



Update and Status of ANSI C63.4, C63.10, and C63.26 Standards

**TCB Workshop
May 3rd, 2017**



Introduction

- ANSI C63 currently updating compliance measurement procedures and test guidance provided by the C63.4-2014 (Unintentional Radiators), C63.10-2013 (Unlicensed Wireless Devices), and C63.26-2015 (Licensed Wireless Devices) Standards.
- The following slides provide an update of the ongoing work in each of these standards working groups.



C63.4

- A revision of the C63.4-2014 standard was undertaken in 2016.
- Main revision topics include:
 - Specification of tolerance values associated with physical dimensional requirements.
 - Addition of guidance for preamplifier use, consistent with CISPR 16-1-1:2015.
 - Specification of phase information for LISN impedance along with amplitude magnitude.
 - Omit site validation alternative method (absorber patch) for radiated emissions above 1 GHz.
 - Defer instead to CISPR 16-1-4 S_{VSWR} methodology
 - Consideration of additional details for measurements performed below 30 MHz with loop antennas
 - Overall editorial cleanup.



C63.4a

- Amendment to C63.4-2014
 - A relatively new process within C63 is being used to publish an amendment to the existing standard.
 - Amendment will update Annex D site validation requirements for alternative test sites (e.g., SACs) and correct some errors in the associated mathematical equations.
 - Balloting process has begun and comments from the first round of balloting are being addressed.



C63.10

- The following Clauses are being considered for the third edition of C63.10 currently under development:
 - 7.8: Measurement guidance for frequency-hopping devices
 - 11: Measurement guidance for Digital Transmission Systems (DTS)
 - Synchronize with recent FCC merging of DTS and UNII requirements
 - 12: Measurement guidance for Unlicensed National Information Infrastructure (U-NII) devices to reflect recent FCC changes and expansion of the U-NII rules.
 - 14: Guidance for combining emissions from devices with multiple output ports.



C63.10 (continued)

- New Additions Under Consideration
 - Measurement procedures and guidance for unlicensed TV Whitespace devices.
 - Development of an Annex providing guidance for testing Dynamic Frequency Selection (DFS) devices.



C63.26

- WG is considering material for the 2nd edition of this standard.
- FCC has not adopted ANSI C63.26-2015 by rule; however, recent draft KDB Publications 442401 and 971168, if adopted, will permit the use of ANSI C63.26 on an optional basis.
- Incorporation by reference of ANSI C63.26-2015 is currently being considered under ET Docket No. 15-170.



C63.26 (continued)

- Much of the new work has been specific to developing procedures and guidance for compliance testing of new (prospective) FCC Part 30 devices (*i.e.*, mmWave with or without massive MIMO).
 - Separate procedures being developed, one for immediate use and a more detailed version for eventual inclusion in the standard.
- Work has also progressed in the Radiated Emissions task group.
- Other areas of work under consideration:
 - Signal Booster Measurement Guidance
 - Complex Channel Aggregation Measurement Issues
 - MIMO test methodologies



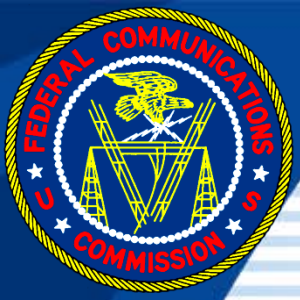
Draft KDB Publication 442401

- Pertinent to acceptable radiated emissions measurement procedures for compliance testing of licensed radio service equipment.
- Proposes use of procedures described in the following for performing compliance testing:
 - **ANSI C63.26-2015**
 - American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
 - **TIA-102.CAAA-E-2016**
 - Project 25 Digital C4FM/CQPSK Transceiver Measurement Methods; or
 - **ANSI/TIA-603-E-2016**
 - Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.



Draft KDB Publication 971168

- KDB Publication 971168 D01 v03 provides procedures and guidance for performing measurements of wideband (> 1 MHz) digitally-modulated RF signals that are acceptable to the FCC for demonstrating compliance to licensed-service rule part requirements.
- Many of the procedures included in Clause 5 of ANSI C63.26-2015 were based upon KDB Publication 971168 D01 and thus it may be used to provide supplementary compliance test guidance relevant to devices operating under a number of FCC licensed-service rule parts.



Questions?