

# Project 25 Standards Update: June 2015

Andy Davis, TIA-TR-8 Chairman

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This document highlights TR-8 accomplishments and work in progress for 2015. The document will be updated after every TR-8 face to face meeting occurring in 2015. The filename reflects the date of the latest update. After the first 2015 version, each update will use blue font to indicate the updates. Note: The official TIA sub-committee detailed meeting reports are publicly available on the TIA website.

## Completed in 2015:

### Data

- **A revision of the Tier 2 Location Standard** was approved for publication. *The Standard was clarified to prevent interoperability issues as an increasing number of vendors implement P25 Location Standard Data applications.*

### Air Interfaces

- **A revision of the Trunking Control Channel Messages Standard** was approved for publication. *The revision corrects several errata that have been noted since the last publication.*
- **A revision of the Link Control Word Formats and Messages Standard** was approved for publication. *The revision corrects several errata that have been noted since the last publication.*
- **A revision to the Trunking Procedures Standard** was approved for publication. *This revision updates the procedures associated with Trunked Data.*
- **A revision of the 2 Conventional Conformance Test Standards; Basic and Advanced** were approved for publication. *The revisions update the list of standard references and correct some errata noted since the last publication.*
- **A revision of the Conventional Procedures Standard** was approved for publication. *This revision updates the procedures associated with Conventional Data and a number of errata comments that have been noted since the last publication.*

### Compliance Assessment Bulletins

- **A revision to multiple RCATs** were approved for publication. This includes:
  - RCAT for Trunked Interoperability (FDMA and TDMA tests)
  - RCAT for TDMA Voice Channel Air Interface (performance and Performance tests)
  - RCAT for Conventional Mode Fixed Station Performance
  - RCAT for Conventional Mode Subscriber Performance
  - RCAT for Trunked Mode Subscriber Performance
  - RCAT for Trunked Mode Fixed Station Performance

*These revision efforts primarily update all references to TIA published test documents. The FDMA Trunking Interoperability testing RCAT was also revised to include Trunking Conformance test recommendations. These documents will be provided to the P25 Steering Committee with a*

recommendation that they forward to the DHS Compliance Assessment Program Governing Board for their consideration as input to future Compliance Assessment Bulletins.

### **Work in Progress:**

**A revision to the TIA-102 Documentation Suite Overview** is in progress. *This update intends to keep the document current with individual document updates that have occurred since the last publication of the Overview.*

#### **Security**

- **Link Layer Encryption** 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*
- **A revision to the OTAR Interoperability Test Standard** is in progress. *This revision will align the Interoperability tests with the revised Messages and Procedures Standard.*

#### **Data**

- **A revision to the Data Overview and Specification and the Radio Management Protocol** documents is in progress. *These revisions address errata and align content with the other recently revised Data documents.*

#### **Wireline Interfaces**

- **An addendum to the ISSI Messages and Procedures Standard** is in progress. *The revision corrects several errata that have been noted since the last publication.*
- **A revision to the Fixed Station Interface Standard** is in progress. *This revision adds additional capabilities the most significant of which is Packet Data.*

#### **Air Interfaces**

- **A revision to the FDMA Common Air Interface Standard** is in progress. *This revision addresses errata that have been collected since the last publication.*
- **A revision to the Trunking Interoperability Test Standard** is in progress. *This revision merges the FDMA and TDMA material and address an error in a call pre-emption test procedure.*
- **A revision to the FDMA, TDMA and Analog Air Interface Performance Measurement Method Standards** is in progress. *These revisions will ensure that harmonics present in Class D amplifiers do not interfere with various audio measurements.*

#### **Broadband**

- **Public Safety requirements for Broad Band Data/LMR Interoperability** is in progress in a joint ATIS/TR8.8 effort. *This is the beginning of work to create the requirements for interworking of Broadband and Existing P25 LMR systems. [This effort is currently on hold pending advancement of the 3GPP Mission Critical services architecture.](#)*
- **Additions to TSB88** is in progress. *These additions will create recommendations for Broadband Data System coverage modeling and verification.*

# P25/APIC/TIA Meetings: Seattle WA, June 23-25 2015

Jim Downes, Project 25 Steering Committee Chairman

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## EXECUTIVE SUMMARY

This report provides information gathered from a series of meetings held by the following groups during the week of June 23-25, 2015, in Seattle, Washington—

