



ANSI-Accredited Standards Committee C63[®]
Electromagnetic Compatibility

SUBCOMMITTEE 2 – E3 Terminology Definitions and EMC Best Practices

Tuesday, 08 November 2016, 1500 to 1700
Hilton Orange County, Costa Mesa, CA 92626

1. **Call to Order.** Mr. Chris Dilay, SC2 Chairman, called the meeting to order.
 - 1.1. **Opening Remarks:** The chairman welcomed everyone to the meeting and recognized the SC2 officers.
 - 1.2. **Meeting Logistics Announcements:** The chairman addressed meeting arrangements for the afternoon sessions.
 - 1.3. **Introductions:** The chairman called for a round of introductions from meeting attendees. The attendee list appears in Attachment 1.
2. **Review and Adoption of Agenda.** The chairman presented the agenda and discussed last minute updates made prior to the meeting. The agenda was approved as written by voice vote. See Attachment 2.
3. **IEEE Patent Policy.** The C63[®] Patent Policy slides were presented as they appear on the C63[®] public website and reviewed as required.
4. **Attendance Fee Slides.** The chairman displayed and discussed the attendance fee slides from the C63[®] website.
5. **Membership Review.**
 - 5.1. The SC2 membership list was displayed as it appears on the C63[®] public website. Mr. Dilay noted that requested changes to membership requested after the last meeting had not yet been changed on the website. It was noted, for example, that the affiliation of Randy Long has changed and that Steve Koster may no longer work at Washington Labs. He reiterated C63[®] policy that all subcommittee chairs are automatically members of SC2 and took an action to verify all noted membership affiliations and provide the update to Mr. Jerry Ramie for posting on the ASC C63[®] public website. The membership list was approved by voice vote. (see Action Item 20161108-1)
 - 5.2. The chairman displayed the WG1 membership working to update ANSI C63.14-2014, and WG2 membership developing ANSI C63.28, noting again that membership changes previously submitted to the C63[®] webmaster have not yet been incorporated to the public site. These updates will be resolved under the action identified above.

5.3. The chairman identified SC2 members at risk. He displayed member meeting attendance as it has occurred over the past couple of years and noted those members who have not been in compliance with C63[®] meeting attendance requirements. He stated that those individuals will be contacted to determine their desire to remain members of SC2. (see Action Item 20161108-2)

5.4. The chairman addressed the consideration of new members to the group stating that no action on soliciting new members has been taken.

6. **Review and Adoption of Minutes of Previous Meeting.** The chairman called for a review of the SC2 meeting minutes from the meeting held at UL LLC, 12 Laboratory Drive, Research Triangle Park, NC 27709 on 10 November 2015. Mr. Duncanson stepped through the minutes highlighting significant points. The minutes were approved without changes. The minutes will be forwarded to Mr. Jerry Ramie for posting onto the ASC C63[®] public website and SC2 member webpage.

7. **Action Item Review.** Action items from the previous meeting were reviewed and resolved as shown below:

#	ACTION ITEM	Disposition
20160511-1	Mr. Dilay to establish a spreadsheet to track SC2 meeting attendance and review SC2, WG1 and WG2 meeting attendance for the past two years and report members who may be at risk.	Closed
20160511-2	Mr. Dilay to provide Jerry Ramie with identified updates to the SC2 membership list posted on the C63 [®] website.	Closed
20160511-3	Mr. Dilay to provide the new definition for, “EMC Best Practices,” to the SC2 for review.	Closed
20160511-4	Mr. Ramie to update the SC2 membership list and other information on the C63 [®] website upon receipt needed changes from Mr. Dilay.	Ongoing
20160511-5	C63 [®] subcommittee chairs to coordinate with SC2 on development of their terms and definitions.	Ongoing

8. **Review of SC2 Title, Scope and Duties.** The chairman displayed and read the currently approved SC2 Title, Scope and Duties for the subcommittee noting the minor word changes introduced to the Scope and approved at the previous meeting.

