C63® American National Standards Committee C63® on Electromagnetic Compatibility

October 4, 2024 – 10:00 AM to 4:00 PM-EDT
Rohde & Schwarz USA, Coppell TX

Chair: **Bob DeLisi**   **Vice-Chair:** **Zhong Chen**   **Secretary:** **Jerry Ramie**

Approved Minutes

1. **Call to Order - Chair** - The meeting was called to order at 10:00AM-EDT. Welcome to the Fall meeting!

   ### 1.1.   Introductions (roll call) - Secretary (Revised: 08/30/2024) (**Absent**)

MEMBER	PRIMARY	ALTERNATE
A2LA (American Assoc. for Laboratory Accreditation)	McConnell, Megan	Miller, Rob
ACIL (American Council of Independent Laboratories)	Reitz, Richard	Koster, Steven
ANAB (ANSI National Accreditation Board)	Long, Randy	Quan, Ross
Apple, Inc.	Kiemel, Greg	Cuevas, Jose
ARRL – The National Assoc. for Amateur Radio	Anderson, Steve	Carlson, Kermit
CISCO Systems	Griffin, Andy	Salem, Pelin
DISA/PEO Spectrum	Shellman, Marcus	Vacant
Element Materials Technology	Molaei, Nima	Schaefer, David
Elite Electronic Engineering Inc.	Fanning, Craig	Cardenas, Javier
Ericsson AB	Skoglund, Kenth	Bria, Aurelian
ETS – Lindgren	Chen, Zhong	Vacant
Federal Communications Commission	Tarditi, Alfonso	Rison, Justin
Food and Drug Administration	Silberberg, Jeffrey L	Vacant
Google, LLC	Wong, Warwick	He, George
IEEE – EMC Society	Norgard, John	Benitez, Henry
Information Technology Industry Council	Hirvela, John	Barrett, Stephanie
Innovation, Science & Economic Development Canada	Nixon, Jason	Popovici, Horia
Intertek	Abbondante, Nick	Vacant
Keysight Technologies	Potts. Nate	Vacant
Motorola Solutions, Inc.	Zakharia, Deanna	Ho, Sze Khian
National Institute of Standards & Technology	Coder, Jason	Vacant
Qualcomm Technologies, Inc.	Forrester, John	White, Andy
Rohde & Schwarz	Rajamani, Vignesh	Patterson, Chuck
TCB Council, Inc.	Graff, William	Harvey, Chris
TIMCO Engineering Inc., an IIA Company	Royer, Tim	Clavier, Bruno
TÜV Rheinland of North America	Mitchell, Robert	Fagley, Bruce
TÜV SÜD America, Inc.	Elliott, William (Mac)	Sellergren, Sean
UL LLC	DeLisi, Bob	Michael Antola

Individual Members:		
INDIVIDUAL Member	**Hoolihan, Daniel**	None
INDIVIDUAL Member	**Lichtig, John**	None
INDIVIDUAL Member	**Schaefer, Werner**	None
INDIVIDUAL Member	**Zimmerman, Dave**	None
INDIVIDUAL Member	**Berger, Stephen**	None
INDIVIDUAL Member	**Hodes, Harry**	None
INDIVIDUAL Member	**Klinger, Jeff**	None

Observers: Jerry Ramie (Secretary), Ken Gjerde, Janet O'Neil, David Chamberlain, Denys Shumakov, Victor Kuczynski, Mark Arthurs, Janneth Marcelo, Kendall Zerman, Grace Lin, Bill Hurst, Tom Braxton, Ernesto Mendoza,

Quorum: 28 organizations + 7 individual members = 35 total. A quorum is 50% (rounding up); which is **18** or more members in attendance. **Quorum was achieved** with **28** members attending the meeting.

2. Approval of the Agenda

2.1 **Approval of Agenda - Chair -** Mr. Hodes moved, seconded by Mr. Graff, to accept the Agenda. No objections. The Agenda was approved.

