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Accredited Standards Committee C63®

Electromagnetic Compatibility

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NEWSLETTER

Issue 42 July 2018

MESSAGE FROM THE CHAIR Daniel D. Hoolihan, Chairman ANSI-ASC C63[®]

ANSI-ASC C63 $^{\ensuremath{\circledast}}$ on EMC – Series of Meetings in Piscataway, New Jersey

The "C63[®] Committee" met the week of April 30 – May 4, 2018 at the IEEE Operations Center in Piscataway, New Jersey. The first part of the week a number of working groups met, Wednesday and Thursday the eight subcommittees of the Main Committee met, and the Main Committee Meeting was held on Friday, May 4th.

The Working Group meetings were well attended with an average attendance of about 25 people. The WG meetings were heavily-oriented around wireless topics on Monday and more general topics on Tuesday.

Our principal contact at the IEEE was Jennifer Santulli and she was an excellent host. The lunches were well presented and there was a light breakfast each day as well as refreshments throughout the day. Jennifer is also our main contact representing the Secretariat (the IEEE) of our Committee. Although she is new to the C63[®] Committee; she is a fast learner and is representing the IEEE in a professional and efficient manner.

We had the opportunity to wish Art Wall a combination retirement and birthday celebration on Tuesday, May 1st. He turned 75 years old and we enjoyed a birthday cake and song in the afternoon. The TCB Council will be represented by Bill Graff going forward as Art and his wife, Hanna, continue their Recreational Vehicle tour of North America!

Awards were given on Friday morning at the Main Committee meeting. The Awards were primarily for the publication of C63.4a and C63.15. The C63.4a document amended the classic C63.4 standard on test methods and was the first Amendment in the history of the "C63[®] Committee."

The C63.15 document revised an earlier version of this "American National Standard Recommended Practice for the Immunity Measurement of Electrical and Electronic Equipment."

See the pictures in another section of this newsletter for more details on the awards that were given at the meeting.

The Main Committee meeting was well attended with approximately 90% of the members of the committee in attendance. Reporting by the Subcommittee chairs on their activities was a key part of the Main Committee meeting. Special emphasis on Patents and the ANSI Patent Policy was part of the Main Committee happening highlighted by an illuminating presentation on patents by Art Wall.

The Meeting concluded at approximately 2 pm in the afternoon.

The next meeting of the "C63[®] Committee" will be November 26-30, 2018 at NIST-Boulder in Colorado. The NIST personnel are interested in hosting us and it will give them an opportunity to show us their new technical and administrative facilities.



C63[®] Main Committee meeting May 4, 2018, IEEE Headquarters, Piscataway, NJ. Chairman Dan Hoolihan presiding.

AWARDS PRESENTED

Awards were presented to the following individuals for their outstanding standards contributions.

Those not pictured here that received an award for their service on the C63.4a working group: Technical Editor - Horia Popovici Special Editor - Tim Harrington Major Technical Contributor - Werner Schaefer

All photos below were provided by Jerry Ramie

Don Heirman - for his service as Chair of the C63.4a working group:



Dan Hoolihan - Hoolihan EMC Consulting (left) presenting to Don Heirman - Don HEIRMAN Consultants, LLC (right)

Harry Hodes - for his service as Vice-chair of the C63.4a working group:



Dan Hoolihan - Hoolihan EMC Consulting (right) presenting to Harry Hodes - Bay Area Compliance Laboratory Corp. (left)

Jerry Ramie for his service as Secretary of the C63.4a working group:



Dan Hoolihan - Hoolihan EMC Consulting (right) presenting to Jerry Ramie - ARC Technical Resources (left)

Zhong Chen for his service as a Major Technical Contributor of the C63.4a working group:



Dan Hoolihan - Hoolihan EMC Consulting (left) presenting to Zhong Chen - ETS-Lindgren (right)

Robert DeLisi for his service as a Major Technical Contributor of the C63.4a working group:



Dan Hoolihan - Hoolihan EMC Consulting (left) presenting to Robert DeLisi – UL - LLC (right)

... Awards Continued

Those not pictured here that received an award for their service on the C63.15-2017 working group: Technical Editor- Tim Harrington Major Technical Contributor - Rick Lombardi Major Technical Contributor - Mark Terrien

Don Heirman - for his service as Chair of the C63.15-2017 working group:



Dan Hoolihan - Hoolihan EMC Consulting (right) presenting to Don Heirman - Don HEIRMAN Consultants, LLC (left)

David Zimmerman - for his service as Vice-chair of the C63.15-2017 working group:



Dan Hoolihan - Hoolihan EMC Consulting (left) presenting to David Zimmerman – Spectrum EMC, LLC (right)

Jerry Ramie for his service as Secretary of the C63.15-2017 working group:



Dan Hoolihan - Hoolihan EMC Consulting (left) presenting to Jerry Ramie - ARC Technical Resources (right)

Harry Hodes – for his service as a Major Technical Contributor of the C63.15 working group:



Dan Hoolihan - Hoolihan EMC Consulting (right) presenting to Harry Hodes - Bay Area Compliance Laboratory Corp. (left)

Jeffrey Silberberg – for his service as a Major Technical Contributor of the C63.15 working group:



Dan Hoolihan - Hoolihan EMC Consulting (right) presenting to Jeffrey Silberberg - Food and Drug Administration (left)

Birthday Celebrated

Art Wall celebrates his 75th birthday with his colleagues and shares some words with the C63 Main Committee.



From left to right – Art Wall, Dan Hoolihan, Jeffrey Silberberg, and Jennifer Santulli



Art Wall takes the cake, with Janet O'Neil in the background.

From left to right – Art Wall, Janet O'Neil

Subcommittee 1 <u>Techniques and Development</u>

Zhong Chen (ETS-Lindgren), Chair



Subcommittee 1 meeting – Janet O'Neil ETS-Lindgren (left), Zhong Chen-ETS-Lindgren (right)

SC1 reapproved its scope, membership and duties at the Main Committee meeting. SC1 duties include:

C63.2: Electromagnetic Interference and Field Strength Measuring Instrumentation in the Frequency Range 9 kHz to 40 GHz

C63.4: American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

C63.5: American National Standard for Electromagnetic Compatibility--Radiated Emission Measurements in Electromagnetic Interference (EMI) Control--Calibration and Qualification of Antennas (9 kHz to 40 GHz)

C63.7: Guide for Construction of Test Sites for Performing Radiated Emission Measurements

C63.22: Guide for Automated Electromagnetic Interference Measurements

C63.23: American National Standard Guide for Electromagnetic Compatibility—Computations and Treatment of Measurement Uncertainty

C63.25.1: American National Standard: Draft Standard for Validation Methods for Radiated Emission Test Sites, 1 GHz to 18 GHz

Standards Activity

C63.2: The standard was published in 2016. The working group is currently not actively working on a new edition. One of the issues, which was raised during the balloting stage, is limiting the frequency range to 9 kHz instead of 10 Hz in C63.2 (due to the reference to C63.2 in MIL-STD461). The reasons are:

The previous version, C63.2-2009, does indeed state in its title the frequency range 10 Hz to 40 GHz. However, Table 1 only calls out actual specifications from 9 kHz to 40 GHz.

In clause 3.1 C63.2-2009 states: "The existing requirements for the low-frequency band, from 10 Hz to 20 kHz (as specified in ANSI C63.2-1996, Clause 5 and Figure 1), shall be maintained. The characteristics in this range are the same as shown in Clause 9 of CISPR 16-1-1:2003."

Clause 5 of C63.2-1996 states: "The frequency range of individual instruments may cover any portion of the overall frequency range and may tune below 10 Hz or above 40 GHz.

