C63® American National Standards Committee C63®

Electromagnetic Compatibility

Subcommittee 7: Spectrum Etiquette

Chair: Omar Al-Kalaa **Vice Chair: Jason Coder** **Secretary: Cathy Miller**

NIST, Boulder, CO
May 6, 2026; 3:00 PM – 4:45 PM MDT

Meeting Minutes

1. **Call to Order - Chair –** meeting start 3pm MDT

   1.1 Announcements - Chair – welcome everyone, Jason will speak on Omar's behalf

   1.2 Meeting logistics announcements - Chair: Restrooms around the corner

   1.3 Introductions - Secretary: (note attendees, absences, excused absences & errors below)
   Report any roster errors to the ANSC-C63® Secretary

Subcommittee 7 Membership Roster

Name	Role within SC 7	Affiliation
Al-Kalaa, Omar	Chair	Inovectrum
Case, Dave	Member	Consultant
Coder, Jason	Vice Chair	NIST (Primary Rep)
DeLisi, Bob	Member	UL LLC (Primary Rep)
Ferrer, Michael	Member	UL LLC (Expert)
Hoolihan, Dan	Member	Hoolihan EMC Consulting (Individual)
Rajamani, Vignesh	Member	Rohde & Schwarz USA
Rison, Justin	Member	FCC Lab (FCC Alternate Rep)
Salem, Pelin	Member	Cisco Systems, Inc.
Schaefer, Dave	Member	Element Materials Tech. (Primary)
Shumakov, Denys	Member	ISED - Canada (Expert)
Silberberg, Jeff	Member	Member Emeritus

Guests and Observers: (non-voting): Susanna Mosleh, Pao Thao, Ken Gjerde, Joseph Nastus, Jerry Ramie, Aurelian Bria, Bob Mitchell, Steve Koster, Doug Kramer, David Chamberlain, Jason Nixon, Victor Kuczynski, Bill Koerner, Henry Benitez

1.4 Quorum: (roster - abstentions) / 2 (rounding up) constitutes a quorum. (Example: 12 roster members / 2 = 6 >> rounding up = 6 (therefore **6 people are required** for a quorum)

Was quorum achieved? (**Yes** / **No**) 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) **Yes**

2. **Approval of the Consent Agenda** (includes Agenda and Previous Minutes) **Secretary** - (Approved Previous Minutes) approve

   2.1 Review of the patent slides - Secretary -

3. **Review of Subcommittee Membership: Chair - Report any errors to the ASC-C63® Secretary**

   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.

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

2/14/2022	5/18/2022	11/9/2022	5/11/2023	10/4/2023	5/16/2024	10/2/2024	5/7/2025	10/8/2025	5/6/2026	Name
X	X	X	X	X	A	X	X	X	X	Al-Kalaa, Omar
X	X	X			A	X				Case, Dave
X	X	X	X	X	X	X	X		X	Coder, Jason
X	X	X	X	X	X	X	X	X	X	DeLisi, Bob
								X	X	Ferrer, Michael
X	X	X	X		X	X	X		X	Hoolihan, Dan
					X	X	X	X		Rajamani, Vignesh
					X	X	X			Rison, Justin
	X	X			A	X	X	X		Salem, Pelin
					X	X	X	X	X	Schaefer, Dave
							X		X	Shumakov, Denys
							X	X		Silberberg, Jeff

Any members at risk? These members are at risk: **None**

3.2 Consideration of new members? Application for C63® Subcommittee Membership

4. Approval of Scope, Duties & Roster: 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 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.

Any changes required? (Approved or changed to read:)

Duties: C63.27, C63.27 Corr.1, C63.36-TPC, C63.17
Roster: see above

Motion to approve Scope, Duties & Roster? Jerry will update subcommittee duties

Motion to approve Jason, second by Denys

4.1 Election of Officers (as required) N/A

5. Working Group reports 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. The WG reports shall be made using either the C63_PowerPoint_template_wide.

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Subcommittee 7
Spectrum Etiquette

Jason Coder, Vice-Chair
May 6th, 2026

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Subcommittee 7 Duties

- C63.17 – American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices
- C63.27 – American National Standard for Evaluation of Wireless Coexistence
- C63.27 – Corrigendum 1
- C63.36-TPC - American National Standard for Evaluation of Transmit Power Control in Wireless Devices
- **Spring meeting: entertain a motion to approval scope, duties, and membership**

5.1 C63.17 - Unlicensed Personal Communications Service (PCS) Devices - Chair (insert link to WG report) Verify accuracy of document status matrix content and report any errors to the ASC-C63® Secretary.