- Telecommunications Industry Association (TIA) Mobile and Personal Private Radio Standards Committee (TR-8) and ten of its subcommittees
- Association of Public Safety Communications Officials–International (APCO) Project 25 (P25) Interface Committee (APIC) and two of its task groups
- Private Radio Section (PRS)
- P25 User Needs Subcommittee (UNS)
- P25 Steering Committee (SC)

Key events that occurred during the meetings included—

- Mr. Bob Schwent (Washington State Patrol) provided an update on their statewide narrowbanding efforts and lessons learned in fielding a complex P25 system.
- Mr. Rick Iverson (State of Oregon) provided an update on the types of radio systems being implemented across the state, and how they are addressing interoperability challenges
- Mr. Craig Allen (State of Iowa) provided an update on the State of Iowa's effort to drive discussions around the topic of *Public Safety Grade*, what it means and a case for its use in the context of interoperable communications issues.
- Mr. Geoff Spring (APCO Australasia) provided an update on the work being done by APCO Australasia and other International Members. Mr. Spring said that APCO Canada and Australasia continue collaboration efforts.
- Mr. Steve Devine (APCO) provided an update on the P25 CAP. He reviewed several of the CAP program's key roles including how the CAP Governing Board (GB) represents the collective interests of organizations that procure P25 equipment, and establishes policies to assist the DHS OIC CAP Program Manager in the administration of the program. A Federal Register Notice will be published soon soliciting nominations for membership on the CAP Governing Board.

The following individuals were elected to serve as chair or vice-chair as annotated, and Mr. Julio Laguardia (U.S. Department of Justice) resigned as Vice-Chair of the P25 UNS —

<b>Committee/ Subcommittee</b>	<b>Chair</b>	<b>Vice-chair</b>
P25 UNS	Paul Gilbert (Texas Department of Transportation)	TBD
TIA/ TR-8.25	Jim Holthaus (Relm Communications)	Vacant
TIA/ TR-8.19	Mr. Jerry Drobka (Motorola Solutions)	Vacant
TIA/ TR8.5	Mr. Jim Eastwood (Motorola Solutions)	Vacant
TIA/ TR-8.15	Mr. Jim Eastwood (Motorola Solutions)	Vacant

The following meeting dates and locations were proposed for consideration.

<b>Date</b>	<b>Location</b>	<b>Status</b>
October 2015	Austin, TX	Tentative; not yet confirmed
February 2016	Phoenix, AZ or San Diego, CA	Tentative; not yet confirmed
June 2016	Midwestern State (i.e., Kansas City, MO)	Tentative; not yet confirmed
October 2016	Northeastern State (i.e., Boston, MA)	Tentative; not yet confirmed

The Project 25 SC consists of representatives appointed by the Association of Public-Safety Communications Officials (APCO) International, National Association of State Technology Directors (NASTD), American Association of State Highway and Transportation Officials (AASHTO), Forestry Conservation Communications Association (FCCA), National Association of State Emergency Management Officials (NASEMSO), and Departments of the Federal Government. The current voting members and alternates are listed below.

Project 25 SC Leadership

Representative	Position	Agency
Jim Downes (U.S. Federal Government Representative)	P25 SC Chair	Department of Homeland Security (DHS), Office of Emergency Communications (OEC)
George Crouch (NASTD Representative)	P25 SC Vice-Chair	Division of Technology Operations, State of South Carolina
Paul Gilbert (AASHTO Representative)	P25 UNS Chair	Texas Department of Transportation
Vacant/ TBD	P25 UNS Vice-Chair	Vacant/ TBD

Project 25 SC Membership

Representative	Representing	Agency
Alan Massie	U.S. Federal Government	U.S. Department of Justice, Federal Bureau of Investigation – Operational Technology Division
Bob Schlieman	APCO International	New York State Police (retired)
Brad Stoddard	NASTD	Michigan Public Safety Communications System – State of Michigan Department of Technology, Management and Budget
Brandon Diemer	U.S. Federal Government	U.S. Department of the Interior, Bureau of Land Management
Brent Williams	NASEMSO	Communications Advisor, Michigan Office of Emergency Medical Services
Geoff Spring	APCO International	Director APCO Australasia, Senior Advisor University of Melbourne
George Crouch	NASTD	Division of Technology Operations, State of South Carolina
Jim Downes	U.S. Federal Government	DHS OEC
John McIntosh	FCCA	FCCA Washington
John Powell	APCO International	University of California Police Department, Berkeley (retired)
Kevin McGinnis	NASEMSO	Communications Technology Advisor, National Association of State EMS Officials
Paul Gilbert	AASHTO	TX DOT
Robert Salmon	U.S. Federal Government	U.S. Coast Guard (alternate)
Sonia Kendall	U.S. Federal Government	U.S. Coast Guard

