

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 41 August 2017

MESSAGE FROM THE CHAIR

Daniel D. Hoolihan, Chairman ANSI-ASC C63[®]

The ANSI-ASC C63[®] Committee and all of its Subcommittees met for four days in Frederick, Maryland from May 8th through May 11th, 2017. Our host for the very successful series of meetings was the American Association for Laboratory Accreditation (A2LA) at their spacious headquarters-building with Megan Riebau our daily host; taking care of the meeting room logistics and lunches and snacks. On Thursday morning, we had the opportunity to thank Lonnie Spires (President/CEO) and Trace McInturff (Senior Director of Accreditation Services) for the hospitality extended to the Committee by the entire A2LA organization.

As per our usual format, Working Groups organized under the 8 subcommittees of C63 primarily met on Monday and Tuesday. The Subcommittees (mostly) started meeting on Tuesday and finished on Wednesday. The Main Committee met on Thursday, May 11th. We enjoyed wonderful weather in Maryland and the attendance at the meetings was excellent.

The eight Subcommittees met during the first three days of the Committee meetings. Each subcommittee met for approximately 1 - 3 hours during the three-day period. Because we now have 8 Subcommittee and a larger number of active working groups for all the Subcommittees, there are numerous overlapping meetings and the Steering Committee is considering going to a five-day meeting format. This may begin as early as the November – 2017 meeting.

The Main Committee was well attended (a quorum of members was present) and the meeting on Thursday was run as per the published agenda.

General comments were made by Chair and they included an update on the Committee's interactions with the U. S. Federal Communications Commission (FCC) in 2016-

2017. The Committee's recommendation to adopt C63.26 into the FCC Rules is still under consideration by the Commission.

The Committee is proud to announce that it has published three new or revised standards in the first half of 2017. The standards are:

ANSI/IEEE C63.5 – 2017 - American National Standard for Electromagnetic Compatibility – Radiated Emission Measurements in Electromagnetic Interference (EMI) Control – Calibration and Qualification of Antennas (9 kHz to 40 GHz)

ANSI/IEEE C63.27 – 2017 - American National Standard for Evaluation of Wireless Coexistence

ANSI/IEEE C63.2 – 2016 – American National Standard for Specifications of Electromagnetic Interference and Field Strength Measuring Instrumentation in the Frequency Range 9 kHz to 40 GHz

The Secretary, Jerry Ramie, asked for and received Committee approval for the Minutes of the November - 2016 Committee Meeting. In addition, Jerry showed a summary of interpretation requests since the last meeting of the Committee and he showed a summary of electronic motions passed since November of 2016.

Sue Vogel gave her IEEE Secretariat report at the meeting including a status of C63[®] standards respect to their four-year anniversary and their ten-year anniversary. She also discussed PINSs (Project Initiation Notification System) for the C63 Committee that had been recently published in the ANSI Standards Action.

Each Subcommittee Chair then gave a report on their SC activities in the past six months as well as the progress made in their Subcommittee meetings held in the previous three days before the Main Committee meeting. This section of the meeting included a Motion from each Subcommittee to approve their Scope, Membership, and Duties (standards they are responsible for) for 2017.

...CHAIR MESSAGE Continued

The Web page was discussed during the Committee meeting as well as other administrative matters from the Steering Committee.

A report on Future Seminars and Workshops was presented by Don Heirman and a Newsletter report was made by Dan Hoolihan in Dave Zimmerman's absence due to business considerations.

Finally, the meeting ended with a discussion of the next meeting (including an extended discussion on a 5-day meeting-time) scheduled for November 6-10, 2017 with ETS-Lindgren as our host in Austin, Texas.

Make sure you check the Committee's web page for all the details on the upcoming meeting (www.c63.org)!



C63® Main Committee Meeting 11 May 2017, A2LA headquarters, Frederick, MD. Chairman Dan Hoolihan presiding.

