



Accredited Standards Committee C63®

Electromagnetic Compatibility

Subcommittee 3: International Standardization

Chair: **VACANT**

Vice Chair: Ross Carlton

Secretary: Jerry Ramie

Webinar

December 3, 2020; 1:00 PM – 3:00 PM - EST

Approved Minutes

1. **Call to Order: Chair** - The meeting was called to order by the Vice Chair at 1:03PM-EST
 - 1.1 **Announcements: Chair's remarks** – Moment of silence for Don Heirman. We will continue to review comparison reports and to review the status of comparison action items.
 - 1.2 **Meeting logistics announcements: Host**
 - 1.3 **Introductions: Secretary** – roll call (attending members with their affiliations and guests are recorded separately below) Gray highlights were absent
 - 1.4 **Present membership: Secretary** - Report any errors to the ASC-C63® Secretary

Subcommittee 3 Membership Roster. Errors shown in yellow highlight

Name	Role within Subcommittee 3	Affiliation
<u>Carlton, Ross</u>	Vice Chair Subcommittee 3	ETS - Lindgren
<u>Coder, Jason</u>	Chair Subcommittee 7	NIST
<u>DeLisi, Bob</u>	Chair Subcommittee 4	UL LLC
<u>Dilay, Chris</u>	Member	Naval Info. Warfare Center Pacific
<u>Griffin, Andy</u>	Member US CISPR/H Technical Advisor	CISCO Systems
<u>Hare, Ed</u>	Chair Subcommittee 5	ARRL
<u>Hoolihan, Dan</u>	Chair ASC-C63®	Hoolihan EMC Consulting
<u>Klinger, Jeff</u>	Member	Compatible Electronics
<u>Kramer, Doug</u>	Member	ETS-Lindgren
<u>Long, Randy</u>	Chair Subcommittee 6	ANAB (ANSI National Accreditation Board)
<u>Mendoza, Ernesto</u>	Member US CISPR/F Technical Advisor	Signify
<u>Popovici, Horia</u>	Member	Innovation, Science and Economic Development Canada
<u>Potts, Nate</u>	Member	Keysight Technologies
<u>Samoto, Mits</u>	Member	Liberty Labs Asia
<u>Shellman, Marcus</u> ^a	Chair Subcommittee 2	DOD – Joint Spectrum Center (JSC)
<u>Thul, Travis</u>	Member	2T2J, Inc.
Non-Voting Members		
<u>Abbondante, Nick</u>	Liaison Member US CISPR/A Technical Advisor	Intertek
<u>Arnett, Dave</u>	Liaison Member US CISPR/I Technical Advisor	Garmin
<u>Cibulka, Michael</u>	Liaison Member TC77 & SC77B Technical Advisor	Rockwell Automation
<u>Fanning, Craig</u>	Liaison Member US CISPR/D Technical Advisor	Elite Electronic Engineering
<u>Hofmann, H.R. (Bob)</u>	Emeritus Member	Hofmann EMC Engineering

Jones, Steve	Liaison Member	FCC Laboratory
Mahn, Terry	Liaison Member US CISPR/B Technical Advisor	Fish and Richardson
Pettit, Ghery	Liaison Member US CISPR/I Chair	Pettit EMC Consulting, LLC

Guests and Observers: (non-voting) Jerry Ramie

1.5 Quorum: (50% of roster) constitutes a quorum. (rounding up) (16 roster members / 2 = 8 (therefore 8 people are required for a quorum) **Was quorum achieved? (Yes)**

2. Approval of the Agenda: Secretary - The [Agenda](#) was approved by acclamation.

2.1 Approval of the previous Minutes - [20200909](#) The previous minutes were shown in a line-by-manner and [approved](#) by acclamation.

2.2 Review of the [patent slides](#) – The patent slides were shown and all in attendance agreed to abide by the patent policies.

