C63®

ANSI-Accredited Standards Committee C63®
Electromagnetic Compatibility

May 11, 2017 – 8:30 AM to 4:00 PM-EDT
A2LA Headquarters, Frederick, MD

Chair: Dan Hoolihan   **Vice-Chair: Dan Sigouin**   **Secretary: Jerry Ramie**

Approved Minutes

1. **Call to Order - Chair -** The meeting was called to order at 8:30AM-EDT.
    1.1.   **Introductions (roll call) - Secretary -** Members in attendance are shown:

MEMBER	PRIMARY	ALTERNATE
ACIL		Vacant
Apple, Inc.	Chen, Jyun-cheng	
ARRL – The National Assoc. for Amateur Radio	Hare, Ed	
Bay Area Compliance Laboratories Corp.	Hodes, Harry	
Bureau Veritas		
CISCO Systems		
Dell Inc.		Vacant
Element Materials Technology	Kiemel, Greg	
Ericsson AB	Bazhanov, Vladimir	
ETS – Lindgren	Chen, Zhong	Kramer, Doug
Federal Communications Commission	Jones, Steve	Vacant
Food and Drug Administration	Silberberg, Jeffrey L	
Hearing Industries Association	Becker, John	
Innovation, Science & Economic Development Canada	Nixon, Jason	
Information Technology Industry Council	Hirvela, John	
IEEE – EMC Society	Norgard, John	
Liberty Labs		Potts. Nate
Motorola Solutions		Khian, Ho Sze
National Institute of Standards & Technology		Coder, Jason
Nokia	Moongilan, Dheena	Vacant
PCTEST Engineering Laboratory		Ward, Dennis
Qualcomm Technologies, Inc.		
Society of Automotive Engineers		
SPAWAR - US Navy	Dilay, Chris	Wojtaszek, Tomasz
Telecommunications Certification Body (TCB) Council	Wall, Art	
TÜV SÜD America, Inc.		Elliott, William (Mac)
UL-LLC	DeLisi, Bob	

US Department of Defense - Joint Spectrum Ctr.		**Duncanson, Michael**
Individual Members:		
INDIVIDUAL Member	**Hoolihan, Daniel**	None
INDIVIDUAL Member	**Lichtig, John**	None
INDIVIDUAL Member (Schaefer)		None
INDIVIDUAL Member	**Zimmerman, Dave**	None
INDIVIDUAL Member	**Berger, Stephen**	None
INDIVIDUAL Member	**Heirman, Don**	None
INDIVIDUAL Member (Sigouin)		None
Emeritus Members:		
MEMBER Emeritus (Kesselman)		None
MEMBER Emeritus (Hofmann)		None
MEMBER Emeritus (Mertel)		None

Observers: Jerry Ramie, Sue Vogel, Allen Crumm, Megan Riebau, Victor Kuczynski, Janet O'Neil, Beth Hackett, Megan Deckert, Caitlin Krop, Khairul Zainal, Mike Buzard (A2LA)
Quorum: 28 organizations + 7 individual members = 35 total. A quorum is 50% +1; which is 18 or more members in attendance. Quorum was achieved with 27 members attending the meeting.

2. Approval of the Agenda
2.1 **Approval of agenda - Chair -** Mr. Hodes moved, seconded by Mr. Heirman, to accept the agenda. There were no objections. The Agenda was accepted.
2.2 **Presentation of Patent slides - Chair -** The patent slides were shown and no patent issues were raised.

3. Chairman's Report – Hoolihan - The Chairman's report was shown.
3.1 **General**
3.2 **FCC Interactions**
3.3 **Standards published**
3.4 **PINS form on website -** A Motion to adopt the new PINS Word document was approved unanimously.
AI-45: Jerry will change the Standards Development page on the C63 web page to serve a WORD document rather than the link for the ANSI PINS site.

4. Vice-Chairman's Report – Sigouin – none

5. Secretary's Report – Ramie

5.1 Minutes of the last Meeting – Ramie - (20161110) Mr. Heirman moved, seconded by Mr. Hare, to approve the previous meeting's Minutes. The Minutes were approved.

