

Accredited Standards Committee C63®

Electromagnetic Compatibility

Subcommittee 3: International Standardization Webinar

Chair: Don Heirman Vice Chair: Harry Hodes Secretary: Jerry Ramie

Webinar

May 28, 2020; 1:00 PM – 3:00 PM - EDT **Approved Meeting Minutes**

1. Call to Order: Chair - The meeting was called to order by the Secretary at 1:01PM-EDT

1.1 Announcements: Chair's remarks – Our major activity will be to continue to review the submitted 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)

1.4 Present membership: Report any roster errors to the ASC-C63® Secretary

Subcommittee 3 Membership Roster Grayed-out names did not attend. (Mr. Heirman is excused due to illness)

Name	Role within Subcommittee 3	Affiliation
Coder, Jason	Chair Subcommittee 7	NIST
DeLisi, Bob	Chair Subcommittee 4	UL LLC
Dilay, Chris	Member	Naval Info. Warfare Center Pacific
Griffin, Andy	Member	CISCO Systems
	US CISPR/H Technical Advisor	
Hare, Ed	Chair Subcommittee 5	ARRL
Heirman, Don	Chair Subcommittee 3	Don HEIRMAN Consultants
	Past Chair CISPR	
	US CISPR/A Deputy Technical	
	Advisor	
	US CISPR Technical Advisor	
Hodes, Harry	Vice Chair Subcommittee 3	Bay Area Compliance Laboratories Corp.
<u>Hoolihan, Dan</u>	Chair ASC-C63®	Hoolihan EMC Consulting
Klinger, Jeff	Member	Compatible Electronics
Kramer, Doug	Member	ETS-Lindgren
Long, Randy	Chair Subcommittee 6	ANAB (ANSI National Accreditation Board)
Mendoza, Ernesto	Member	Signify
	US CISPR/F Technical Advisor	
Popovici, Horia	Member	Innovation, Science and Economic
		Development Canada
Potts, Nate	Member	Keysight Technologies
Samoto. Mits	Member	Liberty Labs Asia
Shellman, Marcus	Chair Subcommittee 2	DOD – Joint Spectrum Center (JSC)
Thul, Travis	Member	Minnesota State College Southeast
	Non-Voting Mem	nbers
Arnett, Dave	Liaison Member US CISPR/I Technical Advisor	Garmin
Fanning, Craig	Liaison Member US CISPR/D Technical Advisor	Elite Electronic Engineering

Hofmann, H.R. (Bob)	Emeritus Member	Hofmann EMC Engineering
Jones, Steve	Liaison Member	FCC Laboratory
Mahn, Terry	Liaison Member	Fish and Richardson
	US CISPR/B Technical Advisor	
Cibulka, Michael	Liaison Member	Rockwell Automation
	TC77 & SC77B Technical Advisor	

Guests and Observers: (non-voting) Ghery Pettit

- **1.5** Quorum: (50% of roster) constitutes a quorum. (rounding up) (17 roster members / 2 = 8.5 >> 9 (therefore <u>9 people are required for a quorum</u>) **Was quorum achieved? (Yes)** If not, any actions taken are subject to confirmation by electronic ballot or at a future meeting. (Quorum is not required for Working Group meetings)
- **2. Approval of the Agenda: Secretary -** The Secretary scrolled through this agenda and then asked for any objections to approval. The Agenda was approved by acclamation.
 - 2.1 Approval of the previous Minutes 20200213 were approved 4/9/20
- **2.2** Review of the <u>patent slides</u> The patent slides were shown and all in attendance agreed to abide by the patent policy.
- 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 <u>one of three</u> 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?

