

C63[®] ANSI-Accredited Standards Committee C63[®] Electromagnetic Compatibility

November 21, 2019 – 8:00 AM to 1:00 PM-PST
Keysight Technologies, Santa Rosa, CA

Chair: [Dan Hoolihan](#)

Vice-Chair: [Dan Sigouin](#)

Secretary: [Jerry Ramie](#)

Approved Minutes

1. **Call to Order - Chair** - The meeting was called to order at 8:13AM-PST. The Chair welcomed the group to Santa Rosa.

- 1.1. **In Memoriam - Chair** - [Dheena Moongilan](#), [Vladimir Bazhanov](#)

A moment of silence was observed for our departed Members:



Dheena Moongilan



Vladimir Bazhanov

- 1.2. **Introductions (roll call) - Secretary** (Revised: 7 November, 2019)

MEMBER	PRIMARY	ALTERNATE
A2LA (American Assoc. for Laboratory Accreditation)		
ACIL (American Council of Independent Laboratories)		
ANAB (ANSI National Accreditation Board)	Long, Randy	Quan, Ross
Apple, Inc.	Chen, Jyun-cheng	O'Dwyer, Michael
ARRL – The National Assoc. for Amateur Radio	Hare, Ed	
Bay Area Compliance Laboratories Corp.	Hodes, Harry	
Bureau Veritas	Vacant	

CISCO Systems	Griffin, Andy	
Dell Inc.	Worley, Richard	Vacant
Element Materials Technology	Kiemel, Greg	
Ericsson AB		
ETS – Lindgren	Chen, Zhong	Kramer, Doug
Federal Communications Commission	Jones, Steve	Vacant
Food and Drug Administration	Silberberg, Jeffrey L	
Google, LLC	Wong, Warwick	He, George
Hearing Industries Association		Gjerde, Ken
Innovation, Science & Economic Development Canada	Nixon, Jason	
Information Technical Industry Council		
IEEE – EMC Society	Norgard, John	Benitez, Henry
Keysight Technologies	Potts, Nate	
Laird Technologies	Zainal, Khairul	
Motorola Solutions, Inc.	Zakharia, Deanna	
National Institute of Standards & Technology	Coder, Jason	Vacant
Nokia Bell Labs	Vacant	Vacant
PCTEST Engineering Laboratory		Ward, Dennis
Qualcomm Technologies, Inc.	Forrester, John	
Resideo		
Rohde & Schwarz	Cline, Jeremy	Arceneaux, Wally
Society of Automotive Engineers		
NAVWAR - US Navy	Dilay, Chris	
TCB Council, Inc.		Vacant
TÜV Rheinland of North America	Graff, William	
TÜV SÜD America, Inc.		
UL-LLC	DeLisi, Bob	
US Department of Defense - Joint Spectrum Ctr.	Shellman, Marcus	Duncanson, Michael
Individual Members:		
INDIVIDUAL Member	Hoolihan, Daniel	None
INDIVIDUAL Member		None
INDIVIDUAL Member		None
INDIVIDUAL Member		None
INDIVIDUAL Member		None
INDIVIDUAL Member		None
INDIVIDUAL Member		None
INDIVIDUAL Member		None
Emeritus Members:		

MEMBER Emeritus		None
MEMBER Emeritus		None
MEMBER Emeritus		None

AI-68: Jerry to change SPAWAR affiliation to NAVWAR - US Navy on Main, Public, Private and SC2 rosters

Observers: Jerry Ramie, Soo Kim, Janet O'Neil, Mark Arthurs, Jeff Evans, Pao Thao, Allen Crumm, Ross Carlton, Deanna Zakharia, Kachi Eloagu

Quorum: 35 organizations + 8 individual members = 43 total. A quorum is 50% (rounding up); which is 22 or more members in attendance. **Quorum was achieved** with 26 members attending the meeting.

2. Approval of the Agenda

2.1 Approval of agenda - Chair - Mr. Hare moved, seconded by Mr. Long, to accept the Agenda as shown. The agenda was approved.

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 – Rohde & Schwarz added 11/8

3. Chairman's Report – Hoolihan

3.1 - General – The Chair thanked **Keysight Technologies** and Nate Potts, Mark Terrien and Alyse Sexton for their hospitality. Zhong Chen was nominated for another term as SC1 Chair. Jason Coder was approved by SC7 as their new Chair, both subject to approval at this Main Committee meeting. We will meet at **ETS-Lindgren in Cedar Park, TX from May 4-8, 2020**.

