



# ANSI-Accredited Standards Committee C63®

Electromagnetic Compatibility

Chair: [Dan Hoolihan](#)

Vice-Chair: [Dan Sigouin](#)

Secretary: [Jerry Ramie](#)

May 07, 2015 – 8:30 am to 3:30 pm (CDT)

Embassy Suites Hotel, 6300 Earle Brown Drive, Brooklyn Center, MN 55330

## Approved Meeting Minutes

1. **Call to Order - Chair** – called the meeting to order at 8:08AM-CDT. Thanks go to Northwest EMC for hosting our meeting and to Kim Vaalen for doing all the work.

1.1. **Introductions (roll call)- Secretary** - members in attendance are shown:

MEMBER	PRIMARY	ALTERNATE
ACIL	<a href="#">Hodes, Harry</a>	
Alcatel – Lucent	<a href="#">Moongilan, Dheena</a>	Vacant
Apple, Inc.		Michael O'Dwyer
ARRL – The National Assoc. for Amateur Radio	<a href="#">Hare, Ed</a>	
Blackberry Corporation		
Bureau Veritas	<a href="#">Stewart, Jonathan</a>	
CISCO Systems	<a href="#">Griffin, Andy</a>	
Dell Inc.		Vacant
ETS – Lindgren	<a href="#">Chen, Zhong</a>	
Federal Communications Commission		<a href="#">Jones, Steve</a>
Food and Drug Administration	<a href="#">Silberberg, Jeffrey L</a>	
Industry Canada		Vacant
Information Technology Industry Council		
IEEE – EMC Society	<a href="#">Norgard, John</a>	
Liberty Labs		<a href="#">Langer, Brandt</a>
Motorola Mobility		Vacant
Motorola Solutions		
National Institute of Standards & Technology		
Northwest EMC	<a href="#">Ghizzone, Dean</a>	<a href="#">Kiemel, Greg</a>
PCTEST Engineering Laboratory		<a href="#">Ward, Dennis</a>
Society of Automotive Engineers	<a href="#">Andersen, Poul</a>	
Sony Mobile		Vacant
SPAWAR - US Navy	<a href="#">Dilay, Chris</a>	<a href="#">Wojtaszek, Tomasz</a>
Telecommunications Industry Association	<a href="#">Whitesell, Stephen</a>	Vacant

Telecomm. Certif. Body (TCB) Council	<a href="#">Wall, Art</a>	
TÜV SÜD America, Inc.		<a href="#">Schaefer, David</a>
UL-LLC	<a href="#">DeLisi, Bob</a>	
US Department of Defense - Joint Spectrum Ctr.		<a href="#">Duncanson, Michael</a>
<b>Individual Members:</b>		
INDIVIDUAL Member	<a href="#">Hoolihan, Daniel</a>	None
INDIVIDUAL Member		None
INDIVIDUAL Member	<a href="#">Schaefer, Werner</a>	None
INDIVIDUAL Member	<a href="#">Zimmerman, Dave</a>	None
INDIVIDUAL Member	<a href="#">Berger, Stephen</a>	None
INDIVIDUAL Member	<a href="#">Heirman, Don</a>	None
<b>Emeritus Members:</b>		
MEMBER Emeritus		None
MEMBER Emeritus		None
MEMBER Emeritus		None

**Observers:** Jerry Ramie, Pat Roder, Victor Kuczynski, Janet O'Neil, Mark Arthurs, Randy Long, Brad Moore, Allen Crumm, Jim Mills, Vladimir Bazhanov, Beth Hackett, Megan McConnell, Khairul Zainal.

**Quorum:** 28 organizations + 6 individual members = 34 total. A quorum is 50%; which is 17 or more members in attendance. Quorum was achieved with 24 members attending the meeting.

## 2. Approval of the Agenda

**2.1 Approval of [agenda](#) - Chair** - The [agenda](#) was shown line-by-line. Mr. Hare moved to accept it, seconded by Mr. Hodes. The Agenda was approved as presented.

