



Accredited Standards Committee C63®

Electromagnetic Compatibility

Subcommittee 4: Wireless and ISM Equipment

Chair: Art Wall

Vice Chair: Bob DeLisi

Secretary: Jerry Ramie
(non-voting)

November 8, 2017; 8:00 AM – 10:00 AM - CST

ETS Lindgren
Round Rock, TX

Approved Meeting Minutes

1. **Call to Order: Chair** - The meeting was called to order at 8:15AM-EDT
 - 1.1 **Announcements: Chair**
 - 1.2 **Meeting logistics announcements: Host**
 - 1.3 **Introductions: Secretary** – roll call (insert attendee names) Art Wall, Jerry Ramie, Dan Hoolihan, Dave Zimmerman, Dan Sigouin, Mac Elliott, Deanna Zakharia, Bob DeLisi, Jeff Moser, Mike Antola, Randy Long, Allen Crumm, Nate Potts, Don Heirman, Zhong Chen, Doug Kramer, JJanet O’Neil, Khairul Zainal, Dennis Ward, Dheena Moongilan, Jonas Friden, Vladimir Bazhanov, Stephen Berger, Henry Benitez, Rick Lombardi, Aurelian Bria, Jason Nixon, Jeff Klinger, Edmund Lee, Greg Kiemel, Dave Case, Steve Jones, Sze Khian Ho, Jeremiah Darden,
2. **Approval of the Consent Agenda: Secretary**
The Consent Agenda consists of the meeting Agenda items below, an acknowledgement of the acceptance of the terms in the [patent slides](#) by all attendees and the [approval](#) of the [draft Minutes of the previous meeting](#). The patent slides were reviewed and discussed, with all in attendance agreeing to abide by their requirements.
3. **Review of [Subcommittee Membership](#) - Report any errors to the Secretary** (none)
([SC4 membership roster](#) from the website is shown below)

Subcommittee 4 Membership Roster

| Name | Role in SC | Affiliation |
|--|------------|---|
| Case, David | Member | Cisco Systems |
| Chen, Zhong | Member | ETS-Lindgren |
| DeLisi, Bob | Vice Chair | UL LLC |
| Dickten, Thomas | Member | GC Consulting |
| Elliott, William (Mac) | Member | TÜV SÜD America, Inc. |
| Hodes, Harry | Member | Bay Area Compliance Laboratories Corp. |
| Hoolihan, Dan | Member | Hoolihan EMC Consulting |
| Howard, Mike | Member | Keysight Technologies |
| Jones, Steve | Member | FCC Laboratory |
| Kiemel, Greg | Member | Element Materials Technology |
| Klinger, Jeff | Member | Compatible Electronics |
| Mendoza, Ernesto | Member | Philips Lighting Electronics NA |
| Moongilan, Dheena | Member | Nokia Bell Labs |
| Nixon, Jason | Member | Innovation, Science and Economic Development Canada |
| Pino, Dan | Member | PCTEST Engineering Laboratory, Inc. |

| | | |
|----------------------------------|--------|-------------------------------|
| Schaefer, Werner | Member | Schaefer Associates |
| Sigouin, Dan | Member | DHS-EMC |
| Waitt, David | Member | Consultant |
| Wall, Art | Chair | Radio Regulatory Consultants |
| Ward, Dennis | Member | PCTEST Engineering Laboratory |
| Whitesell, Steve | Member | Whitesell Consulting, LLC |

3.1 Review of Membership Guidelines – any members at risk?

Subcommittees:

For an individual to remain a voting member of a Subcommittee, active participation in Subcommittee meetings and regular responses to Subcommittee email votes is required. Should a member fail to attend at least one of three consecutive scheduled meetings (in person or remotely via web conference (when used)) or respond to at least one of every two consecutive Subcommittee email votes, their membership in that Subcommittee may be at risk.

Note: Abstentions shall be treated the same as a “yes” or “no” vote regarding the requirement to respond to email votes.

