



ANSI-Accredited Standards Committee C63[®]
Electromagnetic Compatibility

SUBCOMMITTEE 2 – E3 Terminology Definitions and EMC Best Practices

Wednesday, 11 May 2016, 1300 to 1400
IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08855

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 agenda was approved as written. 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 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. Heirman inquired as to whether meeting attendance has been tracked for the purpose of determining members who may be at risk. Mr. Dilay agreed that attention to attendance is needed, stating that moving forward he will maintain a spreadsheet to track attendance. He took an action to review the SC2 meeting minutes of the past two years for attendance and report at the next meeting any members who may be at risk, noting that all subcommittee chairs are automatically members of SC2. (See Action Item 20160511-1). Two needed changes to the membership list were noted; to reflect that Stephen Burger is no longer chair of SC7, and Poul Anderson is no longer a member of C63[®]. The update will be provided to Mr. Jerry Ramie for posting onto the ASC C63[®] public website. The membership list was approved by voice vote. (see Action Item 20160511-2)
 - 5.2. Mr. Dilay displayed the WG1 membership working to update ANSI C63.14-2014, and WG2 membership developing ANSI C63.28, noting that meeting attendance will be tracked for these meetings as well.

5.3. 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. 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
20151110-1	Mr. Dilay to provide Jerry Ramie with identified updates to the SC2 membership list posted on the C63® website.	Closed
20151110-2	Mr. Dilay to contact Sue Vogel to initiate research on the feasibility of converting ANSI C63.14 into a database.	Closed
20151110-3	Mr. Heirman to provide Mr. Dilay with the URL to the online annex of CISPR standards.	Closed
20151110-4	SC2 WG2 members to review definitions provided for “EMC Best Practice,” and “EMC Best Practice Standard,” and provide feedback / recommendations for draft ANSI C63.28.	Closed
20151110-5	Mr. Ramie to update the SC2 membership list and other information on the C63® website upon receipt needed changes from Mr. Dilay.	Ongoing
20151110-6	C63® subcommittee chairs to coordinate with SC2 on development of their terms and definitions.	Ongoing

8. **Review of SC2 Title, Scope and Duties**

8.1. The chairman displayed and read the currently approved SC2 Title and Scope, for review and approval by the subcommittee. He proposed minor changes to the Title and Scope; to include the words “and definitions,” after, “terminology,” in the Scope; and to add commas in the title after, “Terminology,” and “Definitions.” After some discussion about the distinction between the two terms, a consensus was reached that the proposed changes work well. The SC2 Title and Scope were approved by voice vote with the identified word changes.

8.2. SC2 Duties were displayed by the chairman, for review and approval by the subcommittee. SC2 Duties were approved as written by voice vote.

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 noting that discussion would be needed about possibly modifying the 1st rule that, “all terms and definitions

published in ANSI C63[®] standards will be published in .14,” because of an issue that surfaced during the recent SC2 review of draft ANSI C63.16. He went on to cite the rules for terms and definitions sourced from 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 63.16 20XX, and recounted resolution of issues, the first regarding the .14 requirement for the spelling out of acronyms used in a term. He noted that since .16 is an ESD focused document, a large number of the defined terms include, “ESD.” As such, SC2 agreed with SC5 that to spell out “ESD” for each definition would induce redundancy in the document. Consequently, SC2 concurs with the protocol that .16 will only spell out the acronym on first use, but that C63.14-20XX will spell out the acronym on each use, for consistency of the document. Another matter, in due course resolved by the IEEE editor concerned whether draft C63.16 should provide attribution to IEC 61000-4-2 for the term “reference ground plane (RGP),” where the IEC definition is used in .16, but the current IEC term is “ground reference plane (GRP).”