**2.2 Presentation of [patent slides](#) - Ramie** - The [patent slides](#) were shown and no patent issues were raised.

## 3. Chairman's Report – Hoolihan

**3.1 General** - Next meeting at UL-RTP from November 9-12, 2015.

**3.2 Awards** - Awards were given out for Standards development work. (see [Newsletters](#))

**For C63.18:** Jeff Silberberg, Stephen Berger and the late Dr Joseph Morrissey

**For C63.4:** Don Heirman, H Robert Hofmann, Harry Hodes Tim Harrington, Andy Griffin, Dan Sigouin

**For C63.7:** D. Heirman, HR Hofmann, T. Harrington, H. Hodes, M Howard, R Klouda and D. Sigouin

**For C63.14:** M. Shellman, C. Dilay, M. Duncanson, J. Snyder, D. Ashton, and D. Southworth

## 4. Vice-Chairman's Report - Sigouin - not in attendance.

**5. Secretary's Report – Minutes of the last Meeting (November - 2014) – Ramie – Mr.** Ramie showed the [DRAFT Minutes Main Committee November 2014B](#) in a page-by-page manner. Mr. Silberberg had editorial comments that were not addressed previously. He agreed to supply the edits to Mr. Ramie for inclusion. Mr. Hodes moved to approve the minutes with edits, seconded by Mr. Hare. The edited [Minutes](#) were approved by voice vote.

**6. Secretariat Report – IEEE - Patricia Roder – see [Secretariat report](#).**

**6.1 - Status of C63® published standards**

**6.1.1 Fourth Anniversary standards**

**6.1.2 Ten-years or older standards**

Mr. Hodes asked Ms. Roder for information on sales volume of our Standards to be included in the future. The available information is on the last slide of the [Secretariat report](#).

**6.2 – Status of PINS and PINS-C – See [Secretariat report](#)**

**7. Ad Hoc Committee [Report on Revising our C63® Procedures](#) – Ghizzone - Mr.**

Ghizzone showed a [report](#) on items that are being addressed in this effort. Monthly webinars are planned to address comments received. Does the Main Committee want to complete what has been started now or resolve the comments first? Mr. W. Schaefer thought there was a need to have our Standards development steps documented. Mr. Griffin is working on a flow chart, which will be provided to the Ad Hoc Committee. Mr. Hodes agreed with the need to document our process. He was also frustrated by the lack of progress on amendments, corrigenda and errata. He proposed a separate committee to do this work. Mr. Ghizzone thought that large projects don't ever get done and that adding these three items will make the work onerous. Mr. Ghizzone wanted to press forward with the present document, and then take additional input as suggested. Mr. Hodes thought that we should address amendments, corrigenda and errata now. Mr. Heirman agreed with Mr. Ghizzone that large projects don't get done. Mr. Whitesell noted that we have no conflict with ANSI, since they only want us to follow our procedures. Mr. Griffin pointed out that ANSI allows amendments and thought that it shouldn't be that difficult to add these items. Mr. Hodes suggested adding a clause noting that amendments are permitted and the same rules apply as those used for the main Standard. He thought that it would not be too onerous for Mr. Ghizzone's Ad Hoc committee to address. **AI-01:** Mr. Ghizzone will set up monthly Ad Hoc Committee web meetings to integrate Mr. Griffin's flow chart. **AI-02:** Mr. Heirman will check the ANSI essential requirements regarding amendments, corrigenda and errata and report to Mr. Ghizzone's Ad Hoc committee. Mr. Ghizzone expects to have text to review at our next meeting.