Working Groups:

For an individual to remain a member of a Working Group, active participation is required. Should a member fail to attend at least one of three consecutive scheduled meetings (in person or via web conference (when used)) their membership in that Working Group may be at risk. Individual Working Groups may establish additional participation criteria and/or modify this requirement. (insert Member Attendance Log as below)

Member Attendance Log: (report any errors to the SC4 Secretary)

| SC4 Roster: | 20160511 | 20161109 | 20170510 |
|-----------------------------------|----------|----------|----------|
| Case, David | | | |
| Chen, Zhong | | x | x |
| DeLisi, Bob | x | x | x |
| Dickten, Thomas | | x | x |
| Elliott, W. (Mac) | x | x | x |
| Hodes, Harry | x | x | x |
| Hoolihan, Dan | x | x | x |
| Howard, Mike | | | |
| Jones, Steve | x | x | x |
| Kiemel, Greg | | | |
| Klinger, Jeff | | x | x |
| Mendoza, Ernesto | | | |
| Moongilan, Dheena | x | x | x |
| Nixon, Jason | x | x | x |
| Pino, Dan | | | |
| Schaefer, Werner | | | |
| Sigouin, Dan | x | x | x |
| Waitt, David | | x | x |
| Wall, Art | x | x | x |
| Ward, Dennis | x | | |
| Whitesell, Steve | | | |

Members at risk? These members are at risk: **Dave Case, Mike Howard, Greg Kiemel, Dan Pino, Werner Schaefer, Steve Whitesell** AI-7: Jerry to send a letter to members still at risk after this meeting. (Mike Howard, Dan Pino, Werner Schaefer, Steve Whitesell) Jerry to copy the form letter to Dave Zimmerman.

3.2 Consideration of new members? [Application for C63® Subcommittee Membership](#)
[Michael Antola](#) of Honeywell has petitioned for membership ([Application form](#), [resume](#)) **AI-8:** Jerry to add Mike Antola to the SC4 roster. (added 11/30)

3.3 Election of Officers (as required) Art is retiring and closing down his company. Bob DeLisi was recommended by Art for the Chair. Bob accepted the position as new Chairman starting 1/1/18. Election of the SC4 Vice Chair will occur at our next SC4 meeting.

4. Working Group reports - Chair - [More information about each standard](#) is available on the Standards Status Matrix page of the [C63® web site](#). This information will be reviewed for accuracy at each Subcommittee meeting.

4.1 C63.10 – Unlicensed transmitters - Nixon (insert link to [WG report](#)) Verify accuracy of document [status matrix](#) content and report any errors to the ASC-C63® Secretary.

| | | | | | |
|---|--|----------------------|------------------------------|--|--------------------------------|
| C63.10-2013 Learn more | Procedures for compliance testing of unlicensed wireless devices | SC 4 | Nixon, Jason | C63.10 PINS | Current. (published 9/15/2013) |
|---|--|----------------------|------------------------------|--|--------------------------------|

C63.10: C63.10-2013 American National Standard for Testing Unlicensed Wireless Devices

Contact: [Nixon, Jason](#) (Working Group Chair)

Scope: This standard is intended to cover procedures for testing the compliance of a wide variety of unlicensed wireless devices (also called unlicensed intentional radiators) including but not limited to: remote control and security unlicensed wireless devices, frequency hopping and direct sequence spread spectrum devices, anti-pilferage devices, cordless telephones, wireless medical unlicensed wireless devices, Unlicensed National Information Infrastructure devices, intrusion detectors, unlicensed wireless devices operating on frequencies below 30 MHz, automatic vehicle identification systems, and other unlicensed wireless devices authorized by a radio regulatory authority.

Status: Current.

Purchase: [IEEE Store](#). To purchase individual standards, go to the IEEE store and search on the standard number. Draft revisions are not yet available for sale.

Is this information correct? (yes)

There was a motion to distribute the draft C63.10 Ed. 3 to SC4 for comments after action items and clean-up. Discussion ensued. Occupied and Emission bandwidth were reversed in the slides, noted Dennis Ward. No objections or abstentions, the motion was approved. The revised draft will be circulated in January, 2018.

