

APPROVED MINUTES
ANSI ASC C63® SC1: Techniques and Development
WebEx Meeting
Friday, June 5, 2020

Members Present:

Nicholas Abbondante
Mark Arthurs
David Chamberlain
Zhong Chen (Chair)
Bob DeLisi
Andy Griffin
Tim Harrington
Dan Hoolihan
Greg Kiemel
Jeff Klinger
Doug Kramer
Victor Kuczynski
Rick Lombardi
Randy Long
Jason Nixon
Michael O'Dwyer
Janet O'Neil (Secretary)
Nate Potts
David Schaefer
Dan Sigouin
Jeff Silberberg
Dennis Ward
Khairul A. Zainal
David Zimmerman

Members Absent:

Mike Antola
Mac Elliott
Don Heirman
Harry Hodes
Steve Jones
Mits Samoto

Guests:

Ross Carlton
Horia Popovici
Mark Terrien

Employer:

Intertek
Sony
ISED Canada
ETS-Lindgren
Underwriters Laboratories Inc. (UL)
Cisco
FCC
Hoolihan EMC Consulting
Apple
Compatible Electronics
ETS-Lindgren
Vican Electronics
Visteon
ANAB
ISED Canada
Apple
ETS-Lindgren
Keysight
Element Materials Technology
DHS
FDA Center for Devices & Radiological Health
PCTEST
Laird Connectivity
Spectrum EMC, LLC

Employer:

Residio
TUV Sud America
Don HEIRMAN Consultants
Bay Area Compliance Labs
FCC
Liberty Labs Asia

Employer:

ETS-Lindgren
ISED Canada
Keysight

1.0 Call to Order: Chair

Chair Zhong Chen called the meeting to order at 8:00 am PDT. A round of introductions was made.

2.0 Approval of the Meeting Agenda and SC1 Scope: Chair

Zhong Chen presented the draft agenda for the June 5, 2020 meeting for review. The agenda was approved as presented. (See Attachment A for the approved agenda.) The SC1 Scope was reviewed. It was moved and approved to revise the SC1 Scope to remove the wording “are incorporated” as shown below. The approved SC1 Scope reads as follows:

Subcommittee 1 provides the technical expertise and resources necessary for maintaining existing and newly proposed C63® approved standards documents. Subcommittee 1 addresses new or existing measurement methods, site qualification methods, calibration methods, associated instrumentation, and limits development ~~are incorporated~~ as assigned by the Main Committee ASC C63®.

3.0 Presentation of [patent slides](#): Chair

Zhong Chen gave a presentation to review the status of the meeting fees, the ANSI policy related to Intellectual Property (IP), inappropriate topics for IEEE Working Group meetings and the Working Group meeting slide template. (See Attachment B.) **Mr. Chen moved to confirm everyone present agreed to abide by the procedures outlined in the patent slides. The motion was seconded. All confirmed compliance.**

4.0 Approval of Minutes of Previous Meeting: Secretary

Secretary Janet O’Neil presented the minutes of the November 20, 2019 meeting held at Keysight in Santa Rosa, CA. **Dennis Ward moved to approve the November 20, 2019 minutes as presented. The motion was seconded and approved.** (See Attachment C.)

5.0 Review of [Subcommittee Membership](#): Secretary

5.1 Review of membership – Members at risk. Secretary Janet O’Neil advised that Harry Hodes has resigned from ANSI C63 due to a change in employment. Greg Kiemel has changed employers and is now with Apple. Dan Sigouin is now with Timco. Khairul Zainal’s company name has changed to Laird Connectivity. See Attachment D for the updated SC1 Membership Roster.

The secretary reviewed the Member Attendance Log included in the agenda (see Attachment A). There are no members at risk.

5.2 Consideration of New Members – Working Group Rosters

The secretary advised no new membership applications for SC 1 have been received since the last meeting. The updated Working Group Roster is included in Attachment E.

ACTION ITEM: All Working Group Chairs need to complete their rosters and indicate their officers (Vice-Chair and Secretary) and submit to SC1 Chair prior to the next meeting.

