

# P25 Standards Update November 2020

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## Andy Davis Chairman TIA TR-8

This document highlights TR-8 accomplishments and work in progress for 2020. The document will be updated after every TR-8 face to face meeting and at a regular intervals during the COVID period when face to face meetings have been discontinued. The filename reflects the date of the latest update. After the first 2020 version, each update will use **blue font** to indicate the updates.

### Completed in 2020:

#### Air Interfaces

- **A revision to the TIA-102 Documentation Suite Overview Telecommunications Systems Bulletin** was approved for publication.  
*This revision updates the documentation suite and feature information to align with new publications that have occurred over the last 3 years.*
- **A revision of ANSI/TIA-4950-B “Requirements for Battery-Powered, Portable Land Mobile Radio Applications in Class I, II, and III, Division 1, Hazardous (Classified) Locations” Standard** was approved for publication.  
*This revision contains UL recommended improvements/clarifications to the document regarding electrical protection parameters updates*

#### Wireline Interfaces

#### Security

- **An addendum to the Over The Air Rekeying Messages and Procedures Standard** was approved for publication.  
*This will allow single key radios to use any Encryption Key ID and will allow multi-key radios to use any Encryption Key ID in order to ensure interoperability between single key and multi-key equipment.*

#### Data

#### Broadband

### Work in Progress:

#### Air Interfaces

- **Creation of a High Signal Strength Intermodulation Rejection Test** is in progress. Measurement Method for FDMA receivers completed ballot and technical comments are being addressed. Companion FDMA Performance Recommendations standard has been through 1 review cycle.  
*This test will measure the ability of a P25 or analog conventional FM receiver to reject an unwanted broadband base station signal, thereby preventing degradation to the*

*reception of a desired signal. Performance specifications are expected to follow completion of the measurement method.*

- **A revision to the TSB-88.1-E Wireless Communications Systems Performance in Noise and Interference-Limited Situations Part 1: Recommended Methods for Technology-Independent Narrowband Performance Modeling Telecommunications Systems Bulletin** is under consideration.

*This work will look into possible near-far interference issues for radios with wide pre-selectors in proximity of short-tower cellular systems at 700/800 MHz.*

- **A revision to the TSB-88.2 Wireless Communications Systems Performance in Noise and Interference-Limited Situations Part 2: Propagation and Noise** is under consideration.

*Ballot of various technical clarifications was approved at the February quorum meetings. Ballot closed May 27 with significant number of editorial comments. New topic was identified regarding 800 MHz Interstitial 12.5 kHz channels that will be published by the FCC later this year was identified in July. Post ballot revisions will address propagation and noise associated with the interstitial channels. Revised document is pending re-ballot.*

- **A revision to the TSB-88.3 Wireless Communications Systems Performance in Noise and Interference-Limited Situations Part 3: Recommended Methods for Technology-Independent Narrowband Performance Verification** is under consideration.

*This work will consider (a) attenuation to account for building penetration, antenna height, and other factors for Coverage Acceptance Plans (CATPs) and (b) near-far interference for radios with wide pre-selectors in proximity of short tower cellular systems at 700/800 MHz.*

- **An addendum to the Trunking Interoperability Test Standard** is in progress. *This addendum will clarify the testing procedures for System Wide Call.*

## Wireline Interfaces

- **Group Regrouping for the Trunking ISSI/CSSI Standard** is in progress. *This work will enable dispatch equipment connected to Trunking Infrastructures via the ISSI/CSSI to control group regrouping services. Note the control channel messaging for these services has already been standardized.*
- **A revision to the Trunking ISSI/CSSI Messages and Procedures Standard** is in progress. *This document will merge two previously published addendums (Addendum 1; Group Emergency Behaviors and Addendum 2; Errata to Fix Errors and Omissions) into the previously published parent document.*
- **An addendum to the Trunking ISSI/CSSI Messages and Procedures Standard** is in progress. *This addendum will describe how the ISSI/CSSI interface may be used to connect a Trunking RF Sub System to an Inter Working Function (IWF) to enable interoperable services between P25 Systems and LTE Mission Critical Systems.*
- **An addendum to the Trunking ISSI/CSSI Messages and Procedures for Supplementary Data Standard** is in progress.

*This addendum will describe how the ISSI/CSSI interface may be used to connect a Trunking RF Sub System to an Inter Working Function (IWF) to enable interoperable services between P25 Systems and LTE Mission Critical Systems.*

## **Security**

- **A revision to the OTAR Messages and Procedures Standard** is in progress.  
*This revision addresses errata that have been collected since the last publication.*
- **Definition of a Link Layer Encryption Security Service** is in progress.  
*This is the first big new technology upgrade for improved Security for all air interfaces of P25. It protects control channel control messages, and hides group and individual IDs.*
- **An addendum to the Key Fill Interface Standard** is in progress.  
*This will enable Key Fill Device (KVL) interface to a KMF, an Authentication Facility and another Key Fill Device*

## **Data**

### **Broadband**

- **Definition of 3GPP Mission Critical standard services interworking with TIA Land Mobile Radio standard services** is in progress.  
*This document will describe interworking of features (example; group and individual calls) that are common between 3GPP LTE standards and P25 Trunking, P25 Conventional and Analog Conventional FM LMR standards. This document will be a basis for the modification of the ISSI, CSSI and DFSI standards to enable interface with a Mission Critical LTE Inter Working Function (IWF).*