C63®

American National Standards Committee
C63® on Electromagnetic Compatibility

October 5, 2023 – 9:00 AM to 3:00 PM-PDT
Google, Mtn. View, CA

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

Approved Minutes

1. **Call to Order - Chair -** The meeting was called to order at 9:28AM-PDT. Janette Marcelo represented NIST today

   1.1.   **Introductions (roll call) - Secretary** (Revised: 8/30/2023) (**Absent**)

MEMBER	PRIMARY	ALTERNATE
A2LA (American Assoc. for Laboratory Accreditation)	McConnell, Megan	Miller, Rob
ACIL (American Council of Independent Laboratories)	Cardenas, Javier	Reitz, Richard
ANAB (ANSI National Accreditation Board)	Long, Randy	Quan, Ross
Apple, Inc.	Kiemel, Greg	Cuevas, Jose
ARRL – The National Assoc. for Amateur Radio	Carlson, Kermit	Anderson, Steve
CISCO Systems	Griffin, Andy	Castro, Louie
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	Jones, Steve	Vacant
Food and Drug Administration	Silberberg, Jeffrey L	Vacant
Google, LLC	Wong, Warwick	He, George
Hearing Industries Association	Vacant	Gjerde, Ken
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	Cline, Jeremy	Arceneaux, Wally
TCB Council, Inc.	Graff, William	Harvey, Chris
TIMCO Engineering Inc., an IIA Company	Royer, Tim	Clavier, Bruno
TÜV Rheinland of North America	Vacant	Fagley, Bruce

TÜV SÜD America, Inc.	Elliott, William (Mac)	Vacant
UL LLC	DeLisi, Bob	Michael Antola
US Department of Defense - Joint Spectrum Ctr.	Shellman, Marcus	Duncanson, Michael
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	Case, Dave	None
INDIVIDUAL Member	Hodes, Harry	None

Observers: Jerry Ramie, Jennifer Santulli, David Chamberlain, Janet O'Neil, Victor Kuczynski, Jeff Klinger, Janneth Marcelo, Amanda McDonald, Abdul Rala

Quorum: 29 organizations + 8 individual members = 37 total. A quorum is 50% (rounding up); which is **19** or more members in attendance. Quorum was **not achieved** with **17** members attending the meeting. Nick asked if we can remove Members who don't show up. Bob noted that non-paid Members may be removed. Mr. Nixon noted that ISED removes the quorum eligibility of non-attending Members.

2. Approval of the Agenda

2.1 Approval of agenda - Chair - Mr. Hoolihan moved, seconded by Ms. Zakharia, to accept the modified Agenda. (with a new item 8.2) The modified Agenda will be considered & approved remotely.

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

2.3 Consideration of new members - Chair – none

3. Chairman's Report – DeLisi

3.1 - General – See Chairman's report - AI-96: Bob will review FCC NPRM to find out why there is a two-year transition for C63.10

4. Vice-Chairman's Report - None

5. Secretary's Report – Ramie

5.1 Minutes of the last Meeting (20230512_Main_Mins_3.doc) **– Ramie -** The minutes were approved by acclamation. Long moved, seconded by Graff to approve by remote voting.

5.2 Disposition of Interpretation Requests since last meeting – Ramie - none

Date	Requestor	e-mail address	Project name	SC #	Rec by Sec	Sent to SC	Back fm SC

5.3 Open Interpretation requests - Ramie (Interpretations Log 20230821) Open items are in red:

Date	Requestor	e-mail address	Project name	SC #	Rec by Sec	Sent to SC	Back fm SC
11/18/2022	Henrik Nielsen	HEGN@foss.dk	C63.4 2014 Conducted Emissions LISN choke	SC1	11/18/2022	11/18/2022	open
5/16/2023	Jeong Hwan Kim	kimjh@sict.co.kr	C63.5 (2017) Annex F delta antenna factors	SC1	5/16/2023	5/16/2023	open
8/21/2023	Richard Jankovics	Richard.Jankovics@ul.com	C63.27 (2021) Clause A3331 Tier 2 Guidance WiFi	SC7	8/21/2023	8/21/2023	open

