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American National Standards Committee C63

Electromagnetic Compatibility

Secretariat: Institute of Electrical and Electronics Engineers, Inc.

NEWSLETTER

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MESSAGE FROM THE CHAIR

Daniel D. Hoolihan, Chairman ANSC C63

This C63 Newsletter covers the first six-months of the calendar year 2021.

There were no Face-to-Face (F2F) meetings of the C63 Main Committee during January – June 2021 due to the continuing COVID-19 Pandemic. The last F2F meeting of the Main Committee of the “C63-Committee” was held in Santa Rosa, California at the Keysight Technologies facility. The meetings were held from Monday (November 18th) through Thursday (November 21st), 2019.

We are presently planning on having a F2F meeting of the Subcommittees and the Main Committee at the IEEE Operations Center the week of November 15-19, 2021. This is dependent on the IEEE Operations Center fully opening and the continued retreat of the COVID-19 Pandemic.

C63.10 (*American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices*) was published on the 11th of January 2021. It is a full revision of the 2013 version of the standard. Also, C63.24 (*American National Standard – Recommended Practice for In Situ RF Immunity Evaluation of Electronic Devices and Systems*) was published on March 31st, 2021. It is a new standard for the C63 Committee.

Progress continued on selected C63 standards using Working Group meetings via Webex for the first six months of 2021.

C63 Steering Committee

The Steering Committee has met electronically twice in 2021; March 18th and June 30th. A number of recommendations were made to the Main Committee via Motions from the Steering Committee. The Minutes of the Steering Committee were distributed to the members of the Main Committee.

The Steering Committee decided to use the following name for our committee until we have a full discussion of the topic at the November 2021 Main Committee Meeting. The name we are using is: **American National Standards Committee C63.**

Petitions have been sent to the FCC to adopt (1) C63.10-2020 and (2) C63.25.1-2018. We are waiting for the FCC to act on those petitions.

The next meeting of the Steering Committee is scheduled for September 30th, 2021, at 2 PM (EST).

United States EMC Standards Corporation

The U. S. EMC Standards Corporation became an ANSI-Accredited Standards Developer effective 1 January 2021. This was part of the process of ANSI no longer having the category of an “ANSI-Accredited Standards Committee” that was announced in early 2020.

Two new members were added to the Board of Directors of the USEMCSC: Bob DeLisi and Zhong Chen. They replaced the deceased Don Heirman and Herb Mertel. They join the existing Board Members – Janet O’Neil,

Dan Sigouin, Mike Violette, Mike Windler, and Dan Hoolihan.

C63-Committee standards will continue to be both ANSI and IEEE designated standards; the double-branding of C63-Committee standards will continue as it has in the past. A contract between the USEM CSC and the IEEE Standards Association for Professional Services for the C63 Committee (primarily Secretariat Services) for 2021 was signed on 11 January 2021.

Subcommittee 1

Techniques and Development

Zhong Chen (ETS-Lindgren), Chair.

Subcommittee 1 has been meeting every month for the past year on the SC1 votes relating to calibration laboratories for performing antenna calibration. They are looking at discussing the wording of “how to reference to calibration” and its relevance to the standard. Regarding moving forward in other areas, they are waiting on progress of C63.25-2 to discuss moving on with relevant changes to C63.4. The subcommittee will also need to ensure that correct elements are defined for antenna calibration about the updated C63.5 which will need to include harmonizing with C63.25.2 for requirements on site validation related to C63.25.-2. Revision of ANSI C63.2:2016 continued the 15th of April 2021 when a first draft was discussed with confirmed changes to update the references to CISPR 16-1-1 from Edition 3.2 (2014) as well as align CISPR 16-1-1:2019 where applicable. A task force was formed on C63.2 to address the need for adding RMS detection mode and RBW (-3dB). A working group is also addressing harmonizing the family of C63.25 standards which includes: C63.25.1 (1 GHz to 18 GHz) TDR – Published Dec 2018, C63.25.2 (30 MHz to 1000 MHz) NSA and C63.25.3 18-40 GHz. A new draft of C63.25 standards will identify them as the sole responsibility for site validations.

New versions of C63.4 and C63.5 are supporting documents on site validation and will defer to C63.25.x (x = 1, 2, and 3) for site related requirements.

SC1 is still seeking a working group chair for C63.7.

Subcommittee 2 **Definitions**

Marcus Shellman, Jr., Chair.

ANSI C63 SC2 reached quorum on 21 June 2021 at their meeting where they proposed a new scope to SC2 that would include the first scope of: “Subcommittee 2 (SC2) is responsible for developing electromagnetic environmental effects (E3) definitions and terminology for C63[®] publications, and harmonizing its usage with U.S. national, federal government, and international standardization bodies. SC2 is also responsible for developing best practices guidance for implementation and application of C63[®], commercial, and U.S. military electromagnetic compatibility (EMC) standards.” A second scope would read “Subcommittee 2 (SC2) is responsible for developing electromagnetic environmental effects (E3) definitions and terminology for C63[®] publications, and harmonizing its usage with U.S. national, federal government, including the U.S. military, and international standardization bodies. SC2 is also responsible for developing best practices guidance for implementation and application of C63[®], commercial, and U.S. military electromagnetic compatibility (EMC) standards.” In addition to these changes, SC2 WG1 completed IEEE Pre-Ballot Mandatory Editorial Coordination (MEC) review of C63.14-20XX. The secretariat is resolving copyright issues with SAE for two definitions, the ANSI C63.19-20XX Definitions for ‘Net Power’ and ‘Reflected Power.’ Balloting is tentatively scheduled for some time in the next 3-6 months.