2.2 **Presentation of Patent slides – Chair -** The patent slides were shown and no patent issues were raised.

3. Chairman's Report – DeLisi - See PowerPoint slides - Horia noted that ISED published DRS-0012 proposal to adopt C63.10 Amendment & C63.2.

4. Secretary's Report – Ramie

4.1 Minutes of the last Meeting (20240517_Main_Mins__2.doc) Fanning moved, seconded by Long to approve. Any objections? The previous minutes were approved by acclamation.

4.2 Interpretations received, circulated or posted - (Electronic_motions_2024_3Q)

Date	Interpretations received, circulated or posted	Source	Result	Comments
8/21/2023	Received C63.27 Tier 2 Guidance for WiFi request	R. Jankovics	sent to SC7	Approved at Main meeting 5/17
10/20/2023	Received C63.4-2014 Gaps in ground plane request	C. Wang	sent to SC1	open
12/15/2023	Received C63.4-2014 Annex F insulating ground plane	B. Hobbs	sent to SC1	open
5/22/2024	Posted C63.27 Tier 2 Guidance for WiFi & notified sender	B. DeLisi	posted 5/22	requestor was notified 5/22
6/27/2024	Received C63.10_2013&2020_Cl 11.12.2.5.2.3 Avg w/ <VBW	M. Antola	sent to SC4	open
7/31/2024	Received C63.4-2014, Clause 10.2.7 special software	Zimmerman	sent to SC1	open

4.3 Open Interpretation requests - (Interpretations Log 20240918) Open are in red:

Date	Requestor	e-mail address	Project name	SC #	Rec by Sec	Sent to SC	Back fm SC
10/20/2023	Charles Wang	charles@champrotek.com	C63.4 (2014) 20231020_Gaps_in_ground_plane	SC1	10/20/2023	10/20/2023	open
12/13/2023	Brandon Hobbs	thesmartone057@gmail.com	C63.4 (2014) Annex F Insulating Ground Plane	SC1	12/13/2023	12/15/2023	open
6/27/2024	Mike Antola	Michael.Antola@ul.com	C63.10_2013&2020_Cl 11.12.2.5.2.3 Avg w/ <VBW	SC4	6/27/2024	6/27/2024	open
7/31/2024	David Zimmerman	dzimmerman@spectrumemc.com	C63.4-2014, Clause 10.2.7 special software	SC1	7/31/2024	7/31/2024	open

4.4 Electronic Motions since last meeting - (Electronic_motions_2024_3Q)

Date	Main Committee motion or action	Source	Result	Comments
7/9/2024	SC1 Chair moved to accept C63.4:2014 reaffirmation PINS	B. DeLisi	Passed 7/25	Aff=29; Aff/com=0; Neg=0; Abs=0
7/26/2024	SC8 Chair moved to accept C63.33 draft v1.1.5	B. DeLisi	Passed 8/26	Aff=14; Aff/com=3; Neg=1; Abs=7