3.2 - C63.18 – Reaffirmation – *Standard Recommended Practice for an On-Site, Ad Hoc Test Method for Estimating Electromagnetic Immunity of Medical Devices to Radiated Radio-Frequency (RF) Emissions from RF Transmitters* (reaffirmation of ANSI/IEEE C63.18-2014). Published 7/22/2019

3.3 - C63.19 - New Edition - *American National Standard Methods of Measurement of Compatibility Between Wireless Communications Devices and Hearing Aids*. (Revision of ANSI/IEEE C63.19-2011). Published 11/19/2019

4. Vice-Chairman's Report - Sigouin - New draft C63 procedures will be distributed before the end of January 2020. Comments are invited at any time, please submit them to Mr. Sigouin.

5. Secretary's Report – Ramie

5.1 Minutes of the last Meeting (20190503) – Ramie - Mr. Hare moved, seconded by Mr. Long, to approve the previous Minutes. The minutes were approved by acclamation.

5.2 Disposition of Interpretation Requests since last meeting – Ramie

Date	Interpretations circulated or posted	Source	Result	Comments
6/6/2019	C63.4 (2014) Annex N.1 antenna symmetry	J. O'Neil	Closed 6/20	Posted 6/21/19
6/6/2019	C63.4 (2014) Clauses 5.5.1 & 8.2.4 sVSWR	J. O'Neil	Closed 6/20	Posted 6/21/19
6/6/2019	C63.4 (2014) Annex N vs. C63.5 re/ symmetry	J. O'Neil	Closed 6/20	Posted 6/21/19
8/26/2019	C63.2 (2016) Amplitude Accuracy (CW) above/below 18GHz	Abdul-Rahim	Rejected 8/26	No requests accepted in 2019
9/3/2019	C63.4 (2014) Clause 8.3.2.2 Second paragraph	Maruyama	Rejected 9/3	No requests accepted in 2019
10/30/2019	C63.10 (2013) Clause 6.4.6 Third paragraph	Ian Watch	Rejected 10/30	No requests accepted in 2019
11/15/2019	C63.2 (2016) Table 2 list of IF bandwidths	M. Bazzarelli	Rejected 11/15	No requests accepted in 2019

There was a discussion of contacting the four rejected requesters. Mr. Hodes moved to have the Secretary contact the four, seconded by Mr. Silberberg. There was discussion and the motion carried. **AI-69:** Jerry to contact the Interpretation Requestors after 1/1/20 and offer to re-submit their requests for our consideration.

5.3 Open Interpretation requests - Ramie ([Interpretations Log 20190621](#)) Open are in **red**:

Date	Requestor	e-mail address	Project name	SC #	Rc'vd by Se	Sent to SC	Back fm SC
8/29/2017	Charles Wang	charles@champrotek.com	C63.4 (2014) 20170829_D3_NSA_vertical_3_meters	SC1	8/29/2017	8/29/2017	open

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

Date	Main Committee motion or action	Source	Result	Comments
6/11/2019	Consensus ballot of C63.10/D-10 at Main Committee	B. DeLisi	Closed 7/9/19	Affirm=23; Abstain=2; Negative=1
10/21/2019	Motion to approve Rohde & Schwarz application at Main	D. Hoolihan	10 day discuss	Discussion ended 10/31/10
10/24/2019	Consensus ballot of C63.24/D-2.6 at Main Committee	D. Hoolihan	Passed 11/7/19	Aff=13, Aff/com=2, Neg=0, Abs=9
11/1/2019	Ballot to consider Rohde & Schwarz application at Main	D. Hoolihan	Closed 11/7/19	Yes=23, No=0, Abstain=0
11/4/2019	Circulate McNulty paper to Main Committee for approval	D. Hoolihan	17 day discuss	voting at Main meeting 11/21