<u>5/10/17</u>	8/21/2017	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	<u>2/13/20</u>	Full Name
										Х	Х	Coder, Jason
				Х	Х	Х		Х		Х	Х	DeLisi, Bob
Х		Х		Х	Х			Х		Х		Dilay, Chris
	Х	Х		Х		Х		Х			Х	Griffin, Andy
Х		Х		Χ		Х		Х		Х		Hare, Ed
Х	Х	Х	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Heirman, Don
Х				Х		Х	Х		Х	Х		Hodes, Harry
Х		Х		Χ		Х		Х		Х		Hoolihan, Dan
Х	Х	Х		Х	Х	Х		Х	Х	Х		Klinger, Jeff
			Χ	Χ	Х	Х	Х	Х				Kramer, Doug
		Х		Х		Х		Х		Х		Long, Randy
Х	Х		Χ	Χ	Х	Х	Х		Х		Χ	Mendoza, Ernesto
	Х	Х	Χ	Χ	Х	Х					Х	Popovici, Horia
Х	Х	Х	Х	Х			Х	Х	Х	Х	Х	Potts, Nate
Х					Х	Х	Х	Х	Х		Х	Samoto, Mits
								Х	Х	Х		Shellman, M.
									а	а	а	Thul, Travis
			а	Χ	Х		Х					Arnett, Dave
X	Х	Х	Χ	Χ			Χ	Х			Χ	Fanning, Craig
Х		Х	Χ	Χ	Х		Х		Х	Х		Hofmann, H.R.
						Х		Х		Х	Χ	Jones, Steve
				Х								Mahn, Terry
Х	Х	Х	Χ	Χ	Χ	Х	Х	Х			а	Cibulka, Michael
Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Ramie, Jerry

Any members at risk? These members are at risk: Doug Kramer Doug attended this meeting and is no

longer at risk. (Travis Thul is deployed and is excused)

Dave Arnett: I'm not in a position to engage in the work of SC3. If you'd like to keep me in the loop for information sake, that's fine. But I will not be attending calls.

Harry Hodes: Will have a new job at the end of this month. Do we need a different SC3 Vice Chair?

3.2 Consideration of new members? <u>Application for C63[®] Subcommittee Membership</u>
Mr. Berger resigned from SC3, we need a new SC8 member.

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

C63 documents listed below in column 1 are to be compared with the standards indicated in the far-right column. The 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:

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.

Vice Chair Harry Hodes is assigned follow up on these Reviewer Actions (RA) when he is available

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 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: Berger RA-20: Shellman RA-21: Mendoza RA-22-25: Thul

RA-26-29: DeLisi

4.2 Status of naming 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 <u>comparison report template</u>

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

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

RA#	<mark>Task</mark>	Responsible party	Due Date	Status
RA-1	Compare <u>C63.2</u> to CISPR 16-1-1	Harry Hodes	5/28/20	Open
RA-2	Compare C63.4 to CISPR 16-2-X	Horia Popovici	5/28/20	Closed new submittal
RA-3	Compare C63.4 to CISPR 16-1-4	Horia Popovici	5/28/20	Closed new submittal
RA-4	Compare C63.4 to CISPR 32	Nate Potts	5/28/20	Closed
RA-5	Compare C63.5 to CISPR 16-1-6	Nate Potts	5/28/20	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	5/28/20	Closed
RA-7	Compare C63.5 to CISPR 16-1-4	Doug Kramer	5/28/20	Closed
RA-8	Compare <u>C63.9</u> to IEC 61000-4-39 & IEC 61000-4-3	Jeff Evans	5/28/20	Open