...Techniques and Development Continued

Based upon user applications and radio-frequency spectrum use, it is suggested that individual instruments cover one or more of the following ranges:

a) 10 Hz–20 kHz

- b) 10–150 kHz (0.150 MHz)
- c) 0.150–30 MHz
- d) 30–1000 MHz (1 GHz)
- e) 1–18 GHz (or 1–40 GHz)

Figure 1 of C63.2-1996 relates to the definition of a quasipeak detector in the frequency range 10 Hz–20 kHz (similar to the quasi-peak detector definition for CISPR Band B). The intended use is for measurements of interference from power lines around the mains frequency.

CISPR 16-1-1:2003 Clause 9 defines an Audio-Frequency Voltmeter with a psophometric filter.

The omitted specifications did not support MIL-STD 461x measurements other than stating that an instrument needs to cover the frequency range 10 Hz to 20 kHz.

C63.4: The working group is working on the next release of the standard (with PINS approved in November 2017). At November 2016 working group meeting, three teams were formed for certain clauses:

Team 1 (Clauses 1 to 5)-Don Heirman leader

Team 2 (Clauses 6 to 11) —Horia Popovici leader Team 3 (Clauses 12 & annexes) — Tim Harrington Working group also started with checking the use of "shall" and "should" for normative/informative clauses. Each team has held webinars approximately monthly. The working group chair, Don Heirman, estimated that presently 95 percent of the work has been completed. At the working group meetings in May 2018 in Piscataway, the working group presented a combined version of the draft to date, and discussed further changes as needed. The draft also included considerations of all interpretation requests received by the C63 committee. The working group is preparing a draft copy to ballot, targeting by the next in person meetings of C63 in November 2018. The target publication of a new C63.4 standard is in 2019.

C63.5: There is a corrigendum for C63.5, which has been balloted. The corrigendum addresses an issue related to the attenuator requirements connected to the antennas during antenna calibration. Comments were received and addressed.

The working group is defining requirements for sites (SIGNIFICANT debate) regarding loop update, time gating clarification and general edits.

The C63.5 Working Group chair, Doug Kramer, indicates that the group is trying to get a draft for Working Group review by the end of November 2018.

C63.23: C63.23 is currently 5 years old. There is an active PINS initiated by Jason Nixon. However, there is currently no active working group. Therefore, SC1 has motioned that C63.23-2012 Measurement Uncertainties be reaffirmed without changes.

C63.25.1: The C63.25.1 draft standard is the first document for an intended family of C63.25 standards. The family of C63.25 standards will include:

C63.25.1 (1 GHz to 18 GHz) Site VSWR (SVSWR)/Time Domain Site VSWR (TD SVSWR)

C63.25.2 (30 MHz to 1 GHz) Standalone site validation document for 30 MHz to 1 GHz, namely Normalized site attenuation, which is currently part of C63.4 standards.

Future plan for < 30 MHz and > 18 GHz C63.25.2 PINS is current, and work on C63.25.2 will begin once C63.25.1 is published. The draft C63.25.1 has gone through the IEEE Mandatory Editorial Coordination (MEC) process. The Working Group for C63.25.1 has just finished a ballot circulation as of June 2018. The balloting group consists of 19 members. The draft passed the ballot, and the working group is reviewing comments received. Publication of C63.25.1 is imminent.

Subcommittee 2 - Definitions

Marcus Shellman (DOD – Joint Spectrum Center (JSC), Chair.



Subcommittee 2 meeting – Marcus Shellman - DOD – Joint Spectrum Center (JSC) (right), Chris Dilay - SPAWAR - US Navy (center), Michael Duncanson - DOD – Joint Spectrum Center (JSC) (left)

ANSI C63[®] SC2 held its committee on 2 May 2018. SC2 Working Group 1 is approaching the 5-Year update deadline for ASC C63.14 revision. The cut-off date for new submissions is August 2018. SC2 Working Group 2 has revised the PINS for ASC C63.28 which focuses on best practices for the application and use of C63[®] standards. The working group has prepared a draft document with completion of a final draft expected by the spring of 2019.