## **1.1 P25 User Needs Subcommittee**

### **1.2 User Presentations**

#### **1.2.1 State of Washington**

Mr. Bob Schwent (WSP<sup>1</sup>) provided a lessons learned overview on the Washington State Patrol's narrow banding project. He described characteristics of the WSP's legacy system. Mr. Schwent said that the VHF wideband analog system consisted of 132 sites, primarily high power, and high sites, owned and managed by 72 different agencies. In total, Mr. Schwent said that there are 3000 subscriber units, and 18 non-WSP law enforcement agencies supporting the system.

Mr. Schwent explained that WSP is taking a system of systems approach, as outlined in the WSP's Statewide Communications Interoperability Plan (SCIP). He said that in their effort to implement the system of systems, there have been challenges along the way. Mr. Schwent described several challenges among two broad categories: system architecture, and subscriber equipment and users. For example, Mr. Schwent said that the legacy VHF system design created challenges in the P25 conventional system architecture. He said that among the technical challenges were a range of issues, including high power and high sites, simplex channels, frequency reuse, radio sensitivity (i.e., capture effect), legacy coverage baseline, multi-system engineering, and site grounding.

Mr. Schwent also described issues with subscriber equipment and users. He said that among these technical challenges were a range of issues, including audio quality complaints (e.g., audio settings optimization, and squelch control), system complexity (e.g. limited trunking experience, crowded talkgroups, and system upgrade inconsistencies), and user expectations (e.g., ubiquitous coverage, scanning capabilities, and interoperability with partner agencies).

Mr. Schwent reviewed six lessons learned that were gleaned as part of WSP's system upgrade effort. First, he said that turning down the power will allow better coverage to be realized in P25 conventional, in many cases by reducing base station and repeater transmission power. Mr. Schwent also said that an agency should survey coverage in all areas prior to system deployment, such as existing analog coverage, to establish a baseline, collect signal strength, and map results to system users. Further, Mr. Schwent suggested users should avoid simplex operation, as a self-induced multipath and on-channel interference gives system users the appearance of poor to no coverage.

Mr. Schwent also identified key lessons learned on interoperability, training, and expectation management. Mr. Schwent said that multi-band trunking capable P25 radios improved interoperability between WSP and partner trunked systems. He also emphasized the

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<sup>1</sup> Washington State Patrol, Electronic Services Division

importance of training continuously. Mr. Schwent said that it is critical to provide training before, during, and after system cutovers, and that training by officers is better received from other officers than from technical staff. Finally, he said that users should manage expectations of upgraded systems, as new radios do not equate to 100% ubiquitous coverage.

Mr. Schwent closed his presentation by reviewing WSP's next steps in their system upgrade efforts. He said that they plan to complete the project by July of 2016, and coverage gaps will be addressed as outside the scope of the project. Mr. Schwent said that WSPs' long term goal is to implement statewide trunking with P25 conventional as a redundant system.

During the Q&A Session, additional points were addressed. The WSP does patch channels, and that it is a console-type patch. They also provide programming support maintenance.

WSP is not currently using Inter RF Subsystem Interface (ISSI) or hardwire connections between systems, but are considering future implementation Mr. Schwent stated that although data is not currently available on the standard ISSI, WSP plans to integrate the capability at a later date. WSP does not charge subscriber fees, but there are fees for dispatch services.

WSP does not currently use vehicular repeaters, but they would like to do so if funding became available.

### **1.2.2 State of Oregon**

Mr. Rick Iverson (OR DOT<sup>2</sup>) provided an overview on interoperable communications systems in the State of Oregon. He said that the majority of agencies in Oregon use VHF conventional systems and interoperability is achieved by basically using "same system types". Mr. Iverson also said that State agencies in current trunked radio areas are using multiple radios to access trunking or multi-mode tri-band radios for communications with adjacent agencies. He explained that most of Oregon's population density is situated in the northwestern geographical area of the State.

Mr. Iverson explained that one of Oregon's greatest challenges is population density. To address this issue, he said that many of the States existing VHF conventional channels will be tied in to trunked radio systems (TRS) to provide continuity for users and VHF conventional access for cooperators. He also said that the Oregon State Radio System is purchasing 45 additional channels of interoperability gateways to integrate partner agencies with the trunked radio systems to allow trunked radio users the ability to communicate with conventional channel users while remaining registered.