**8. Report – Art Wall – Copyright issues with C63.26 -** Problems have been encountered in wideband consumer boosters. Detailed procedures were developed over the last two years. In this process, one manufacturer pointed out that their essential patent was being used. The working group agreed to avoid patent issues. As the document was being finished, another manufacturer stated that some of these procedures required other manufacturers' essential patents. Mr. Wall contacted Ms. Roder and received guidance. The Working Group Chair has the responsibility to ask the patent holder to provide a "letter of assurance," now posted on our [Main Committee page](#) under "[Patents](#)." The WG members also have the responsibility to notify the WG Chair early of any essential patents. Mr. Hodes noted that the purchase of an instrument that employs patented technology allows the use of such an instrument in our procedures. He asked what triggered this issue. Mr. Whitesell said it was as simple as somebody making a patent claim. The assertion of a patent claim causes the process of collecting "letters of assurance" to begin. **AI-03:** Ms. Roder to ask the IEEE legal department to prepare a patent tutorial for us at our next meeting.

**9. 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 Power Point slide(s) using the C63 [Template](#).**

**9.1. SC1: Measurement and Instrumentation- Chen -** The [SC1 report](#) was shown. Mr. Chen wanted to form new Working Groups for ISM equipment, including wireless power transfer, lighting products and traditional ISM equipment. The FCC has asked us to begin these

three efforts. Mr. Chen moved to approve the [PINS for lighting products](#). No second was needed. The motion carried to begin work on C63.29.

The second motion was to approve the [wireless power transfer \(WPT\) PINS](#) shown. No second was needed. Discussion of the text regarding radiated and conducted emissions, rather than radiated "field" ensued. The consensus was to leave the text as shown. The motion carried to begin work on C63.30. Mr. Silberberg asked for the WPT working group minutes. **AI-04:** Mr. Wall to provide the Wireless Power Transfer (WPT) minutes to Mr. Silberberg.

The third motion was to approve the "traditional" [ISM device PINS](#) shown. (to replace MP-5) No second was needed. The motion carried to begin work on C63.31.

There were 11 interpretation requests for SC1 in the last 18 months. The request comes in to the Secretary, who forwards it to the appropriate SC Chair to form a working group to address it. When completed, the Subcommittee reviews the document and then, if approved, it is circulated to the Main Committee for 14 days. Seven interpretations are still open under SC1.

Membership, Scope and Duties for each Subcommittee are reviewed at least annually. **AI-05:** Mr. Ramie to remove Mr. Hoffman from the SC1 roster. Mr. Chen moved to approve the [SC1 membership](#) and the motion passed by voice vote.

- 9.2. SC2: Definitions – Dilay** - The [SC2 report](#) was shown The Scope was changed since the last meeting. The SC2 roster was also shown. **AI-06:** Mr. Dilay to remove Mr. Ramie from the SC2 membership roster. The SC2 leadership roster was shown. Mr. Shellman has stepped down. SC2 duties were then shown. Mr. Dilay moved to approve the Scope, Duties and Membership of SC2. No second was required and the motion carried by voice vote.

The [C63.14 revision PINS](#) was shown. The motion to approve prevailed.

- 9.3. SC3: International Standardization – Andersen** - The [SC3 report](#) was shown. The Scope is unchanged. Duties (Main activities) from the [SC3 web page](#) were shown. **AI-07:** Mr. Ramie to change [SC3 web page](#) to show "Duties" rather than "Main Activities" and post the new [SC3 Membership roster](#), which was slightly changed. **AI-08:** Mr. Ramie will add C63.12 to the list of SC3 Duties. **AI-09:** Mr. Ramie to separate the voting and non-voting members in the [SC3 roster](#). Mr. Andersen moved to approve the Scope, Duties and Membership as shown. No second was required and the motion carried.

- 9.4. SC5: Immunity testing – Whitesell** - The [SC5 report](#) was shown. The Membership, Scope and Duties were presented. Mr. Whitesell moved to accept the Membership, Scope and Duties as shown. The motion carried. Status of the projects was shown. A new [PINS-C study project for updating C63.9](#) and the topics to consider was shown. The Chair asked for volunteers for this effort. Mr. Whitesell moved to accept the [C63.9 PINS-C](#) with editorial changes. No second was required and the motion carried.