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<u>Subcommittee 3</u> -<u>International Standardization</u>

Don Heirman (Don Heirman Consultants), Chair

The May 2018 SC/3 meeting was very busy reviewing the status of the C63 standards and those being prepared and their comparison with international standards of similar scope (See tables 1 and 2 below, respectively). This is done at all its meetings to determine which of the topics are needed internationally or may exist in part in international standards. The goal is to reduce duplication and yet foster the introduction of material from C63 standards into IEC EMC standards. The major IEC committees considered in these comparisons are those of the Special International Committee on Radio Interference (CISPR) and TC 77 on EMC.

As this was the first full meeting of SC/3, the membership, scope and duties had to be reviewed and approved. What follows shows the approved versions of the three tasks.

Member	Role within Subcommittee 3	Affiliation
Berger, Stephen	Chair Subcommittee 8	TEM Consulting
Bazhanov, Vladimir	Chair Subcommittee 7	VB Laboratory Services, LLC
Griffin, Andy	Member	CISCO Systems
	CISPR/H Technical Advisor	-
Hare, Ed	Chair Subcommittee 5	ARRL
Heirman, Don	Chair Subcommittee 3; Past	Don HEIRMAN Consultants
	Chair CISPR;	
	CISPR/A Deputy Technical	
	Advisor	
Hodes, Harry	Member	Bay Area Compliance
		Laboratories Corp.
<u>Hoolihan, Dan</u>	Chair C63 [®]	Hoolihan EMC Consulting
Klinger, Jeff	Member	Compatible Electronics
Kramer, Doug	Member	ETS-Lindgren
Long, Randy	Chair Subcommittee 6	ANSI-ASQ National
		Accreditation Board (ANAB)
Popovici, Horia	Member	Innovation, Science and
		Economic Development
		Canada
Potts, Nate	Member	Keysight Technologies
Samoto, Mits	Member	Liberty Labs Asia
Shellman, Marcus	Chair Subcommittee 2	SPAWAR
Schaefer Werner	Member, Vice Chair of	Schaefer Associates
	Subcommittee 3	
	CISPR/A Technical Advisor	
<u>DeLisi, Bob</u>	Chair Subcommittee 4	UL LLC
	Non-Voting Members	5
Arnett, Dave	Liaison Member	HP
	CISPR/I Technical Advisor	
Fanning, Craig	Liaison Member	Elite Electronic Engineering
	CISPR/D Technical Advisor	
Hofmann, H.R.	Emeritus Member	Hofmann EMC Engineering
(Bob)		
Jones, Steve	Liaison Member	FCC Laboratory
Mahn, Terry	Liaison Member	Fish and Richardson
	CISPR/B Technical Advisor	
Cibulka, Michael	Liaison Member	Rockwell Automation
	TC77 & SC77B Technical	
	Advisor	
Mendoza, Ernesto	Liaison Member	Philips Lighting Electronics
	CISPR/F Technical Advisor	NA

Subcommittee 3 Membership Roster

Scope

Subcommittee 3 provides a forum for comparing international standards activities to ASC C63® membership standards activities and makes recommendations to the C63® Main Committee on possible US positions on international EMC matters, to facilitate harmonization of national and international standards, considering US regulatory as well as commercial requirements. Subcommittee 3 may make recommendations to the C63® Main Committee about introducing the work of C63® to the US National Committee Technical Advisory Groups for submission to international standards committees.

Duties

SC 3 shall review international EMC standards for technical issues that may affect C63[®] membership standards development. These reviews may lead to recommendations for action by C63[®] to promote harmonization of C63[®] standards with international standards. Via the SC 3 liaison representatives of the USNC TAGs for international standards organizations with EMC activities (e.g., CISPR, TC77, ISO), information is shared in both directions with the following expectation:

To take action in the form of recommendations to the parent committee (C63®) of possible US positions on international EMC matters with the focus of striving for harmonization of national and international standards, considering US regulatory as well as commercial requirements. Conversely, recommendations can be made to the parent committee for introducing the work of C63® to the USNC TAGs.

