

**APPROVED MINUTES - May 6, 2015**  
**ANSI ASC C63® SC1: Techniques and Development**  
**Embassy Suites Hotel, Brooklyn Center, MN**

Presiding Officer: Zhong Chen

Date Prepared: May 6, 2015

**Members Present:**

Mark Arthurs  
Zhong Chen (Chair)  
Bob DeLisi  
Dean Ghizzone  
Andy Griffin  
Tim Harrington  
Don Heirman  
Harry Hodes (Vice-Chair)  
Dan Hoolihan  
Mike Howard  
Greg Kiemel  
Jeff Klinger  
Victor Kuczynski  
Rick Lombardi  
Randy Long  
Michael O'Dwyer  
Janet O'Neil (Secretary)  
Ghery Pettit  
Mits Samoto  
Werner Schaefer  
Jeff Silberberg  
Don Umbdenstock  
Art Wall  
Dennis Ward  
Steve Whitesell  
Khairul A. Zainal  
David Zimmerman

**Members Absent:**

Masud Attayi  
Doug Parker  
Nate Potts  
Dan Sigouin

**Guests:**

Poul Andersen  
Vladimir Bazhanov  
Allen Crumm  
Chris Dilay  
Ed Hare  
Beth Hackett  
Steve Jones  
Brandt Langes  
Megan McConnell  
Dheena Moongilan  
Brad Moore  
John Norgard  
Jerry Ramie  
Tomasz Wojtaszek

**Employer:**

Sony  
ETS-Lindgren  
Underwriters Laboratories Inc. (UL)  
Northwest EMC  
Cisco  
FCC (via telecom)  
Don HEIRMAN Consultants  
ACIL/Proficiency Testing Services  
Hoolihan EMC Consulting  
Liberty Labs  
Northwest EMC  
Compatible Electronics (via telecom)  
Vican Electronics  
Visteon (via telecom)  
L-A-B  
Apple  
ETS-Lindgren  
Pettit EMC Consulting  
Liberty Labs Asia  
Schaefer Associates  
FDA Center for Devices & Radiological Health  
Tyco Retail Solutions  
RRC/TCB Council  
PC Test Lab  
Consultant  
LS Research  
Spectrum EMC Consulting, LLC

**Employer:**

Blackberry Corp.  
Liberty Labs  
Liberty Labs  
Industry Canada

**Employer:**

PA Consulting  
Ericsson AB  
HP Retired  
SPAWAR-Navy  
ARRL  
NVLAP  
FCC  
Liberty Labs  
A2LA  
Alcatel-Lucent  
NIST/NVLAP  
NASA/JSC  
ARC Technology Services  
Navy

## 1.0 Call to Order—Chair

### 1.1 Opening Remarks and Announcements: Chair

### 1.2 Meeting Logistics Announcements: Host

### 1.3 Introductions: Secretary

Chair Zhong Chen called the meeting to order at 1:00 pm. A round of introductions was made.

## 2.0 Approval of the Meeting Agenda and SC 1 Scope: Chair

Zhong Chen presented the draft agenda for the May 6, 2015 meeting for review. (See Attachment A.) There were no changes from the floor. **Don Heirman moved to approve the agenda as presented. The motion was seconded and approved.**

## 3.0 Presentation of [patent slides](#): Chair

Zhong Chen gave a presentation that reviewed the status of the meeting fees, ANSI policy related to Intellectual Property (IP), inappropriate topics for IEEE working group meetings and the working group meeting slide template. (See Attachment B.) **Mr. Chen moved to confirm everyone present agreed to abide by the procedures outlined in the patent slides. The motion was seconded. All confirmed compliance.**

## 4.0 Presentation of [meeting attendance](#) fee slides: Chair

Zhong Chen reviewed the meeting attendance fee structure and noted that Dan Hoolihan, Chair of C63<sup>®</sup>, would contact individuals present who are required to pay a meeting attendance fee.

## 5.0 Approval of Minutes of Previous Meeting: Secretary

Secretary Janet O'Neil presented the minutes of the November 12, 2014 meeting held at Compliance Testing in Mesa, AZ. **Don Heirman moved to approve the minutes as distributed. The motion was seconded and approved.** The approved minutes are included in Attachment C.