C63.16 ESD Test Methods Guide was circulated on 4/20/15. Two yes votes were received with four abstentions. Mr. Whitesell stated that "the email process did not work." The Mandatory Editorial Coordination (MEC) feedback from IEEE was received. That text was integrated on Monday, May 4 with a few editorial changes and became Draft 3.0. It was sent to the Main Committee yesterday, May 6. Mr. Whitesell moved to approve a C63.16 balloting group and proceed to a formal IEEE ballot. No second was needed. The motion carried. **AI-10:** Ms. Roder to form the balloting group and run a formal C63.16 ballot on Draft 3.0.

There has been no progress on C63.24 on Generic In-Situ Immunity Evaluation. There were no volunteers. Mr. Heirman offered to make one last effort to find volunteers to work on it before it is cancelled. Discussion ensued. Mr. Berger wanted to cancel the project now. Mr. Heirman pointed out that the interfering sources were known transceivers of any modulation type. Mr. Berger suggested that not all sources were known. Mr. Hodes thought this effort might be valuable, although his conversations with chip manufacturers indicated that they had no interest. He also pointed out that the Navy will not communicate about how their surveys are conducted.

He added that "nobody wants to pay to have the work performed."

- 9.5. SC6: Laboratory Accreditation – Long** - The [SC6 report](#) was shown. The Scope, Duties and Membership were shown. There were two working groups. Mr. Hoffman has been removed from the roster. Mr. Long moved to approve the Scope, Duties and amended Membership Roster as shown in the report. No second was needed. The motion carried.

Working Group and Liaison reports were then shown. Accreditation Body status reports were also reviewed.

- 9.6. SC7: Unlicensed Personal Comm. Services – Berger** - The [SC7 report](#) was shown. A PINS-C study project was proposed for Measurements of an Ambient RF Environment. Jason Coder of NIST was the proposed Chair of the study project. It is focused on local monitoring of radio frequency (RF) spectrum. Mr. Berger showed the proposed [Standardized Data Collection PINS-C](#) for this study project. He moved to have the PINS-C approved as shown. The motion passed.

The Scope, Duties and Membership were presented. The active project (Duty) in SC7 is on C63.27 for the Evaluation of Wireless Coexistence. Webinars are running every other week. A draft is being prepared. Mr. Berger moved to approve the Scope, Duties and Membership as presented. The motion carried.

- 9.7. SC8: Medical Equipment Testing – DeLisi** - The [SC8 report](#) was shown. The Scope, Duties and Membership were presented. Mr. DeLisi moved to approve the Scope, Duties and Membership and the motion passed.

The only working group report was from WG2 on C63.19, since disbanded, on hearing aid compatibility with wireless phones. The FCC wanted further work on this document, reflected in the PINS-C shown for a new study project on updating C63.19. Mr. DeLisi moved to approve the [C63.19 PINS-C](#) shown. The PINS-C was approved.

The FDA liaison report was shown. ASHRAE proposed dropping the humidity in surgical suites from 30% down to 20%, without consideration for the effects on the equipment. AAMI is considering work on these humidity effects in operating suites.

## 10. New Business

- 10.1. [Proposal to change standards revision process – Schaefer](#)** - We considered [Mr. Schaefer's proposed changes](#) in our revision process at the Steering Committee meeting last night. **AI-11:** Mr. Hoolihan to propose changes in our standards revision process in response to Mr. Schaefer's input.

- 10.2. Interpretation Response Times - Hoolihan** - We have adopted the new [operating procedures](#) and have experienced delays in getting Interpretations done in a timely manner.

## 11. Other Administrative Matters

- 11.1. Web Page – Ramie** - Members need to police their content on the site and send any desired corrections to Mr. Ramie visually, showing what "correct" content looks like to avoid language misunderstandings.