4.2 C63.26 – Licensed transmitters - Jones (insert link to [WG report](#)) Verify accuracy of document [status matrix](#) content and report any errors to the ASC-C63® Secretary.

| | | | | | |
|---|--|----------------------|------------------------------|--|-------------------------------------|
| C63.26-2015 Learn more | Procedures for compliance testing of licensed transmitters | SC 4 | Jones, Steve | C63.26 PINS | Published 1/15/16, new work pending |
|---|--|----------------------|------------------------------|--|-------------------------------------|

C63.26-2015: American National Standard of procedures for compliance testing of transmitters used in licensed radio services

Contact: [Jones, Steve](#) (Working Group Chair)

Scope: This standard covers the procedures for testing a wide variety of licensed transmitters; including but not limited to transmitters operating under Parts 22, 24, 25, 27, 90, 95 and 101 of the FCC Rules, transmitters subject to the general procedures in Part 2 of the FCC Rules and procedures for transmitters not covered in the FCC Rules. The standard also addresses specific topics; e.g., ERP/EIRP, average power measurements and instrumentation requirements.

Status: New Standard published 1/15/16. New work is pending.

Purchase: [IEEE Store](#). To purchase individual standards, go to the IEEE store and search on the standard number.

Is this information correct? (yes)

Art noted that the May target date for submission to SC4 was aggressive. Mr. Jones agreed, but believe it was possible, but the schedule might slip a bit.

4.3 C63.29 – Lighting equipment - Mendoza (insert link to [WG report](#)) Verify accuracy of document [status matrix](#) content and report any errors to the ASC-C63[®] Secretary.

| | | | | | |
|--|-------------------|----------------------|----------------------------------|-----------------------------|------------------------------------|
| C63.29-draft Learn more | Lighting products | SC 4 | Mendoza, Ernesto | C63.29 PINS | New standard. Draft being written. |
|--|-------------------|----------------------|----------------------------------|-----------------------------|------------------------------------|

C63.29-draft: American National Standard of procedures for compliance testing of lighting products

Contact: [Mendoza, Ernesto](#) (Working Group Chair)

Scope: This standard is intended to include procedures for compliance testing of general illumination lighting products with applicable radio regulatory requirements. This standard encompasses various technologies, from traditional lighting like fluorescent or HID, as well as novel technologies like LED and others. Related national and international standards (e.g., CISPR 15, ANSI C63.4) will be reviewed and used to the extent possible.

Status: New standard. Draft being written.

Purchase: Not yet available for sale.

Is this information correct? (yes)

4.4 C63.30 – Wireless Power Transfer equipment - Thul (insert link to [WG report](#)) Verify accuracy of document [status matrix](#) content and report any errors to the ASC-C63[®] Secretary.

| | | | | | |
|--|----------------------------------|----------------------|------------------------------|-----------------------------|------------------------------------|
| C63.30-draft Learn more | Wireless Power Transfer Products | SC 4 | Thul, Travis | C63.30 PINS | New standard. Draft being written. |
|--|----------------------------------|----------------------|------------------------------|-----------------------------|------------------------------------|

C63.30-draft: American National Standard of procedures for compliance testing of Wireless Power Transfer products

Contact: [Thul, Travis](#) (Working Group Chair)

Scope: This standard is intended to include procedures for compliance testing of several different types of Wireless Power Transfer (WPT) products with applicable electromagnetic compatibility (EMC) and radio regulatory requirements. Test procedures will focus on radiated field and conducted measurements and may reference established standards. WPT RF exposure compliance procedures will not be included, although standards pertaining to laboratory EMF safety may be referenced. WPT testing methods may consider, but are not limited to, large in-situ installations, charging systems for electric vehicles (including impact of host on electromagnetic fields), house-hold appliances, and desktop chargers. Consideration will also be given to appropriate testing distances and test locations (such as Semi-Anechoic Chambers, Open Area Test Sites, ground plane, and earth sites). Related national and international standards (e.g., CISPR, SAE, etc.) will be reviewed and used to the extent possible.

Status: New standard. Draft being written.

Purchase: Not yet available for sale.