Maintain ANSI C63.12 - American National Standard Recommended Practice for Electromagnetic Compatibility Limits and Test Levels

Tables 1 and 2 follow as presented in the introduction. Red font simply shows the changes and additions that were added to the tables as a consequence of the SC/3 meeting.

Current Status of C63 Standards - Publication status of the C63 documents are shown below in Table 1. This was done to determine the appropriate time to review in more depth their content with that of international equivalents to lead to harmonization where possible.

 Table 1: Status of C63[®] Standards with possible input to

 CISPR/TC77 via US National Committee TAG

C63 Standard	Publication status	
C63.2 (Schaefer)	Published in 2016	
C63.4 (Heirman)	Published in 2014; PINS approved for	
	next full revision	
C63.4a (Heirman)	Published in 2017	
C63.5 (Kramer)	Under revision	
C63.9 (Heirman/Griffin)	2008 edition; PINS approved.	
C63.10 (Nixon)	Under revision	
C63.15 (Heirman)	Published in 2017	
C63.23 (DeLisi)	2012 edition current - not under revision	
Draft C63.24 (Heirman)	Draft standard (joint task with IEEE 473):	
C63.25 (Sigouin)	Draft standard under preparation	
C63.26 (Jones)	2013 edition under revision	
C63.27 (Berger)	Published in 2017	
Draft C63.28 (Dilay)	Draft standard under preparation	
Draft C63.29 (Mendoza)	Draft standard under preparation	
Draft C63.30 (Thul)	Draft standard under preparation	
Draft C63.31 (Walton)	Draft standard under preparation	

...Techniques and Development Continued

Table 2: Comparisons

C63® Document	SC number	Short Subject	International Documents with subjects that are similar to the C63 documents in column 1
C63.2	SC1	Test Instrumentation	CISPR 16-1-1
C63.4	SC1	Measurements	CISPR 16-1-4, CISPR 16-2-1, CISPR 16-2-2, CISPR 16-2-3, CISPR 16-2-5, CISPR 32
C63.5	SC1	Antenna Calibration	CISPR 16-1-6; SAE ARP 958; CISPR 16-1- 4, CISPR 16-1-5
C63.9	SC5	Office Equipment Immunity	IEC 61000-4-39, IEC 61000-4-3, IEC 61000- 4-20, IEC 61000-4-21
C63.10	SC4	Unlicensed Transmitters	ETSI 300 220, EN 300 330, EN 300 440, EN 300 328, EN 301 893, etc
C63.15	SC5	Immunity	IEC 61000-4-x; CISPR 35, IEC 60601-1-2
C63.16	SC5	ESD	IEC 61000-4-2; ISO 10605; SAE J1113-13
C63.23	SC1	Uncertainty	CISPR 16-4-2; 16-1-4,
C63.24 draft	SC5	Generic On-site Meas.	CISPR 16-2-5, IEEE 473; CISPR 11;
C63.25.1	SC1	Site Validation Methods	16-1-4, 16-1-5 (1- 18GHZ)
C63.25.2	SC1	Site Validation Methods	16-1-4, 16-1-5 (30MHz - 1GHz)
C63.26	SC4	Licensed Transmitters	ETSI wireless requirements
C63.27	SC7	Co-existence	IEC 62657-2
C63.28 draft	SC2	Best Practices	No equivalent;
C63.29 draft	SC4	Lighting products	CISPR 15; Runway lighting under IEC 61827
C63.30 draft	SC4	Wireless Power Transfer Products	Draft amendments to CISPR 11, CISPR 14-1, CISPR 32; update to CISPR 12, CISPR B 698/DC, SAE J2954 (send mins. to SC Chairs)
C63.31 draft	SC4	ISM equipment (FCC MP-5)	CISPR 11; CISPR 14-1 induction cooking; CISPR 16-2-5

Note that column 2 shows the responsible C63[®] SC for the shown standards.

