



ANSI C63.26 Measurement Standard Update

Office of Engineering and Technology
Laboratory Division



ANSI C63.26 Status and Proposed Changes

- **ANSI C63.26-2015(Draft)** – Measurement Procedures for Compliance Testing of Licensed Wireless Devices
 - First balloting round concluded on March 20th, 2015.
 - Draft standard currently undergoing editing to resolve received comments.
 - Decision to re-ballot to be made at C63 meeting in May.
 - Scope of standard is to provide compliance measurement guidance for testing of contemporary licensed digital radio services (e.g., CMRS, PLMRS, PSRS, MedRadio, etc.).
 - Most extensive modification to *status quo* is the relaxing of long-standing FCC policy requiring use of signal substitution methodology, as defined by TIA-603, when performing radiated emissions measurements.



Signal Substitution Measurement Methodology

(Background)

- FCC signal substitution policy initially developed to accommodate the fact that FCC rules do not specify radiated test site requirements for testing licensed wireless transmitters.
 - At the time, radiated testing was envisioned to be limited to the radiated spurious emissions measurement requirements specified by §2.1053 (i.e., cabinet/case radiation).
 - All other pertinent technical data (i.e., OBW, fundamental emission power, unwanted emissions) were envisioned to be collected via conducted testing.
- However, wide proliferation of portable and mobile devices, many of which utilize integrated/embedded transmit and receive antenna configurations, has extended the need for radiated testing to demonstrate compliance to all technical requirements (i.e., no longer limited to just cabinet/case radiation).



Radiated Signal Substitution

(Changes proposed in C63.26 Draft Standard)

- C63.26 will offer an option to perform direct intercept radiated measurements (e.g., radiated field strength) without a requirement to utilize signal substitution methods, under specific conditions.
 - If radiated measurements are to be performed on validated test site (i.e., validated to C63.4 NSA specifications), then the use of signal substitution methodology will become an available option.
 - Rationale is that since many of the subject devices incorporate both licensed and unlicensed radio components, access to a validated test site will be required to perform the radiated compliance testing on the unlicensed component(s) and could thus also be utilized to perform similar radiated measurements on the licensed component(s).
- If radiated testing is to be performed on a test site that has not been validated to C63.4 NSA specifications, then the use of signal substitution methods remains mandatory.
- Guidance in regards to performing signal substitution measurements has been incorporated within the draft standard.
 - Attempt to alleviate concerns regarding future maintenance of the TIA standard, and to permit “tweaking” of the methodology to accommodate more contemporary signal structures.