Mr. Iverson offered insight on operability and interoperability. He said that in rural Oregon counties, agencies depend on one another to accomplish their missions. He also said that in many rural areas there is a mixture of P25, P25 trunked, and conventional systems on three

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<sup>2</sup> State of Oregon Department of Transportation, Wireless Communications Section



different bands. As a result, “meet me” and patching strategies do not work, and that officers need to be able to hear each other. He said that users must be able to scan between systems.

Mr. Iverson closed his presentation by reviewing issues related to extended affiliation. He said that agencies should allow subscriber units to generate a primary affiliation and two or more scan affiliations when registering. In addition, he recommended that users be mindful of missed calls with other native system users due to large geographic areas with numerous sites. He further stated that virtual users or other permanent means of generating demand are undesirable due to low talk-path availability.

It was suggested that Mr. Iverson’s presentation reflects a scenario in which a first test case can be applied for user needs. Mr. Iverson agreed to submit a request, in the recently approved format, to be considered by the UNS.

### **1.2.3 State of Iowa**

Mr. Craig Allen (Iowa SWIC) provided a presentation on Public Safety Grade (PSG) and LMR. Mr. Allen said that the leadership in Iowa believes there is a need for a lay definition for “mission critical.” He has observed that public safety grade has different meanings to different people. Mr. Allen stated that the National Public Safety Telecommunications Council (NPSTC) started the conversation by publishing a high-quality, relevant report titled “*Defining Public Safety Grade Systems and Facilities Final Report*,” however, it is a lengthy 85 page document. Mr. Allen suggests that the report would be enhanced with a one to two sentence definition of public safety grade for lay persons.

Mr. Allen suggested that there are two primary drivers for defining public safety grade. He explained that those being asked to fund LMR systems should know about what they are being asked to fund. Secondly, he suggested that there should be one place to locate a simple, precise definition for public safety grade that any elected official can read, understand, and leverage to explain to their constituents why investments are made in radio systems and equipment.

Mr. Allen suggested that there is also a political need for the definition of public safety grade. He said that *mission critical* does not equate to *public safety grade*. Mr. Allen explained that Iowa Statewide Interoperable Communications System Board (ISICSB), is a 15 member Governor-appointed board. Recently, Mr. Allen said that ISICSB recognized a need for elected and lay voters to understand the demand for standards based interoperable systems and that P25 standards based interoperable equipment has a price. As a result, he said ongoing conversations led to an attempt to define what PSG means in Iowa (Note: a draft definition of Public Safety Grade can be reviewed in Mr. Allen’s presentation upon request).

Mr. Allen provided a comparison for public safety grade and non-public safety grade equipment, based on Iowa’s draft definition. He said that PSG equipment can operate upon a

non-PSG (or mission critical) system, network, and platform. Conversely, he said that non-PSG equipment can operate on a PSG system, network, and platform. As such, he suggested that under this dynamic, standards are necessary across a spectrum of equipment and system, network, and platform elements from different standards-making bodies.

Mr. Allen closed his presentation by suggesting a next step in this discussion regarding PSG. He said he is seeking help to advance the national conversation about PSG lay definition by considering some form of action. Mr. Allen seeks to take a small step to work on an area firmly in the P25 wheelhouse. He also shared an opportunity for P25 UNS members to offer feedback on the ISICSB website in their effort to define PSG.

It was suggested that any stakeholder must understand what the different standards are, and to educate them, one must be able to explain the issue in two minutes or less. The group was advised that the First Responder Network Authority (FirstNet) Public Safety Advisory Committee (PSAC) is currently reviewing the concept of public safety grade.

When addressing the next step, it was suggested that the Project 25 Technology Interest Group (PTIG) represents a wide range of stakeholders, and that it is therefore a potential place to drive the PSG discussion.

Mr. Steve Nichols (PTIG) advised that he thought PTIG was the proper forum to address the PSG issue and advised that PTIG has a process in place, and they are willing to address the issue with further discussion.

### **1.3 P25 Steering Committee New Business**

Julio Laguardia announced that effective immediately, he is stepping down as Chair of the UNS. Due to commitments at the U.S. Department of Justice, he is no longer able to serve as UNS chair, but hopes to remain involved with the subcommittee as much as his schedule will allow. The P25 Steering Committee Chair thanked Julio for his support and participation over the years, and Mr. Laguardia expressed his appreciation for the opportunity to provide meaningful contributions.