5.2 Disposition of Interpretation Requests since last meeting – Ramie

Date	Interpretations circulated or posted	Motioner/source	Result	Comments
11/18/2016	Received ANSI C63.4:2014 Clause 5.5.1 (a) (1) & Fig.6 Interpretation request	Larry Stillings	Sent to SC1	
1/23/2017	Circulated C63.4 Annex D.3 Horizontal Polarization draft Interpretation	Zhong Chen	No ballot called	Comment period closed 2/6/17; posted 2/7
2/22/2017	Circulated C63.4:2014 Clause 5.5.1 (a) (1) & Fig. 6 draft Interpretation	Zhong Chen	No ballot called	Comment period closed 3/8/17; posted 3/9

5.3 Open Interpretation requests - Ramie [(Interpretations Log 20170309)](#)

Date	Requestor	e-mail address	Project name	SC #	Rc'vd by Secretary	Sent to SC	Back fm SC	Sent to Main
5/7/2016	Charles Wang	charles@champrotek.com	C63.5 (2006) Annex H Antennas for NSA	SC1	5/7/2016	5/7/2016		
5/7/2016	Charles Wang	charles@champrotek.com	C63.4 (2014) Clause 4.5 Horn antenna aperture	SC1	5/7/2016	5/7/2016	6/11/2016	6/15/2016

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

Date	Main Committee motion or action	Motioner/source	Result	Comments
11/28/2016	Is C63.4a-D1.03_2016_11_18 ready for formal ANSI ballot?	Zhong Chen/SC1	Motion carried	Closed 12/19/16 -Yes:17 No: 5 Abstain: 5
12/12/2016	Is C63_15_D1_03_20161129_clean.pdf ready for a Formal ANSI ballot?	Don Heirman/SC3	Motion carried	Closed 1/9/17 - Yes: 18 No: 1 Abstain: 4
1/16/2017	Circulated IEC Guide 107 "extract" (Annex C) for style guide	Segouin/Heirman	Motion carried	Closed 2/15/17, vote thereafter
2/17/2017	Shall IEC Guide 107 (Annex C) be our guide for referencing dated or undated Standards?	Segouin/Heirman	Discussion	Ballot closed 3/10/17, period extended
3/15/2017	Shall IEC Guide 107 (Annex C) be our guide for referencing dated or undated Standards?	Segouin/Heirman	Motion carried	Ballot closed 3/31/17 - Yes: 23 No:2 Abstain:2

5.5 Membership Changes since last meeting - Ramie

Membership changes	Motioner/source	Result	Comments
Added Greg Kiemel to C63.10 WG roster	Jason Nixon	Added 11/28/16	
Made Rich Boyer Vice Chair of SC3-WPT harmonization WG	Craig Fanning	Added 12/12/16	on SC3/WPT Harmonization roster
Changed email & address for Michael Duncanson	Mike Duncanson	Changed 1/17	on Private and Public rosters
Steve Jones becomes FCC primary, Bill Hurst remains on SCs	Bill Hurst	Changed 1/20	on Private, Public & C63 Main rosters
G. Kiemel and J. Darden become Element Materials Technology reps	Dean Ghizzone	Changed 1/20	on Private, Public & C63 Main rosters
Dean Ghizzone retained SC & WG memberships under Element	Dean Ghizzone	Changed 1/20	on Private and Public rosters
John Rapella removed as ACIL Alternate, position vacant	Richard Reitz	Changed 1/20	on Private, Public & C63 Main rosters
ACS removed from Main Committee roster (acquired by TUV SUD America)	Mac Elliott	Changed 2/27	on Private, Public & C63 Main rosters
Added Jason Granger to C63.31 roster	Derek Walton	Added 2/28	on C63.31 roster only
Removed Carl Bloomfield from C63.31 roster	Carl Bloomfield	Removed 3/5/17	from WebEx list and C63.31 roster
Added Ho, Sze Khian as Motorola Solutions Alternate rep	Deanna Zakharia	Added 4/12	on Private, Public & C63 Main rosters
Added Qiong Wu to C63.27 roster	Vladimir Bazhanov	Added 4/28	on C63.27 roster only