The subcommittee has agreed to meet four times each year. The face to face meetings are roughly 6 months apart. In between the face to face meetings there is a webinar meeting. All the meetings have webinar access. Those wishing to listen in and contribute should contact the secretary on jramie@arctechnical.com

The next SC3 meeting is a webinar on 19 September 1:30 to 3:30 pm ET (2 hrs.)

Subcommittee 4 - Wireless and ISM Equipment Measurements

Bob DeLisi (UL-LLC), Chair

SC4 reapproved its scope, membership and duties at the Main Committee meeting. SC4 duties include:

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

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

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

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

C63.31: draft: American National Standard for compliance testing of Industrial, Scientific and Medical (ISM) Equipment <u>Standards Activity</u>

C63.10: The WG reviewed all technical comments received on the latest draft. The group also discussed the use of duty cycle correction of protocol limited devices related to spurious emissions. It was noted that the spurious emissions need to be directly related to the time domain profile of the fundamental and the emission must be in a restricted band. Other signals cannot use the same measurement technique.

The group briefly discussed what to do about test sites above 18GHz. This is still outstanding but it is noted especially with testing required well above 40GHz that we start to look at such requirements. The discussion also included if the site is the issue or if we need to focus on items such as test equipment and fixturing, etc. This will need to be discussed further and determine where the work belongs since it impacts C63.10, C63.26 and C63.31.

The target for the completed draft is the beginning of August. It will be sent to SC4 for vote to gain approval from SC4 to send to the main committee to form a balloting group and for main committee to approve.

C63.26: The Working Group chair, Steve Jones, asked the group if there has been any knowledge of test labs using the first edition of C63.26 as it was recently incorporated by reference as an option to TIA-603. It was noted that the use is increasing and it was also noted that ISED currently only recognizes C63.26 for use when testing licensed devices.

The working group discussed the topic of test reduction. This is in preliminary stages and should the group decide to address the issue the outcome would be guidance ways that test labs can determine what testing can be reduced but at this time it would be limited to technologies that are well known. This discussion is ongoing and will also tie in C63.10 for the same issues.

...<u>Techniques and Development</u> Continued

The working group added a new topic to the scope of the current draft. The new clause will address Vehicular Radar in the 76-81GHz band. A new task group was formed to address testing for these devices.

Work that has been progressing and soon to be included in the draft – mmWave (expected by June), Radiated Emissions (completed), Signal boosters (completed), MIMO (completed)

Proposed schedule - Will finalize and incorporate new procedures and revised text into standard for WG review by Nov 2018 face-to-face, with intent to submit for SC review in late 2018 or early 2019

C63.29: The Working Group continued edits of the draft standard. The Working Group Chair, Ernesto Mendosa, gave an overview of LiFi and how it operates. The Working Group will be reviewing the operation and determine what parts of the system will be included in the scope of C63.29.

Schedule – goal is to have a draft to SC4 by next face-to-face meeting.

C63.30: The group is working on test procedures to compare the Large Loop Antenna System to the tradition shielded loop antenna. Of importance in the comparison is the creation of transmit loop that exhibits low resonances. Part of this effort has resulted in two transmit coils being developed. For measurements below 9MHz the 30cm loop will be used and above 9MHz the 10 cm loop will be used. This will remove any major resonance issues seen with the 30cm loop above 9 MHz.

Testing of the small loop (60cm) compared to the LLAS will start once TX loop work is completed which is targeted to be completed within a couple of months.

Schedule – Goal is publication in 2019

C63.31: The Working Group is continuing to work on the current draft included is new text for testing of ISM equipment at locations other than a standard or alternative test site (on-site and/or in-situ).

Wireless Power Transfer test procedures for devices operating above 22kW were discussed but this will be held until the next edition.