6.0 Working Group Reports

C63.2: Field Strength Measuring Instrumentation – Mark Terrien of Keysight provided a report that summarized activity on this document. (See Attachment F.) He noted the last PINS for C63.2:2009 was opened in October 2012. At the time, C63.2 needed significant updating since it had not been updated in many years and contained references to outdated equipment types. C63.2:2016 was updated and published February 2017. This version was more aligned with CISPR 16-1-1 (through 18 GHz) and modern 40 GHz receiver information was included. At the SC1 meeting on November 20, 2019, a suggestion was made to consider an update to ANSI C63.2:2016. The main issue for the update is that C63.2:2016 refers to CISPR 16-1-1:2010, AMD 2010, 2014. CISPR 16-1-1:2019 is available.

Dan Hoolihan noted that Jens Medler of Rohde & Schwarz is interested in helping out with the document. He suggested referencing CISPR-16-1-1-2019 in the next edition of the document. Andy Griffin asked about including dated references in the document so the changes are clear. Tim Harrington mentioned that if sub clause numbers are called out in the document, a date needs to be included.

Zhong asked if there was any interest in updating the document to include dated references. The document needs to be reaffirmed or updated in 2021. Zhong will check with Jens Medler to see if he is interested in helping. Andy volunteered to help Mark and Jens with this document.

ACTION: Zhong Chen to confirm the interest of Jens Medler in assisting with the update to C63.2:2016.

C63.4: Emissions Measurements

Working Group Chair: Don Heirman

Status: C63.4: Current-2014. New PINS approved by WG, SC1 and C63 in Nov. 2017

Horia Popovici provided an update on this activity in the absence of Don Heirman. (See Attachment G.)

The vote on sending the latest edition of C63.4 to the parent committee for balloting closed on Feb. 21, 2020 and passed (the votes were 14 yes, 10 no, and three abstain). Eight members submitted 122 comments. A sizable portion of these was repeated comments, i.e. they were submitted at previous stages; the resolution to these are the same as before since these were already discussed at length and decided upon in the working group. On the proposed resolutions to these comments, three were noted, 63 were not accepted, 32 were accepted, and 24 were partially accepted. The draft C63.4 document was updated per the accepted and partially accepted comments. Jerry Ramie, at Don Heirman's request, set up a working group meeting for Friday, April 24, but this had to be postponed indefinitely due to Don's health issues.

Regarding the copyright letter, Horia noted the draft C63.4 uses (in clause 3.1: definitions) some text from various CISPR and IEC standards. A copyright request letter was drafted, based on a template provided by Jennifer Santulli with IEEE, and Jennifer sent it to the IEC Central Office on Wednesday, June 3, together with a second similar letter, specific to the C63.30 draft document (wireless power transfer).

The consolidated comment matrix, as well as the updated C63.4 draft document (with all updates shown using track changes), were sent to all working group members.

ANSI C63 Chair Dan Hoolihan noted that it is very unusual for the parent committee to receive a standard that narrowly passed subcommittee approval and had a significant number of comments to address. In the absence of working group chair Don Heirman and the resignation of working group vice-chair Harry Hodes, Dan Hoolihan suggested we put a pause on working on this document.

Zhong asked Horia and Tim Harrington, in the absence of Don Heirman due to his illness, and the resignation by Harry Hodes from C63 activities, to help more with the document, pending direction from Dan Hoolihan following the steering committee meeting.

C63.5: Antenna Calibration

Working Group Chair: Doug Kramer
Status: Current-2017

Doug Kramer presented his report. (See Attachment H.) Doug provided the current list of Working Group members and summarized their activity. They are working on editing and revising the next edition of the C63.5 document: American National Standard for Electromagnetic Compatibility - Radiated Emission Measurements in Electromagnetic Interference (EMI) Control - Calibration and Qualification of Antennas. There are some major rewrites needed. For example, text is needed to clarify the transition away from NSA to Site Validation. In addition, the major changes require use of dated references to C63.5 during the transition.

Doug closed his report in noting that the Working Group uses iMeet Central Workspace (at <https://ieeesc.meetcentral.com/c635/>) to manage work product and files. Meetings are held via WebEx with a focus on contributions and debate of submitted data. Files are stored on iMeet; the Working Group no longer shares information via email.