6. [Secretariat Report](#) – IEEE – Sue Vogel
6.1 - Status of C63® published standards
6.1.1 Fourth Anniversary standards (included)
6.1.2 Eight-years or older standards (included)

6.2 – Status of PINS and PINS-C – The Secretary asked that all Working Group chairs update the status of their PINS and PINS-C on the [Status of Standards Matrix](#) on the C63 web page that they are responsible for. (last updated 11/17/16) The Secretary requests that changes be submitted to him for posting on this page.
** Morning Break **

7. Subcommittee reports (BRIEF written reports to include actions needed by C63®, and items of particular interest during SC meetings).

7.1. SC1: Measurement and Instrumentation-Chen - The [report](#) was shown. A new Scope was shown. The current roster was shown. Duties (Standards) covered by SC1 were shown. Mr. Chen moved, on behalf of SC-1 so no second required, to accept the Scope, Roster and Duties. They were approved by acclamation.

A motion from the Steering Committee to correct the far-field equation in C63.4-2014 was placed in front of the committee and discussed. The correction can be included with the other equation corrections that are included in the C63.4a Amendment that will be circulated to the Main Committee. The actual MOTION was "*We move to add a correction to the C63.4a document to change the equations on pages 16, 17, 18 and 19 of C63.4-2014 to the correct version, which is $D^2/2*lambda$.*" The motion carried unanimously.

Harry noted that a discussion on uncertainty for site validation was in C63.25. No accreditation bodies require uncertainty for site validation. He felt it belonged in an Uncertainty annex in C63.23. He may vote negative on C63.25 if it includes uncertainty for site validation measurements. Mr. DeLesi noted that third parties may already do this as a service to their customers.

A NEW [C63.5 PINS](#) was shown. A vote was taken to approve the PINS and the

document was approved unanimously.

7.2.   **SC2: Definitions – Dilay -** The report was shown. SC2 Scope, Membership roster and Duties (and their responsible working groups) were shown. Mr. Dilay, on behalf of SC2, moved to accept the Scope, Roster and Duties of SC2. They were approved by the Main Committee by acclamation.

C63.14 status was reviewed. It is on schedule for its next publication date.

C63.28 status was reviewed. The ANSI-PC63.28 "Strawman" presentation was shown. Mr. Hodes thought that the costs associated with various design considerations should be included. They were removed to comply with the IEEE anti-trust policy. Mr. Hodes suggested that board layout be included as a design consideration.

7.3.   **SC3: International Standardization – Heirman -** The report was shown. The SC3 Title, Scope, Duties and Roster were shown. Some of the work has been introduced in IEC-TC77B. Mr. Heirman, on behalf of SC3, moved to accept the Scope, Duties and Roster as shown. The motion passed unanimously. Mr. Heirman indicated that we should be proud of our contributions to International Standardization. Mr. Wall pointed out that the FCC does not always agree with CISPR methods, so caution is appropriate when suggesting harmonization.

7.4.   **SC4: Wireless and ISM Equipment Measurements - Wall -** The report was shown. The SC4 Title, Scope, Duties and Roster were shown. A minor edit was shown in the Scope. The membership roster was shown. The Standards addressed by the SC (Duties) were shown with updates on each Standard under development. Mr. Wall, on behalf of SC4, moved to accept the Scope, Duties and Roster as shown. The motion was approved by the Main Committee by acclamation.

7.5.   **SC5: Immunity testing – Hare -** The report was shown. Mr. Hare showed the un-changed Scope, the Duties (four Standards) and the SC4 membership roster. The SC Chair, on behalf of SC5, moved to accept Scope, Duties and Roster as shown. The motion was approved by the Main Committee by acclamation.

The status of each of the projects in SC5 was reviewed.

7.6.   **SC6: Laboratory Accreditation – Megan Riebau -** The report was shown. The Scope, Duties and Roster were shown. Mrs. Riebau, on behalf of SC6, moved to accept the Scope, Duties and Roster as shown. The motion was approved by the Main Committee by acclamation.