5.5 Membership Changes since last meeting - Ramie

Date	Membership changes	Source	Result	Comments
5/1/2019	Remove A. Wall & W. Schaefer from SC4 roster	B. DeLisi	removed 5/18	on SC4 roster only
5/1/2019	Add Bruce Fagley to C63.31 roster	B. DeLisi	added 5/18	to C63.31 roster only
5/1/2019	Add John Repella to SC4 and C63.26 rosters	B. DeLisi	added 5/18	to SC4 & C63.26 rosters only
5/1/2019	Add Guangqi Zhu to C63.30 roster	B. DeLisi	added 5/18	to C63.30 roster only
5/1/2019	Add J. Evans as C63.9WG Chair, D. Heirman as Vice Chair	E. Hare	added 5/22	on C63.29 roster only
5/1/2019	Ballot C63.10/D09 recirc. comments for approval at SC4	J. Nixon	closed 6/8	Affirmative = 15, Abstain = 2
5/6/2019	Ballot David Chamberlain SC4 membership application to SC4	B. DeLisi	closed 6/8	Yes=19, No=0, Abstain=0
5/5/2019	Add K. Williams as SAE-Primary, move R. Lombardi to Alternate	D. Hoolihan	changed 5/26	on Main, public & private rosters
5/31/2019	Remove S. Berger from C63.9 roster & WebEx list	J. Evans	removed 5/31	on C63.9 roster only
6/9/2019	Add David Chamberlain to SC4 roster & Web Ex list	B. DeLisi	added 6/9	to SC4, Public & Private rosters
6/14/2019	Remove D. Moongilan from all rosters / deceased	D. Hoolihan	removed 6/14	on Main, pub,priv, SC4, SC7, SC8
7/28/2019	Remove V. Bazhanov from all rosters / deceased	S. Berger	removed 7/29	on pub,priv, SC2, SC3, SC4, SC7
8/19/2019	Circulate WG Applications & resume of Nima Molaei to SC4	B. DeLisi	circulated 8/19	Discussion ended 8/23; re-circ.
8/21/2019	Vote on Motion to Table discussion of Molaei applications	Zimmerman	closed 8/30	Failed: Yes=3; No=2; Abstain=5
8/21/2019	Circulate C63.24/D2.6 to SC5 for comments	D. Heirman	circulated 8/21	Closed 9/4 - no comments
8/27/2019	Change Dave Arnett e-mail address / Consultant	D. Heirman	changed 8/27	on SC3, Public & Private rosters
8/27/2019	Circulate McNulty paper to SC4, ask for 2nd to advance to Main	B. DeLisi	circulated 8/27	to SC4 Members only
8/27/2019	Ballot McNulty paper to SC4 for advancement to Main	B. DeLisi	closed 9/28	Yes=23, No=1, Abstain=3
9/9/2019	Re-circulate WG Applications & resume of Nima Molaei to SC4	B. DeLisi	closed 9/30	Discussion ended 9/30
9/12/2019	Circulate D. Perugini applicatioin & resume for C63.4WG	D. Perugini	circulated 9/12	Accepted by C63.4 on 10/17
9/28/2019	Ballot C63.24/D2.6 advancement to Main Committee at SC5	E. Hare	closed 10/5	Affirm = 10, Affirm w/ comment=1
10/1/2019	Ballot Nima Molaei membership apps for C63.10, .26, .30, .31	B. DeLisi	closed 10/7	Passed Yes=12, No=0, Abstain=3
10/8/2010	Add Nima Molaei to C63.10, C63.26, C63.30, C63.31 rosters	B. DeLisi	added 10/8	on SC4 rosters only
10/14/2019	Circulate N. Molaei SC4 application & resume to SC4	B. DeLisi	circulated 10/14	SC4 ballot at face-to-face on 11/20
10/18/2019	Circulate N. Abbondante C63.4 application to C63.4WG	D. Heirman	circulated 10/18	C63.4 approved 10/31/19
10/18/2019	Removed D. Hoolihan from C63.4 roster & WebEx list	D. Heirman	removed 10/18	on C63.4 roster only
10/28/2019	Removed D. Sigouin & E. Hare from C63.9 roster	J. Evans	removed 10/28	C63.9 roster only, Hare observing
10/31/2019	Added D. Perugini and N. Abbondante to C63.4WG roster	D. Heirman	added 10/31	on C63.4 roster only
11/5/2019	Removed D. Perugini from C63.4 roster / no email or phone #	J. Ramie	removed 11/5	from C63.4 roster only
11/6/2019	Remove ITI Alternate Rosenberg, replace with Barrett	J. Hirvela	changed 11/7	vmc, Main, Public & private rosters
11/7/2019	Added Rohde & Schwarz to Main, public, priv. & vmc rosters	D. Hoolihan	added 11/8	vmc, Main, Public & private rosters

6. **[Secretariat Report](#) – IEEE – Soo Kim** - A new Standards Template was sent to Jerry in June. Jerry asked to have it re-sent as he cannot find it. IEEE-SA template: [Microsoft Word® template](#) Harry noted that C63.11 was never approved or published, so it could never be withdrawn. The slide that was shown was be modified by Ms. Kim.