4.5 Membership Changes since last meeting - (Electronic_motions_2024_3Q)

Date	Membership changes (Main & SCs)	Source	Result	Comments
5/21/2024	Added Justin Rison to Main (R&S Alternate) and SC7 rosters	J. Rison	added 5/21	to Main, Pub, Priv & SC7 rosters
5/23/2024	Added Denys Shumakov to SC1 roster (ISED Expert)	J. O'Neil	added 5/23	to SC1 roster
5/23/2024	Added Yasaman Ardeshirpour to SC8 roster (FDA expert)	S. Berger	added 5/23	to SC8 roster
5/23/2024	Added D. Shumakov to SC4, C63.10 & C63.26 rosters (ISED)	Abbondante	added 5/23	to SC4, C63.10 & C63.26 rosters
5/23/2024	Added N. Suryadevara to C63.10 Webex, considering in SC4	Abbondante	added 5/23	to C63.10 Webex invitation list
8/19/2024	Added Robert Mitchell as TUV Rheinland Primary rep	R. Mitchell	added 8/19	to Main, Pub. & Priv. rosters
8/19/2024	Added P. Salem as Cisco alternate/removed L. Castro	P. Salem	added 8/19	to Main, Pub. & Priv. rosters
8/19/2024	Swapped ARRL Primary and Alternate reps	S. Anderson	swapped 8/19	on Main, Pub. & Priv. rosters
8/20/2024	Added Chuck Patterson as R&S Alternate (removed Payne)	V. Rajamani	added 8/21	on Main, Pub. & Priv. rosters
8/21/2024	Removed M. Duncanson as SC2 Secretary (retired)	M. Shellman	removed 8/22	from Main, Pub, Priv & SC2 rosters
8/29/2024	Removed Cardenas, added Reitz & Koster (ACIL reps)	R. Reitz	added 8/30	to Main, Pub. & Priv. rosters
9/22/2024	Added Soham Surve & Brandon Hobbs to SC1 & C63.4 rosters	J. O'Neil	added 9/23	to Pub, Priv, SC1 & C63.4 rosters

5. **Secretariat Report** – IEEE –
5.1 - Status of C63® published standards
5.1.1 Fourth Anniversary standards
5.1.2 Eight-years or older standards

5.2 – Status of PINS and PINS-C (currently posted list)

6. **Subcommittee reports** (Brief written reports to include actions needed by C63®, and items of particular interest during SC meetings). **Note**: A short report from each Subcommittee using either the C63 PowerPoint template or the C63_PowerPoint_template_wide. (no password required)
NOTE – EACH COMMITTEE REPORT WILL BE LIMITED TO A MAXIMUM OF 15 MINUTES.
AI-115: Jerry to place a link to the two PPT templates on the site on the Standards Development page.

- 6.1.   **SC1: Measurement and Instrumentation - Griffin** - (SC1 report) Andy showed a new C63.2 draft PINS. Andy moved to approved the C63.2 PINS shown. No second required. No discussion, no opposition, no abstentions. The motion carried to approve the new C63.2 PINS. Andy showed and moved to approve the C63.25.1 PINSv2. Discussion ensued. No opposition, no abstentions. The motion carried to approve the C63.25.1 PINSv2. Andy showed an Interpretation Response from Dave Zimmerman re/ "*special test software*." The term was not defined in the document. The laboratory was free to define the term. Andy wanted approval. Bob asked the Members if they wanted a vote? No members wanted to vote. The proposed Interpretation response was accepted.
- 6.2.   **SC2: Definitions – Shellman** - (SC2 report) C63.14 draft PINS was shown; the date was added. Marcus moved to approve the edited C63.14 PINS; no second required. No discussion. No objections, no abstentions. The PINS was approved. AI-116: Jerry to post the Definitions Process document on the SC2 landing page.
- 6.3.   **SC3: International Standardization – Mendoza** - (SC3 report)
- 6.4.   **SC4: Wireless and ISM Equipment Measurements - Abbondante** - (SC4 report) We need a Chair for new work in C63.30. Horia volunteered to Chair C63.30. AI-117: Horia to generate a PINS for C63.30.

    There was agreement in the C63.10WG this week on generating a C63.10.DTS.UNII PINS. It was approved by SC4. It was shown and discussed. The work would be done by C63.10. Nick moved to adopt the PINS shown. No discussion. No objections. The C63.10.DTS.UNII PINS was approved as shown. AI-118: Jerry to contact C63.10 Ed.4 & Main & SC4 members and ask for participants in C63.10.DTS.UNII Working Group. (sent 10/7)

    There was content shown on C63.26. Harry asked Jennifer why equations in an Annex aren't accepted in the text. Why does the IEEE template only allow five levels of sub-headings. Nick noted that the template macros don't allow annex equations.