Is this information correct? (yes)

4.5 C63.31 – ISM equipment - Walton (insert link to [WG report](#)) Verify accuracy of document [status matrix](#) content and report any errors to the ASC-C63[®] Secretary.

| | | | | | |
|--|----------------------|----------------------|-------------------------------|-----------------------------|------------------------------------|
| C63.31-draft Learn more | ISM equipment (MP-5) | SC 4 | Walton, Derek | C63.31 PINS | New standard. Draft being written. |
|--|----------------------|----------------------|-------------------------------|-----------------------------|------------------------------------|

C63.31-draft: American National Standard for compliance testing of Industrial, Scientific and Medical (ISM) Equipment

Contact: [Walton, Derek](#) (Working Group Chair)

Scope: This standard is intended to include procedures for compliance testing of traditional ISM equipment (industrial heaters, dielectric heaters, food tempering equipment, microwave ovens, medical diathermy equipment, etc.) with applicable EMC and radio regulatory requirements. Related national (FCC/OET MP-5) and international standards (e.g., CISPR, IEEE) will be reviewed and used to the extent possible.

Status: New standard. Draft being written.

Purchase: Not yet available for sale.

Is this information correct? (yes)

Mr. Heirman asked that the WG chairs include a full title of their document, such as "C63.31 - ISM Equipment."

AI-9: All SC4 Working Group Chairs are to include the full title of their document on their report Title slides.

4.6 Below 30MHz Task Group - DeLisi ([TG report](#))

5. Other Old Business: Chair

Written reports of this Subcommittee meeting shall be presented by the Subcommittee Chair at the Main Committee meeting. These reports shall be made using the [PowerPoint template](#). Prior to the Main Committee meeting, the [SC report](#) and [approved previous meeting minutes](#) shall be provided to the projectionist for showing on the screen at the Main meeting. The Presentation and any written SC report shall also be sent by the Subcommittee Chair to the ASC-C63[®] [Newsletter editor](#).

6. New Business: Chair - none

7. [C63.org](#) website use and updates: Secretary - We normally post documents to the [SC4 protected area](#). If any SC or WG needs help with this posting, a Technical Secretary is available to assist.

8. Review of the Action Items: Secretary

8.1 Review of Action Items from previous meeting: The previous meeting consolidated Action Item list is shown below:

Consolidated Action Items from 05/10/17 Meeting of SC4

| Action Item # | Subject | Responsible Person(s) | Status | Delivery Date | Comments |
|---------------|--|-----------------------|--------|---------------|-----------|
| AI-5: | Send edited SC4 Scope to Shannon for posting. | Jerry Ramie | Closed | 11/8/17 | Sent 5/24 |
| AI-6: | Add PINS and Status Matrix review to the next SC4 generic agenda | Jerry Ramie | Closed | 11/8/17 | |

8.2 Review of Action Items from this meeting: Secretary - The Action Items from this meeting were shown and agreed upon.

9. Time and place of next meeting: Chair - 4/30/18 - 5/4/18 @ IEEE Piscataway, NJ.

10. Closing remarks and Adjournment: Chair - The Chair thanked ETS-Lindgren, Zhong and Janet for allowing us to meet at their facility. Appreciation was shown to the WG Chairs. Don noted that he appreciated the support he had received during his term. The meeting was adjourned at 9:36 AM-CST.

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

Consolidated Action Items from 11/8/17 Meeting of SC4

| Action Item # | Subject | Responsible Person(s) | Status | Delivery Date | Comments |
|---------------|--|-----------------------|--------|---------------|--------------|
| AI-7: | Jerry to send a letter to members still at risk after this meeting. (Mike Howard, Dan Pino, Werner Schaefer, Steve Whitesell) Jerry to | Jerry Ramie | Closed | 5/16/18 | Sent 12/1/17 |

| | | | | | |
|-------|--|------------------------------|--------|---------|----------------|
| | copy the form letter to Dave Zimmerman. | | | | |
| AI-8: | Jerry to add Mike Antola to the SC4 roster | Jerry Ramie | Closed | 5/16/18 | Added 11/30/17 |
| AI-9: | All SC4 Working Group Chairs are to include the full title of their document on the report Title slide | All SC8 Working Group chairs | Open | 5/16/18 | |