### **1.4 TIA TR-8 Report**

The TIA/TR-8 Chair provided the TR-8 report and reviewed a summary of accomplishments and work in progress for 2015. Revisions to six (6) Recommended Compliance Assessment Tests (RCATs) have been published. The RCATs published were:

- RCAT for *Trunked Interoperability RCAT (FDMA and TDMA tests)*
- RCAT for *TDMA Voice Channel Air Interface (performance and performance tests)*
- RCAT for *Conventional Mode Fixed Station Performance*
- RCAT for *Conventional Mode Subscriber Performance*
- RCAT for *Trunked Mode Subscriber Performance*

- RCAT for *Trunked Mode Fixed Station Performance*

The TR8 Chair also advised that a formal memo will be submitted to the P25 SC from TR-8 recommending the P25 SC forward the listed RCATs to the DHS CAP Governing Board for consideration as input to future Compliance Assessment Bulletins (CABs). The recommendation was unanimously approved by the SC members and the Chair will forward a memo and the published documents to the CAP GB pending receipt of the formal recommendation from TR-8.

The TR8 Chair also introduced TIA-102.BAAD-B *Conventional Procedures* document and advised it was approved by the TR-8.15 subcommittee for publication. He requested the P25 SC review the document for inclusion in the P25 suite of standards, and upon approval, recommend that TIA include “Project 25” in the title page of the document.

The recommendation was unanimously approved by the SC members.

## **1.5 PTIG Report**

Mr. Steve Nichols (PTIG Executive Director) provided an update on PTIG activities. He said that the primary activity since the February 2015 meeting was PTIGs participation at both the IWCE and the FDIC Fire Training conferences, as well as development and planning for the upcoming APCO conference to be held during the month of August in Washington DC. Mr. Nichols said that arrangements are being made for the PTIG annual meeting to be held during the APCO conference on Sunday, August 16th. He also said significant time continued to be dedicated to development of materials, documents, and updates for the PTIG website.

Mr. Nichols reported that PTIG sponsored and convened two P25 sessions at the IWCE conference. He advised both were well received and the panel presentations were well attended. He also advised that DHS OEC Deputy Director Chris Essid provided introductory remarks and was effective in stating the need for continued support and funding for P25 as the primary mission critical voice service for Public Safety for several years.

Mr. Nichols advised that Mr. Jim Goldstein (IAFC<sup>3</sup>), and Harlin McEwen (IACP<sup>4</sup>) have been contacted and asked to deliver presentations on P25 to the Communications Committee at the IAFC Conference in Atlanta August 26-29, and Communications and Technology Committee at the IACP Conference October 24-27 in Chicago, respectively. Mr. Nichols stated that it was agreed that PTIG would develop a white paper detailing why P25 LMR is “Public Safety Grade.” He suggested there was also a suggestion that PTIG endorse the NPSTC paper on “Public Safety Grade.”

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<sup>3</sup> International Association of Fire Chiefs

<sup>4</sup> International Association of Chiefs of Police

## 1.6 APCO Australasia Report

Mr. Geoff Spring (APCO Australasia) provided an update on the work being done by APCO Australasia and International Members. Mr. Spring advised that APCO Canada and APCO Australasia continue collaboration efforts and advised the initial focus is to identify P25 end users, and share further information. He advised that APCO Canada continued to review their membership database to identify locations where P25 networks were in place or being implemented in Canada. He advised that an initial release of the information is expected in August for Canada, and similar information will be provided for Australia. Mr. Spring also advised that representatives from the RCMP<sup>5</sup> has re-joined the P25 UNS.

Mr. Spring provided an update on the Australian public safety communications environment. He advised the Australian Federal Government appointed the “Productivity Commission” to perform a cost benefit analysis to determine the most efficient way to deliver mobile broadband capabilities to meet the long term needs of the public safety agencies in Australia. He advised the final report to the Australian Government is expected December 2015.

Mr. Spring provided a review of the regulatory activities in Australia. He reiterated that the Minister for Communications announced that a comprehensive review of the spectrum management framework began in 2014. He said the terms of reference for the review included the following:

- Develop an appropriate framework to consider public interest spectrum issues;
- Develop a whole-of-government approach to spectrum policy;
- Develop a whole-of-economy approach to valuation of spectrum that includes consideration of the broader economic and social benefits.

Mr. Spring advised the Australian Government is currently reviewing the Spectrum Review Report.