AWARDS PRESENTED

Awards were presented to the following individuals for their outstanding standards contributions:

All photos below were provided by Jerry Ramie

A Certificate of Appreciation for updating the ANSI C63® Operating Procedures



Dan Hoolihan (left) presenting to Greg Kiemel (right) accepting for Dean Ghizzone

An award for work on the American National Standard C63.27



Dan Hoolihan (right) presenting to Stephen Berger (left)

...Awards Continued

An award for work on the American National Standard ANSI C63.5



Dan Hoolihan (right) presenting to Bob DeLisi (left)

An award for work on the American National Standard ANSI C63.2



Dan Hoolihan (left) presenting to Werner Schaefer (right)

An award for his service as chair of SC5



Dan Hoolihan (right) presenting to Stephen Whitesell (left)

FCC 17-93 – First Report and Order (ET Docket No. 15-170 – First Report and Order)

Daniel D. Hoolihan, Chairman ANSI-ASC C63®

The subject Report and Order is dealing with the matter of: Amendment of Parts 0, 1, 2, 15, and 18 of the Commission's Rules regarding Authorization of Radiofrequency Equipment. It was adopted opted by the Commission on July 13, 2017 and released on July 14, 2017.

Major topics covered by the First Report and Order include: (1) Unifying self-approval procedures, (2) Labeling, (3) Importation Rules, and (4) Measurement Procedures.

Under the Measurement Procedures topic, there is a sub-topic titled "ANSI C63.26 (Compliance Testing for Licensed Radio Services).

In the sub-topic, it says:

In the *NPRM*, the Commission acknowledged the then-pending ANSI C63.26 standard, "American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services" and asked parties to "take the ANSI C63.26 standards development into account when drafting their comments" related to our measurement procedure proposals.

In particular, we observed that references to the applicable measurement procedures in ANSI C63.26 could replace measurement procedures set forth in both the Part 2 equipment authorization rules and many of the specific licensed service rule parts. Further, we noted that many products now incorporate both licensed and unlicensed transmitters and there could be value in providing for the same test method to be used for a device that is subject to technical requirements in different ruleparts.

Subsequent to the *NPRM*, OET released a Public Notice acknowledging the publication of the finally-approved standard ("ANSI C63.26-2015") and seeking comment on modifying Section 2.910 of our rules (47 C.F.R. § 2.910) to incorporate ANSI C63.26 by reference. In addition, the Public Notice asked commenters to address how the Commission would incorporate the standard into our existing rules, as discussed in the *NPRM*. For example, what specific Part 2 measurement procedures would ANSI C63.26 replace, and which specific licensed service rules should be replaced with cross-references to Part 2 (and, by extension, ANSI C63.26).

FCC 17-93 continued...

In sum, the *NPRM* and Public Notice sought comment on whether there are alternatives to our proposed rules for measurement procedures that would better promote clarity and accommodate future technological developments.

All commenters supported incorporating ANSI C63.26 in our rules for measurements made on transmitters used in licensed services. However, while supportive, these commenters pointed out that the current version of the standard does not cover all licensed services. Specifically, as Cisco points out, “the current version is geared to the mobile and broadband radios used in Part 22, 24, 25, 27, 90, and 95. TV broadcast systems under Part 74, high power analog land mobile services under Part 90 and other similar technologies are not addressed in the first version of the standard.”

Accordingly, commenters suggest that it would be premature to remove the measurement procedures in Part 2 and elsewhere before these other services are addressed by the standard. Additionally, ANSI ASC C63 suggests that we implement an 18-month transition period for the new standard in order to allow test labs to incorporate the standard into the scope of their accreditation. Finally, Cohen Dippel and Everist expressed concerns about the availability of the standard and whether the Commission would be relying on a standard that is not in the public domain and available only at a cost to the user.

We will amend section 2.910(c) and section 2.1041 to include ANSI C63.26-2015 as acceptable measurement procedure for equipment that operates in authorized radio services covered by the measurement standard, where measurements are required in sections 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, and 2.1057.

This standard is in the public domain; although available at a cost, use of ANSI standards is long-standing Commission practice. We observe that Section 2.947 provides a number of options that can be considered in selecting a measurement procedure to be used for demonstrating compliance. We agree with the comments that the ANSI standard does not cover all of the license services and will retain the additional procedures in the current rules as well. While Cisco proposed an 18-month transition period to permit test laboratories to expand the scope of their accreditation, we have consistently used a two-year transition for expanding scope for accredited testing laboratories pursuant to new rules, as this parallels the reexamination cycle of the accrediting bodies. We provide here that accredited laboratories may test to the ANSI C63.26 standards for up to two years from the date of adoption of this Order without an explicit expansion of their scope by an accrediting body.