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: Reports should be provided on the [C63 Power Point template 4_3](#) or [C63 PowerPoint template 16_9](#) and should include Scope, Duties, and Membership for 2019 for each

Subcommittee. NOTE – EACH COMMITTEE REPORT WILL BE LIMITED TO A MAXIMUM OF 15

MINUTES.

- 7.1. **SC1: Measurement and Instrumentation - Chen** - Mr. Kramer and Mr. Griffin expressed their support for using iMeet Central with IEEE. Mr. Crumm thought it was useful but he was not a "power user" like the others. "It's not overly difficult to use." The Chair thought that we should have another working group try to use the service and discuss it further at the next meeting. C63.9 was named as a candidate for this trial. Mr. Hodes moved, seconded by Mr. Graff to affirm Zhong Chen as the next SC1 Chair. The motion carried. He appointed Mr. Hodes as Vice Chair and Ms. O'Neil as Vice Chair and Secretary of SC1. Zhong moved to petition the FCC to adopt C63.25.1. Mr. Hare seconded. Discussion ensued. Mr. Jones (FCC) noted that there "was no harm in petitioning." The motion carried. FCC & ISED abstained. **AI-70:** Dan H to write the FCC petition draft with Terry Mahn regarding C63.25.1. Mr. Kiemel thought a KDB might be quicker to implement than a petition.
- 7.2. **SC2: Definitions – Shellman** - There was a motion to have the Main Committee approve C63.14 from Mr. Shellman. No second is needed. We will circulate C63.14 for review. The motion carried. **AI-71:** Jerry to circulate the C63.14 draft provided by Marcus to the Main Committee for a vote to approve the document for formal balloting at the IEEE.
- 7.3. **SC3: International Standardization – Heirman**
- 7.4. **SC4: Wireless and ISM Equipment Measurements - DeLisi** - Mr. DeLisi moved to create a task group to publish the NIST/McNulty report as a C63 technical report. No second was needed. Discussion ensued. Mr. Ward opposed. There were no abstentions. The motion carried. **AI-72:** Soo Kim to research how to publish this [NIST paper](#) as a C63 technical report. Harry reported that he gave a presentation to the TCB Council on C63.30 Status. **AI-72A:** Harry will provide the [TCB Council C63.30 PowerPoint file](#) ([VTOL video](#)) to Jerry to attach to these Minutes and to Mr. Crumm to post in the private SC4 area for C63.30.
- 7.5. **SC5: Immunity testing – Hare** - Mr. Hare appointed Ross Carlton as Vice Chair. Mr. Hare's term expires at the end of next month. **AI-73:** Mr. Hare will solicit volunteers to become the new SC5 Chair and Mr. Ramie will hold an electronic vote within SC5 to choose the next Chair of SC5. Mr. Hare solicited for volunteers to join the C63.9 WG, please contact Mr. Hare or Mr. Evans for information. There was a technical comment on the C63.24 draft, so a re-circulation vote at the Main is required. **AI-74:** Mr. Ramie will circulate the comment resolution and the draft C63.24 at the Main Committee for voting approval.
- 7.6. **SC6: Laboratory Accreditation – Long** - There are changes required in the SC6 roster, which will be sent to Jerry for posting on our site. **AI-75:** Mr. Long to provide the changes required in the SC6 roster for posting by Mr. Ramie. The FDA report was the same as that given in SC8.
- 7.7. **SC7: Wireless Coexistence –** Mr. Coder has been approved within SC7 as their new Chair. Mr. Coder gave the Subcommittee 7 report. **AI-76:** Mr. Coder to provide wide-screen version of C63 template to Mr. Ramie for posting with existing template. Mr. Silberberg moved, seconded by Mr. Long, to approve Mr. Coder as SC7 Chair. Motion carried unanimously.
- 7.8. **SC8: Medical Equipment Testing – Berger** - Mr. Coder filled in for Mr. Berger to deliver the SC8 report. There were changes required in the rosters. **AI-77:** Mr. Coder or Mr. Berger to inform Mr. Ramie about the required changes needed in the SC8 rosters. Mr. Silberberg felt that there was a need for immunity testing of electronic articles surveillance. Labs have reported that clients want this testing done. SC8 voted to work on a Standard for immunity of medical devices to various phenomenon. Dave Schaefer took an Action Item to generate a PINS for this testing. The FDA report given was the same as that given in SC6. In addition, Mr. Silberberg presented a liaison report from IEC - SC62A - MT23 regarding the status of Amendment 1 of IEC 60601-1-2. Also, there was a report of a meeting between MT23 and ETSI TG30. In addition,