C63.17-2020 Learn more	Unlicensed Personal Communications Service (PCS) Devices	SC 7	Coder, Jason	C63.17 PINS	Reaffirmed 2020.

C63.17: C63.17-2020 Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices
Contact: Coder, Jason
Scope: Revision of IEEE Std C63.17-2013. 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: Reaffirmed 2020.
Purchase: Search IEEE Standards - Enter C63 Standard number then Search (Enter) - Click on the version you want - Click on Purchase

Is this information correct? (Yes/No) (repeat this verification for all Standards covered by this Subcommittee) yes

5.1 Working Group Reports: C63.17

- Scope: Revision of IEEE Std C63.17-2013. 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. *Reaffirmed 2020.*
- Status: No new C63 action.
- Need new link to the stakeholder community
  - Future versions of C63.17 may need to be harmonized with ETSI.
  - Need a new link to the DECT stakeholder community

5.2 C63.27 – Evaluation of Wireless Coexistence - Coder (insert link to WG report) Verify accuracy of document status matrix content and report any errors to the ASC-C63® Secretary.

C63.27-2022 Learn more	Evaluation of Wireless Coexistence	SC 7	Coder, Jason	C63.27 PINS	Published 5/17/22. Working Group disbanded.

C63.27-2022: American National Standard for Evaluation of Wireless Coexistence
Contact: Coder, Jason (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: Published 5/17/22. Current. Working Group disbanded.
Purchase: Search IEEE Standards - Enter C63 Standard number then Search (Enter) - Click on the version you want - Click on Purchase

Is this information correct? (Yes/No) yes

5.3 C63.27 – Evaluation of Wireless Coexistence Corrigendum 1 (insert link to WG report) Verify accuracy of document status matrix content and report any errors to the ASC-C63® Secretary.

C63.27 PINS is opening up for revisions and approved to be sent to main committee.

C63.27-202X-Corr1	Evaluation of Wireless Coexistence – Corrigendum 1	SC 7	Liu, Yongkang	C63.27-202x Corr1 PINS	balloting in progress

C63.27-202X Corr1: American National Standard for Evaluation of Wireless Coexistence - Corrigendum 1
Scope: This corrigendum will correct an error in Annex A of C63.27-2021 that appears to limit specifications of the

unintended signal. It will also correct wording in Annex A that leads some readers to believe that other parts of the standard can be disregarded. Current recommendations require the user to generate a custom signal that can be overly burdensome. This corrigendum will make clear what the recommendations are, including the use of existing test signals standardized by others (e.g., 3GPP)
Status: Draft is being written.
Purchase: Not yet available for sale.

Is this information correct? (Yes/No). yes

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5.2 Working Group Reports: 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.*
- Status: Published May 17th, 2022
- News: Next edition of IEC 60601-1-2 (medical device EMC) plans to reference C63.27-2021 for coexistence testing
- Corrigendum – Waiting for the formation of a ballot group
  - MEC comments received, working to see if a "black box warning" is acceptable

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C63.27 Revision

- Action item (Vice-Chair) – Draft PINS for revision of: C63.27
- **Abstract:** An evaluation process and supporting test methods are provided in this standard to quantify the ability of a wireless device to coexist with other wireless services in its intended radio-frequency environments.
- **Need:** Wireless technology continues to evolve at a rapid pace. Though the core testing methods of C63.27-2021 remain valid, several improvements can be made to provide more relevant technology specific guidance and more efficient testing processes. This revision will add new technology-specific guidance to address today's common test scenarios and will revise conducted test methods to enable more direct comparison with radiated test methods.
- **Stakeholders:** Manufacturers of wireless devices, network operators, IT enterprise managers, regulators of wireless devices (e.g., U.S. Food and Drug Administration), test laboratories, lab accreditation organizations.

C63.27 Revision

- Possible content:
  - Adjustments to Annex A to account for current generation of Wi-Fi and cellular technology (requested from FDA)
  - Addition to Annex A to include an example for FHSS and DSSS systems (requested by NIOSH – mining industry, they have agreed to participate)
  - Change conducted test setup to more closely reflect radiated setup, account for two-way coexistence testing (requested by NIST)
  - Further clarifications on the applicability of the standard: not just medical, not just technologies specified in Annex A
- Several interested entities have reached out to participate in the working group

5.4 C63.36-TPC – Evaluation of Transmit Power Control in Wireless Devices (insert link to WG report) Verify accuracy of document status matrix content and report any errors to the ASC-C63® Secretary.