    Nick described a "methods" Standard to be done in SC1 since it addresses test methods. Nick moved to ask the Main Committee to assign SC1 the task of a PINS and starting work on a test methods Standard. Discussion ensued. Harry pointed out it may take a lot of time. Jason Nixon suggested a PINS-C to see if the work was possible. Randy liked the PINS-C path better. Nick thought we could begin work with a PINS. No opposition.

No abstentions. The motion carried. AI-119: Bob to bring this Test Methods Standard motion to SC1.

6.5. **SC5: Immunity testing – Braxton** - (SC5 report) AI-120: Tom & Ernesto to meet by Webex to discuss immunity testing for lighting. Alfonso (FCC) thought that industry-specific immunity requirements were appropriate.

6.6. **SC6: Laboratory Accreditation – Kramer** (SC6 report)

6.7. **SC7: Spectrum Etiquette – Coder** - (SC7 report)

6.8. **SC8: Medical Equipment Testing – Berger** - no report

********************************** **Break** **

7. New Business

7.1. **Awards** – C63.10 Amendment 1:2024, C63.25.2:2024, Marcus Shellman

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Awards

C63.10:2020 Amendment 1

Nima Molaei (chair)

Robert Paxman

C63.25.2

Horia Popovici

Andy Griffin

Nicholas Abbondante

Bob DeLisi (chair)

Marcus Shellman – SC2 chair

7.2. **Presentation – Proficiency testing update** - Hodes (presentation)

7.3. **Presentation – Antenna height scans –** Chen (Univ. of Magdeburg)

7.4. **Presentation – Antenna height scans -** Griffin (2, 3, 5, 6, 8, 9, 10)

8. Other Administrative Matters

8.1. **Web Page – Ramie**

8.1.1 The Generic Agendas for Subcommittees include a review of the Membership roster, a Quorum check, review of Membership Guidelines, Attendance Log and Members at Risk at each meeting. Spring meeting requires approval of the SC Membership. At each Spring meeting, a review is conducted for all PINS content, the Status Matrix text and the "Learn more" text for each Standard covered by that SC.

8.2. **Administrative matters from the Steering Committee** - Marcus Shellman is retiring. Marcus spoke of the joy of working with C63 for many years. Marcus will receive an award for his work. Stephen Berger has retired from all C63 activity. AI-121: Jerry to remove S. Berger from all rosters and Bob will be listed as interim Chair of SC8.

9. Other Business

9.1 **Future Seminars and Workshops –** Raleigh NC before the symposium

9.2 **Newsletter report – Chair –** AI-122: All SC chairs to send a summary of their activities to the newsletter Editor. News page

9.3   Next meeting – Chair - Week of May 5, 2025 @ TUV Rheinland of North America, Inc., Boxborough MA

10. Old Business

10.1   Action item review on items not covered elsewhere on Agenda – (as time permits) **- Secretary**

Consolidated Action Items from Main Committee Meeting 05/17/24[1]