8. New Business

8.1. [Standards Transition Period](#) - Randy Long - An example Statement was shown as the last slide. Discussion ensued. Mr. Ward asked if it was appropriate for ASC-C63® to introduce transition periods? Is a phase-in period more appropriate? Mr. Griffin asked about undated references in our Standards. How would they transition? What to do about updating a dated Standard that includes an undated reference was raised. Mr. Ward noted that transitions are for regulators to impose, not for our SDO to impose. Mr. Hodes asked: "What is the object of this exercise?" The US and Canada aren't the only ones using our Standards. Some countries require that the date a new Standard comes out is when it is required. Mr. Benitez felt that we should not introduce a transition period, as regulators may or may not adopt the document. Mr. DeLisi thought the problem would arise when a dated Standard contains an undated reference. (such as C63.5) **AI-78:** SC6 to generate another "example" statement for a transition period. Andy to supply the text for such a statement.

8.2. [NIST / McNulty report](#) - Bob DeLisi - Vote on the formation of an AdHoc committee within SC4 to place the McNulty text in the IEEE template for publication and subsequent citation in our Standards. See item 7.4 above.

8.3 [IEEE Style Manual](#) , Normative Figures - The IEEE Style Manual notes that figures are Normative. Mr. Coder spoke about C63.10 and C63.4 using C63 verb usage direction. We have indicated which figures are Normative and which are Informative. Ms. Kim reported that if figures are in the body of the document, they are Normative. Any figures in the Annexes will be considered Informative. Mr. Hodes noted that this was not how we have generated our flagship Stds. for decades and felt that this was poor customer service from the IEEE. **AI-79:** Mr. Hoolihan will set up a meeting with IEEE personnel to express our concern with this Normative figure requirement. Mr. Kiemel wanted us to state the status of figures, footnotes, notes, etc. in our front matter. The convention has typically used figures as informative. Mr. Griffin thought we can meet the IEEE half way and compromise with our use of figures.

The IEEE [Style Manual](#) instructs us not to use color in our documents. C63.19 (2019) was published by IEEE in color. Ms. Kim noted that the front matter in that document informed the reader that color would be required. She said the disclaimer in the front matter can address this issue and allows exceptions, such as in C63.19. She noted that "no-color" is not a recent change and has been an IEEE requirement for at least 11 years.

9. Other Administrative Matters

9.1. [Web Page](#) – Ramie 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.

9.2. Administrative matters from the Steering Committee – 2020
Membership Fees - \$1300/individual; \$1300/SC member, and the Organization fee will be \$3700. Mr. Coder noted that this is over his credit card limit. He asked if multiple years can be included at once. Mr. Hoolihan noted that we can accept pre-payment for up to three years. **AI-80:** Mr. Griffin to send a note to Mr. Windler asking for twice/yearly billing to keep his fees below the credit card limit. Mr. Ward wondered why the IEEE needs to increase their fees as they keep all the profits from selling our documents. Invoices will go out within ten days. If anyone wants to pay multiple years or shorter terms, they can proceed. **AI-81:** Mr. Hoolihan will communicate with Mr. Windler about allowing the option of paying ahead up to three years.

There was a recent controversy about a member applying for a Working Group

membership. We are considering a three-tier membership criteria, WG, SC and Main Committee. We have to meet the ANSI essential requirements, but we can write our own membership criteria and submit the criteria to both IEEE and ANSI.