The Working Group reports of SC6 were then shown. A summary of SC6 Action Items was reviewed.

*** Lunch Break ***

7.7.   **SC7: Unlicensed Personal Comm. Services – Bazhanov -** The report was shown. The Scope, Duties and Membership roster were shown. Mr. Bazhanov, on behalf of SC7, moved to accept the Scope. The motion was approved by acclamation. Mr. Bazhanov moved to accept the Duties. The motion was approved by acclamation. The Roster was shown with several new members. Mr. Bazhanov moved to accept the Roster. The motion was approved by acclamation.
Updates on their Duties (Standards) were shown. The C63.27 PINS-C was shown. (content on Status Matrix needs updating) Mr. Bazhanov moved to accept the PINS-C as shown. Mr. Silberberg offered editorial comments on the text in the PINS-C and offered to add a stakeholder. Mr. Berger objected to changing the text in ways that are not editorial. He did not object to editorial changes. The vote was taken. Mr. Heirman and Mr.

Silberberg voted no. Mr DeLisi abstained. The motion carried, although the PINS form, not the PINS-C form, was used.

AI-46: Jerry to add the PINS-C form link to the Stds. Development page. The PINS-C form on the private PINS-C page is incorrect

7.8. **SC8: Medical Equipment Testing – Berger -** The report was shown. Mr. Berger presented the Scope, Duties and Roster of SC8. He moved, on behalf of SC8, to accept them and the motion carried unanimously.

The progress on their Standards (C63.18, C63.19) was shown.

8. New Business
8.1. **Interpretation on Double-Ridged Guide Horn Antennas –** Discussions were held on the subject interpretation which was one-year old. The changes to C63.4a, discussed under SC1, should resolve this interpretation issue.

9. Other Administrative Matters
9.1. **Web Page – Ramie -** All SCs and WGs should post their Agendas, Minutes, Attendance logs, support documents and their most recent working draft on our server. If help is needed with uploading to our server, Mr. Crumm and Mr. Ramie are available to assist. If the official roster for a group on the public website area needs corrections, just send the corrections to Mr. Ramie showing what the correct roster should look like.
AI-47: Mr. Ramie to send an email to each SC Chair showing them the existing content on the Status Matrix and asking them for their corrections and requesting their Approved Minutes from their previous meeting in November, 2016.

9.2. **Education Report - Heirman -** Mr. Heirman showed the report.
AI-48: Mr. Heirman to send an email to all voting members for their training ideas and possible venues for our training offerings.

9.3. **Administrative matters from the Steering Committee -** There was an issue raised about meeting time conflicts between Subcommittees and Working Groups, even with nine drafts of the meeting schedule. Mr. Berger felt that we can do much of our administrative work by email before the face-to-face meetings. Discussion of various approaches to address overlapping meetings ensued. Mr. Hoolihan proposed that SC Chairs send him an email requesting the hours they need. Mr. Kiemel suggested that meetings be no longer than two hours. Mr. Hodes moved, seconded by Mr. Berger, to accept Mr. Hoolihan's suggestion on collecting time requests from SC Chairs. Their responses are requested by the end of May. The motion carried.
AI-49: The WG chairs shall send their requests for time slots in November to Mr. Hoolihan by the end of May, 2017.

9.4. **"Shall and Should" Use of Verbs - Heirman**
9.5. **Dated Standards versus Undated Standards -** This issue was settled by electronic ballot. Either can be used in our documents.
9.6. **Officer elections for 2018 – November, 2017 Meeting**

10. Other Business
10.1 **Proficiency Testing - Hodes –** An ACIL-supported presentation was shown.
10.3 **Newsletter report – Zimmerman –** The Newslettter will be distributed at the C63 booth at the 2017 IEEE EMC Symposium in Washington, DC.
AI-50: All SC Chairs need to submit their newsletter content to Mr. Zimmerman by the end of May.
10.4 **Financial Report - Hoolihan -** The finances for calendar year 2016 were shown.