5.4 Electronic Motions since last meeting - Ramie (electronic motions log)

Date	Main Committee motion or action	Source	Result	Comments
9/7/2023	Circulate MIMO draft 27 to Main Committee for two weeks	B. DeLisi	Passed 9/21	Y=15, N=1, A=7 / returned to TG

5.5 Membership Changes since last meeting - Ramie

Date	Membership changes (Main & SCs)	Source	Result	Comments
5/25/2023	Discussion of N. Abbondante nomination for SC4 chair begins	J. Ramie	ended 6/8	Two week ballot then begins
6/9/2023	Voting on N. Abbondante nomination for SC4 Chair begins	J. Ramie	ended 6/23	Results: Y=22, N=0; A=0
6/21/2023	Single entity for Element Materials Tech / Molaei & Schaefer	B. DeLisi	posted 6/21	C63_Members, Pub & Priv Rosters
6/26/2023	N. Abbondante confirmed as next SC4 Chair (in October)	J. Ramie	closed 6/23	Becomes SC4 Chair at Oct. meet.
6/29/2023	Remove Alain Abou-Zeid from all rosters	Abou-Zeid	removed 6/29	from SC1 and SC4 roster pages
8/21/2023	Add Kermit Carlson as ARRL Primary representative	K. Carlson	added 8/21	to Main, Public & Private rosters
8/18/2023	Replace T. Braxton affiliation with ARRL Expert	T. Braxton	changed 8/30	on Main roster
8/23/2023	Replace W. Graff affiliation with TCB Council - Primary	C. Harvey	changed 8/30	on Main roster
8/23/2023	Change Chris Harvey affiliation to TCB Council - Alternate	C. Harvey	changed 8/30	on Main roster
9/22/2023	Add N. Abbondante as C63.33 Vice Chair	S. Berger	changed 9/22	on C63.33 roster
9/22/2023	Add S. Berger as Secretary of C63.33	S. Berger	changed 9/22	on C63.33 roster

6. Secretariat Report – IEEE –
6.1 - Status of C63® published standards
6.1.1 Fourth Anniversary standards
6.1.2 Eight-years or older standards

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

7. 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.***

7.1. **SC1: Measurement and Instrumentation - Griffin** - There was a discussion of reverb chamber characteristics. C63.23 has an open (dormant) PINS. (it can stay open)

7.2. **SC2: Definitions – Shellman** - Mr. Duncanson gave the SC2 report. Their officers' terms end on 12/31/23. They can hold a SC2 meeting to elect/re-elect their officers. They will submit additional material for the new Procedures to Mr. Hoolihan.
************************************** BREAK ***

7.3. **SC3: International Standardization – Carlton**

7.4. **SC4: Wireless and ISM Equipment Measurements - Abbondante**

7.5. **SC5: Immunity testing – Braxton**

7.6. **SC6: Laboratory Accreditation – Kramer**

7.7. **SC7: Spectrum Etiquette – Coder** - The C63.27 Corr. PINS was shown. Mr. Coder submitted a motion to approve the submitted PINS that did not require a second. Discussion ensued. AI-96b: Jerry will circulate the C63.27 Corr. PINS to the Main Committee for electronic approval soon.

7.8. **SC8: Medical Equipment Testing – Berger** - no report. Nick suggested an historical document that preserves our rationale for previous decisions. Bob reported that SC8 met last week and the main discussion was about C63.33 EAS immunity WG progress.

8. New Business
8.1. **New draft Procedures - 5/23 - Hoolihan (comments from Bob DeLisi)** The steering committee has reviewed the procedures three times and the Main will have until Oct. 31 to comment.
*** LUNCH ***

8.2. **C63.19 Discussion** - Mr. Nixon note that TIA 5050 is updating their Standard. He wanted to open a PINS to update a dated reference in C63.19 to TIA 5050. AI-97: Bob to work with Steve Berger to draft a PINS to update C63.19 to include an updated reference to TIA 5050.

8.3. **Membership Dues** - We have received an update from our Treasurer listing those persons or entities that have not paid their dues. We will communicate with them.