10. Other Business

10.1 [Future Seminars and Workshops](#) – Heirman

10.2 [Newsletter page](#) – Chair - we want to produce a short newsletter by the beginning of 2020.

10.3 **Next meeting – Chair - May 4-8, 2020 – ETS-Lindgren – Austin, Texas,**
Zhong Chen / Janet O'Neil - Hosts

11. Old Business

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

Consolidated Action Items from Main Committee Meeting 05/03/19¹

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-55:	Don to add a column to SC3-Table 2 to list which target committee the report is being sent to	Don Heirman	Closed	11/21/19	Provided 11/15/19 AI-55
AI-59:	Harry to forward the reviewed and approved Reviewer Action reports to SC2	Harry Hodes	Open	11/21/19	
AI-61:	Bob DeLisi to provide to Jerry the test statements text that was originally on the site for antenna calibration below 1GHz.	Bob DeLisi	Closed	11/21/19	
AI-63:	WORD template link on our site is broken, Jerry and Jennifer will fix it. Equations no longer work in the Standards template	Jerry Ramie Jennifer Santulli	Closed	11/21/19	2 docs sent to Jerry 12/5/19, sent for posting 12/5
AI-64:	Jerry to change the Scope on the SC1 landing page .	Jerry Ramie	Closed	11/21/19	See SC1 report Request sent 5/28
AI-65:	Jerry to update Chris Dilay & Randy Long affiliations on SC2 and SC3 rosters	Jerry Ramie	Closed	11/21/19	See SC3 report Updated 5/28
AI-66:	Hare to host an informational WebEx to discuss transition periods for our Standards. Jerry to provide Ed with the vmc63.xls mailing list for this purpose. Jerry will set the resulting webinar.	Jerry Ramie Ed Hare Randy Long	Closed	11/21/19	List provided 5/28 Randy to show Standards Transition PPT Never scheduled...
AI-67:	Don Heirman and Janet O'Neil to propose scheduling an introductory tutorial at the TCB Council meeting. (Oct. 13-15, 2020?)	Don Heirman Janet O'Neil	Closed	11/21/19	

12. Adjournment - Chair - The Chair thanked Keysight Technologies and the Members for their efforts and adjourned the meeting at 11:54AM-PST.

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

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

Consolidated Action Items from Main Committee Meeting 11/21/19²

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-59:	Harry to forward the reviewed and approved Reviewer Action reports to SC2	Harry Hodes	Open	5/8/20	
AI-68:	Jerry to change SPAWAR affiliation to NAVWAR - US Navy on Main, Public, Private and SC2 rosters	Jerry Ramie	Closed	5/8/20	Changed 11/25/19
AI-69:	Jerry to contact the Interpretation Requestors after 1/1/20 and offer to re-submit their requests for our consideration	Jerry Ramie	Open	5/8/20	
AI-70:	Dan H to write the FCC petition draft with Terry Mahn regarding C63.25.1	Dan Hoolihan Terry Mahn	Open	5/8/20	
AI-71:	Jerry to circulate the C63.14 draft provided by Marcus to the Main Committee for a vote to approve the document for formal balloting at the IEEE	Marcus Shellman Jerry Ramie	Open	5/8/20	
AI-72:	Soo Kim to research how to publish this NIST paper as a C63 technical report	Soo Kim	Open	5/8/20	
AI-72A:	Harry will provide the TCB Council C63.30 PowerPoint file (VTOL video) to Jerry to attach to these Minutes and to Mr. Crumm to post in the private SC4 area for C63.30	Harry Hodes Jerry Ramie Allen Crumm	Closed	5/8/20	Posted 11/30/19
AI-73:	Mr. Hare will solicit volunteers to become the new SC5 Chair and Mr. Ramie will hold an electronic vote within SC5 to choose the next Chair of SC5	Ed Hare Jerry Ramie	Open	5/8/20	
AI-74:	Mr. Ramie will circulate the comment resolution and the draft C63.24 at the Main Committee for voting approval	Don Heirman Jerry Ramie	Open	5/8/20	
AI-75:	Mr. Long to provide the changes required in the SC6 roster for posting by Mr. Ramie	Randy Long Jerry Ramie	Open	5/8/20	
AI-76:	Mr. Coder to provide wide-screen version of C63 template to Mr. Ramie for posting with existing template	Jason Coder Jerry Ramie	Closed	5/8/20	Posted 11/25/19
AI-77:	Mr. Coder or Mr. Berger to inform Mr. Ramie about the required changes needed in the SC8 rosters	Jason Coder Stephen Berger Jerry Ramie	Open	5/8/20	
AI-78:	SC6 to generate another "example" statement for transition period. Andy to supply text for such statement	Andy Griffin Randy Long	Open	5/8/20	
AI-79:	Mr. Hoolihan will set up a meeting with IEEE personnel to express	Dan Hoolihan	Open	5/8/20	