It should be noted that this group is also dependent on the work being performed in C63.30 with regards to test sites below 30MHz.

Schedule – draft to SC4 by mid-2019 and publication in 2020.

Subcommittee 5 - Immunity Testing

Ed Hare (ARRL – The National Assoc. for Amateur Radio), Chair

No article was submitted for this edition of the newsletter.

Subcommittee 6 Laboratory

Accreditation/ Conformity Assessment

Randy Long (Laboratory Accreditation Bureau), Chair



Subcommittee 6 meeting–Randy Long - ANSI-ASQ National Accreditation Board (ANAB)

Working Group 4 of Subcommittee 6 is drafting ANSI C63.8 to provide organizations with guidance to effectively communicate their 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

Vladimir Bazhanov (VB Laboratory Services), Chair

The scope of C63[®] SC7 states that "Subcommittee 7 develops standards addressing spectrum etiquettes, wireless coexistence and related standards to provide new or amended measurement techniques, protocols or methods and associated instrumentation and operational constraints supporting more efficient spectrum utilization, including dynamic spectrum access". SC7 is responsible for two ANSI standards: (1) C63.17 - American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices; (2) C63.27 - American National Standard for Evaluation of Wireless Coexistence. The scope and duties were reviewed and approved at the recent face-to-face meeting in Piscataway, NJ, in May 2018. At the time SC7 consists of 17 members. It is chaired by Vladimir Bazhanov. The Vice Chair is Stephen Berger. The membership roster of the Subcommittee may be found at http://www.c63.org/documents/rosters_public/sc7_members.htm The recent product developed by the subcommittee is "American National Standard for Evaluation of Wireless Coexistence". It was published on May 11, 2017. The standard specifies methods for assessing the wireless coexistence of equipment that incorporates radio-frequency communications. Key functional wireless performance indicators are used to quantify the ability of the equipment under test to coexist with other equipment in its intended operational environment. The evaluation procedures, test methods and other guidance are provided. Historically the working group consisted of up to 100 members. Fantastic job was performed by co-chairs Stephen Berger and Jason Coder. The former secretary Nickolas LaSorte contributed considerably to the editing and shaping the document. Workshops to demonstrate applicability of the C63.27 standard are organized to attract attention to the new standard.

During its development several items relevant for the future version of the standard were identified. Besides, a constructive feedback addressing the new use cases is already received. The work on the second revision of the standard started and C63[®] Main Committee approved PINS proposed by SC7:

http://www.c63.org/documents/misc/pins/PINS C63 27 v2r ev6 Coexistence Evaluation 20171106.pdf The focus will be on the new technology specific test

The focus will be on the new technology specific test procedures and improvements of test methods, measurement repeatability, uncertainty analysis, and estimation of probability-of-coexistence. New members are encouraged to join the working group. In particular we would like to involve Wi-Fi Alliance and 3GPP community in the development of ANSI C63.27 rev. 2.

Another initiative approved by the Main Committee is to offer invitation to have a co-sponsored study on the use of wireless technology in health care delivery to the organizations that may be interested. The driver of related activities is the Vice Chair Stephen Berger.

<u>Subcommittee 8</u> <u>Medical Equipment Testing</u> Stephen Berger (TEM Consulting, LP), Chair



Subcommittee 8 meeting - Stephen Berger - TEM Consulting

No article was submitted for this edition of the newsletter.

ANSI ASC C63[®] 2018 OFFICERS

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Randy Long, Chair SC6 Accreditation/Conformity Assessment (rlong@1-a-b.com)
Vladimir Bazhanov, Chair SC7 Unlicensed Personal Communications Services Devices (vladimir.bazhanov@ieee.org)
Stephen Berger, Chair SC8 Medical Device EMC Test Methods (stephen.berger@ieee.org)

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Any questions about the Newsletter should be addressed to: David Zimmerman, Editor (d.j.zimmerman@ieee.org)

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