## 6.0 Review of [Subcommittee Membership](#): Secretary

**6.1 Review of membership – Members at risk.** Janet O'Neil advised that Masud Attayi of Blackberry is at risk of losing membership in SC 1, meaning by not attending the meeting today, he will have missed three consecutive meetings. Janet O'Neil will contact him about his membership status. (See Attachment D for the updated membership tracking record.)

**6.2 Consideration of Members.** The secretary advised there were two new SC 1 membership applications received since the last meeting.

The secretary reviewed the roster of working group members as shown on the C63 website. Some revisions were made. The updated roster of working groups and the SC 1 membership roster are included in Attachment E.

**ACTION ITEM: All working group Chairs need to complete their rosters and indicate their officers (Vice-Chair and Secretary) and submit to Chair prior to the next meeting (November 2015).**

## 7.0 Working Group Reports

### C63.2: Specifications for Electromagnetic Noise and Field Strength Measurement Instrumentation

Working Group Chair: Werner Schaefer

Status: PINS submitted to IEEE on May 8, 2013. Next edition in progress C63.2

Werner Schaefer presented his report (see Attachment F.) This includes information on the three negative votes: two negative votes resulted from the limitation of the frequency range of the balloted standard from 10 Hz to 9 kHz and one negative vote was due to presumably ambiguous wording related to specifications in Table 2 of the balloted standard. In addition, numerous editorial comments were received with positive votes. The working group met on 5/5/2015 to discuss mainly the issues related to the negative votes. It was agreed to formally request input on test instrumentation specifications in the frequency range 30 Hz to 9 kHz, per Table 2 in the balloted standard. The formal request will be prepared and issued by Harry Hodes. The deadline for feedback was set to June 22, 2015, after a discussion in the subcommittee. In case adequate specifications are received by June 22, 2015 a normative Annex to C63.2 will be prepared to include such specifications and the title of the standard will reflect the extended frequency range. If no specifications are received the frequency range of the standard will be 9 kHz to 40 GHz, as proposed right now. Based on this approach UL LCC (Bob Delisi) and ACIL (Harry Hodes) indicated that the negative votes will be withdrawn. In addition, a clarifying statement will be added to Table 2 to address the third negative comment. It is the desire of the working group to avoid a recirculation.

The subcommittee also agreed to add a section for acronyms to the standard and to include CISPR 16-2-1/2/3 and MIL-STD 461F to the Bibliography and not to the normative reference section of the standard.

**ACTION ITEM: SC 1 members to send any comments or feedback on the C63.2 document no later than June 22 to Werner Schaefer.**

### C63.4: Emissions Measurements

Working Group Chair: [Don Heirman](#)

Status: Current-2014. Next edition planned (2018?)

Don Heirman presented his report. (See Attachment G.) He presented his roster of working group members and noted that they represent varied organizations, including government and industry.

The PINS-C was approved by the working group, SC1 and the main C63 committee on November 7, 2014. The 21 proposals for work were narrowed down initially to nine; those not of high priority were identified and reasons provided in the C63.4 voting document.

PINS-C study questions were started to determine what should initially be considered for a revision of an existing standard or a new standard; this then is quantified by issuing a PINS which is a public record cited by ANSI to alert all that this is a project that might be of interest to others.

The working group held a meeting on May 4, 2015 for two hours. They reviewed the nine topics to consider first, then assigned a “lead” person to work on each topic. The working group expects to hold a webinar at the end of the summer to review the status of the nine topics. The next meeting will be held during the November 2015 series of C63 meetings.

**ACTION ITEM: Don Heirman to address errata question posed by Tim Harrington to C63.4 standard.**

### **C63.5: Antenna Calibration**

Working Group Chair: Bob DeLisi

Status: Current-2006. Next edition in progress

Working Group Chair Bob DeLisi presented a report. (See Attachment H.) The PINS (dated October 2012) is on website. The working group met on May 5, 2015. Eleven members attended. They will have a webinar to continue ballot resolution, currently scheduled for May 21, 2015.

The recirculation ballot closed in July 2014. It was approved with 62% of the 26 person ballot body voting yes. There were four negative votes, three abstentions, and a response was not received from three people in the ballot body. In those that voted, 14 people provided comments. In all, there were 239 comments received; of these, 14 were technical in nature to address.

