heirman
C63.4	SC1	Measurements	16.2.X	Heirman
C63.5	SC1	Antenna Calibration	16.1.6	Camell
C63.9	SC5	Office Equip Immunity	61000-4-3	Berger
C63.14	SC2	Definitions	IEV	Shellman
C63.15	SC5	Immunity	61000-4-3	Hare
C63.16	SC5	ESD	61000-4-2	Heirman
C63.18	SC8	Medical Equip On-Site	*	Silberberg
C63.19	SC8	Measurement Hearing Aid Compatibility	IEC 60118-13	Berger
C63.23	SC1	Emission Measurement Uncertainty	16.4.2	Delisi
C63.24	SC5	Generic On-Site Meas.	*	Berger
C63.25	SC1	Test Site Validation Antenna calibration site	16.1.4 16.1.5	Camell

Of the 12 documents identified for review, three will be dropped from the list as two have achieved harmonization (C63.2 and C63.9) and it was decided that the third (C63.14) would not be addressed.

For the Spring 2012 meeting the Review Leaders for two documents (C63.15 and C63.18) have been requested to propose a plan of action – recommend to request the associated TAG to submit portions of document content to the international standards body or to drop from further consideration.

Six of the documents have been placed on hold until the related documents have been published.

The decision was made that the Subcommittee recommend to the Main Committee that C63.19 be recommended to the appropriate US TAG to introduce appropriate portions of the document into the international standards arena. Steve Berger will be attending an industry meeting (not standards body) where he will explore interest in some of the C63.19 content. He will report to Subcommittee 3 at the Spring 2012 meeting.

With the shortened list of documents for discussion at the Spring 2012 meeting, it is anticipated that only 1 to 1½ hours will be needed for the SC3 meeting.

Subcommittee 5 Immunity Testing

Steve Whitesell, Chair

Subcommittee 5 is happy to welcome Rick Lombardi (Visteon Corporation) and Andy Griffin (Cisco Systems) as new SC5 members. A draft PINS for revision of the C63.16 ESD Guide was reviewed and recommended to the parent C63® Committee, where it was subsequently approved. Richard Worely (Dell) is serving as chair, and David Staggs as vice-chair, of the newly formed C63.16 WG. Stephen Berger is chair of the other two active SC5 WGs, C63.20 on Nuclear Power Plant Immunity and C63.24 on Generic In-Situ (On Site) Immunity Evaluation. Both are still in the process of Working Group formation although progress is being made on both documents. Mr. Berger presented a proposal for establishing voting membership in the working groups that was very well received by SC5. At the suggestion of Don Heirman, his proposal was forwarded to the Steering Committee for consideration as a model for other C63 WGs to use.

Subcommittee 6 Laboratory Accreditation/ Conformity Assessment

Victor Kuczynski, Chair

Oct. 4, 2011 Meeting summary:

16 members including two in-calls and 10 guests were present. Two new members joined SC6.

WG 2 was dissolved at previous meeting.

WG3 C63® C63.11™/D1.0 Draft Standard-American National Standard for Inter-lab Comparison EMC Testing.

Dan Hoolihan Chair, Victor Kuczynski V-chair, Harry Hodes, Werner Schafer, Zhong Chen, Collis Brench, Randy Long, Bob Delisi, Dennis Camell, Phillip Keebler, Steven Berger, and Nich Hooper.

Proficiency testing updates and the PT program run by ACIL were discussed in details. SC6 has two different artifacts for conducted and radiated emission round robin testing. SC6 is inviting laboratories to participate.

WG4 C63® C63.8™/D1.0 Draft Guide-Guidance on specifying requirements for the calibrations and verifications of EMC test equipment.

Victor Kuczynski Chair, Bob Delisi, Dean Ghizzone, Dan Hoolihan, Werner Schaeffer, Randy Long V-chair, Zhong Cheng, Colin Brench, Denise Camell. Phillip Keebler, Steven Berger, Nich Hooper, Dheena Moongilan, Adam Gouker, David Zimmerman, Marc Elliot and Brad Moore.

Progress was discussed as well as usefulness of that guidance document..