3. Review of [Subcommittee Membership](#), - Report any errors to the Secretary

3.1 Review of Membership Guidelines

Subcommittees:

For an individual to remain a voting member of a Subcommittee, active participation in Subcommittee meetings and regular responses to Subcommittee email votes is required. Should a member fail to attend at least one of three consecutive scheduled meetings (in person or remotely via web conference (when used)) or respond to at least one of every two consecutive Subcommittee email votes, their membership in that Subcommittee may be at risk.

Note: Abstentions shall be treated the same as a “yes” or “no” vote regarding the requirement to respond to email votes.

Member Attendance Log: Any errors in the log?

11/9/17	2/7/18	5/3/18	9/19/18	11/29/18	2/14/19	5/2/19	8/28/19	11/20/19	2/13/20	5/28/20	9/9/20	Full Name
											x	Carlton, Ross
								x	x	x	x	Coder, Jason
		x	x	x		x		x	x	x	x	DeLisi, Bob
x		x	x			x		x			x	Dilay, Chris
x		x		x		x			x	x		Griffin, Andy
x		x		x		x		x				Hare, Ed
x		x		x		x		x		x	x	Hoolihan, Dan
x		x	x	x		x	x	x		x	x	Klinger, Jeff
	x	x	x	x	x	x				x		Kramer, Doug
x		x		x		x		x		x	x	Long, Randy
	x	x	x	x	x		x		x	x	x	Mendoza, Ernesto
x	x	x	x	x					x	x	x	Popovici, Horia
x	x	x			x	x	x	x	x			Potts, Nate
			x	x	x	x	x		x			Samoto, Mits
						x	x	x		x		Shellman, M.
							a	a	a	a		Thul, Travis
												Abbondante, Nick
	a	x	x		x							Arnett, Dave
x	x	x	x	x	x	x			a	x	x	Cibulka, Michael
x	x	x			x	x			x	x		Fanning, Craig
x	x	x	x		x		x	x				Hofmann, H.R.
				x		x		x	x			Jones, Steve
		x										Mahn, Terry
											x	Pettit, Ghery
x	x	x	x	x	x	x	x	x	x	x	x	Ramie, Jerry

Any members at risk? **Ed Hare** was at risk. Ed Hare attended and is no longer at risk.

3.2 Consideration of new members? [Application for C63® Subcommittee Membership](#)

Mr. Ross Carlton was appointed by Mr. Heirman as the **Vice Chair** of SC3, and approved at our last meeting of this Subcommittee. Section 6.2 of our [Procedures](#) states that the Chair of a Subcommittee shall be elected by the Subcommittee with a (simple) majority vote and confirmed by a (simple) majority of the Main Committee. The Vice Chair and Secretary of that Subcommittee are appointed by the Subcommittee Chair. The votes were recorded as below: Nominations from the floor? Dan H. nominated Ross as our new Chair! Dan Moved to approve by acclamation his nomination. Randy seconded the motion. Any discussion? Any opposed? The motion carried. **AI-135:** Jerry to correct SC3 roster to show new Chair and corrected Pettit role. Vice Chair position is still open.

4. Status of harmonization of all C63 Standards with international equivalents - Chair

C63 documents listed in the first column are to be compared with the standards indicated in the far-right column. The assigned comparisons are to show where harmonization may or may not be possible and what action should be taken All this will be in the reporting form for each standard shown .