10.5 Next meeting – Hoolihan - 11/6 - 11/9, 2017 @ ETS-Lindgren in Cedar Park, TX

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 11/10/16[1]

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-22:	Sue will inform the Main Committee if a consolidated version of C63.4 (2014) and C63.4a (201x) will be available	Sue Vogel	Closed	11/10/16	Two documents
AI-28:	Mr. Chen and Mr. Hodes to contact Sue Vogel regarding VNA scripts as intellectual property or "work product" for copyright purposes	Zhong Chen Harry Hodes Sue Vogel	Closed	11/10/16	
New Action Items					
AI-29:	Hoolihan to add financial report to previous Minutes by end of 2016	Dan Hoolihan	Closed	12/31/16	Posted 11/18/16
AI-30:	Jerry to insert headers and date information in master file.	Jerry Ramie	Closed	5/11/17	Headers added 11/18/16
AI-31:	Jerry to show motion source in the future	Jerry Ramie	Closed	5/11/17	Column added 11/18/16
AI-32:	Mr. Hoolihan to check in our procedures for ability to reaffirm a Standard without a written ballot at a face-to-face meeting.	Dan Hoolihan	Open	5/11/17	
AI-33:	Jerry to change item 6.1.2 to eight years or older in future Agendas.	Jerry Ramie	Closed	5/11/17	See 6.1.2 above
AI-34:	Sue to ask ANSI if we can expand the number of characters we can submit or if we can include a URL for additional explanatory text. What do they recommend in a PINS?	Sue Vogel	Closed	5/11/17	Will be expanded and URL for attachments can be included
AI-35:	Jerry to send the finished C63.15 draft to the Main Committee for a Consensus ballot and consideration of formal Standards balloting by the IEEE.	Jerry Ramie	Closed	12/31/16	In formal Stds. balloting
AI-36:	Don Heirman to provide the C63.15 draft to Jerry for this purpose.	Don Heirman	Closed	12/31/16	
AI-37:	Jerry to correct BACL affiliation text in the SC6 roster.	Jerry Ramie	Closed	5/11/17	Roster corrected 11/15/16
AI-38:	Dan H. to solicit Standards Council Canada regarding membership.	Dan Hoolihan	Open	5/11/17	
AI-39:	Mr. Hodes to provide contact info for SCC to Dan H.	Harry Hodes	Open	5/11/17	
AI-40:	Vladimir Bazhanov to provide SC7 roster edits to Jerry for correcting the SC7 roster page	Vladimir Bazhanov	Closed	5/11/17	

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

AI-41:	The steering committee is to adopt a style guide	Steering Committee	Closed	5/11/17	
AI-42:	Jerry to circulate this motion on adopting a style guide with the annex to Guide 107 to the Members for a future vote	Jerry Ramie	Closed	11/30/16	Posted 3/15/17
AI-43:	Harry to ask Sue if VNA scripts for C63.25 need a copyright release	Harry Hodes Sue Vogel	Closed	5/11/17	
AI-44:	Don H. will look at the paragraph in C63.4 on antenna calibration to determine if labs must be accredited to C63.5	Don Heirman	Open	5/11/17	

12. Adjournment - Hoolihan - The Chair thanked the Members for their attendance and their contributions and adjourned the meeting at 1:42PM-EDT.

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

Consolidated Action Items from Main Committee Meeting 05/11/17[2]

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
AI-32:	Mr. Hoolihan to check in our procedures for ability to reaffirm a Standard without a written ballot at a face-to-face meeting.	Dan Hoolihan	Open	11/09/17	
AI-38:	Dan H. to solicit Standards Council Canada regarding membership.	Dan Hoolihan	Open	11/09/17	
AI-39:	Mr. Hodes to provide contact info for SCC to Dan H.	Harry Hodes	Open	11/09/17	
AI-44:	Don H. will look at the paragraph in C63.4 on antenna calibration to determine if labs must be accredited to C63.5	Don Heirman	Open	11/09/17	
AI-45:	Jerry will change the Standards Development page to serve a WORD document rather than the link for the ANSI PINS site.	Jerry Ramie	Closed	11/09/17	Sent order 5/17
AI-46:	Jerry to add the PINS-C form link to the Stds. Development page. The PINS-C form on the private PINS-C page is incorrect.	Jerry Ramie	Closed	11/09/17	Sent order 5/17
AI-47:	Mr. Ramie to send an email to each SC Chair showing them the existing content on the Status Matrix and asking them for their corrections and requesting their Approved Minutes from their previous meeting in November, 2016	Jerry Ramie	Closed	11/09/17	Sent emails 5/17
AI-48:	Mr. Heirman to send an email to all voting members for their training ideas and possible venues for our training offerings	Don Heirman	Open	11/09/17	
AI-49:	The WG chairs shall send their	All WG Chairs	Open	05/31/17	