- 11.2. Administrative matters from the Steering Committee** - Mr. Heirman discussed the meaning of members being "at risk." Membership Guidelines have been added to each Subcommittee roster page, both for the Subcommittees and their Working Groups. These guidelines noted how members may become "at risk" but did not define what would happen next. He noted that the Steering Committee is considering further clarification of this.

## 12. Other Business

**12.1 Future Seminars and Workshops – Heirman –** The [Education Report](#) was shown. 2015 workshop offerings in Santa Clara were presented. Speakers were those involved in generating the Standards. Plans for the Dresden workshops were shown. (Two days) Seven additional standards were listed that might need workshops. If any member Organization would like a workshop presented at their facility, they are available. We are willing to sign NDAs so we can discuss organization-specific concerns. It has been suggested that we offer Workshops after our bi-annual meetings, like the one being given tomorrow at Northwest EMC in Minneapolis. We always wait until after publication of the latest Standard to offer a workshop. Speakers always have to have been involved in the generation of the Standard. We are always searching for speakers. We pay all expenses for those speakers, and try to offer a reasonable honorarium for their services.

**12.2 Newsletter report – Zimmerman -** We published the latest newsletter ([2014 November Newsletter – Issue 38](#)) in January. Please send timely summaries of your subcommittee activities to Mr. Zimmerman for inclusion in the next newsletter.

**12.3. Next meeting – UL -** Research Triangle Park, NC, Nov. 9-12, 2015.

## 13. Old Business

**13.1 Action item review on items not covered elsewhere on Agenda – as time permits – Secretary -** Action Item status is shown below:

**Consolidated Action Items from Main Committee Meeting 11/13/14<sup>1</sup>**

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
<b>AI-83:</b>	Don Heirman to pass around topics for consideration in the next edition of C63.4 to the main committee for additional comments	Mr. Heirman	Closed	5/7/15	
<b>AI-85:</b>	C63.2 working group membership will be provided to the Secretary by Mr. Schaefer	Mr. Schaefer	Closed	5/7/15	
<b>New Action Items</b>					
<b>AI-90:</b>	Steve and Poul to change Membership verbiage to clarify Subcommittee attendance rules, subject to review by e-mail	Steve Whitesell Poul Andersen	closed	5/7/15	
<b>AI-91:</b>	Pat to seek clarification from ANSI on members dying or becoming sick during a ballot	Pat Roder	closed	5/7/15	Indicate why ballot group is smaller
<b>AI-92:</b>	Pat to ask third party resellers for sales figures on our Standards	Pat Roder	closed	5/7/15	
<b>AI-93:</b>	Don Heirman will issue a formal call for volunteers to serve on the C63.4 working group	Mr. Heirman	closed	5/7/15	
<b>AI-94:</b>	Steering committee to respond to Mr. Schaefer's submission about dated references	C63® Steering Committee	Open	5/7/15	
<b>AI-95:</b>	The Chairman is to provide the US-EMC Standards Corporation MOU to the Main Committee	Dan Hoolihan	closed	5/7/15	
<b>AI-96:</b>	C63® members are asked to endorse the workshop activities	C63® members	closed	5/7/15	
<b>AI-97:</b>	C63® members are asked to advertise our workshops in their company and	C63® members	closed	5/7/15	

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

	trade organization				
<b>AI-98:</b>	C63@ members are asked to identify venues and events where our workshops can be held	C63@ members	closed	5/7/15	
<b>AI-99:</b>	C63@ members are asked to consider hosting a workshop	C63@ members	closed	5/7/15	

Note: Action Items will be re-numbered back to **AI-01**.