Some notable activity with the document:

- Annex N (identical to that in C63.4:2014) has been removed from C63.5:20XX. This removes 33 comments.
- Table 1 (“Antennas used for Product Measurements and NSA”) was updated to clarify hybrid antennas are calibrated to Clause 5 for product measurements and Annex J for NSA measurements.
- CISPR 16-1-6 is being reviewed for suggested frequency step size (minimum) for swept measurements.
- Annex L has been updated to clarify that from below 1GHz an ACS (Antenna Calibration Site) can only be an OATS with no weather protection covering.

The working group is targeting a recirculation of the document by the November 2015 C63 series of meetings.

### **C63.7: Construction of Test Sites**

Working Group Chair: [Don Heirman](#)

Status: Current – Published January 2015

Don Heirman presented his report. (See Attachment G.) C63.7 was approved in January 2015 and is published. It is already being referenced in the draft C63 standards under preparation (C63.12, C63.16, C63.25, etc.). No further work is anticipated at this time.

### **C63.25: Test Site Validation**

Working Group Chair: Dan Sigouin

Status: New Standard. Draft being written. PINS Current.

Zhong Chen noted in the absence of Dan Sigouin, Greg Kiemel will provide the report. (See Attachment I.) The working group met at Northwest EMC on Tuesday, May 5, to address the document. The PINS is current and posted to the C63 website. This is a new standard which will be circulated to SC 1 for review in early 2016.

## **C63.26: Licensed Transmitter Testing**

Working Group Chair: [Art Wall](#)

Status: New Standard. Draft being written.

Chair Art Wall presented his report. (See Attachment J.) The wireless working group met on May 4-5 for two half-day sessions. There were 28 attendees at these meetings (seven were present via webinar) plus three observers. He noted C63.26D13 was balloted January 2015 and approved with 3 negative votes and 241 comments. A summary of the comments was circulated to balloters and WWG members on April 26, 2015 for discussion at the working group meeting. All comments were resolved at the meeting, but due to the extent of the comments and negative votes, a re-balloting is necessary.

The following topics were deferred to the working group for further consideration and inclusion into the 2<sup>nd</sup> Edition of C63.26:

- (a) Channel aggregation
- (b) Use of loop antennas in a chamber
- (c) Measurement of emission power
- (d) Table height for radiated measurements above and below 1 GHz

PINS-C for Industrial, Scientific and Medical (ISM) equipment – It was recommended to form a new working group for ISM equipment with the following three task groups:

- i. Wireless power transfer
- ii. Lighting power products
- iii. Traditional ISM equipment

**Art moved to recommend to the parent committee to establish a new a Working Group for ISM equipment with three task groups (as noted above). The motion was seconded and approved.** Tim Harrington and Harry Hodes voted against the motion.

**Art moved to approve the attached PINS for lighting products - see PINS-C in Attachment K. The motion was seconded and approved.**

**Art moved to approve the attached PINS for Wireless Power Transfer Products - see PINS-C in Attachment L. The motion was seconded and approved.**

**Art moved to approve the attached PINS for traditional ISM equipment (to replace MP-5) - see PINS-C in Attachment M.**

The rationale for each motion is included in the report (Attachment J).

Art noted C63.10-2013 is pending acceptance by the FCC and Industry Canada.

## **8.0 Old Business - Chair**

No old business was discussed.

## **9.0 New Business – Chair**

No new business was discussed.

## 10.0 Review of Interpretation Requests: Chair

Zhong Chen advised there have been several interpretation requests as shown on the agenda and below:

- C63.4-2009, request dated 9-10-14, **“Text Takes Precedence”** - From **Nana Liu – Foxconn – Don Heirman (Chair)**; subgroup members include Bob DeLisi, Victor Kuczynski, Ghery Pettit, Werner Schaefer, Dennis Ward, Khairul Aidi Zainal, and Tim Harrington (subgroup secretary). Don Heirman advised the subgroup prepared a response which was sent from SC 1 to Jerry Ramie, parent committee secretary, on December 4, 2014.
- C63.4-2009, request dated 10-28-14, **“Conducted Emissions with Vertical Plane”** - From **Ghery Pettit – Intel – Don Heirman (Chair)**; subgroup members include Dennis Ward, Dean Ghizzone and Harry Hodes. Don Heirman advised the subgroup prepared a response which was sent from SC 1 to Jerry Ramie, C63 committee secretary, on January 7, 2015.
- C63.4-2009 and -2014, request dated 11-6-14, **“C63.4 (2014) NSA Phase Center of Antenna”** - From **Bob DeLisi – UL - Khairul Aidi Zainal (Chair)**; subgroup members include Don Heirman, Harry Hodes and Mits Samoto. Khairul Aidi Zainal presented a report on the status of this interpretation request. (See Attachment N.)
- C63.4-2009, request dated 1-9-15, - **“LISN Receptacle Distance”** - From **Mike Coye - Compliance Management Group – Bob DeLisi (Chair)**; subgroup members include Don Heirman, Werner Schaefer, and Victor Kuczynski. Bob DeLisi presentation a report on the status of this interpretation request. (See Attachment O.) He advised the subgroup prepared a response which was sent from SC 1 to Jerry Ramie, C63 committee secretary, on March 24, 2015.
- C63.4-2009, request dated 1-15-15, **“Testing Large TVs as Floor Standing”** - From **Winnie Liu - Foxconn - Don Heirman (Chair)**; subgroup members include Werner Schaefer, Victor Kuczynski, Bob DeLisi, and Khairul Aidi Zainal. Don Heirman advised the subgroup expects to prepare a response to send from SC 1 to Jerry Ramie, C63 committee secretary, by the end of May 2015.
- C63.4-2014, four separate requests dated 2-21-15, **“Exploratory emissions Clause 8.3.1.2, Antenna Symmetry Annex N.1, NSA Measurement Annex D.3, and NSA Measurement Annex D.2”** From **Takashi Maruyama - LAB Support - Dan Sigouin (Chair)**; subgroup members included Don Heirman, Werner Schaefer, Victor Kuczynski, Bob DeLisi, Mits Samoto, Khairul Aidi Zainal, Zhong Chen and Harry Hodes. Dan Sigouin advised the subgroup expects to prepare a response to send from SC 1 to Jerry Ramie, C63 committee secretary, within the next two weeks (by May 20 2015).
- C63.4-2014, request dated 3-27-15, **“Test Distance”** - From **Nana Liu – Foxconn - Subgroup Chair and members TBD**. The secretary will send out a request for subgroup volunteers following the meeting. The chair will appoint a subgroup chair once the subgroup members are identified.

**ACTION ITEM: O’Neil to send out call for subgroup volunteers to address the “Test Distance” interpretation request.**

## 11.0 [C63.org](#) Website Use and Updates

Jerry Ramie requested members be specific with any requests for postings to the website. He asked members to be sure to update or confirm they are correctly listed on the website.

## 12.0 Review of the Action Items from Previous Meetings: Secretary

Secretary O'Neil advised that there is one outstanding action items from the last meeting. An updated action item list will be distributed to the SC 1 members along with the draft minutes from this meeting. (See Attachment P for the Action Items list.)

**ACTION ITEM: O'Neil to distribute the updated consolidated action items and draft minutes from the November 12, 2014 meeting to the committee.**

## 13.0 Time and Place of Next Meeting: Chair

Zhong Chen noted the next series of C63® meetings will be announced following the C63 steering committee meeting that evening. He anticipates this to be on November 9-11 in Raleigh, NC.

## 14.0 Closing Remarks and Adjournment: Chair

With no further business, Zhong Chen adjourned the meeting at 4:00 pm. He thanked everyone for attending the meeting.

Minutes submitted by:



Janet O'Neil, Secretary, SC 1

## ATTACHMENTS

- Attachment A: Agenda for May 6, 2015 SC 1 Meeting
- Attachment B: Patent Slides Required Meeting Template Slides for ASC C63®, IP Info
- Attachment C: Approved Minutes from November 12, 2014 SC 1 Meeting
- Attachment D: Meeting Attendance/Tracking List
- Attachment E: SC 1 Membership Roster and Working Group Roster
- Attachment F: Schaefer Report on C63.2
- Attachment G: Heirman Report on C63.4 and C63.7
- Attachment H: DeLisi Report on C63.5
- Attachment I: Kiemel/Sigouin Report on C63.25
- Attachment J: Wall Report on C63.26 and Wireless Working Group
- Attachment K: Wireless Working Group: PINS on Lighting Products
- Attachment L: Wireless Working Group: PINS on Wireless Power Transfer Products
- Attachment M: Wireless Working Group: PINS on Industrial, Scientific, and Medical (ISM) Equipment
- Attachment N: Zainal report on "C63.4 (2014) NSA Phase Center of Antenna" interpretation request
- Attachment O: DeLisi report on "LISN Receptacle Distance" interpretation request
- Attachment P: Consolidated Action Item List