9. **SC2 Status and Working Group Reports**

9.1. **Working Group 1 Report.**

9.1.1. Mr. Duncanson provided an update of WG1 activities since the last meeting, beginning with a review of the established SC2 rules for adding new terms and definitions to draft ANSI C63.14-20XX. He displayed the SC2 coordination process and went on to cite the rules for terms and definitions sourced from C63[®] standards, military standards, the treatment of acronyms, C63 developed definitions and inputs from international

standards. He detailed the status of the SC2 review of draft ANSI 63.5 20XX, commending SC1 for their work in developing definitions and noting that very few comments were generated for the 20 terms and definitions reviewed. He stated that in many cases the draft .5-20XX definitions updated definitions currently in C63.14-2014, attributed to C63.5-2006. He also recounted the resolution of issues:

- 9.1.1.1. Review of the definition for “antenna calibration site (ACS),” resulted in a recommendation that the last sentence, which makes reference to an annex in .5, be converted to a Note commensurate with previously established procedures in C63.14 for the use of Notes in definitions. He explained that since the .5 annex will not be accessible to .14 readers, the definition would appear in draft C63.14-20xx without the last sentence, which is the case with Notes in C63[®] standards, and with attribution to ANSI C63.5-20xx.
- 9.1.1.2. The definition for the new term, “dipole antenna,” does contain a Note which accompanies the definition, so under established precedence the definition will be added to .14 without the Note, and attribution to ANSI C63.5-20xx.
- 9.1.1.3. In the course of the discussion about the fact that a significant number of the draft .5 definitions represented updates of definitions that currently exist in .14, the question was raised as to whether the updated definitions should be added and the existing definitions retained, or if the existing definitions be replaced by the new ones. The consensus of the subcommittee is that SC1 should make the decision on a case by case basis as to whether the existing definitions should be retained in .14. Mr. Dilay took an action to contact Bob DeLisi for resolution of the issue with the terms in question. (see Action Item 20161108-3)
- 9.1.2. Mr. Duncanson addressed SC2 coordination planning for the upcoming year with regard to C63[®] draft standards and definitions. He stated that Sue Vogel had been consulted by WG1 for a list of draft standards that may be coming up for balloting during 2017. He displayed the list totaling 7 draft standards and urged the chairs of the subcommittees drafting those documents get their definitions to SC2 as soon as practical. Of the standards listed, he noted that C63.4a represents just an amendment to an Annex to the existing .4, so not much is anticipated in terms of new definitions; however it will remain on the list until that is verified. Of the other standards on the list only draft C63.27 definitions have been previously reviewed by SC2, so a significant amount of new coordination is anticipated during the upcoming year.
- 9.1.3. Mr. Dilay updated the subcommittee on the status of the feasibility study to determine whether ANSI C63.14 should be converted to a database. He discussed what was learned at the preliminary meeting between SC2 officers, Sue Vogel and Mr. Marcus Plessel, IEEE about the status of the IEEE 100 Online definitions database, which is being upgraded as part of a larger IEEE online innovation. In follow-up discussions with the IEEE he has learned that Phase 1 of the upgrade is complete; a majority of the old standards have been converted to XML and uploaded to the IEEE Xplore Digital Library, including the latest versions

of the C63[®] standards. He explained an odd circumstance, however, whereby while the standards are available for purchase; registered users are provided the option of viewing a standard's abstract, references, keywords, and definitions for free. Consequently, since C63.14 is a definitions document, the whole document can basically be viewed for free by any registered user, negating the need for purchase. Since C63.14 in large measure is already in database form and the Library will be updated with all C63[®] standards and their definitions as they are published per Phase 2 planning, the relevance of continuing the publication of C63.14 was addressed. After discussion it was concluded that C63.14 is needed as a published standard; in addition to the continuing need for WG1 to coordinate with C63 subcommittees on their standard's definitions, it was also noted the standard is needed to continue coordination with military EMC terminology, as well as participation in international terminology harmonization. Mr. Dilay took an action to inform Sue Vogel about IEEE Xplore and free access to C63.14. (see Action Item 20161108-4)

- 9.1.4. The chairman displayed the schedule for completion of draft ANSI C63.14-20XX, noting that there have been no changes since the last report; publication is anticipated for 2019 with August 2018 as the tentative cut-off date for the incorporation of new definitions to be considered.
- 9.1.5. Mr. Dilay discussed the ongoing effort to coordinate with the other C63[®] subcommittees on developing and obtaining copyright approvals for their definitions where required.