**14. Adjournment** - The meeting was adjourned at 12:04PM-CDT.

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**End of Meeting**

**Consolidated Action Items from Main Committee Meeting 05/07/15<sup>2</sup>**

Action Item #	Subject	Responsible Person	Status	Delivery Date	Comments
<b>AI-94:</b>	Steering committee to respond to Mr. Schaefer's submission about dated references	C63@ Steering Committee	Open	11/12/15	
<b>New Action Items</b>					
<b>AI-01:</b>	Mr. Ghizzone will set up monthly Ad Hoc Committee web meetings to integrate Mr. Griffin's flow chart.	Mr. Ghizzone	Open	11/12/15	
<b>AI-02:</b>	Mr. Heirman will check the ANSI essential requirements regarding amendments, corrigenda and errata and report to Mr. Ghizzone's Ad Hoc committee	Mr. Heirman	Open	11/12/15	
<b>AI-03:</b>	Ms. Roder to ask the IEEE legal department to prepare a patent tutorial for us at our next meeting	Ms. Roder	Open	11/12/15	
<b>AI-04:</b>	Mr. Wall to provide the Wireless Power Transfer (WPT) minutes to Mr. Silberberg	Mr. Wall	Open	11/12/15	
<b>AI-05:</b>	Mr. Ramie to remove Mr. Hoffman from the SC1 roster	Mr. Ramie	CLOSED	11/12/15	5/22/15
<b>AI-06:</b>	Mr. Dilay to remove Mr. Ramie from the SC2 membership roster	Mr. Dilay Mr. Ramie	CLOSED	11/12/15	5/22/15
<b>AI-07:</b>	Mr. Ramie to change <a href="#">SC3 web page</a> to show "Duties" rather than "Main Activities" and post the new <a href="#">SC3 Membership roster</a>	Mr. Ramie	CLOSED	11/12/15	5/22/15
<b>AI-08:</b>	Mr. Ramie will add C63.12 to the list of SC3 Duties	Mr. Ramie	CLOSED	11/12/15	5/22/15
<b>AI-09:</b>	Mr. Ramie to separate the voting and non-voting members in the <a href="#">SC3 roster</a>	Mr. Ramie	CLOSED	11/12/15	5/22/15
<b>AI-10:</b>	Ms. Roder to form the balloting group and run a formal C63.16 ballot on Draft 3.0	Ms. Roder	Open	11/12/15	
<b>AI-11:</b>	Mr. Hoolihan to propose changes in our standards revision process in response to <a href="#">Mr. Schaefer's input</a>	Mr. Hoolihan	Open	11/12/15	

