

**APPROVED MINUTES**  
**ANSI ASC C63® SC1: Techniques and Development**  
**November 13, 2013**  
**UL, Northbrook, IL**

Presiding Officer: Zhong Chen

Date Prepared: November 13, 2013

**Members Present:**

Mark Arthurs  
Masud Attayi  
Dennis Camell  
Zhong Chen (Chair)  
Bob DeLisi  
Andy Griffin  
Dean Ghizzone  
Tim Harrington  
Don Heirman  
Harry Hodes (Vice-Chair)  
H. R. Hofmann  
Dan Hoolihan  
Mike Howard  
Greg Kiemel  
Victor Kuczynski  
Rick Lombardi  
Randy Long  
Janet O'Neil (Secretary)  
Ghery Pettit  
Mits Samoto  
Dan Sigoion  
Jeff Silberberg  
Art Wall  
Dennis Ward  
Steve Whitesell  
Khairul A. Zainal

**Members Absent:**

Jeff Klinger  
Doug Parker  
Nate Potts  
Werner Schaefer  
Don Umbdenstock

**Guests:**

Chris Dilay  
Mac Elliott  
Adam Gouker  
Ed Hare  
Beth Hackett  
Tom Knipple  
Dheena Moongilan  
Brad Moore

**Employer:**

Sony  
Blackberry Corp.  
NIST  
ETS-Lindgren  
Underwriters Laboratories Inc. (UL)  
Cisco (present via telecom)  
Northwest EMC  
FCC (present via telecom)  
Don HEIRMAN Consultants  
ACIL  
Hofmann EMC Engineering  
Hoolihan EMC Consulting  
Liberty Labs  
Northwest EMC  
Vican Electronics  
Visteon (present via telecom)  
L-A-B  
ETS-Lindgren  
Intel  
Liberty Labs Asia  
Industry Canada  
FDA Center for Devices & Radiological Health  
TCB Council  
PC Test Lab  
Consultant  
LS Research

**Employer:**

Compatible Electronics  
Liberty Labs  
Liberty Labs  
Schaefer Associates  
Tyco Retail Solutions

**Employer:**

SPAWAR/Navy  
Motorola  
A2LA  
ARRL  
NVLAP  
Motorola Mobility  
Alcatel-Lucent  
NIST

Michael O'Dwyer  
Jerry Ramie  
Pat Roder  
David Schaefer  
Dave Southworth  
Bill Young  
David Zimmerman

Apple  
ARC Technology Services  
IEEE  
TUV AM  
URS/Navv  
NIST  
Spectrum EMC

## 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 November 13, 2013 meeting for review. (See Attachment A.)

**Ghery Pettit moved to approve the agenda as presented. The motion was seconded and approved.**

The SC1 “Scope of Work” was presented. (See Attachment B.) **Don Heirman moved to approve the SC 1 Scope of Work 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 C.) **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®, 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 May 8, 2013 meeting held at IEEE in Piscataway, New Jersey. **Harry Hodes moved to approve the minutes as distributed. The motion was seconded and approved.** The approved minutes are included in Attachment D.

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

**6.1 Review of membership – Members at risk.** Janet O’Neil advised that the memberships of Greg Kiemel, Masud Attayi and Tim Harrington are at risk. (See Attachment E for the updated membership tracking record.) Secretary O’Neil contacted them to advise their membership would be terminated if they missed the November meeting. Since they attended the meeting today, their membership is no longer at risk.