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

	our concern with this Normative figure requirement				
AI-80:	Mr. Griffin to send a note to Mr. Windler asking for twice/yearly billing to keep his fees below the credit card limit	Andy Griffin	Open	5/8/20	
AI-81:	Mr. Hoolihan will communicate with Mr. Windler about allowing the option of paying ahead up to three years	Dan Hoolihan Mike Windler	Open	5/8/20	

Attachments from Main Committee Meeting 11/21/19³

Item	Description	URL
2.1	Draft agenda	http://www.c63.org/documents/misc/minutes/2019_Nov/20191121_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	http://www.c63.org/documents/misc/minutes/2019_Nov/191121-%20DDH%20-%20Report%20-%20C63_PowerPoint_.ppt
4.0	Vice Chair's Report	
5.1	Approved previous Minutes	http://www.c63.org/documents/misc/minutes/2019_Nov/20190503_Approved_Main_Mins.doc
5.3	Interpretation log	http://www.c63.org/documents/misc/minutes/2019_Nov/Interpretations_log_20190621.xls
5.4	Electronic motions	http://www.c63.org/documents/misc/minutes/2019_Nov/Electronic_motions_2019May_2019Nov.xls
6.0	Secretariat Report	http://www.c63.org/documents/misc/minutes/2019_Nov/C63_November_2019_Secretariat_Update.ppt
7.0	Slide Template (4:3)	http://www.c63.org/documents/misc/minutes/2019_Nov/C63_PowerPoint_template.ppt
7.0	Slide Template (16:9)	http://www.c63.org/documents/misc/minutes/2019_Nov/C63_PowerPoint_template_wide.ppt
7.1	SC1 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/SC1%20update%2020191121.ppt
7.2	SC2 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/SC2_Report_to_Main_Committee_20191121%20Rev%201.pptx
7.3	SC3 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/C63_Subcommittee%203%20report%20to%20C63%20November%202019.ppt
7.4	SC4 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/Main%20Committee%20Report%20-%20SC4%2020192111.pptx
7.4	TCB Presentation on WPT	http://www.c63.org/documents/misc/minutes/2019_Nov/TCB%20Council%20Presentation%20on%20ANSI%20C63.30%20(11-14-19).pptx
7.4	VTOL video	http://www.c63.org/documents/misc/minutes/2019_Nov/This%20VTOL%20Aircraft%20is%20Fully%20Electric%20is%20A%20Game%20Changer.mp4
7.5	SC5 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/C63_Subcommittee%205%20report%20to%20C63%20November%202019.ppt
7.6	SC6 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/20191121_r1%20SC6%20Main%20Report.ppt
7.7	SC7 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/SC7%20Main%20committee%20update%20-%20Fall%202019.ppt
7.8	SC8 Report	http://www.c63.org/documents/misc/minutes/2019_Nov/Main%20Committee%20Report%20-%20SC8%20-%2020191121%20-%20v1.pptx
8.1	Standards Transition Period	http://www.c63.org/documents/misc/minutes/2019_Nov/SC6_Stds%20Transition%20Period.ppt
8.2	NIST/McNulty report	http://www.c63.org/documents/misc/minutes/2019_Nov/ANSI_NIST_Below_30_MHz.pdf
8.3	IEEE Style Manual	https://www.ieee.org/content/dam/ieee-org/ieee/web/org/conferences/style_references_manual.pdf
10.1	Education & Training report	http://www.c63.org/pw/c63/Archived%20Draft%20Minutes/2019/November%202019%20C63%20education%20committee%20report.ppt
10.2	Newsletters page	http://www.c63.org/documents/c63/list_of_newsletters.htm

³ Attachments are included here for reference, but are not a part of the Minutes