



Accredited Standards Committee C63®

Electromagnetic Compatibility

Subcommittee 7 Spectrum Etiquette

Chair: Vladimir Bazhanov **Vice Chair: Stephen Berger** **Secretary: Allen Crumm**
November 29, 2018; 1:00 PM – 3:00 PM -

NIST
Boulder, CO
Generic Meeting Minutes

1. **Call to Order: Chair** – The meeting was called to order at 1:01PM-MST
 - 1.1 **Announcements: Chair's remarks** – Welcome to the SC7 meeting.
 - 1.2 **Meeting logistics announcements: Host**
 - 1.3 **Introductions: Secretary** – Report any roster errors to the ASC-C63® Secretary
- SC7 members:** Jerry took these minutes in my absence. The attendance sheet that was sent around for this meeting seems to have gone missing. We are trying to find it. If you were at this meeting in Boulder, please send me an email stating this so I can try to recreate the attendance list.

Thanks,
Allen

Subcommittee 7 Membership Roster

Name	Role within SC 7	Affiliation
Bazhanov, Vladimir	Chair	VB Laboratory Services, LLC
Al-Kalaa, Mohamad	Member	FDA
Berger, Stephen	Member	TEM Consulting
Case, Dave	Member	Cisco Systems
Coder, Jason	Member	NIST
Dilay, Chris	Member	SPAWAR Systems Center, Pacific
Hare, Ed	Member	ARRL
Hoolihan, Dan	Member	Hoolihan EMC Consulting
Jones, Steve	Member	FCC
LaSorte, Nick	Member	NTIA
Moongilan, Dheena	Member	Nokia Bell Labs
Rajamani, Vignesh	Member	Exponent
Refai, Hazem	Member	University of Oklahoma
Seidman, Seth	Member	FDA
Silberberg, Jeff	Member	FDA
Witters, Don	Member	FDA
Wu, Qiong	Member	Apple, Inc.

Guests and Observers: (non-voting) Jeremiah Darden, Calvin Sproul,

1.4 Quorum: (50% of roster + 1) constitutes a quorum. (rounding down) (17 roster members / 2 = 8.5 + 1 = 9 (therefore 9 people are required for a quorum) **Was quorum achieved? (Yes)** If not, any actions taken are subject to confirmation by electronic ballot or at a future meeting. (Quorum is not required for Working Group meetings)

2. Approval of the Agenda: Secretary - The agenda was approved by acclamation.

2.1 Approval of the previous Minutes - [Minutes of the previous meeting](#) The previous Minutes were approved by acclamation.

2.2 Review of the [patent slides](#) – The patent slides were shown and no patent issues were raised.

3. Review of [Subcommittee Membership](#): Chair - Report any errors to the ASC-C63® Secretary

3.1 Review of Membership Guidelines – 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.

Member Attendance Log: (insert member attendance log as shown) **Any errors in the log?**

Name	11/10/15	05/10/16	11/08/16	05/11/17	11/9/17	5/3/18	11/29/18
Vladimir Bazhanov		X	X	X	X	X	X
Seidman, Seth	X			X			
Mohamad Al-Kalaa				X	X	X	
Berger, Stephen	X	X	X	X	X	X	X
Case, Dave						X	
Coder, Jason	X	X	X	X	X	X	X
Dilay, Chris		X				X	
Hare, Ed							X
Hoolihan, Dan		X	X	X	X	X	X
Jones, Steve				X			X
LaSorte, Nick		X		X			
Moongilan, Dheena		X	X	X		X	X
Vignesh Rajamani				X	X		
Refai, Hazem							
Silberberg, Jeff	X	X	X	X	X	X	X

Witters, Don		X				X	
Qiong Wu				X	X		

Noote: The attendance log for the November 2018 meeting is still being updated.