- 9.1.2. In the course of discussion about draft ANSI C63.16, Mr. Duncanson opened up discussion on the issue of 6 terms that the WG1 review questioned to be too generic for ANSI C63.14, because the definitions would be limited to an ESD context. He noted that WG1 expressed concerns about confusion these terms might cause with the wider E3 community, considering similar terms in wide use that may have different meanings than the ESD context. He related that one option under discussion by WG1 was to withhold these terms and definitions from .14, which consequently would call for a modification or exception to the SC2 Process Rules requiring .14 to publish all terms and definition that appear in C63[®] standards. After considerable discussion by the committee it was concluded that the terms and definitions in question should be published in .14, in keeping with the established policy.
- 9.1.3. The chairman displayed the schedule for completion of draft ANSI C63.14-20XX, noting that the publication is anticipated for 2019 with August 2018 as the tentative cut-off date for the incorporation of new definitions to be considered.
- 9.1.4. Mr. Dilay discussed the ongoing effort to coordinate with the other C63[®] subcommittees on developing and obtaining copyright approvals for their definitions where required. He stressed the responsibility of subcommittee chairs to submit their new terms and definitions to SC2 for review as soon as is practical for the draft standard and noted receipt earlier in the day of proposed terms and definitions slated for inclusion in draft ANSI C63.5, which will be next on the agenda for WG1 review.

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, reporting near completion of the task to review Annex B of the Engineering Practice Study (EPS) published in 2001 by the DoD/Industry E3 Standards Committee chaired by DISA/Joint Spectrum Center and ANSI C63[®]. He noted this initial review will form the basis for comparisons of commercial standards with MIL-STD-461G.
- 9.2.2. Mr. Dilay displayed the JSC EPS Guide Annex B1 update, which was provided on an Excel spreadsheet, for the status of the individual standards associated with each organization. In the course of discussion he inquired of Mr. Heirman any progress a WG2 action on finding a good POC for information on RTCA DO 160. Mr. Hodes noted that on the back of DO 160G there is a list of POCs for each test method in the standard. He offered to supply a copy of the standard with the proper POCs in accord with the specific information being sought by the WG. The chairman noted that in going through the list of IEC standards provided via web link by Mr. Heirman, he was overwhelmed by the numbers of standards and the fact that they for the most part were so product specific. He questioned the need to address such product specific standards, noting that the DoD has no such equivalents, and expressed the need for the comparison effort to be geared to more generalized EMC criteria. He also noted the fact that the lack of industry participation on the WG has made it difficult to discern the relevance of some of the standards being addressed. Significant discussion followed about the focus of the effort and the need to pin down the specific goals. It was agreed that an update to the 2001 EPS is doable, but the proper standards need to be identified. Mr. Hodes suggested that the DoD be polled on the varieties of commercial items that pose the most problems, then focus on the compliance standards for those systems types. The chairman stated that the .28 WG will address these ideas at the next meeting in the course of determining the way forward.
- 9.2.3. The chairman addressed status of the effort to develop a definition for “EMC Best Practices,” stating that the definition was approved at this morning’s WG1 meeting. The definition will be provided to SC2 members for review. (See Action Item 20160511-3)

9.3. **SC2 website maintenance.** Mr Dilay provided a report on the status of the SC 2 member webpage, stating that the site is currently up to date.

10. **Old Business.** The chairman discussed the action from the last meeting to research conversion of ANSI C63.14 into a database. He reported that SC2 officers met with Sue Vogel and Mr. Marcus Plessel, IEEE earlier in the day to discuss the issues involved. He stated that the outcome of the meeting was that many questions remain. Mr. Plessel will investigate alternatives including the costs involved, noting that right now, the structure and framework is not in place for what we would need a C63.14 database to do. Further, IEEE 100 database is currently static, with IEEE plans for it to undergo reengineering next year. The chairman reported plans to meet with the IEEE again next month for further discussion and to get some of the questions answered.

11. **New Business.** Mr. Dilay noted continuing dialog with the IEEE to determine the feasibility of transitioning ANSI C63.14 from a standard to a database.

