



# Accredited Standards Committee C63<sup>®</sup>

## Electromagnetic Compatibility

### Subcommittee 3: International Standardization

Chair: Don Heirman

Vice Chair: Ross Carlton

Secretary: Jerry Ramie

Webinar

September 9, 2020; 1:00 PM – 3:00 PM - EDT

### Approved Minutes

1. **Call to Order: Chair** - The meeting was called to order by the Secretary at 1:00PM-EDT
  - 1.1 **Announcements: Chair's remarks** – Our major activity will be to continue to review 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<sup>®</sup> Secretary**

**Subcommittee 3 Membership Roster**. Errors shown in yellow highlight AI-133: Jerry to correct errors in [SC3 roster](#) as shown.

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

<a href="#">Jones, Steve</a>	Liaison Member	FCC Laboratory
<a href="#">Mahn, Terry</a>	Liaison Member US CISPR/B Technical Advisor	Fish and Richardson
<a href="#">Cibulka, Michael</a>	Liaison Member TC77 & SC77B Technical Advisor	Rockwell Automation

Guests and Observers: (non-voting)

**1.5 Quorum: (50% of roster) constitutes a quorum.** (rounding up) (17 roster members / 2 = 8.5 >> 9 (therefore **9 members** are required for a quorum) **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** - Secretary will scroll through this agenda to show it and then ask for approval.

**2.1 Approval of the previous Minutes - [20200528](#)** 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 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 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?**

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	2/13/20	5/28/20	Full Name
												Carlton, Ross
									x	x	x	Coder, Jason
			x	x	x		x		x	x	x	DeLisi, Bob
	x		x	x			x		x			Dilay, Chris
x	x		x		x		x			x	x	Griffin, Andy
	x		x		x		x		x			Hare, Ed
x	x	x	x	x	x	x	x	x	x	x	a	Heirman, Don
	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	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	x		Potts, Nate
				x	x	x	x	x		x		Samoto, Mits
							x	x	x		x	Shellman, M.
								a	a	a	a	Thul, Travis
		a	x	x		x						Arnett, Dave
x	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	x	x	x	x	x	x	x			a	x	Cibulka, Michael
x	x	x	x	x	x	x	x	x	x	x	x	Ramie, Jerry

Any members at risk? None are at risk. (Travis Thul is deployed)

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

Mr. Ross Carlton has been appointed by Mr. Heirman as the new **Vice Chair** of SC3, subject to approval of his [Application](#) and [Resume](#) by this Working Group. Dan moved, seconded by Randy Long, to approve of this application. The application was approved unanimously.