9. Other Administrative Matters

9.1. Web Page – Ramie

9.1.1 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. We have a [shared Meeting calendar](#) now.

9.1.2 Website Security - When clicking on links provided by Google, some pages come up "Unsecured" (http://) AI-98: Jerry to provide Shannon with examples of insecure C63 page links being served by Google. AI-99: Bob to provide the link to our LinkedIn page for inclusion on our site.

9.2. Administrative matters from the Steering Committee - We may implement an editorial committee. This will require further study. We may re-schedule time allocations to more accurately reflect the time they really need. We are considering combining some subcommittees with few members or related topics. (immunity & co-existence, for example)

10. Other Business

10.1 Future Seminars and Workshops – We usually hold a 1-2 day workshop before the EMC Symposium. We're looking for a speaker for C63.26, such Mac. Same for C63.10..
We need to deliver content for C63.31 as well such as Nick.

10.2 Newsletter report – Chair – latest Newsletter was August of 2023. Available [here](#). It was distributed at the EMC Symposium.

10.3 Next meeting – Chair - Week of May 12 @ RTP, North Carolina (Potentially Mon. afternoon & Tue Working Groups, SCs for 1.5 - 2 days, Main meeting on Friday)

11. Old Business

11.1 Action item review on items not covered elsewhere on Agenda – (as time permits) **- Secretary** AI-100: Bob to contact Harry regarding AI-84 & AI-88.

Consolidated Action Items from Main Committee Meeting 05/12/23[1]

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-84:	Harry to write a PINS-C for incorporating EMC procurement guidance for Government purchases of COTS equipment [PINS-C form](#)	Harry Hodes	Open	Next meeting	Working with Marshall and Goddard re/ requirements
AI-85:	Investigate recognition of a corrigendum by the FCC & ~~ISED~~	Steve Jones ~~Jason Nixon~~	Open	Next meeting	Reminder sent 5/27 All Stds. are voluntary so recognition is also voluntary. Corr. is a stand-alone document(s) and must be recognized together with the base document. KDB is most likely
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	Harry Hodes	Open	Next meeting	

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

	spacecraft radars and communications equipment				
AI-92:	Bob to discuss reaffirmation of C63.4 w/ Andy (new SC1 Chair)	Bob DeLisi Andy Griffin	Closed	Next meeting	
AI-93:	Jennifer to check with IEEE for access to C63.14 for use by our working groups.	Jennifer Santulli	Closed	Next meeting	Read-only file
AI-94:	Bob to circulate the MIMO white paper to the Main Committee	Bob DeLisi	Closed	Next meeting	
AI-95:	All SC Chairs to provide text for the next newsletter to Dan Hoolihan	All SC Chairs	Closed	7/1/23	

12. Adjournment - Chair - The Chair thanked Google and George He and the Members for their efforts and adjourned the meeting at 1:04PM-PDT.

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

Consolidated Action Items from Main Committee Meeting 10/05/23[2]

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-84:	Harry to write a PINS-C for incorporating EMC procurement guidance for Government purchases of COTS equipment PINS-C form	Harry Hodes	Open	Next meeting	Working with Marshall and Goddard re/ requirements
AI-85:	Investigate recognition of a corrigendum by the FCC & ISED	Steve Jones Jason Nixon	Open	Next meeting	Reminder sent 5/27 All Stds. are voluntary so recognition is also voluntary. Corr. is a stand-alone document(s) and must be recognized together with the base document. KDB is most likely
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	Open	Next meeting	
AI-96:	Bob will review FCC NPRM to find out why there is a two-year transition for C63.10	Bob DeLisi	Closed	Next meeting	Response: *The transition is being given due to inclusion of C63.4a as a mandatory site evaluation which the FCC is giving 2 years to comply with before it's mandated through amending C63.4:2014*
AI-96b:	Jerry will circulate the C63.27 Corr. PINS to the Main Committee for electronic approval	Jerry Ramie	Open	Next meeting	