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Subcommittee 1

Techniques and Development

Zhong Chen (ETS-Lindgren), Chair.



Subcommittee 1 meeting – Zhong Chen-ETS-Lindgren on the right in the foreground and Janet O’Neil at his side.

Chair Zhong Chen called the meeting to order at 1:00 pm. A round of introductions was made. Chair Zhong Chen gave a presentation that reviewed the status of the meeting fees, ANSI policy related to Intellectual Property (IP), inappropriate topics for IEEE working group meetings and the working group meeting slide template.

Mits Samoto gave a presentation on antenna VSWR during the working group meeting. The presentation provided an overview of matching pad values at the output of the receive antenna to meet VSWR requirements (2.5:1). The report includes a few slides from Mits Samoto’s presentation. The report concluded with a list of the working group members.

Dan Sigouin reported the status of C63.25: Test Site. A draft is being written and he confirmed the scope of the standard: This standard provides methods of measurement requirements for the validation of radiated emission test sites in the frequency range of 30 MHz to 18 GHz. These requirements are applicable to open area test sites (OATS), fully and partially covered OATS, semi-anechoic chambers (SAC), and fully anechoic rooms (FAR). Dan thanked Zhong Chen, Tim Harrington, Greg Kiemel, and Werner Schaefer for their work getting this document ready to review.

In February 2016, it was decided and approved by the SC 1 Chair that the C63.4 working group (chaired by Don Heirman) will continue addressing the site validation requirements below:

1 GHz. C63.25 is only addressing the frequency range 1 GHz to 18 GHz regarding site validation. On the new standard, the plan is to circulate a draft to SC 1 in the second quarter of 2016. The time domain method in the current draft of C63.25 is for complete. The PINS is current.

Subcommittee 1 continued...

Following is the scope of Standard C63.25 in the draft:

This standard provides methods of measurement requirements for the validation of radiated emission test sites in the frequency range of 1 GHz to 18 GHz. These requirements are applicable to fully anechoic rooms (FAR) and when spectrally treated on the floor open-area test sites (OATS), fully- and partially-covered OATS, semi-anechoic chambers (SAC). The SVSWR method in CISPR 16-1-4 for site validation above 1 GHz is referenced in C63.25. An alternative approach to test site validation is the time domain method detailed in C63.25. The TDR method has several useful features:

- Requires less time to perform the validation
- Gives an indication of where the site or chamber may be deficient and allowing use of corrective measures to bring it into compliance.

The user of the standard will now have the ability to select the option of choosing among the two techniques. Because the time domain approach is relatively new and has yet to be adopted universally.

SC3 Chair Don Heirman shared the PINS with SC 1. He noted they will add an “a” after C63.4 on the PINS, i.e. C63.4a.

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Subcommittee 2 Definitions

Chris Dilay (SPAWAR), Chair.



Subcommittee 2 meeting – Chris Dilay-SPAWAR/SYSCEN-PACIFIC

ANSI C63 Subcommittee 2 and C63.14 / C63.28 Working Group Meetings were held at A2LA facilities in Frederick, MD 9 May 2017.

The C63.14 5-year update is in progress and recent C63 Standards were reviewed for EMC definitions to include C63.27 and C63.5 with reviews for C63.4a and C63.15 in progress.

C63.28 draft development continued with the need identified for additional support from C63 main committee for commercial sector representation in draft development efforts.

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Subcommittee 3

International Standardization

**Don Heirman (Don Heirman Consultants),
Chair**

Subcommittee 3 (SC3) met on 10 May as part of the 4-day meeting schedule of all C63 activities. Don Heirman, chair, presided over the 2-hour meeting.

The SC recommended approval of the existing scope and duties of the subcommittee which is on the SC3 website:

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

The parent C63 committee approved the recommendation at their meeting the next day.

The main work was to go over comparisons between the C63 standards and international standards primarily of the International Electrotechnical Commission (IEC). The focus was to see if some of our standards work could be contributed to the international standard and vice versa where there is some material in the international work that can be added to our C63 standards.