### 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 ( <b>Reviewer Action 1</b> (RA-1) - Doug)
C63.4	SC1	Measurements	CISPR 16-2-X; <b>RA-2</b> ; CISPR 16-1-4 <b>RA-3</b> ; CISPR 32 <b>RA-4</b> Petit Doug needs a reviewer for this
C63.5	SC1	Antenna Calibration	CISPR 16-1-6 <b>RA-5</b> ; SAE ARP 958 <b>RA-6</b> ; CISPR 16-1-4 ( <b>RA-7</b> )
C63.9	SC5	Office Equipment Immunity	IEC 61000-4-39 ( <b>RA-8</b> ) 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; <b>RA-9</b> ; Heirman; CISPR 35 <b>RA-10</b> Pettit
C63.16	SC5	ESD	IEC 61000-4-2; <b>RA-11</b> ; Worley; ISO 10605; <b>RA-12</b> ; Worley, SAE J1113-xx <b>RA-13</b> 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: Evans  
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<sup>®</sup> 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 <a href="#">C63.2</a> to CISPR 16-1-1	Ross Carlton	9/9/20	Open
RA-2	<a href="#">Compare C63.4 to CISPR 16-2-X</a>	Horia Popovici	9/9/20	Closed new submittal
RA-3	<a href="#">Compare C63.4 to CISPR 16-1-4</a>	Horia Popovici	9/9/20	Closed new submittal
RA-4	<a href="#">Compare C63.4 to CISPR 32</a>	Nate Potts	9/9/20	Closed
RA-5	<a href="#">Compare C63.5 to CISPR 16-1-6</a>	Nate Potts	9/9/20	Closed
RA-6	<a href="#">Compare C63.5 to SAE ARP 958 Rev D</a> (RDL) <a href="#">Compare C63.5 to SAE ARP 958 Rev D</a> (DK)	R. Lombardi Doug Kramer	9/9/20	Closed
RA-7	<a href="#">Compare C63.5 to CISPR 16-1-4</a>	Doug Kramer	9/9/20	Closed
RA-8	Compare <a href="#">C63.9</a> to IEC 61000-4-39 & IEC 61000-4-3	Jeff Evans	9/9/20	Open
RA-9	<a href="#">Compare C63.15 to IEC 61000-4-x</a>	Don Heirman	9/9/20	Closed Subject to multiple people involved based on C63.15
RA-10	<a href="#">Compare C63.15 to CISPR 35</a>	Ghery Pettit	9/9/20	Closed received submission
RA-11	<a href="#">Compare C63.16 to IEC 61000-4-2</a>	Mike Cibulka	9/9/20	Closed
RA-12	<a href="#">Compare C63.16 to ISO 10605 (Automotive ESD)</a>	Rich Worley R. Lombardi	9/9/20	Closed
RA-13	<a href="#">Compare C63.16 to SAE J1113-xx</a>	R. Lombardi	9/9/20	Closed
RA-14	<a href="#">Compare C63.23 to CISPR 16-4-2</a> <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	9/9/20	Closed Sent 2/2018
RA-15	<a href="#">Compare C63.5 to CISPR 16-1-6</a>	Nate Potts	9/9/20	Duplicate of RA-5
RA-16	<a href="#">Compare C63.24 draft to IEEE 473</a>	Don Heirman Chad Kiger	9/9/20	Closed <a href="#">C63.24 draft</a>
RA-17	Compare <a href="#">C63.25</a> to CISPR 16-1-4 (two freq. ranges under C63.25.1 and C63.25.2)	Doug Kramer	9/9/20	Open
RA-18	<a href="#">Compare C63.26 to ETSI wireless requirements</a> mmWave possible	Bob DeLisi	9/9/20	Closed
RA-19	Compare <a href="#">C63.27</a> (2017) to IEC 62657-2	Jason Coder	9/9/20	Open
RA-20	<a href="#">Compare C63.28 draft to "no equivalent"</a>	Marcus Shellman	9/9/20	Closed No equivalents found
RA-21	<a href="#">Compare C63.29 draft to CISPR 15</a> Ed. 8; Compare C63.29 draft to CISPR 15 Ed. 9 Runway lighting under IEC 61827	Ernesto Mendoza	9/9/20	Open compare to Ed. 9
<b>RA-22 through RA-29 awaiting publication of the cited C63 standards before comparisons can be made</b>				
RA-22	Compare C63.30 draft to Draft amendments to CISPR 11	Travis Thul Horia & Bob	9/9/20	Open wait until balloting is complete
RA-23	Compare C63.30 draft to CISPR 14-1	Travis Thul Horia & Bob	9/9/20	Open wait until balloting is complete
RA-24	Compare C63.30 draft to CISPR 32	Travis Thul Horia & Bob	9/9/20	Open wait until balloting is complete
RA-25	Compare C63.30 draft to CISPR 12	Travis Thul	9/9/20	Open wait until

		Horia & Bob		balloting is complete
RA-26	Compare C63.31 draft to CISPR 11	Bob DeLisi Abbondante	9/9/20	Open text being drafted
RA-27	Compare C63.31 draft to CISPR 14-1 induction cooking	Bob DeLisi Abbondante	9/9/20	Open text being drafted
RA-28	Compare C63.31 draft to <a href="#">CISPR/B/672/DC</a> (4/14/17)	Bob DeLisi Abbondante	9/9/20	Open text being drafted
RA-29	Compare C63.31 draft to <a href="#">CISPR/B/700/DC</a> (2/2/18)	Bob DeLisi Abbondante	9/9/20	Open text being drafted