9.2. Working Group 2 Report: Best Practices Guide

- 9.2.1. The chairman provided a status update for the ANSI C63.28-20XX development effort, noting that the Annex B1 Update has been completed and distributed to SC chairs for review. He discussed the Annex and its origin in the Engineering Practice Study (EPS) published in 2001 by the DoD/Industry E3 Standards Committee chaired by DISA/Joint Spectrum Center and ANSI C63[®] and discussed its use as the basis for identifying standards for inclusion in the EMC Best Practice study. He noted the significant number of standards on the lists that WG2 has updated and discussed the need to reduce the numbers of standards to a manageable level, more generalized EMC criteria for the Best Practices effort. He observed, however, that the lack of industry participation on the WG has made it difficult to discern the relevance of some of the standards being addressed. He stated he has formerly asked for assistance from the SC chairs to identify the most basic, commonly used EMC standards for inclusion in the effort. (see Action Item 20161108-5)
- 9.2.2. Mr. Dilay also discussed the effort to obtain a copy of the latest version of RTCA DO-160 which addresses EMC compliance criteria for aircraft, stating that the effort is ongoing. Mr. Silberberg noted that a Change 1 Notice for DO 160 had been issued that separated test methods from guidance. He also stated that Steve Whitesell has reviewed the standard and should have the latest version. Mr. Dilay took an action to contact Steve Whitesell for a copy of the standard. (see Action Item 20161108-6)
- 9.2.3. The chairman displayed the draft C63.28-20xx development schedule noting that the projected completion date has been pushed out from 2018 to 2019. He reiterated that feedback from the SC chairs will be important to help focus the effort.

9.3. **SC2 website maintenance.** Mr. Dilay provided a report on the status of the SC 2 public site, noting that a number of changes to memberships and affiliations need to be made. Mr. Wojtaszek provided an update on the SC2 member's site with an overview on the current content.

10. **Old Business.** None identified.

11. **New Business.** None identified.

12. **Action Item Review.** Newly assigned actions appear below:

#	<u>ACTION ITEM</u>	<u>Disposition</u>
20161108-1	Mr. Dilay to provide Jerry Ramie with identified updates to the SC2 membership list posted on the C63 [®] website.	ASAP
20161108-2	Mr. Dilay to contact all identified SC2 members at risk to determine their intention to remain affiliated with SC2.	ASAP
20161108-3	Mr. Dilay to contact Bob DeLisi to determine if ANSI C63.5-2006 definitions that are updated in draft C63.5-20XX should remain in draft ANSI C63.14 20XX.	9 May
20161108-4	Mr. Dilay to contact Sue Vogel to inform IEEE of the fact that the IEEE Xplore, with its option to view a standard's definitions, currently provides ANSI C63.14 2014 content for free to registered users.	9 May
20161108-5	SC Chairs to assist WG2 to identify the most basic commonly used EMC standards for inclusion in the draft C63.28 effort.	9 May
20161108-6	Mr. Dilay to contact Steve Whitesell to determine if he can provide a copy of DO 160G to WG2.	9 May
20161108-7	Mr. Ramie to update the SC2 membership list and other information on the C63 [®] website upon receipt needed changes from Mr. Dilay.	Ongoing
20161108-8	C63 [®] subcommittee chairs to coordinate with SC2 on development of their terms and definitions.	Ongoing

13. **C63[®] Newsletter Input.** Mr. Dilay stated that preparation of the newsletter input is pending, but would be provided to Mr. Zimmerman.

14. **Next Meeting.** The next SC2 meeting is scheduled for 8 – 10 May at Headquarters of the American Association of Laboratory Accreditation (AALA), Frederick, Md.

15. **Adjournment.** The SC2 meeting was successfully completed as scheduled. The chairman adjourned the meeting at 1700.

Attachment 1

**SC2 Meeting Attendance List (November 08, 2016)
Hilton Orange County, Costa Mesa, CA 92626**

NAME	TITLE	EMAIL
Chris Dilay	Chair, SC2	chris.dilay@navy.mil
Marcus Shellman	Vice Chair, SC2	marcus.shellman.civ@mail.mil
Michael Duncanson	Secretary, SC2	michael.duncanson@aecom.com
Tomasz Wojtaszek	Web Coordinator, SC2	tomasz.wojtaszek@navy.mil
Randy Long	Chair, SC6	rlong@anab.org
Dan Hoolihan	Member	danhoolihanemc@aol.com
Janet O'Neil	Member	j.n.oneil@ieee.org
Jeff Silberberg	Observer	jeffery.silberberg@fda.hhs.gov
Henry Benitez	Observer	h.benitez@ieee.org

Attachment 2

ANSI Accredited Standards Committee C63® Electromagnetic Compatibility Subcommittee 2 – E3 Terminology Definitions