C63.7: Construction of Test Sites

Status: Published update on March 9, 2015; working group disbanded

Zhong Chen commented that this document is a guide and very helpful. Dan Hoolihan recommended SC1 reaffirm this document since it was published in 2015.

ACTION: SC1 to reaffirm C63.7

C63.22-2004: Guide for Automated EMI Measurements

Status: Published in 2004

Zhong advised that this standard is active, but it has not been revised or reaffirmed since 2004. The listing is shown here from the IEEE SA website: https://standards.ieee.org/standard/C63_22-2004.html. The standard should be reviewed or withdrawn as it is now over 15 years since original publication.

ACTION ITEM: Secretary O'Neil to check with Jennifer Santulli and Soo Kim of IEEE to confirm the status of this document. *NOTE: Subsequent to the meeting, Jen Santulli confirmed the document was set to expire in 2020. Dan Hoolihan advised that was fine, to let the document expire as scheduled.*

C63.23-2012: Guide for Computations and Treatment of Measurement Uncertainty

Working Group Chair: TBD

Zhong Chen advised that he has not been able to find a person to chair this Working Group. He has approached several people.

ACTION ITEM: Secretary O’Neil to check with Jennifer Santulli and Soo Kim of IEEE to confirm the status of this document. *NOTE: Subsequent to the meeting, Jen Santulli advised that the BSR9 for C63.23 was submitted in late May/early June and would be approved soon. IEEE is working on this so it will be a quick turn-around once approved.*

C63.25: Time Domain Applications for Test Site Validation

Working Group Chair: Dan Sigouin

Status: New Standard. Draft being written. PINS approved by SC1 on October 27, 2014

Dan Sigouin reported on C63.25. (See Attachment I.) This work addresses the family of C63.25 standards:

- C63.25.1 (1 GHz to 18 GHz) TDR – Published Dec 2018. Future plan to address above 18 GHz.
- C63.25.2 (30 MHz to 1000 MHz) NSA - Work began in January 2019. It will be sent to SC1 for review by September 2020. Future plan to address below 30 MHz. The PINS is current.

The last in person working group meeting was held on Tuesday Nov 20, 2019 at Keysight Technologies in Santa Rosa, CA. Twenty-three people attended the meeting,

During the Working Group meeting, Zhong Chen discussed his proposal for a simplified site validation method for 30 MHz – 1 GHz. There were conflicting opinions on whether the antenna calibration method and the site validation method should reside in C63.25.2 - or just the site validation method. Currently the antenna calibration method for this method has been submitted to the C63.5 Working Group for possible inclusion in their draft standard. Relevant information regarding normalized site attenuation will be ported over from ANSI C63.4a – 2017.

The Working Group made the decision to not work (at this time) on NSA for free space test sites, e.g. FAR. The test methodology needs to be defined when two antenna masts are used simultaneously. In some cases, there is an interaction between the antennas that impacts site validation results. The Working Group is addressing this and will have a draft to send to SC1 for review in September 2020.

At the last meeting, Bob DeLisi noted that neither the FCC nor Canada have issued support of C63.25.1 which means the standard has no value to industry. Dan Hoolihan volunteered to address this at the steering committee level. He also contacted the FCC and ISED to inquire about their action in addressing C63.25.1.

ACTION ITEM: Dan Sigouin to send the draft of C63.25.2 to SC1 members for review in September 2020.

7.0 Old Business – Chair

There are no old business to discuss.

8.0 New Business – Chair

8.1 Chair and Vice-Chair Transitions

Zhong Chen noted the resignation of Harry Hodes means the vice-chair position in SC1 is vacant. Ross Carlton noted the same is true for SC3. Further, with the expected absence of Don Heirman through the end of the year, this leaves a vacancy in his Committee Chair (SC3) and Working Group Chair positions

(C63.4). Andy Griffin indicated an interest in being Vice-Chair of SC1. These vacancies will be discussed during the C63 Steering Committee meeting in late July.

ACTION ITEM: Zhong Chen to review vacancies in SC1 due to resignation of Harry Hodes and leave of absence by Don Heirman at next Steering Committee meeting.