RA-9	Compare C63.15 to IEC 61000-4-x	Don Heirman	5/28/20	Closed Subject to multiple people involved based on C63.15
RA-10	Compare C63.15 to CISPR 35	Ghery Pettit	5/28/20	Closed received submission
RA-11	Compare C63.16 to IEC 61000-4-2	Mike Cibulka	5/28/20	Closed
RA-12	Compare C63.16 to ISO 10605 (Automotive ESD)	Rich Worley R. Lombardi	5/28/20	Closed
RA-13	Compare C63.16 to SAE J1113-xx	R. Lombardi	5/28/20	Closed
RA-14	Compare C63.23 to CISPR 16-4-2 (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)	Bob DeLisi	5/28/20	Closed Sent 2/2018
RA-15	Compare C63.5 to CISPR 16-1-6	Nate Potts	5/28/20	Duplicate of RA-5
RA-16	Compare C63.24 draft to IEEE 473	Don Heirman Chad Kiger	5/28/20	Closed C63.24 draft
RA-17	Compare <u>C63.25</u> to CISPR 16-1-4 (two freq. ranges under C63.25.1 and C63.25.2)	Doug Kramer	5/28/20	Open
RA-18	Compare C63.26 to ETSI wireless requirements mmWave possible	Bob DeLisi	5/28/20	Closed
RA-19	Compare <u>C63.27</u> (2017) to IEC 62657-2	Jason Coder	5/28/20	<mark>Open</mark>
RA-20	Compare C63.28 draft to "no equivalent"	Marcus Shellman	5/28/20	Closed No equivalents found
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	5/28/20	Open compare to Ed. 9
RA-22	through RA-29 awaiting publication of the cited C6		ore compa	risons can be made
RA-22	Compare C63.30 draft to Draft amendments to CISPR 11	Travis Thul Horia & Bob	5/28/20	Open
RA-23	Compare C63.30 draft to CISPR 14-1	Travis Thul Horia & Bob	5/28/20	Open
RA-24	Compare C63.30 draft to CISPR 32	Travis Thul Horia & Bob	5/28/20	Open
RA-25	Compare C63.30 draft to CISPR 12	Travis Thul Horia & Bob	5/28/20	Open
RA-26	Compare C63.31 draft to CISPR 11	Bob DeLisi Abbondante	5/28/20	Open
RA-27	Compare C63.31 draft to CISPR 14-1 induction cooking	Bob DeLisi Abbondante	5/28/20	Open
RA-28	Compare C63.31 draft to <u>CISPR/B/672/DC</u> (4/14/17)	Bob DeLisi Abbondante	5/28/20	Open
RA-29	Compare C63.31 draft to <u>CISPR/B/700/DC</u> (2/2/18)	Bob DeLisi Abbondante	5/28/20	<mark>Open</mark>

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 $\underline{\text{no activity on C63.12}}$, there are $\underline{\text{no definitions to forward to SC2}}$ as no other standard is being developed in this Subcommittee.

- 6. New Business: Chair none
- 7. <u>C63.org</u> website use and updates: Secretary We normally post documents to the <u>SC3</u> <u>protected area</u>. 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 2/13/20 Meeting of SC3

Al #	Task Responsible Due				
Al #	I don	•		Status	
11.00		party	Date	0000	
AI-20:	Look at modulation in <u>C63.9</u> with potential for introduction into SC77B through the US National Committee.	Andy Griffin Jeff Evans	9/9/20	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	9/9/20	OPEN C63.31 Draft needs to mature	
AI-36:	Supply note on progress of IEC 61000-4-3. What is happening between 1 & 6GHz? (immunity) 77B/830/FDIS document link here (closes 7/3/20)	Andy Griffin	9/9/20	CLOSED New CDV 77B-798 has replaced old one, voting in mid-May	
AI-57:	Generate comparison table to summarize requirements from 1-6 GHz. (emissions)	Andy Griffin	9/9/20	OPEN	
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	9/9/20	OPEN are changes needed?	
AI- 100B	Review reports to see if they are sufficient and importantly show the need for action to harmonize.	Subcommittee members	9/9/20	OPEN priorities?	
AI-102:	Jerry & Don to look at reports already received and list in a table the conflicts, similarities and identical ones	Jerry Ramie Don Heirman Harry Hodes	9/9/20	OPEN	
AI-117:	Dan Hoolihan to provide CISPR/SCB documents shown in RA-28 and RA-29	Dan Hoolihan	9/9/20	Closed posted 6/8	
AI-118:	Jerry to send Jeff Evans the comparison report template and C63.9	Jerry Ramie	9/9/20	Closed sent 2/13	
AI-119:	Jerry to provide read-only link to C63.2 & comparison report template to Harry	Jerry Ramie	9/9/20	Closed sent 2/13	
AI-120:	Jerry to provide read-only link to C63.15 & comparison	Jerry Ramie	9/9/20	Closed sent 2/13	