Here are two tables to show comparisons of the standards with similar subjects. Also shown are the C63 subcommittees responsible for C63 standards noting the actual standard(s)

C63® Document	SC	Subject	International Document
C63.4	SC1	Measurements	CISPR 16-2-X CISPR 32
C63.5	SC1	Antenna Calibration	CISPR 16-1-6
C63.9	SC5	Office Equipment Immunity	IEC 61000-4-39
C63.10	SC4	Unlicensed Transmitters	ETSI wireless requirements
C63.15	SC5	Immunity	IEC 61000-4-X CISPR 35
C63.16	SC5	ESD	IEC 61000-4-2
C63.23	SC1	Uncertainty	16-4-2

C63.24-draft	SC5	Generic On-Site Meas.	IEEE 473
C63.25	SC1	Test Site Validation Antenna calibration site	CISPR 16-1-4 CISPR 16-1-5
C63.26	SC4	Licensed Transmitters	ETSI wireless requirements
C63.27	SC1	Co-existence	IEC 62557-2
C63.28-draft	SC2	Best Practices	No equivalent
C63.29-draft Link to item	SC4	Lighting products	CISPR 15
C63.30-draft Link to item	SC4	Wireless Power Transfer Products	CISPR 11
C63.31-draft Link to item	SC4	ISM equipment (FCC NP-5)	CISPR 11

There was important progress made in considering inputs into international standards including a successful attempt. Here is a summary of this activity:

Work considered as possible input to CISPR

- C63.4 (Emission Measurements) --Dimensional Tolerance Table updates to be submitted to CISPR
- C63.5 (Antenna Calibration)—Equivalency of C63.5 and CISPR calibrations if site validation meets both CISPR 16-1-6 and C63.5 to be identified in both standards
- C63.23 (Site validation)—possible submission of repeat measurements approach to CISPR 16-4-2

• Work in progress

In this case, the input on special ESD tests based on experience in the field by the user was identified and as a consequence this happened:

- C63.16 (ESD)—An input on the special field experience has been inputted to IEC SC/77B for consideration in the next edition of IEC 61000-4-2 on the same subject.

Note that all such inputs go through the US National Committee of the IEC and their technical advisory group (TAG) on SC77/B. In this case, a member of the TAG did the submitting of the proposed addition useful information in C63.16.

SC3 was very appreciative of this positive action.



Subcommittee 4 Wireless and ISM Equipment Measurements

Art Wall (TCB Council), Chair



Subcommittee 4 meeting – Art Wall (TCB Council), Chair in immediate foreground

Subcommittee 4 is responsible for writing and maintaining existing and proposed C63[®] standards for wireless and ISM devices (e.g., lighting, wireless power transfer, Industrial and dielectric heaters, and similar equipment), as assigned by the Main Committee ASC 63[®].

Duties:

C63.26 WG – Licensed transmitter test procedures C63.29

WG – Lighting devices test procedures

C63.30 WG – WPT equipment test procedures

C63.10 WG – Unlicensed transmitter test procedures

C63.31 WG – ISM equipment test procedures

Work on the 2nd Edition of C63.26 continuing with expectation of circulating a draft to SC-4 next year.

A 2nd draft of C63.29-201x will be circulated by September 2017 with expectation of circulation to SC by early 2018 regarding measurements below 30 MHz; equipment set-up; and definitions.

JTG – measurements below 30 MHz was discussed. This was created to determine correlation between measurements made with a small loop antenna and van Veen loop system (LLAS), if possible. After some discussion, it was agreed that the JTG will use the procedures developed by C63.31 TG and C63.30 TG.

Subcommittee 5 Immunity Testing

Ed Hare (ARRL), Chair

Discussion revolved around VNA scripts as intellectual property or "work product." Also, the procedures for ability to reaffirm a Standard without a written ballot at a face-to-face meeting. The WG is seeking from ANSI knowledge as to if we can expand the number of characters we can submit or if we can include a URL for additional explanatory text. What do they recommend in a PINS?

The steering committee is to adopt a style guide.