The SC2 WG 2 has been meeting monthly to develop a draft of C63.28 revision 1.42 with a tentative finish time for an initial draft before the end of the year.

Subcommittee 3 **International Harmonization**

Ross Carlton, Chair

At the SC3 meeting held on May 26, 2021, Ernesto Mendoza was appointed Vice-Chair of SC3. The group also reviewed and consolidated their reports and determined that no maintenance or reaffirmation was needed for C63.12. They did hold extensive discussion on the purpose of Subcommittee and the appropriateness of existing processes. From this they established an SC3 process task group that will be responsible for reviewing SC3 scope and duties. They are looking at process flow charts and guidance to SCs and WGs and working on improving connections with USNC technical experts. The SC also reviewed the PINS for revision of C63.16 Harmonization potential. Any recommended changes will be forthcoming. Their next meeting is on August 25, 2021.

Subcommittee 4 Wireless and ISM **Equipment Measurements**

Bob DeLisi (UL), Chair

SC4 met virtually on May 27, 2021, it was attended by 22 members. The main purpose of the meeting was to update the members on current subcommittee activities of the working group reporting to SC4. The working group on C63.10:2020 reported that they are still awaiting FCC response to the C63 petition to adopt the new version. The new PINS for a corrigendum to C63.10 were approved. Jason Nixon will lead efforts to create the document. There was also a reminder of need for corrigendum: fix a formula error for UWB center frequency calculation and to align requirements on LISN extension cords that currently conflict in two different sections and correction for pulse desensitization formulas. Work continues editing new revision of the Standard for C63.26. They are finishing the scrubbing of the use of the should or shall verb tense within the standard. They need to format the vehicular radar procedure into ANSI format and insert into the standard. Amongst other editorial changes, the group plans to compare the current draft of C63.26 against C63.4 / C63.10 before allowing the standard to go to ballot later this year. C63.29 reported a completed draft to be sent out to the WG members for final

comments. They hope to also have this standard ready to go to ballot later this year. WG Meeting highlights C63.30 has completed all IEEE editing. They have a target publication date of July 11, 2021. C63.31 Changed test methods referenced to ANSI C63.4 for AC and Radiated emissions with only minor modifications as well as assigning tasks to WG members to work on AC LC EMI section. This leaves radiated emissions and exploratory radiated emissions and then a last and a final pass through the document for comments, definitions, references, etc., before balloting in the first part of 2022. In addition, the Massive MiMO measurement distance (PINS-C) group is continuing to meet. Their efforts are focused on how to determine how to address the near / far field separation distance for determining compliance for systems using beam forming Massive MiMo antennas with mmW systems when that distance is larger than available test distance available. The issue is due to the minimum wavelength determined based on the antenna beam forming design and impact on near /far field effects. Testing has been started by members of the working group and a white paper is being developed to provide some guidance and further discussion points for future standards groups to consider. Task group hopes to get this complete by early 2022. The next virtual meeting of SC4 will be held on September 9, 2021, from 2:00PM - 4:00PM EDT.

Subcommittee 5 Immunity Testing **Ed Hare (ARRL), Chair**

Subcommittee 5 met on June 3. C63.9 was confirmed to continue to be used. The PINS on C63.16 appeared in Standards Action on 23 July 2021 with a response end date to make changes of 22 August 2021. In addition, SC5 published C63.24 on 24 March 2021. No interest was expressed by SC5 in the C63.12 standard.

Subcommittee 6 **Laboratory Accreditation/ Conformity** **Assessment**

Randy Long (ANSI National Accreditation Board - ANAB), Chair

Working Group 4 of Subcommittee 6 is resolving comments in an effort to bring ANSI C63.34 to publication and will provide organizations with guidance to effectively communicate technical

requirements to both purchasing staff and selected service providers to ensure the appropriate product or services are received. A number of examples are in development to effectively convey technical requirements to purchasing staff in order to ensure purchased services or equipment are fit for use or appropriately tested or calibrated meeting their Accreditation/Conformity Assessment obligations.

Subcommittee 7 **Spectrum Etiquette**

Jason Coder, Chair

In the spring of 2021, the Subcommittee 7 changed its scope as approved by the steering committee as well as the main committee. It will now read as, *“Subcommittee 7 develops standards addressing spectrum etiquette, wireless coexistence, and related technical fields to provide new or amended measurement techniques to support efficient spectrum utilization. This scope includes areas related to coordinated or uncoordinated spectrum sharing schemes and dynamic spectrum access.”* The committee’s duties will remain the same covering

C63.17 – American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices and C63.27 – American National Standard for Evaluation of Wireless Coexistence. The committee’s work on C63.17 in the past year has included having its status recently reaffirmed. New PINS may be developed to update to 5G. C63.27 Revision to C63.27 is in balloting. The MEC review is complete, and a ballot group has been formed of 16 members. The draft should be distributed soon.

Subcommittee 8 **Medical Equipment Testing**

Stephen Berger (TEM Consulting, LP), Chair

Two of SC8’s standards are stable at this time (C63.18, C63.19. A new standard – C63.33 – Immunity to EAS Systems is being worked on. The SC had a meeting in March - no meeting was held second quarter of 2021.



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Any questions about the Newsletter should be addressed to: Bridget Hoolihan, Editor (bhoolihan@gmail.com)

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