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-88:	Harry to contact NASA components to see if there is interest in developing a design guide for anechoic chambers suitable for use in testing commercial payloads and spacecraft radars and communications equipment	Harry Hodes	Closed	Next meeting	Serious interest, but security issues to be resolved. Leave open for future meeting.
AI-101	Jerry to replace the PINS text to the C63.7 to read "No active PINS" status to read "Published 2015"	Jerry Ramie	Closed	Next meeting	Text replaced 5/27
AI-102:	Jerry to remove Steve Jones from the SC1 roster	Jerry Ramie	Closed	Next meeting	Removed 5/23
AI-103:	Jerry to post the PDF file on how to develop a definition on the Standards Development page	Jerry Ramie S. Archambeault	Closed	Next meeting	File sent to Shannon on 5/29
AI-104:	Jerry to post new roster for SC3 w/ Mendoza as Chair	Jerry Ramie	Closed	Next meeting	Posted 5/23
AI-105:	Jerry to post new C63.29 PINS_3 that was modified and approved	Jerry Ramie	Closed	Next meeting	Posted 5/29
AI-106:	Jerry to send the new C63.29_PINS_3 to Jennifer	Jerry Ramie	Closed	Next meeting	Sent 5/20
AI-107:	Jerry to circulate a call for C63.29 members at the Main & SC4 & old C63.29 roster.	Jerry Ramie E. Mendoza	Closed	Next meeting	(Ernesto to approve text) draft sent 5/29
AI-108:	Jerry to add Dave Schaefer as Vice Chair of SC5 (use report)	Jerry Ramie	Closed	Next meeting	Added 5/23
AI-109:	Jerry to use this report to update the SC6 roster	Jerry Ramie	Closed	Next meeting	Updated 5/21
AI-110:	Jerry to use this report to update the SC7 roster. Jason will provide new text for the landing page	~~Jerry Ramie~~ Jason Coder	Closed	Next meeting	Updated 5/29 note sent to Jason
AI-111:	Jerry to receive email of Ardeshirpour to update the SC8 roster. (add Ardeshirpour as Member)	Jerry Ramie	Closed	Next meeting	Email added 5/29
AI-112:	Bob to send procedures to Jennifer for circulation to IEEE and ANSI	Bob DeLisi	Closed	Next meeting	
AI-113:	Bob to send Alfonso & Justin a list of topics covered by the corrigendum.	Bob DeLisi	Closed	Next meeting	
AI-114:	Jerry to post the C63.27 Interpretation response reviewed and notify the requester	Jerry Ramie	Closed	Next meeting	Posted 5/22

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[1] Consolidated (re-numbered) action items are included here for reference, but are not a part of the minutes.

11. Adjournment - Chair - The Chair thanked Rohde & Schwarz USA and the Members for their efforts and adjourned the meeting at 4:04PM-EDT.
*** **End of Meeting** ***

Consolidated Action Items from Main Committee Meeting 10/04/24[2]

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-115:	Jerry to place a link to the two PPT templates on the site on the Standards Development page	Jerry Ramie	Open	Next meeting	
AI-116:	Jerry to post the Definitions Process document on the SC2 landing page	Jerry Ramie	Open	Next meeting	
AI-117:	Horia to generate a PINS for C63.30	Horia Popovici	Open	Next meeting	
AI-118:	Jerry to contact C63.10 Ed.4 & Main & SC4 members and ask for participants in C63.10.DTS.UNII Working Group.	Jerry Ramie	Closed	Next meeting	(sent 10/7)
AI-119:	Bob to bring this Test Methods Standard motion to SC1	Bob DeLisi	Open	Next meeting	
AI-120:	Tom & Ernesto to meet by Webex to discuss immunity testing for lighting	Tom Braxton E. Mendoza Jerry Ramie	Open	Next meeting	
AI-121:	Jerry to remove S. Berger from all rosters and Bob will be listed as interim Chair of SC8	Jerry Ramie	Open	Next meeting	Member Emeritus?
AI-122:	All SC chairs to send a summary of their activities to the newsletter Editor	All SC chairs	Open	Next meeting	

Attachments from Main Committee Meeting 10/04/24 [1]