Table 1: Comparisons of ASC-C63® Documents and International Documents

C63® Document	SC #	Subject	International Document
C63.2	SC1	Test Instrumentation	CISPR 16-1-1 (Reviewer Action 1 (RA-1) - Doug)
C63.4	SC1	Measurements	CISPR 16-2-X; RA-2 ; CISPR 16-1-4 RA-3 ; CISPR 32 RA-4 Petit Doug needs a reviewer for this
C63.5	SC1	Antenna Calibration	CISPR 16-1-6 RA-5 ; SAE ARP 958 RA-6 ; CISPR 16-1-4 (RA-7)
C63.9	SC5	Office Equipment Immunity	IEC 61000-4-39 (RA-8) Griffin
C63.10	SC4	Unlicensed Transmitters	ETSI Wireless requirements? (need SC4 member's help) Bob Delisi indicated that there are so many ETSI standards that might apply that this review will not be done.
C63.15	SC5	Immunity	IEC 61000-4-x; RA-9 ; Heirman; CISPR 35 RA-10 Pettit
C63.16	SC5	ESD	IEC 61000-4-2; RA-11 ; Worley; ISO 10605; RA-12 ; Worley, SAE J1113-xx RA-13 Fanning
C63.23	SC1	Uncertainty	CISPR 16-4-2; RA-14 ; CISPR 16-1-4 RA-15
C63.24 draft	SC5	Generic In Situ Meas.	IEEE 473; RA-16 ; (Heirman-Kiger)
C63.25.1	SC1	Test Site Validation 1 GHz to 18 GHz)	CISPR 16-1-4 RA-17
C63.25.2	SC1	Test Site Validation 30 MHz to 1 GHz	CISPR 16-1-4 RA-17
C63.26	SC4	Licensed Transmitters	ETSI wireless requirements mmWave possible comparison. RA-18
C63.27	SC7	Co-existence	IEC 62657-2 RA-19 Berger
C63.28 draft	SC2	Best Practices	No equivalent; RA-20 Shellman
C63.29 draft	SC4	Lighting products	CISPR 15; Runway lighting under IEC 61827 RA-21 Ernesto Mendoza (waiting for maturity of C63.29 before comparison)
C63.30 draft	SC4	Wireless Power Transfer Products	Bob assigned Travis: Draft amendments to CISPR 11 (RA-22), CISPR 14-1 (RA-23), CISPR

			32; (RA-24) update to CISPR 12 (RA-25)
C63.31 draft	SC4	ISM equipment (FCC MP-5)	CISPR 11; (RA-26) CISPR 14-1 induction cooking; (RA-27) DeLisi CISPR/B/672/DC (4/14/17) RA-28 CISPR/B/700/DC (2/2/18) RA-29

4.1 Review Actions: Assignments

These are the assignments for the 29 **Reviewer Actions**. The assignments have been given to the Subcommittee chairs (or WG chairs or their designee) noted below to find subcommittee reviewers to do the comparisons in the above table and to fill out the comparison reports using the template provided to the SC chairs.

The "*comparison report*" form that reviewers should use is available [here](#).

These are the initial assignments. It has to be updated as to who ended up with the RA action if different than what is shown here.

RA-1 thru RA-7: Kramer -- Note **RA-2** and **RA-3** were assigned to Horia Popovici

RA-8: Griffin

RA-9: Heirman

RA-10: Pettit

RA-11 thru 13: Worley

RA-14 & 15: Kramer

RA-16: Heirman

RA-17: Kramer

RA-18: DeLisi

RA-19: Coder

RA-20: Shellman

RA-21: Mendoza

RA-22-25: Thul

RA-26-29: DeLisi

4.2 Status of reviewers and reports completed - This part of the agenda will be to identify the persons named for each RA and to update Table 2 for the minutes and going into 2020. For those named, there will be time to review what is in their report using the [comparison report template](#)

Access to ASC-C63[®] documents available here: <https://app.box.com/s/tv8akgqrjncb3qwbbkdyobk6mgpiuwci> (read-only) **Table 2** will be used to measure progress on receiving the comparison reports. The completed consolidated **RA table** will be sent to SC2 for use on the [C63.28 \(draft\)](#).