	report template to Ghery			
AI-121:	Jerry to provide read-only link to C63.16 & comparison report template to Mike C.	Jerry Ramie	9/9/20	Closed sent 2/13
AI-122:	Jerry to provide read-only link to C63.25 & comparison report template to Doug K.	Jerry Ramie	9/9/20	Closed sent 2/13
AI-123:	Jerry to send Jason Coder the comparison report template and C63.27 link.	Jerry Ramie	9/9/20	Closed sent 2/13
AI-124:	Horia to insert a one-word "descriptor" with clause numbers and send the new reports to Jerry for posting.	Horia Popovici	9/9/20	Closed received 5/27
AI-125:	Members of SC3 to evaluate Horia's reports and pick the top two or three items to move to the IEC.	All members	9/9/20	OPEN The next step would be to ask in the reverse direction, moving from IEC to C63 documents.
AI-126:	Don to establish a priority of significant items shown in RA-2 & RA-3.	Don Heirman	9/9/20	OPEN
Al-127:	Jerry, Harry & Don to pull first two columns in Table 2 into a stand-alone document (finished items only) by 3/15	Jerry Ramie Don Heirman Harry Hodes	9/9/20	OPEN
AI-128:	Jeff to place this <u>C63.9</u> content into the <u>comparison</u> report template and keep the PowerPoint for an annex.	Jeff Evans	9/9/20	OPEN
AI-129:	Jerry to provide the <u>read-only link to C63.12</u> to all SC3 Members	Jerry Ramie	9/9/20	Closed Link shown
AI-130:	Jerry & Don will assemble the RA matrix into a single document by 3/15	Jerry Ramie Don Heirman	9/9/20	OPEN

- **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 Each Subcommittee should have a meeting in the second and third quarter of 2020. (Sept. 9 @ 1:00PM-EDT 2 hours) Al-131: Jerry to add date & time columns to Upcoming Meeting Schedule for Fall 2020 meetings. Al-132: Jerry to check with Allen re/ SC8 meeting dates/times.

Consolidated Action Items from 5/28/20 Meeting of SC3

Al #	Task	Responsible party	Due Date	Status
AI-20:	Look at modulation in <u>C63.9</u> with potential for introduction into SC77B through the US National Committee.	Andy Griffin Jeff Evans	9/9/20	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.	Bob DeLisi	9/9/20	OPEN C63.31 Draft

	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.			needs to mature
AI-57:	Generate comparison table to summarize requirements from 1-6 GHz. (emissions)	Andy Griffin	9/9/20	OPEN
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	9/9/20	OPEN are changes needed?
AI- 100B	Review reports to see if they are sufficient and importantly show the need for action to harmonize.	Subcommittee members	9/9/20	OPEN priorities?
AI-102:	Jerry & Don to look at reports already received and list in a table the conflicts, similarities and identical ones	Jerry Ramie Don Heirman Harry Hodes	9/9/20	OPEN
AI-117:	Dan Hoolihan to provide CISPR/SCB documents shown in RA-28 and RA-29	Dan Hoolihan	9/9/20	OPEN
AI-125:	Members of SC3 to evaluate Horia's reports and pick the top two or three items to move to the IEC.	All members	9/9/20	OPEN The next step would be to ask in the reverse direction, moving from IEC to C63 documents.
AI-126:	Don to establish a priority of significant items shown in RA-2 & RA-3.	Don Heirman	9/9/20	OPEN
AI-127:	Jerry, Harry & Don to pull first two columns in Table 2 into a stand-alone document (finished items only) by 3/15	Jerry Ramie Don Heirman Harry Hodes	9/9/20	OPEN
Al-128:	Jeff to place this <u>C63.9</u> content into the <u>comparison</u> report template and keep the PowerPoint for an annex.	Jeff Evans	9/9/20	OPEN
AI-130:	Jerry & Don will assemble the RA matrix into a single document by 3/15	Jerry Ramie Don Heirman	9/9/20	OPEN
AI-131:	Jerry to add date & time columns to Upcoming Meeting Schedule for Fall 2020 meetings.	Jerry Ramie	9/9/20	CLOSED added 5/28
Al-132:	Jerry to check with Allen re/ SC8 meeting dates/times.	Jerry Ramie	9/9/20	CLOSED checked 5/28