**6.2 Consideration of Members.** The chair advised there is one new SC 1 membership application to review from Khairul Aidi Zainal of LS Research. Mr. Chen received his membership application and resume. This was distributed to the committee to review on October 30. Harry Hodes and Dan Hoolihan noted they endorsed this membership application. **Harry Hodes moved to approve the membership application of Khairul Aidi Zainal. The motion was seconded and approved.**

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

**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 (April 2014).**

## **7.0 Working Group Reports**

### **C63.4: Emissions Measurements**

Working Group Chair: [Don Heirman](#)

Status: Current-2009. Next edition in progress – C63.4-2013

Don Heirman presented his report. (See Attachment G.) He reviewed the ballot history and process for C63.4. The third recirculation ballot was sent to the balloting group in August 2013; it closed in September 2013. The ballot met the approval requirements with 73% or 2/3 approval by the entire balloting group. There were four negative ballots. Don's report includes the subjects of the recent third recirculation and a comment resolution matrix. Next the working group will present a new PINS to address topics raised that were not incorporated into the standard (i.e. topics placed in the "parking lot" for future discussion). See Attachments G.a – G.d for additional information, including the new PINS, resolution comments discussed during the working group meeting, minutes of the working group meeting, and second draft PINS topics.

**Dan Sigouin moved to proceed with sending the current draft of C63.4 to publication. Harry Hodes seconded the motion. The motion was approved.**

**Ghery Pettit moved to send the contents of the PINS on the revision to C63.4 to the Subcommittee 1 for review and comment. Harry Hodes moved to amend the motion to approve a PINS-C which simply changed the PINS presented to another "title". The motion to amend was seconded and approved.**

**Ghery Pettit moved approve having a C63.4 PINS-C circulated to the SC 1 committee with the opportunity to review and comment following the publication of the next edition to C63.4. The motion was seconded and approved.**

**ACTION ITEM: Heirman to send the current draft of C63.4 out for publication.**

**ACTION ITEM: Heirman to send the PINS on revision to C63.4 to Subcommittee 1 for review and comment.**

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

Working Group Chair: [Dennis Camell](#)

Status: Current-2006. Next edition in progress

Dennis Camell presented his report. (See Attachment H.) He advised the ballot failed as not enough members of the balloting group voted positively to have a majority. There were 26 people in the ballot pool and 20 people responded. Of the 20 responses, there were 6 disapprovals (with comments), 1 abstention, 10 approvals (with comments) and 3 approvals (with no comments). He is compiling the comments received to start addressing these. A sampling of the comments received is included in his report. He plans to incorporate the comments into another draft for new ballot with a recirculation in February 2014.

Andy Griffin noted the vote for the CISPR 16.1.6 calibration standard will take place soon. It references C63.5 as a calibration procedure.

**ACTION ITEM: Camell to incorporate the comments into another draft of C63.5 for a new ballot with a recirculation in February 2014.**

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

Working Group Chair: [Don Heirman](#)

Status: Current 2005. Next edition in progress

Don Heirman talked about this new activity. (See Attachment I.) It should not be confused with C63.25 on test site validation. Working group members include Don Heirman (Don HEIRMAN Consult.), Chair; Bob Hofmann (Hofmann EMC Eng.) Secretary; Harry Hodes (ACE-PT Inc. and QAI Lab), Editor; Ray Klouda (Elite Electronic Engineering); and Cooper LaFond (DLS Electronics). Don is looking for additional members. He noted C63.7 was published in 2005 and addresses OATS construction under 1 GHz. The current project is to extend this to above 1 GHz. A first draft has been prepared for initial comment. It shows the existing clause below 1 GHz and adds clauses applicable above 1 GHz. New material is being added to cover OATS both with and without ground planes. Application to semi-anechoic chambers and fully anechoic rooms is also being considered. Working group webinars will be held.

**C63.10: Unlicensed Wireless Devices Testing**

Working Group Chair: [Art Wall](#)

Status: New Standard. Published September 2013.

Art Wall presented his report. (See Attachment J.) His working group met on November 11 and 12, 2013. There were 28 attendees (five via webinar) plus nine observers. Standard C63.10 was published on September 13, 2013.

**C63.25: Time Domain Applications for Test Site Validation**

Working Group Chair: [Dennis Camell](#)

Status: New Standard. Draft being written.