Table 2: Reviewer Actions from 5/2/19 Meeting of SC3

RA #	Task	Responsible party	Due Date	Status
RA-1	Compare C63.2 to CISPR 16-1-1	Ross Carlton	12/3/20	Open
RA-2	Compare C63.4 to CISPR 16-2-X	Horia Popovici	12/3/20	Closed new submittal
RA-3	Compare C63.4 to CISPR 16-1-4	Horia Popovici	12/3/20	Closed new submittal
RA-4	Compare C63.4 to CISPR 32	Nate Potts	12/3/20	Closed
RA-5	Compare C63.5 to CISPR 16-1-6	Nate Potts	12/3/20	Closed
RA-6	Compare C63.5 to SAE ARP 958 Rev D (RDL) Compare C63.5 to SAE ARP 958 Rev D (DK)	R. Lombardi Doug Kramer	12/3/20	Closed
RA-7	Compare C63.5 to CISPR 16-1-4	Doug Kramer	12/3/20	Closed
RA-8	Compare C63.9 to IEC 61000-4-39 & IEC 61000-4-3	Jeff Evans	12/3/20	Open
RA-9	Compare C63.15 to IEC 61000-4-x	Don Heirman	12/3/20	Closed Subject to multiple people

				involved based on C63.15
RA-10	Compare C63.15 to CISPR 35	Ghery Pettit	12/3/20	Closed received submission
RA-11	Compare C63.16 to IEC 61000-4-2	Mike Cibulka	12/3/20	Closed
RA-12	Compare C63.16 to ISO 10605 (Automotive ESD)	Rich Worley R. Lombardi	12/3/20	Closed
RA-13	Compare C63.16 to SAE J1113-xx	R. Lombardi	12/3/20	Closed
RA-14	Compare C63.23 to CISPR 16-4-2 <i>(Record that if all the measurement uncertainty terms in the test procedure are not in CISPR 16-4-2, no MU can be calculated and hence MU does not apply, i.e. Ucispr cannot be fully computed to come up with the MU)</i>	Bob DeLisi	12/3/20	Closed Sent 2/2018
RA-15	Compare C63.5 to CISPR 16-1-6	Nate Potts	12/3/20	Duplicate of RA-5
RA-16	Compare C63.24 draft to IEEE 473	Don Heirman Chad Kiger	12/3/20	Closed C63.24 2019 draft C63.24 2020 w/comment resolution
RA-17	Compare C63.25 to CISPR 16-1-4 (two freq. ranges under C63.25.1 and C63.25.2)	Doug Kramer	12/3/20	Open
RA-18	Compare C63.26 to ETSI wireless requirements mmWave possible	Bob DeLisi	12/3/20	Closed
RA-19	Compare C63.27 (2017) to IEC 62657-2 C63.27-D11	Jason Coder	12/3/20	Closed RA file provided 12/3
RA-20	Compare C63.28 draft to "no equivalent"	Marcus Shellman	12/3/20	Closed No equivalents found
RA-21 through RA-29 awaiting publication of the cited C63 standards before comparisons can be made				
RA-21	Compare C63.29 draft to CISPR 15 Ed. 8 ; Compare C63.29 draft to CISPR 15 Ed. 9 Runway lighting under IEC 61827	Ernesto Mendoza	Future..	Open C63.29 is not done; compare to Ed. 9
RA-22	Compare C63.30 draft to Draft amendments to CISPR 11	Travis Thul Horia & Bob	Future..	Open
RA-23	Compare C63.30 draft to CISPR 14-1	Travis Thul Horia & Bob	Future..	Open
RA-24	Compare C63.30 draft to CISPR 32	Travis Thul Horia & Bob	Future..	Open
RA-25	Compare C63.30 draft to CISPR 12	Travis Thul Horia & Bob	Future..	Open
RA-26	Compare C63.31 draft to CISPR 11	Bob DeLisi Abbondante	Future..	Open
RA-27	Compare C63.31 draft to CISPR 14-1 induction cooking	Bob DeLisi Abbondante	Future..	Open
RA-28	Compare C63.31 draft to CISPR/B/672/DC (4/14/17)	Bob DeLisi Abbondante	Future..	Open
RA-29	Compare C63.31 draft to CISPR/B/700/DC (2/2/18)	Bob DeLisi Abbondante	Future..	Open