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

	requests for time slots in November to Mr. Hoolihan by the end of May, 2017			
AI-50:	All SC Chairs need to submit their newsletter content to Mr. Zimmerman by the end of May	All SC Chairs	Open	05/31/17

Attachments from Main Committee Meeting 05/11/17[3][1]

Item	Description	URL
2.1	Draft agenda	http://www.c63.org/documents/misc/minutes/2017_May/20170511_Main_Agenda3.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/2017_May/170511%20-%20DDH%20-%20Report%20-%20C63_PowerPoint_template2.ppt
5.1	Approved Minutes of previous meeting	http://www.c63.org/documents/misc/minutes/2017_May/20161110_Main_Approved_Mins.pdf
5.3	Interpretation requests since last meeting	http://www.c63.org/documents/misc/minutes/2017_May/Interpretations_log20170309.xls
5.4	Electronic motions since last meeting	http://www.c63.org/documents/misc/minutes/2017_May/Electronic_motions_2016Nov_2017May.xls
6.0	Secretariat Report	http://www.c63.org/documents/misc/minutes/2017_May/C63_NMay%202017%20Secretariat%20Update.ppt
7.0	Slide Template	http://www.c63.org/pw/c63/C63_PowerPoint_template.ppt
7.1	SC1 Report	http://www.c63.org/documents/misc/minutes/2017_May/SC1%20update.ppt
7.1	C63.5 PINS	http://www.c63.org/documents/misc/minutes/2017_May/PINS%20Single%20Form%200108%20-%20used%20in%202017%20C63.5.doc
7.2	SC2 Report	http://www.c63.org/documents/misc/minutes/2017_May/SC2_Report_to_Main_Committee_20170511_Rev1.pptx
7.3	SC3 Report	http://www.c63.org/documents/misc/minutes/2017_May/C63_Subcommittee%203%20report%20to%20C63%202017-05-11.ppt
7.4	SC4 Report	http://www.c63.org/documents/misc/minutes/2017_May/SC-4%20report%205-11-17.ppt
7.5	SC5 Report	http://www.c63.org/documents/misc/minutes/2017_May/SC-5%20report%205-11-17.ppt
7.6	SC6 Report	http://www.c63.org/documents/misc/minutes/2017_May/May-2017_SC6_Report_to_Main.ppt
7.7	SC7 Report	http://www.c63.org/documents/misc/minutes/2017_May/C63%20SC7%20-%202017%20Report%201%20-%20170511%20-%20v2.ppt
7.8	SC8 Report	http://www.c63.org/documents/misc/minutes/2017_May/Main%20Committee%20Report%20-%20SC8%20-%20170510%20v1.ppt
9.2	Education & Training report	http://www.c63.org/documents/misc/minutes/2017_May/May%202017%20C63%20education%20report.ppt
9.4	Use of Verbs	http://www.c63.org/documents/misc/minutes/2017_May/Use%20of%20verbs%20in%20C63%20documents%20.ppt
10.1	Proficiency Testing	http://www.c63.org/documents/misc/minutes/2017_May/Hodes%20PT%20Program%20Status%20Presentation%20%28SC6%20%26%20Main%29%20-%20ASC%20C63%20Meetings%20May%202017.pdf
10.4	Financial Report	http://www.c63.org/documents/misc/minutes/2017_May/2016%20C63%20P%26L.xlsx