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

	soon.				
AI-97:	Bob to work with Steve Berger to draft a PINS to update C63.19 to include an updated reference to TIA 5050	Bob DeLisi Steve Berger	Open	Next meeting	
AI-98:	Jerry to provide Shannon with examples of insecure C63 page links being served by Google.	Jerry Ramie	Closed	Next meeting	Examples sent to Shannon on 10/30. Response: *Technically they're the same exact pages, just one way the link is https and one isn't, so it's not as simple as removing older pages; they're literally the same page.*
AI-99:	Bob to provide the link to our LinkedIn page for inclusion on our site.	Bob DeLisi	Closed	Next meeting	The link is American National Standards Committee C63® - EMC | Groups | LinkedIn. Sent to Shannon 10/31
AI-100:	Bob to contact Harry regarding AI-84 & AI-88	Bob DeLisi Harry Hodes	Open	Next meeting	

Attachments from Main Committee Meeting 10/05/23[3]

Item	Description	URL
2.1	Draft agenda	http://c63.org/documents/misc/minutes/2023_Oct/20231005_Main_Agenda_3.doc
2.2	Patent slides	http://www.c63.org/documents/misc/patents/C63_Patent_Call_slideset_final_1.pdf
3.1	Chairman's Report	http://c63.org/documents/misc/minutes/2023_Oct/C63_Main%20Committee%20-%20Chairman's%20Report%20October%202023.pptx
5.1	Approved previous Minutes	
5.3	Interpretation log	http://c63.org/documents/misc/minutes/2023_Oct/Interpretations_log_20230821.xls
5.4	Electronic motions	http://c63.org/documents/misc/minutes/2023_Oct/Electronic_motions_2023_3Q.xls
6.0	Secretariat Report	http://c63.org/documents/misc/minutes/2023_Oct/Secretariat%20report%20q2%202023.ppt
6.2	Status of PINS & PINS-C	https://www.c63.org/documents/misc/matrix/c63_standards.htm
7.0	Slide Template (4:3)	http://www.c63.org/documents/misc/temp/C63_PowerPoint_template.ppt
7.0	Slide Template (16:9)	http://www.c63.org/documents/misc/temp/C63_PowerPoint_template_wide.ppt
7.1	SC1 Report	http://c63.org/documents/misc/minutes/2023_Oct/SC1%20report%20to%20mian_oct23.ppt
7.2	SC2 Report	http://c63.org/documents/misc/minutes/2023_Oct/SC2_Committee%20Report_20231003.pptx
7.3	SC3 Report	http://c63.org/documents/misc/minutes/2023_Oct/SC3_Report_to_Steering_2023_10.ppt
7.4	SC4 Report	http://c63.org/documents/misc/minutes/2023_Oct/Main%20Committee%20Report%20-%20SC4%202023-10-05.pptx
7.5	SC5 Report	http://c63.org/documents/misc/minutes/2023_Oct/C63_SC5_Report_20231004.ppt
7.6	SC6 Report	http://c63.org/documents/misc/minutes/2023_Oct/20231005%20SC6%20report%20to%20Main%20Committee.ppt
7.7	SC7 Report	http://c63.org/documents/misc/minutes/2023_Oct/SC7%20Main%20Committee%20-%20Fall%202023.ppt
7.7	C63.27 Corr. PINS	http://c63.org/documents/misc/minutes/2023_Oct/C63-27%20Corrigendum%20PINS%20v2.doc
7.8	SC8 Report	
8.1	New draft procedures	http://c63.org/documents/misc/minutes/2023_Oct/20230629%20-%20C63%20Committee%20-%20PPs%20-%20THIRD%20DRAFT%20for%20review%20by%20Steering%20Committee%20BD5252023%20(6).rtf
8.1	Comments from DeLisi	http://c63.org/documents/misc/minutes/2023_Oct/20230621%20-%20comments%20from%20Bob%20DeLisi.docx
9.1.1	Shared meeting calendar	https://calendar.google.com/calendar/u/0/embed?src=qcmimf2huferqmgt8qu8vd2bvs@group.calendar.google.com&ctz=America/Los_Angeles
10.2	August 2023 Newsletter	https://www.c63.org/documents/c63/newsletters/C63%20Newsletter%20Summer%202023%20FINAL.pdf

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