Any members at risk? These members are at risk: **Hazem Refai**, (send letter to each member at risk)

AI-4: Allen to request the removal of Mr. Whitesell from the SC7 roster

AI-5: Allen to send attendance reminder note to Dr. Refai

3.2 Consideration of new members? [Application for C63® Subcommittee Membership](#)

4. Approval of [Scope](#): Chair ~~– (Spring Meeting Only)~~ (Report approval or any changes to the Main Committee)

Scope

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.

4.1 Election of Officers (as required) **Election of the Chair** - Vladimir Bazhanov was re-elected unanimously. The Chair appointed Steve Berger as the next Vice Chair and Allen Crumm as the next Secretary. AI-6: Allen to send a note to the Secretary to change all SC7 officer terms to ending 12/31/21.

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

5.1 C63.17 - Unlicensed Personal Communications Service (PCS) Devices -

Berger (insert link to [WG report](#)) Verify accuracy of document [status matrix](#) content and report any errors to the ASC-C63® Secretary.

C63.17-2013 Learn more	Unlicensed Personal Communications Service (PCS) Devices	SC 7	Berger, Stephen	C63.17 PINS	Current.
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C63.17: C63.17-2013 Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices

Contact: [Berger, Stephen](#) (Former Working Group Chair)

Scope: Revision of IEEE Std C63.17-1998. Specific test procedures are established for verifying the compliance of unlicensed personal communications services (UPCS) devices with applicable regulatory requirements regarding radio-frequency (RF) emission levels and spectrum access procedures.

Status: Current. No plans for further maintenance at this time.

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

Is this information correct? (Yes) (repeat this verification for all Standards covered by this Subcommittee)

No updates. No report.

5.2 C63.27 – Evaluation of Wireless Coexistence - Berger

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

C63.27-draft Learn more	Evaluation of Wireless Coexistence	SC 7	Berger, Stephen	C63.27 PINS	Published in 2017
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C63.27-draft: American National Standard for Evaluation of Wireless Coexistence

Contact: [Berger, Stephen](#) (Working Group Chair)


Scope: This revision of the C63.27 standard provides improvements to the evaluation procedure and supporting test methods for wireless coexistence and evaluation of key performance indicators (KPI). The revised standard will provide evaluation procedures, test methods and other guidance necessary for performing the evaluation.

Status: Current. New revision being developed.

Purchase: Current version available for sale.

Is this information correct? (Yes/No)

C63.27 [report](#): (below)


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ANSI C63.27

Scope:

"During the development of C63.27, items were deferred to future versions to focus on establishing test methods and provide some technology specific guidance....Items under consideration for version 2 include: Wi-Fi/LTE guidance, improvements to the estimation of likelihood-of-coexistence, and improvements to the test methods to help ensure repeatability."

Attendance:

As noted in the meeting minutes, generally around 12 active participants


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Meeting highlights:

- Received feedback from industry via Keysight Technologies
 - Many are still working to understand coexistence vs. interference
 - Many in industry are working to better understand what their RF environment looks like
- Frequent use by the medical device community. Also seeing interest from:
 - Internet of Things (IOT)
 - Automotive
 - Industrial
 - Building Automation

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Meeting highlights:

- 2) Discussed details of changes to C63.27
 - FDA proposed changes on:
 - Streamlining the testing outlined in Annex A
 - The addition of LTE/Wi-Fi testing
 - Additional clarifications in the body of the standard
 - NIST proposed:
 - Expanding the probability of coexistence calculation
 - Expanding the guidance given on the calculation of measurement uncertainty
 - An additional informative annex that outlines the concept of a "two-way" coexistence test
 - Two-way testing is a long-term goal of the working group

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Meeting highlights continued:

- 3) Leadership change (approved by the SC7 chair)
 - Jason Coder (NIST), Chair
 - Steve Berger (TEM), Vice Chair
 - Omar Al-Kalaa (FDA), Secretary
- 4) Timeline of revisions
 - NIST and FDA plan to circulate text by the end of December

Motions

- Changing the definition of membership in the working group
 - Change the definition to include teleconferences as counting toward fulfilling the attendance requirement

Conclusions

- Continue gathering feedback on C63.27 and its use
- Continue work to develop additions for the revised standard

References

- Meeting minutes on file

There was discussion of the additional Membership requirement that webinars do not count for C63.27 Working Group attendance. This is optional in the C63 procedures. The marked-up procedures for C63.27 are shown below:

1.1.2. *Conference calls*

Conference calls and other forms of electronic meetings ~~shall not~~may be used for purposes of establishing eligibility for membership.