Dennis Camell presented his report. (See Attachment K.) They have a test plan now and have taken many TD and Site VSWR measurements (four spots and at two heights) to 12 GHz in several labs, including Northwest EMC and UL. They expect to have a draft available for the working group to review in February 2014 and to send to the SC 1 committee shortly thereafter. Don Heirman suggested the group measure to 18 GHz so there is adequate comparison to the CISPR VSWR method which goes to 18 GHz. Harry Hodes suggested the title for this working group effort be revised from "Time Domain Applications for Test Site Validation" to read "Test Site Validation". Zhong Chen then

presented information on the working group's measurements using time domain sVSWR and CISPR sVSWR. This discussed correlation between the two methods. (See Attachment L.) The working group will meet in the UL semi-anechoic chamber following the meeting; Zhong invited members to attend and witness the TD and Site VSWR live measurements they will take.

Future activity includes addressing using PODS/bicons as the TD antenna, measuring the TD ring down signature, studying the modeling of antennas, and comparing different antennas. Dennis will revise the current draft to update with IEEE formatting.

**ACTION ITEM: Camell to revise current draft of C63.25 to update according to IEEE format.**

#### **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.) His working group met on November 11 and 12, 2013. There were 28 attendees (five via webinar) plus nine observers. He reviewed a draft of C63.26-201X and recommended balloting within SC 1 by the end of January 2014. The voting results and comments can be considered at the next working group meeting.

**Art Wall moved that the ballot C63.26-201X be circulated within SC 1 in the February 2014 time frame. The motion was seconded and approved.**

**Art Wall moved to revise the PINS for ANSI C63.26 to show "for compliance testing of transmitters used in licensed radio devices". This revision will show in items 1 and 5 of the PINS. The motion was seconded and approved. (See Attachment M.)**

**ACTION ITEM: Wall to send C63.26-201X to Subcommittee 1 in February 2014 for review and comments to be addressed at April 2014 working group meeting.**

#### **8.0 Old Business - Chair**

No old business was addressed.

#### **9.0 New Business - Chair**

**9.1 Recent Measurements in C63.25 and Results** - This presentation by Zhong Chen was given previously in the meeting as part of Dennis Camell's working group report.

#### **10.0 Review of Interpretation Requests: Chair**

Zhong Chen advised we are up to date on the interpretations. No new requests were received.

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

Jerry Ramie noted that he asked people to be specific with any requests for postings to the website.

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

Secretary O'Neil advised that there are no 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 N for the Action Items list.)

**ACTION ITEM: O'Neil to distribute the updated consolidated action items and draft minutes from the November 13, 2013 meeting to the committee.**

**ACTION ITEM: O'Neil to send the password to the SC 1 committee so they can access the SC 1 "members only" section of the website. NOTE: This user and pass code is for access to the SC 1 page ONLY. Working groups under other SCs will have different user codes and passwords.**

### **13.0 Time and Place of Next Meeting: Chair**

Zhong Chen noted the next series of C63® meetings will be determined by the steering committee at its meeting on May 9, 2013.

### **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 November 13, 2013 SC 1 Meeting

Attachment B: Subcommittee 1 "Scope of Work"

Attachment C: Patent Slides Required Meeting Template Slides for ASC C63®, IP Info

Attachment D: Approved Minutes from May 8, 2013 SC 1 Meeting

Attachment E: Meeting Attendance/Tracking List

Attachment F: SC 1 Membership Roster and Working Group Roster

Attachment G: Heirman Report on C63.4

Attachment G.a: New PINS on C63.4

Attachment G.b: C63.4 Resolution Comments from 11-11-13 WG Meeting

Attachment G.c: C63.4 Second Draft PINS Topics

Attachment G.d: C63.4 WG Minutes from 11-11-13 Meeting

Attachment H: Camell Report on C63.5

Attachment I: Heirman Report on C63.7

Attachment J: Wall Report on C63.10 and C63.26

Attachment K: Camell Report on C63.25

Attachment L: Chen Presentation on Time Domain and Site VSWR Measurements

Attachment M: Revised PINS on C63.26

Attachment N: Consolidated Action Items List