5 Other Old Business: Chair

5.1 Written reports - Written reports of this Subcommittee meeting shall be presented by the Subcommittee Chair at the Main Committee meeting. These reports shall be made using either the [C63 PowerPoint template](#) or the [C63 PowerPoint template wide](#). Prior to the Main Committee meeting, the [SC report](#) and [approved previous SC meeting minutes](#) shall be provided to the projectionist for showing on the screen at the Main meeting. The Presentation and any written report shall also be sent by the Subcommittee Chair to the ASC-C63® [Newsletter editor](#)

5.2 Coordination with SC2 for definitions - Before any Working Group draft can be submitted to the Subcommittee for approval, the document must be provided to the SC2 Chair for evaluation and coordination of the definitions used.

Since there is no new activity on C63.12, there are no definitions to forward to SC2 as no other standard is being developed in this Subcommittee.

6. New Business: Chair -

6.1 Re-affirmation of C63.12: Chair - Section 6.3.1 of our [Procedures](#) states that Working Groups shall be formed by the Subcommittee Chair and be approved by a majority vote of the Subcommittee. The working group would be dissolved when the re-affirmation of the Standard is complete. The Chair of the Working Group shall be appointed by Chair of the Subcommittee. Membership in the Working Group is open and shall be approved by the Subcommittee. The roster of the Working Group will be posted on the SC3 roster page.

Here is a [copy of C63.12](#) (for SC3 members). We want to take a vote to reaffirm the standard, without changes, & republish it with a 2021 reaffirmation date. Then, we are good for another 5 years on it. So, for the members to vote - they need to see the standard. So, I think we can circulate the standard to the SC members who would make up the Working Group for the reaffirmation.

We are looking for volunteers to work on this re-affirmation of C63.12: Three of the original working group members are Craig Fanning, Jeff Klinger and Jeff Silberberg. Any volunteers ready to help? Mr. Carlton can circulate an updated draft and ask for any objections. **AI-136**: Jerry to schedule a Task Group to update the next draft of C63.12. (Ross, Craig, Jeff, Jeff, Ernesto) meeting date: 12/15/20 @ 4:00PM-EST (2 hours)

7. [C63.org](#) website use and updates: Secretary - We normally post documents to the [SC3 protected area](#). If any SC or WG needs help with this posting, a Technical Secretary is available to assist.

8. Review of the Action Items: Secretary

8.1 Review of Action Items from previous meeting:

Consolidated Action Items from 9/9/20 Meeting of SC3

AI #	Task	Responsible party	Due Date	Status
AI-20:	Look at modulation in C63.9 with potential for introduction into SC77B through the US National Committee.	Andy Griffin Jeff Evans	12/3/20	OPEN Unique test, possible in 61000-4-3? Modulation is not AM but more varied.
AI-27:	Review CISPR 11, 14-1 for consideration for use in C63.31. CISPR 11 totally addresses Industrial, Scientific, and Medical device emission tests, both radiated and conducted. Maybe Derek can use the comparison template to show what is covered and not covered in CISPR 11 or in C63.31 so it is clear where we are and where the FCC MP-5 can be bolstered with the info from at least CISPR 11 and possibly 14-1 and 14-2 (if anything) Horia was advocating for C63.4 test methods.	Bob DeLisi N. Abbondante	12/3/20	Closed C63.31 Draft needs to mature
AI-57:	Generate comparison table to summarize requirements from 1-6 GHz. (emissions)	Andy Griffin	12/3/20	OPEN using FAR, different methods