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

#	<u>ACTION ITEM</u>	<u>Disposition</u>
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.	Next SC2 Meeting
20160511-2	Mr. Dilay to provide Jerry Ramie with identified updates to the SC2 membership list posted on the C63 [®] website.	ASAP
20160511-3	Mr. Dilay to provide the new definition for, “EMC Best Practices,” to the SC2 for review.	ASAP
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

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 the week of 7 November in Orange County, Ca.

15. **Adjournment.** The SC2 meeting was successfully completed as scheduled. The chairman adjourned the meeting at 1400.

Attachment 1

SC2 Meeting Attendance List (May 11, 2016) IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08855

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
Dan Sigouin	Vice Chair, C63 [®]	DS@DHSEMC.COM
Jerry Ramie	C63 Webmaster	jramie@arctechical.com
Stephen Whitesell	Chair, SC5	swhitesell@ieee.org
Randy Long	Chair, SC6	rlong@l-a-b.com
Vladimir Bazhanov	Chair, SC7	vladimir.bazhanov@ericsson.com
Bob DeLisi	Vice Chair, SC4	bob.delisi@us.ul.com
Don Heirman	Member	d.heirman@ieee.org
Harry Hodes	Member	harry.hodes@baclcorp.com
Janet O'Neil	Member	j.n.oneil@ieee.org

Stephen Berger	Observer	stephen.berger@ieee.org
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Mits Samoto	Observer	yokohamasmt@yhc.att.ne.jp
Michael O'Dwyer	Observer	odwyer.m@apple.com
Mark Arthurs	Observer	mark.arthurs@am.sony.com
Dave Case	Observer	davecase@cisco.com
Werner Schaefer	Observer	wernerschaefer5@comcast.net
Megan McConnell	Observer	mmcconnell@azia.org

Attachment 2

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

**SC 2 Meeting Agenda for – 11 May 2016
IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08855**

Wednesday, 1300 - 1400

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 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. SC2 Status and Working Group Reports
 - 8.1 Working Group 1: ANSI C63.14 Revision– Chair: Marcus Shellman
 - 8.1.1 [Current status](#): Review of new draft terms and definitions.
 - 8.1.1.1 C63.16 Review
 - 8.1.2 ANSI C63.14-2019 development [schedule](#)
 - 8.1.3 Coordination with other C63 subcommittees on terms/definitions and copyright approvals.

8.2 Working Group 2: ANSI C63.28 Draft [Best Practices Guide](#) – Chair: Chris Dilay

8.2.1 Current status

8.2.2 Draft development [schedule](#)

8.2.3 JSC Guide Annex B1 [update](#)

8.2.4 EMC Best Practice [definitions](#)

9. SC2 website maintenance

9.1 Public SC2 Web Content Manager (Jerry Ramie)

9.2 Member [SC2 Web](#) Content Manager (Tom Wojtaszek)

10. Old Business: (Chair)

11. New Business: (Chair)

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

13. C63 Newsletter Input (Secretary)

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

14.1 Place: TBD, Date: TBD

15. 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@aecom.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. Jerry Ramie	Web Master, C63 [®]	jramie@artechnical.com
Mr. Zhong Chen	Chair, SC1	zhong.chen@ets-lindgren.com
Mr. Poul Anderson	Chair, SC3	anderpoul@comcast.net
Mr. Art Wall	Chair, SC4	awall@atlanticbb.net
Mr. Steve Whitesell	Chair, SC5	swhitesell@ieee.org
Mr. Ed Hare	Vice Chair, SC 5	WIRFI@arrl.org
Mr. Randy Long	Chair, SC6	rlong@l-a-b.com
Mr. Vladimir Bazhanov	Chair, SC7	vladimir.bazhanov@ericsson.com
Mr. Bob DeLisi	Chair, SC8	bob.delisi@us.ul.com
Mr. Don Heirman	Member (WG2)	d.heirman@ieee.org
Mr. Harry Hodes	Member (WG2)	harry.hodes@baclcorp.com
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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