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



### Attachments from Main Committee Meeting 05/07/15<sup>3</sup>

Agenda Item #	Description	Filename
2.1	Draft agenda	<a href="http://www.c63.org/documents/misc/minutes/2015_May/2015_May_main_committee_agenda_Rev3.docx">http://www.c63.org/documents/misc/minutes/2015_May/2015_May_main_committee_agenda_Rev3.docx</a>
2.2	Patent slides	<a href="http://www.c63.org/documents/misc/minutes/2015_May/slideset.pdf">http://www.c63.org/documents/misc/minutes/2015_May/slideset.pdf</a>
5.0	Approved Minutes of previous meeting	<a href="http://www.c63.org/documents/misc/minutes/2015_May/Approved_Minutes_Main_Committee_November_2014B.doc">http://www.c63.org/documents/misc/minutes/2015_May/Approved_Minutes_Main_Committee_November_2014B.doc</a>
6.0	Secretariat Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/Secretariat_report_20150507.ppt">http://www.c63.org/documents/misc/minutes/2015_May/Secretariat_report_20150507.ppt</a>
7.0	Ad Hoc Committee report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/Ghizzone_07_MAY2015_Update.pptx">http://www.c63.org/documents/misc/minutes/2015_May/Ghizzone_07_MAY2015_Update.pptx</a>
8.0	Patent Statements	<a href="http://www.c63.org/documents/misc/patents/patent_index.htm">http://www.c63.org/documents/misc/patents/patent_index.htm</a>
9.0	Slide Template	<a href="http://www.c63.org/pw/c63/C63_PowerPoint_template.ppt">http://www.c63.org/pw/c63/C63_PowerPoint_template.ppt</a>
9.1	SC1 Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/SC1_update20150507.ppt">http://www.c63.org/documents/misc/minutes/2015_May/SC1_update20150507.ppt</a>
9.1	PINS - lighting products	<a href="http://www.c63.org/documents/misc/minutes/2015_May/PINS_Lighting_Products_5_6_15.docx">http://www.c63.org/documents/misc/minutes/2015_May/PINS_Lighting_Products_5_6_15.docx</a>
9.1	PINS - Wireless Power Trans.	<a href="http://www.c63.org/documents/misc/minutes/2015_May/PINS_WPT_5_6_15.docx">http://www.c63.org/documents/misc/minutes/2015_May/PINS_WPT_5_6_15.docx</a>
9.1	PINS - ISM test procedures	<a href="http://www.c63.org/documents/misc/minutes/2015_May/PINS_ISM_eqmt_5_6_15.docx">http://www.c63.org/documents/misc/minutes/2015_May/PINS_ISM_eqmt_5_6_15.docx</a>
9.2	SC2 Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/SC2_Report_to_Main_Committee_20150507_Rev1.pptx">http://www.c63.org/documents/misc/minutes/2015_May/SC2_Report_to_Main_Committee_20150507_Rev1.pptx</a>
9.2	C63.14 PINS	<a href="http://www.c63.org/documents/misc/minutes/2015_May/Draft_PINS_C63_14_2019.doc">http://www.c63.org/documents/misc/minutes/2015_May/Draft_PINS_C63_14_2019.doc</a>
9.3	SC3 Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/SC3_Spring_2015_Report.ppt">http://www.c63.org/documents/misc/minutes/2015_May/SC3_Spring_2015_Report.ppt</a>
9.4	SC5 Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/SC5_Report_20150507_R2.pptx">http://www.c63.org/documents/misc/minutes/2015_May/SC5_Report_20150507_R2.pptx</a>
9.4	C63.9 PINS-C	<a href="http://www.c63.org/documents/misc/minutes/2015_May/C63_9_PINS_C_20150505_R2.doc">http://www.c63.org/documents/misc/minutes/2015_May/C63_9_PINS_C_20150505_R2.doc</a>
9.5	SC6 Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/201505_SC6_Report_Main.pptx">http://www.c63.org/documents/misc/minutes/2015_May/201505_SC6_Report_Main.pptx</a>
9.6	SC7 Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/SC7_Report_20150505_v1.ppt">http://www.c63.org/documents/misc/minutes/2015_May/SC7_Report_20150505_v1.ppt</a>
9.6	PINS-C Spectrum Data	<a href="http://www.c63.org/documents/misc/minutes/2015_May/PINS_C_Standardized_Spectrum_Data_Collection.doc">http://www.c63.org/documents/misc/minutes/2015_May/PINS_C_Standardized_Spectrum_Data_Collection.doc</a>
9.7	SC8 Report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/SC8_Report_20150507.ppt">http://www.c63.org/documents/misc/minutes/2015_May/SC8_Report_20150507.ppt</a>
9.7	C63.19 PINS-C	<a href="http://www.c63.org/documents/misc/minutes/2015_May/C63_19_PINS_C_05_06_2015.doc">http://www.c63.org/documents/misc/minutes/2015_May/C63_19_PINS_C_05_06_2015.doc</a>
12.1	Education & Training report	<a href="http://www.c63.org/documents/misc/minutes/2015_May/2015_C63_education_report.ppt">http://www.c63.org/documents/misc/minutes/2015_May/2015_C63_education_report.ppt</a>
12.2	2014-Nov. Newsletter	<a href="http://www.c63.org/documents/c63/newsletters/C63_Newsletter_Feb_2015_38%20-%20Final.pdf">http://www.c63.org/documents/c63/newsletters/C63_Newsletter_Feb_2015_38%20-%20Final.pdf</a>

<sup>3</sup> Attachments are not a part of the meeting minutes. They may be downloaded from the [Last Meeting Minutes](#) page of the [C63.org](#) website.