Item	Description	URL
2.1	Draft agenda	https://www.c63.org/documents/misc/minutes/2024_Oct/20241004_Main_Agenda_4.doc
2.2	Patent slides	http://www.c63.org/documents/misc/patents/C63_Patent_Call_slideset_final_1.pdf
3.0	Chairman's Report	https://www.c63.org/documents/misc/minutes/2024_Oct/C63_Main%20Committee%20-%20Chairman's%20Report%20Oct%202024.pptx
4.1	Approved prev. Minutes	https://www.c63.org/documents/misc/minutes/2024_Oct/20240517_Approved_Main_Mins.pdf
4.2	Electronic motions log	https://www.c63.org/documents/misc/minutes/2024_Oct/Electronic_motions_2024_3Q.xls
4.3	Interpretation log	https://www.c63.org/documents/misc/minutes/2024_Oct/Interpretations_log_20240918.xls
4.4	Electronic motions log	https://www.c63.org/documents/misc/minutes/2024_Oct/Electronic_motions_2024_3Q.xls
5.0	Secretariat Report	https://www.c63.org/documents/misc/minutes/2024_Oct/Secretariat%20report%20q3%202024.ppt
5.2	Status of PINS & PINS-C	https://www.c63.org/documents/misc/matrix/c63_standards.htm
6.0	Slide Template (4:3)	http://www.c63.org/documents/misc/temp/C63_PowerPoint_template.ppt
6.0	Slide Template (16:9)	http://www.c63.org/documents/misc/temp/C63_PowerPoint_template_wide.ppt
6.1	SC1 Report	https://www.c63.org/documents/misc/minutes/2024_Oct/SC1%20report%20to%20main_oct24.ppt
6.1	C63.2 PINS	https://www.c63.org/documents/misc/minutes/2024_Oct/PINS_C63.2%20(2024-10-03)%20ag.docx
6.1	C63.25.1 PINSv2	https://www.c63.org/documents/misc/minutes/2024_Oct/C63.25.1%20PINS%20v2%20-%20Zhong%20Chen.docx
6.1	Special Software response	https://www.c63.org/documents/misc/minutes/2024_Oct/Interpretation_response%20-%20Special%20Software%20-%20SC1%20Approved.doc
6.2	SC2 Report	https://www.c63.org/documents/misc/minutes/2024_Oct/SC2_Committee%20Report_20241004%20Rev%201.pptx
6.2	C63.14 draft PINS	https://www.c63.org/documents/misc/minutes/2024_Oct/Draft%20PINS%20C63.14-20XX.docx
6.2	Definitions process doc.	https://www.c63.org/documents/misc/minutes/2024_Oct/ANSC_C63%20Standards%20Definitions%20Development%20Criteria%20Rev%201.pdf
6.3	SC3 Report	https://www.c63.org/documents/misc/minutes/2024_Oct/SC3ReportOct24.pptx
6.4	SC4 Report	https://www.c63.org/documents/misc/minutes/2024_Oct/Main%20Committee%20Report%20-%20SC4%202024-10-04%20rev2.pptx
6.4	C63.10.DTS.UNII PINS	https://www.c63.org/documents/misc/minutes/2024_Oct/ANSI%20USEMCSC%20C63%2010%20DTS%20UNII%20Pins%20SC4%20final.docx
6.5	SC5 Report	https://www.c63.org/documents/misc/minutes/2024_Oct/C63_SC5%20Report%20Oct%204%203034.ppt
6.6	SC6 Report	https://www.c63.org/documents/misc/minutes/2024_Oct/20241004%20SC6%20Report%20to%20Main.pptx

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[2] Consolidated (re-numbered) action items are included here for reference, but are not a part of the minutes.

6.7	SC7 Report	https://www.c63.org/documents/misc/minutes/2024_Oct/SC7%20Main%20Committee%20Report%20-%20Fall%202024.ppt
7.1	Awards	https://www.c63.org/documents/misc/minutes/2024_Oct/C63_Main%20Committee%20-Awards.pptx
7.2	Proficiency testing	https://www.c63.org/documents/misc/minutes/2024_Oct/Hodes%20PT%20Program%20Status%20Presentation%20(SC6%20&%20Main)%20-%20ANSC%20C63%20Meetings%20(30%20Sept%20-%2004%20Oct%202024).pdf
7.3	Antenna height scans (Chen)	https://www.c63.org/documents/misc/minutes/2024_Oct/Magdeburg%20slides_height_scan_Zhong.pptx
7.4	Antenna height scans (Griffin)	[2](#), [3](#), [5](#), [6](#), [8](#), [9](#), [10](#)
8.1.1	Generic SC Agendas	https://www.c63.org/subcommittees.htm
9.2	News page	https://www.c63.org/news.htm