1.2. *Loss of Membership & Voting Rights*

Once an individual becomes a voting member, it is the individual's responsibility to maintain an active participation. Membership and voting privileges may be revoked if any one of the following occurs:

- Failure to pay a meeting fee if required.
- Failure to respond and vote on 2 out of 3 consecutive WG letter or E-Mail ballots.
- Failure to satisfy minimum participation criteria, i.e., an individual must participate in ~~31~~ out of ~~53~~ consecutive ~~in-person~~ meetings (in-person and or via teleconference).

If the voting rights are removed then the individual's voting status becomes a Non-Voter.

If voting members are unable to attend meetings, they can maintain their voting membership by participating by correspondence. This correspondence must include significant, written contributions that are technically relevant to the working group. These contributions shall be submitted to the WG chair at least two weeks before the meeting where it is to be discussed so that it can be distributed and added to the agenda.

The motion from the Chair was to adopt the changes in **blue** above, there were no negative votes. The amended attendance rules are available [here](#).

6. Other Old Business: Chair

6.1 Written reports - Written reports of the 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 reports and [approved previous meeting minutes](#) shall be provided to the projectionist for showing on the projector screen at the meeting. The Presentation and any written report shall also be sent by the Subcommittee Chair to the ASC-C63[®] [Newsletter editor](#).

6.2 Coordination with SC2 for definitions - Before any Working Group draft can be submitted to the Subcommittee for approval, the document must be provided to the SC2 Chair for evaluation and coordination of the definitions used.

6.3 Coordination with SC3 for harmonization - Before any Working Group draft can be submitted to the Subcommittee for approval, the document must be provided to the SC3 Chair for evaluation and coordination of any harmonization effort.

7. New Business: Chair - none

8. C63.org website use and updates: Secretary - We normally post documents to the [SC7 protected area](#). If any SC or WG needs help with this posting, a Technical Secretary is available to assist.

9. Review of the Action Items: Secretary -

9.1 Review of Action Items from this meeting: The Action Items from this meeting were reviewed and accepted.

9.2 Review of Action Items from previous meeting:

Consolidated Action Items from previous Meeting of SC7

Action Item #	Subject	Responsible Person(s)	Status	Delivery Date	Comments
1	Contact WiFi Alliance and 3GPP community regarding their possible involvement in C63.27 WG	Vladimir Bazhanov	CLOSED	Autumn meeting 2018	More attempts to follow by Chair and Vice Chair
2	C63.27 Workshops	Jason Coder	CLOSED	Status report at the Autumn meeting 2018	Very important activity
3	Offer invitation to have a co-sponsored study on the use of wireless technology in health care delivery to organizations that may be interested	Stephen Berger	CLOSED	Status report at the Autumn meeting 2018	Approved by Main Committee

10. Time and place of next meeting: Chair - Week of April 29, 2019 @ UL-RTP

11. Closing remarks and Adjournment: Chair - The Chair thanked the group for their participation and adjourned the meeting at 2:00PM-MST.

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

Consolidated Action Items from 11/29/18 Meeting of SC7

Action Item #	Subject	Responsible Person(s)	Status	Delivery Date	Comments
AI-4:	Allen to request the removal of Mr. Whitesell from the SC7 roster	Allen Crumm Jerry Ramie	Open	Next meeting	
AI-5:	Allen to send attendance reminder note to Dr. Refai	Allen Crumm	Open	Next meeting	
AI-6:	Allen to send a note to the Secretary to change all SC7 officer terms to ending 12/31/21.	Allen Crumm Jerry Ramie	Open	Next meeting	