## 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 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** - What project should we pursue next? Bob noted that we don't have a process for bringing our RA information to the US-TAG for presentation to the IEC. (sVSWR) Ernesto suggested presenting a report at their plenary meeting. Reporting is one thing, adoption is harder. Ghery pointed out the need for an "access point," like the conveners. There is not a single point of contact. Dan noted that we're missing a few CISPR representatives in our roster. We need the [contact information](#) for liaison members so we can contact them. Ernesto supplied the list. A contact e-mail can be developed and sent out after the list is reviewed. **AI-134:** Jerry to add Ghery Pettit representing CISPR/I & Nick Abbondante representing CISPR/A as non-voting members. (incl. Webex) Ernesto noted that if we want CISPR to consider new methods we need to present our ideas while the document is being drafted, rather than in maintenance. This will be discussed at the next meeting.

**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 5/28/20 Meeting of SC3

AI #	Task	Responsible party	Due Date	Status
AI-20:	Look at modulation in <a href="#">C63.9</a> with potential for introduction into SC77B through the US National Committee.	Andy Griffin Jeff Evans	9/9/20	<b>OPEN</b> 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.  <a href="#">CISPR 11 totally addresses Industrial, Scientific, and Medical device emission tests, both radiated and</a>	Bob DeLisi	9/9/20	<b>OPEN</b> <b>C63.31 Draft needs to mature</b>

	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.			
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 received 6/1
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
AI-128:	Jeff to place this C63.9 content into the comparison 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
AI-132:	Jerry to check with Allen re/ SC8 meeting dates/times.	Jerry Ramie	9/9/20	CLOSED checked 5/28

**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 – Dec. 3 @ 1:00PM-EST (2 hours)** (meeting set 9/9)

**10. Closing remarks and Adjournment: Chair** - The completed consolidated RA table will be sent to SC2 when all the reports are received. The Vice Chair thanked the group for their efforts and adjourned the meeting at 2:14PM-EDT.

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

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



AI #	Task	Responsible party	Due Date	Status
AI-20:	Look at modulation in <a href="#">C63.9</a> with potential for introduction into SC77B through the US National Committee.	Andy Griffin Jeff Evans	12/3/20	<b>OPEN</b> 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.  <a href="#">CISPR 11</a> 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	12/3/20	<b>OPEN</b> C63.31 Draft needs to mature
AI-57:	Generate comparison table to summarize requirements from 1-6 GHz. (emissions)	Andy Griffin	12/3/20	<b>OPEN</b>
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	<b>OPEN</b> are changes needed?
AI-100B	Review reports to see if they are sufficient and importantly show the need for action to harmonize.	Subcommittee members	12/3/20	<b>OPEN</b> 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	12/3/20	<b>OPEN</b>
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	12/3/20	<b>OPEN</b> 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 <a href="#">RA-2</a> & <a href="#">RA-3</a> .	Don Heirman	12/3/20	<b>OPEN</b>
AI-127:	Jerry, & Don to pull first two columns in Table 2 into a stand-alone document (finished items only) by <u>3/15</u>	Jerry Ramie Don Heirman	12/3/20	<b>OPEN</b>
AI-128:	Jeff to place this <a href="#">C63.9</a> content into the <a href="#">comparison report template</a> and keep the PowerPoint for an annex.	Jeff Evans	12/3/20	<b>OPEN</b>
AI-130:	Jerry & Don will assemble the <a href="#">RA matrix</a> into a single document by <u>3/15</u>	Jerry Ramie Don Heirman	12/3/20	<b>OPEN</b>
AI-133:	Jerry to correct errors in <a href="#">SC3 roster</a> as shown.	Jerry Ramie	12/3/20	<b>CLOSED</b> 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	<b>CLOSED</b> posted 9/9 added 9/9