8.2 Coordination with SC3 for Harmonization

In the absence of the SC3 Chair, Don Heirman, Zhong Chen reminded SC1 that before any Working Group draft may be submitted to SC1 for approval, the document must be provided to the SC3 Chair for evaluation and coordination of any harmonization effort. See the table below for the activity status updated during the meeting:

Reviewer Actions

RA #	Task	Responsible party	Due Date	Status
RA-1	Compare C63.2 to CISPR 16-1-1	Harry Hodes	2/1/20	Closed
RA-2	Compare C63.4 to CISPR 16-2-X	Horia Popovici	2/1/20	Closed
RA-3	Compare C63.4 to CISPR 16-1-4	Horia Popovici	2/1/20	Closed
RA-5	Compare C63.5 to CISPR 16-1-6	Nate Potts	2/1/20	Open
RA-6	Compare C63.5 to SAE ARP 958 Rev D	Doug Kramer	5/1/19	Closed
RA-7	Compare C63.5 to CISPR 16-1-4	Doug Kramer	5/1/19	Closed
RA-14	Compare C63.23 to CISPR 16-4-2	Bob DeLisi	5/1/19	Closed
RA-17	Compare C63.25 to CISPR 16-1-4 (two freq. ranges under C63.25.1 and C63.25.2)	Doug Kramer	5/1/19	Open

ACTION ITEM: SC1 Members to contact Doug Kramer if they have comments on the CISPR document comparisons to the ANSI C63 equivalent standards.

9.0 Review of Interpretation Requests: Zhong Chen reviewed the following open interpretation request since the last meeting on November 20, 2019. Note Interpretation Requests have been suspended by the parent committee; however, it was requested this request below remain on the agenda for now.

- C63.4 (2014) “D3 NSA Vertical 3 Meters”** from Charles Wang, request dated 8-29-17. Subgroup members confirmed at the last meeting included Don Heirman (chair) and Khairul Zainal. No update was provided by the subgroup. **Given the submittal date of this interpretation request and lack of activity, Dan Hoolihan advised it would be addressed in the next edition of C63.4.**

[Click here for more information about interpretation request procedures](#) (see pages 12-14).

Dan Hoolihan reminded the committee that responses to interpretation requests are informative, NOT normative, in nature.

10.0 C63.org Website Use and Updates

Jerry Ramie requested members be specific with any requests for postings to the website. He asked members to be sure to update or confirm they are correctly listed on the website.

11.0 Review of the Action Items from Previous Meetings: Secretary

Secretary O'Neil advised that an updated action item list would be distributed to the SC1 members along with the draft minutes from this meeting.

ACTION ITEM: O'Neil to distribute the updated consolidated action items and draft minutes from the June 5, 2020 meeting to the committee.

12.0 Time and Place of Next Meeting: Chair

Zhong Chen noted the next series of C63® meetings are scheduled to be held in late October at IEEE headquarters in Piscataway, NJ. ANSI C63 Chair Dan Hoolihan advised that the October 2020 face-to-face C63 series of meetings at IEEE is at risk due to the ongoing pandemic. He would like each subcommittee to hold a quarterly meeting. He plans hold a steering committee meeting via WebEx in July 2020. Zhong advised that SC1 would meet virtually in mid-Sept on a Friday morning from 8:00 am – 10:00 am PDT. September date TBD.

13.0 Closing Remarks and Adjournment: Chair

With no further business, Zhong Chen adjourned the meeting at 10:00 am PDT. He thanked everyone for attending the meeting.

Minutes submitted by:



Janet O'Neil
Secretary, SC1

ATTACHMENTS

- Attachment A: Approved Agenda for June 5, 2020 SC1 Meeting
- Attachment B: Patent Slides Required Meeting Template Slides for ASC C63®, IP Info
- Attachment C: Approved Minutes from November 20, 2019 SC1 Meeting
- Attachment D: SC1 Membership Roster
- Attachment E: SC1 Working Group Roster
- Attachment F: Terrien Report on C63.2
- Attachment G: Popovici Report on C63.4
- Attachment H: Kramer Report on C63.5
- Attachment I: Sigouin Report on C63.25 standards series