C63.36-TPC Learn more	American National Standard for Evaluation of Transmit Power Control in Wireless Devices	SC 7	Coder, Jason	C63.36-TPC-DRAFT-PINS	New Standard, draft is being written

C63.36-TPC: American National Standard for Evaluation of Transmit Power Control in Wireless Devices
Contact: Coder, Jason (Working Group Chair)
Scope: This project will develop a new standard for the evaluation of wireless devices that use transmit power control as part of their function. The standard will detail measurement methods and procedures that enable evaluation of common transmit power control related functions of wireless devices and demonstrate compliance with governing regulations.
Status: Draft is being written.
Purchase: Not yet available for sale.

Is this information correct? (Yes/No). yes

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C63.36-TPC

- Working group meets monthly
- Still looking for working group leadership
- Looking to increase industry participation to ensure we capture implementations of TPC
- Discussed proposed structure of standard – "choose your own adventure"
  - Next: taking volunteers to write sections (thanks to David C.)
- Reminder: TPC is the first in a longer series of standards addressing spectrum access

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C63.36-TPC Membership

Name	Role in WG	Affiliation
Ahmad, Salman	Member	ISED Canada (Expert)
Al-Kalaa, Omar	Vice Chair	Inovectrum
Ardeshirpour, Yasaman	Member	FDA (Primary)
Chamberlain, David	Member	ISED Canada (Primary)
Coder, Jason	Chair	NIST (Primary)
DeLisi, Bob	Member	UL LLC (Primary)
Escamilla, Angel	Member	Element Materials Technology (Expert)
Forrester, John	Member	Qualcomm (Primary)
Knight, Louis (Len)	Member	FCC (Expert)
Ma, Yao	Member	NIST (Expert)
Mosleh, Susanna	Member	NIST (Expert)
Nixon, Jason	Member	ISED Canada (Expert)
Paxman, Robert	Member	Intel
Pino, Dan	Member	Element Materials Technology (Expert)
Ryu, Taehee	Member	Element Materials Technology (Expert)
Shumakov, Denys	Member	ISED Canada (Expert)
Yucek, Tevfik	Member	Qualcomm (Expert)

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 should be made using the C63_PowerPoint_template_wide Prior to the Main Committee meeting, the WG reports and the approved previous meeting minutes shall be provided to the projectionist for showing on the projector screen at the meeting. The Presentation and any written reports shall also be sent by the Subcommittee Chair to the ASC-

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):**

7.1 **Update on status of C63.27-Corrigendum**

7.2 **Discuss new version of C63.27**

7.3 **Call for participation for C63.36-TPC**

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Summary

- C63.17-2020
  - Need a new link to the stakeholder community
- C63.27 Corrigendum
  - Waiting for balloting group and response to MEC question
- C63.27-2021
  - Introduced new PINS
- C63.36-TPC
  - Working group is running, agreed on structure of standard

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C63.27 Corrigendum

- New black box notice

NOTICE

This annex is not an exhaustive list of technologies that can be tested for wireless coexistence using this standard. Any wireless communications technology can be evaluated using the methods described in the body of this standard.

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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, the SC7 Technical Secretary is available to assist.

9. Review of the Action Items: Secretary -

9.1 Review of Action Items from this meeting: (read Action Items to Members, who must agree that they understand their meaning)

9.2 Review of Action Items from previous meeting: (insert consolidated Action Item table from the previous meeting Minutes as shown below)

Consolidated Action Items from 20251008 Meeting of SC7

Action Item #	Subject	Responsible Person(s)	Status	Delivery Date	Comments
AI-37:	Jerry to send an email from Omar to SC4 & SC7 soliciting for members in the C63.36-TPC Working Group.	Jerry Ramie	Closed	Next meeting	
AI-38:	Omar will draft the email solicitation for Jerry to send out.	Omar Al-Kalaa	Closed	Next meeting	
AI-39:	Omar to set a meeting date for the kick-off of C63.36TPC	Omar Al-Kalaa	Closed	Next meeting	
AI-40:	Jason will draft a PINS for the new revision of C63.27	Jason Coder	Closed	Next meeting	

10. Next meeting date/location: week of October 19th at A2LA in Frederick, Maryland

11. Closing remarks and Adjournment: thank you everyone closing meeting at 3:50pm MDT

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

Consolidated Action Items from 20260506 Meeting of SC7

Action Item #	Subject	Responsible Person(s)	Status	Delivery Date	Comments
AI-41:	Jason to send Jerry roster of C63.27 roster (2021)	Jason Coder	Open	Next Meeting	
AI-42:	reach out to FDA for participation	Omar Al-Kalaa	Open	Next Meeting	
AI-43:	correct website to C63.36-TPC	Cathy Miller Jerry Ramie	Open	Next Meeting	