**SC 2 Meeting Agenda for – 8 Nov 2016
Hilton Orange County, Costa Mesa, CA 92626**

Wednesday, 1500-1700 PST

1. Call to order and opening Statement – Chair
 - 1.1 Opening remarks and announcements: (Chair)
 - 1.2 Meeting logistics announcements: (Host)
 - 1.3 Introductions: (Secretary)
2. Approval of the agenda: (Secretary)
3. Presentation of [patent slides](#): (Secretary)
4. Presentation of meeting attendance [fee slides](#): (Secretary)
5. Review of [Subcommittee Membership](#): (Chair)
 - 5.1 Review of Subcommittee 2 membership
 - 5.2 Review of Working Group 1 membership
 - 5.3 Review of Working Group 2 membership
 - 5.4 Members at risk
 - 5.5 Consideration of new members
6. Approval of [minutes](#) of previous SC2 meeting (Secretary)
7. Review action items of previous SC2 meeting (Secretary)
(See [Attachment 1](#))
8. Review [SC Title, Scope, Duties](#)
9. SC2 Status and Working Group Reports
 - 9.1 Working Group 1: ANSI C63.14 Revision– Chair: Marcus Shellman
 - 9.1.1 [Current status](#): Review of new draft terms and definitions.
 - 9.1.1.1 Rules for inclusion of Annex references in C63 standards term definitions in C63.14 term definitions.
 - 9.1.1.2 Rules for updating term definitions in C63.14 from the latest revisions of C63 standards (i.e. updated definition in latest standard revisions).

- 9.1.2 C63.14 transition to online publication with IEEE Xplore
- 9.1.3 ANSI C63.14-2019 development [schedule](#)
- 9.1.4 Coordination with other C63 subcommittees on terms/definitions and copyright approvals.

9.2 Working Group 2: ANSI C63.28 Draft Best Practices Guide – Chair: Chris Dilay

- 9.2.1 Current status
- 9.2.2 Draft development [schedule](#)
- 9.2.3 JSC Guide Annex B1 [update](#)
- 9.2.4 EMC Standards selection for comparison

10. SC2 website maintenance

- 10.1 Public SC2 Web Content Manager (Jerry Ramie)
- 10.2 Member [SC2 Web](#) Content Manager (Tom Wojtaszek)

11. Old Business: (Chair)

12. New Business: (Chair)

13. Review action items from this meeting: (Secretary)

14. C63 Newsletter Input (Secretary)

15. Time and place of next meeting: (Chair)

- 15.1 Place: TBD, Date: TBD

16. Closing remarks and Adjournment: (Chair)

Current SC2 Officers and web coordinator:

SC2 Chair: Chris Dilay, chris.dilay@navy.mil

SC2 Vice Chair: Marcus Shellman, Jr., marcus.shellman.civ@mail.mil

SC2 Secretary: Mike Duncanson, michael.duncanson@aeacom.com

SC2 Web Coordinator: Tomasz Wojtaszek, tomasz.wojtaszek@navy.mil

Attachment 3

SC2 Membership List

Chairman – Chris Dilay
ASC C63[®] / SC2 Membership Roster

NAME	TITLE	EMAIL
Mr. Chris Dilay	Chair, SC2 (WG1/WG2)	chris.dilay@navy.mil
Mr. Marcus Shellman	Vice Chair, SC2 (WG1/WG2)	marcus.shellman.civ@mail.mil
Mr. Michael Duncanson	Secretary, SC2 (WG1/WG2)	michael.duncanson@aecom.com
Mr. Tomasz Wojtaszek	Web Coordinator, SC2 (WG1/WG2)	tomasz.wojtaszek@navy.mil
Mr. Dan Hoolihan	Chair, C63 [®] (WG2)	danhoolihanemc@aol.com
Mr. Zhong Chen	Chair, SC1	zhong.chen@ets-lindgren.com
Mr. Don Heirman	Chair, SC3 (WG2)	d.heirman@ieee.org
Mr. Art Wall	Chair, SC4	artwall43@gmail.com
Mr. Steve Whitesell	Chair, SC5	swhitesell@ieee.org
Mr. Randy Long	Chair, SC6	rlong@anab.org
Mr. Vladimir Bazhanov	Chair, SC7	vladimir.bazhanov@ericsson.com
Mr. Bob DeLisi	Chair, SC8	bob.delisi@ul.com
Mr. Ed Hare	Member	W1RFI@arri.org
Mr. Harry Hodes	Member (WG1/2)	harry.hodes@baclcorp.com
Mr. Victor Kuczynski	Member	vican@on.aibn.com
Ms. Janet O'Neil	Member	j.n.oneil@ieee.org
Mr. Bob Hofmann	Member	hrhofmann@att.net
Mr. Steve Koster	Member (WG1)	stevek@wll.com
Mr. Dave Schaefer	Member (WG1)	dschaefer@tuvam.com