



C63 Activities and Revised Measurement KDB Publications

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C63.10 Standard for Compliance Testing of Unlicensed Transmitters

- First balloting on 2nd edition completed last July (2012)
 - 17 positive ballots, 2 negative, and one abstention
 - 113 comments submitted
- Balloting committee met regularly from November through February to resolve comments and update to include new or revised procedures (e.g., DTS, UNII, MIMO, Millimeter Wave)
- Submitted for re-balloting on February 19th.
 - Balloting closed on March 13th.
 - Standard was approved by C63 committee
- Now proceeds to ANSI review process
- Final publication anticipated this summer



C63.26 Standard for Compliance Testing of Licensed Transmitters

- The 6th draft was circulated for comment on March 7th
- Comments requested by April 5th for consolidation into the draft for discussion at Wireless Working Group meeting scheduled for May 5th and 6th
- Meeting will focus on proposed revisions and on establishing an achievable scope for the first edition



Revisions to KDB 558074

- Compliance Measurement Procedures for Digital Transmission Systems (DTS) operating under §15.247
 - Revised in collaboration with C63 WWG
 - Primary revisions:
 - RBW setting for measuring DTS bandwidth standardized to a value of 100 kHz
 - Procedures added to accommodate average power measurements over active, full-power transmissions when the EUT cannot be configured to transmit continuously, sweep triggering or signal gating cannot be implemented, and the transmissions exhibit a non-constant duty cycle
 - Procedures for measuring unwanted emissions at the authorized band edge were expanded to allow use of narrower RBW
 - Document was reformatted to be consistent with UNII measurement guidance
 - Final KDB has been published and is now fully consistent with the procedures included in current version of C63.10



Revisions to KDB 971168

- Compliance Measurement Procedures for Licensed Digital Transmitters
 - Proposed revisions have been made to expand guidance for:
 - Occupied bandwidth measurements
 - Peak and average power and power spectral density measurements
 - Peak-to-average power ratio measurements
 - Unwanted emissions measurements
 - Mathematical conversions between electric field strength and power/power spectral density
 - Frequency stability measurements
 - Modulation reporting requirements
 - Has been published in draft form for public comment
 - Has been included in most recent draft of C63.26 for discussion/comment



Revisions to KDB 966099

- Addresses perpetual question regarding acceptability of various averaging detection methodologies available with a spectrum analyzer
- Three basic forms of average detection commonly available on most modern spectrum analyzers
 - Power averaging (also known as RMS averaging) – the averaging is performed on a measure of the voltage-squared.
 - Voltage averaging (also known as linear averaging) – the averaging is performed on a measure of the absolute voltage.
 - Log averaging (also known as dB averaging) - the averaging is performed on the log of the power or the log of the absolute voltage.
- FCC-acceptable averaging methodologies
 - Log averaging is never acceptable for demonstrating compliance to limits specified under any FCC rule part
 - Power averaging shall be used when the applicable limits are expressed in terms of average conducted power, ERP/EIRP, or power spectral density
 - Voltage (linear) averaging or power averaging shall be used when the applicable limits are expressed in terms of electric field strength.
 - When the option of power averaging is utilized, a mathematical conversion must be applied to the measurement result to convert the measurement units to the expressed limit units.



Questions and Answers

Thanks!