AI-96A	Identify what is similar, different, or not considered per the categories in the report form and place that information into the form	All members	12/3/20	Closed are changes needed?
AI-100B	Review reports to see if they are sufficient and show the need for action to harmonize.	Subcommittee members	12/3/20	OPEN priorities?
AI-102:	Jerry & Ross to look at reports already received and list in a table the conflicts, similarities and identical ones	Jerry Ramie Ross Carlton	12/3/20	OPEN
AI-125:	Members of SC3 to evaluate Horia's reports and pick the top two or three items to move to the IEC. Contained within AI-100B	All members	12/3/20	OPEN The next step would be to ask in the reverse direction, moving from IEC to C63 documents.
AI-126:	Ross to establish a priority of significant items shown in RA-2 & RA-3.	Ross Carlton	12/3/20	OPEN
AI-127:	Jerry & Ross to pull first two columns in Table 2 into a stand-alone document (finished items only) by 3/15	Jerry Ramie Ross Carlton	12/3/20	OPEN
AI-128:	Jeff to place this C63.9 content into the comparison report template and keep the PowerPoint for an annex.	Jeff Evans	12/3/20	OPEN
AI-130:	Jerry & Ross will assemble the RA matrix into a single document by 3/15. See AI-127	Jerry Ramie Ross Carlton	12/3/20	OPEN
AI-133:	Jerry to correct errors in SC3 roster as shown.	Jerry Ramie	12/3/20	CLOSED posted 9/9
AI-134:	Jerry to add Ghery Pettit representing CISPR/I & Nick Abbondante representing CISPR/A as non-voting members. (incl. Webex)	Jerry Ramie	12/3/20	CLOSED posted 9/9 added 9/9

8.2 Review of Action Items from this meeting—Secretary - The Action Items from this meeting were shown and agreed upon.

9. Next meeting: Chair – March 3, 2021, 1:00PM-EST (2 hours) (meeting set 12/3/20)

10. Closing remarks and Adjournment: Chair - The completed consolidated RA table will be sent to SC2 when all the reports are received. The new Chair thanked the group for their efforts and adjourned the meeting at 2:08PM-EST.

***** End of Meeting *****

Consolidated Action Items from 12/3/20 Meeting of SC3

AI #	Task	Responsible party	Due Date	Status
AI-20:	Look at modulation in C63.9 with potential for introduction into SC77B through the US National Committee.	Andy Griffin Jeff Evans	12/3/20	OPEN Unique test, possible in 61000-4-3? Modulation is not AM but more varied.
AI-57:	Generate comparison table to summarize requirements from 1-6 GHz. (emissions)	Andy Griffin	12/3/20	OPEN using FAR, different methods

AI-100B	Review reports to see if they are sufficient and show the need for action to harmonize.	Subcommittee members	12/3/20	OPEN priorities?
AI-102:	Jerry & Ross to look at reports already received and list in a table the conflicts, similarities and identical ones	Jerry Ramie Ross Carlton	12/3/20	OPEN
AI-125:	Members of SC3 to evaluate Horia's reports and pick the top two or three items to move to the IEC. Contained within AI-100B	All members	12/3/20	OPEN The next step would be to ask in the reverse direction, moving from IEC to C63 documents.
AI-126:	Ross to establish a priority of significant items shown in RA-2 & RA-3.	Ross Carlton	12/3/20	OPEN
AI-127:	Jerry & Ross to pull first two columns in Table 2 into a stand-alone document (finished items only)	Jerry Ramie Ross Carlton	12/3/20	OPEN
AI-128:	Jeff to place this C63.9 content into the comparison report template and keep the PowerPoint for an annex.	Jeff Evans	12/3/20	OPEN
AI-130:	Jerry & Ross will assemble the RA matrix into a single document. See AI-127	Jerry Ramie Ross Carlton	12/3/20	OPEN
AI-135:	Jerry to correct SC3 roster to show new Chair and corrected Pettit role. Vice Chair position is still open.	Jerry Ramie	12/3/20	Closed updated 12/3
AI-136:	Jerry to schedule a Task Group to update the next draft of C63.12. (Ross, Craig, Jeff, Jeff, Ernesto) meeting date: 12/15/20 @ 4:00PM-EST (2 hours)	Jerry Ramie	12/3/20	Closed set 12/3