Subcommittee 7 Unlicensed Personal Communications Services Devices

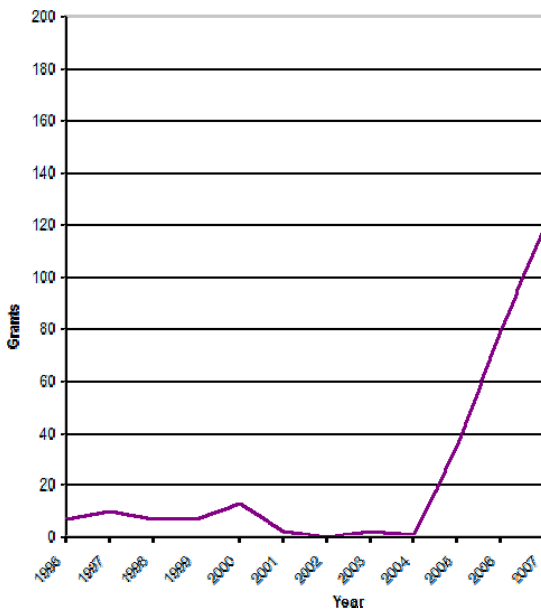
Stephen Berger, Chair

ANSI C63 Subcommittee 7 (SC7) develops addressing spectrum etiquettes, wireless coexistence and related standards to provide new or amended measurement techniques, protocols or methods and associated instrumentation and operational constraints supporting more efficient spectrum utilization, including dynamic spectrum access. SC7 was responsible for developing ANSI C63.17, which provides the test methods for FCC Part 15D, Unlicensed Personal Communications Services (UPCS).

The committee recently initiated a new project addressing Wireless Interference and Coexistence Evaluation. This committee project will study the need and approach to a set of tests and evaluation method for wireless interference and coexistence. Regulators, IT system planners and others need tests that accurately evaluate the ability of wireless devices to operate in their intended environments, particularly in the vicinity of nearby in-band and adjacent-band transmitters. The task group for the project expects to deliver a report at the next C63 meeting on the progress of its work.

Since the committee revised ANSI C63.17 in 2006 and its adoption by the FCC SC7 as the required test method for the UPCS band, 1920-1930 MHz, use of the band has exploded. The UPCS band is now the dominant home for cordless phones in the US market.

FCC Equipment Grants - UPCS Band



FCC Equipment Grants for UPCS Frequency Band

Subcommittee 8 Medical Equipment Testing

Bob DeLisi, Chair

Subcommittee 8 met on October 5, 2011. One new member was accepted by SC8. Total membership is now 31. Current working groups within SC8 are WG1 which is responsible for C63.18 maintenance and WG2 which is responsible for C63.19 maintenance. C63.18 was sent for recirculation ballot on October 3, 2011 and comments were due on October 24, 2011. Results of the ballot are still pending. C63.19 was balloted earlier in 2011 and was completed with acceptable results.

Liaison reports for AAMI, the FDA and IEC SC62A MT 23 were provided to the group.

AAMI membership was reviewed and can be found at <http://www.aami.org/committeecentral/Committee/ShowCommitteeMembers.cfm?ComID=0EM0000>.

The FDA reported on current activities including FDA draft wireless medical device guidance, Working with the Association for Automatic Identification and Mobility (AIM Global) RFID Experts Group (REG) to develop test protocols for interference between RFID and medical devices – consensus draft for non-implanted devices and the activities working with the University of Oklahoma with wireless coexistence. Wireless coexistence will be studied in Subcommittee 7 since this area of interest extends beyond medical devices. IEC SC62A MT 23 is currently addressing over 500 comments received in the ballot of the latest draft of the fourth edition of IEC 60601-1-2.

April 2012 ANSI ASC C63[®] MEETING SERIES

The first 2012 meeting series is scheduled to be held during the week of April 16-20, 2012 at the IEEE Operations Center in Piscataway, NJ .

The Main Committee meeting is on Thursday April 19th.

Please check schedule on C63[®]'s website:
www.c63.org "C63[®] main committee", "Upcoming meeting schedule & logistics".

ANSI ASC C63[®] 2011 OFFICERS

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

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

Jerry Ramie, Secretary (jramie@arctechnical.com)

Erin Spiewak, Secretariat (e.spiewak@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)

Stephen R. Whitesell, Chair SC-5 Immunity Testing and Measurements (swhitesell@ieee.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)

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Warren Kesselman, Editor (w.kesselman@ieee.org)

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