Questions were discussed regarding VNA scripts for C63.25 and the need for a copyright release and the paragraph in C63.4 on antenna calibration trying to determine if labs must be accredited to C63.5

Subcommittee 6 Laboratory

Accreditation/ Conformity Assessment

Randy Long (ANSI-ASQ National Accreditation Board, dba L-A-B), Chair



Subcommittee 6 - May 9, 2017 meeting

The committee met on May 9, 2017 and was presided over by Megan Riebau, Vice Chair. Secretary, David Zimmerman, presented regarding IEEE patent policy. It was communicated that the IEEE-SA strongly recommends that at each Working Group, the meeting chair or a designee should advise the working group. Opportunity was given to the subcommittee members to identify/disclose patents. There was no objection to the content in the policy. The scope of the subcommittee was amended at the meeting to say:

Subcommittee 6 provides guidance for laboratory assessment activities. It works on topics related to laboratory accreditation. Representatives of accreditation bodies, laboratories, and regulators report on the status of EMC testing and calibration activities.

Subcommittee 6 continued...

Rather than the previous wording:

Subcommittee 6 provides a resource for laboratory assessment activities. It works on many aspects related to laboratories, regulators and accreditation bodies. Representatives of the accreditation bodies, laboratories, and regulators are invited to give reports on the status of EMC testing and calibration activities.

During the discussion on WG3 it was brought forth to draft a guide for Inter-lab comparison of EMC testing – Suspended and that WG4 was to draft a guide: Calibration of EMC Test Equipment.

Harry Hodes then presented the topic “Recent History, Current Status, and Latest PT Results of ACE-PT Inc. EMC Proficiency Testing (PT) Programs” which was followed by reports from the Accreditation bodies before the session was closed.

Subcommittee 7 Spectrum Etiquette

Vladimir Bazhanov (Ericsson), Chair

The scope of C63 SC7 states that “Subcommittee 7 develops standards 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”. The scope was reviewed and approved at the recent face-to-face meeting in Frederick, MD, in May 2017.

At the time, SC7 consisted of 19 members. It is chaired by Vladimir Bazhanov. The Vice Chair is Seth Seidman, and Bill Young is the Secretary. The membership roster of the Subcommittee may be found at:

http://www.c63.org/documents/rosters_public/sc7_members.htm

The recent product developed by the subcommittee is “American National Standard for Evaluation of Wireless Coexistence”. It was published on May 11, 2017. The standard specifies methods for assessing the wireless coexistence of equipment that incorporates radio-frequency communications. Key functional wireless performance indicators are used to quantify the ability of the equipment under test to coexist with other equipment in its intended operational environment. The evaluation procedures, test methods and other guidance are provided.

Historically the working group consisted of up to 100 members. A fantastic job was performed by co-chairs Stephen Berger and Jason Coder. The secretary Nickolas LaSorte contributed considerably to the editing and shaping the document. Now it is planned to organize a C63.27 Workshop to attract attention to the new standard.

During its development, several items relevant for the future version of the standard were identified. Besides, a constructive feedback addressing the new use cases is already received. The work on the second revision of the standard started and C63 Main Committee approved PINS-C proposed by SC7. The focus will be on the new technology specific test procedures and improvements of test methods, measurement repeatability, uncertainty analysis, and estimation of probability-of-coexistence.

Subcommittee 8

Medical Equipment Testing

Stephen Berger (TEM Consulting, LP), Chair

SC8 met on May 11, 2017. The meeting was called to order by Stephen Berger, Chair.

A motion was made to approve previously introduced membership, scope and duties. The motion was passed.

Steve Berger gave a verbal report regarding C63.19. More information about the standard is available on the Standards Status section of the C63® web page.

Jeff Silberberg also reported on: 10.2 FDA EMC Activities, 10.3 IEC SC62A MT23 Liaison, 10.4 FDA Expectations for Wireless Medical Devices, and 10.5 IEC 60601-1-2 Requirements for Receivers. Bob Delisi initiated conversation following the presentations about risk management, and there was some general discussion on the topic. Before the meeting was brought to a close.

Application for Membership Received

An application for organizational membership was received by the C63 Membership Committee from Honeywell International. The application was circulated through the main committee and no objections to the membership were received. They were accepted as an organizational member. The primary delegate from Honeywell International will be Michael Antola with the alternate as Andrew Roussin. The Executive who initiated the application for membership is Ted Ramos. The committee welcomes Honeywell International.

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ANSI ASC C63[®] ELECTROMAGNETIC COMPATIBILITY, NEWSLETTER is published approximately sixty-six days after the spring ANSI ASC C63[®] 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.

Any questions about the Newsletter should be addressed to: David Zimmerman, Editor (d.j.zimmerman@ieee.org)

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