Mr. Spring provided an update on the National Emergency Management projects (NEMP) application for funding during fiscal years 2015 and 2016. He explained that the Australian Government established the NEMP program to fund emergency management projects of national significance. He said that projects funded through the program are designed to improve the ability to prevent, prepare for, respond to and recover from disasters across social, economic, environmental and governance elements. He further advised that NEMP projects support the implementation of the National Strategy for Disaster Resilience and that he is waiting to hear advice on the outcome of their grant application.

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<sup>5</sup> Royal Canadian Mounted Police

## **1.7 P25 Approved Standards List**

The chair provided an overview of the revised P25 approved standards list for review and consideration. Upon approval, the list will be sent to Mr. Nichols for PTIG review and reference, as well as other interested public safety advisory groups, such as the National Council of Statewide Interoperability Coordinators (NCSWIC), SAFECOM, and others.

## **1.8 P25 Compliance Assessment Program (CAP)**

Mr. Steve Devine (APCO Project 25 Program Manager) provided an update on the P25 CAP, on behalf of John Merrill, DHS-OIC. He reviewed several of the CAP program's key roles. Mr. Devine stated this includes how the CAP GB represents the collective interests of organizations that procure P25 equipment, and establishes policies to assist the DHS OIC CAP Program Manager in the administration of the program. He explained that the DHS OIC Director appoints all P25 CAP GB members, and that OIC is responsible for posting all Summary Test Reports and Suppliers' Declaration of Compliance documents.

Mr. Devine further explained the purpose of restructuring the P25 CAP program. He said the goal is to improve the efficiency and effectiveness of user input in the P25 process. Mr. Devine advised that to achieve this goal, DHS OIC established a partnership with APCO. He said that DHS OIC and DHS OEC awarded APCO a grant to obtain support for the execution of P25 CAP activities. Mr. Devine said that as part of ongoing activities, DHS OIC and APCO are considering candidates for the re-launch of the P25 CAP GB in accordance with the terms in the current P25 CAP charter.

Mr. Devine provided an update on P25 Compliance Assessment Bulletins (CABs), stating that more than 50 comments have been received and are currently undergoing adjudication. He advised that the plan is to publish updated CABs on the FirstResponder.gov web site in the coming weeks.

Mr. Devine also advised that a draft Federal Register Notice (FRN) has been developed that outlines the nomination process and criteria that will be considered for appointments to the governing board. He stated the CAP GB will continue to be made up of local, tribal, state, and Federal representatives. He advised the release of the FRN is planned for the next few weeks and it will remain open for 30 days. He stated the goal is to have a new P25 CAP GB established by the APCO Conference in August 2015.

## **1.9 New Business**

### **1.9.1 Pending Standards Activity and Development of a "Roadmap"**

The chair opened discussion stating the purpose was to review P25 work items that are completed, under development, pending revision, and where the P25 standards process is going in the future. He stated that after reviewing status reports of the numerous TR8 Subcommittees and APIC Task Groups addressing current, pending, and future standards activities there is a significant amount of work remaining. He felt the group should consider what requirements and interfaces were still required and if additional information was needed..

The TIA TR8 Chair explained from the manufacturer and TIA/TR8 perspective, it is important to look at three areas: interoperability (does it work at all?), performance (if it does work, how well is working?), and conformance (if it works, does it work according to the standard?). The group basically agreed with the overall theme of the discussion, in that, issues such as security and encryption are important, and it would be advantageous to clearly provide a suggested priority for current, pending, and future work.

**1.9.2 User Participation – Future Meetings**

The chair advised that he felt there is significant value in hearing from various users, and asked for general observation from meeting participants. Members felt it was highly useful when there are concrete requirements discussed that are actionable, and that it seems as though there are things users still need from standards work. The TIA/TR-8 Chair stated that TR8 is interested in hearing from users, especially because it is important that they know TIA/TR-8 members are interested in hearing from them. He said that if more knowledgeable users such as Rick Iverson (State of Oregon) can be involved in this process, the more beneficial it would be to our work. He further suggested that it would be helpful to know whether a given standard is useful for the user, if so in what way, and then identify how P25 can continue to drive meaningful progress. The chair agreed and felt increased participation should be promoted by moving meetings around geographically to get new users involved. He further stated that as an example, a number of invited users asked to become involved in the UNS after participating in a meeting, and he felt that is exactly what is needed.

**1.9.3 Next Meeting**

The chair advised the next P25 SC quorum meeting is tentatively scheduled for October 2015, in Austin, Texas. However, no travel arrangements should be made yet by anyone, as TIA needs to confirm meeting details.

Date	Location	Status
October 2015	Austin, TX	Tentative; not yet confirmed
February 2016	Phoenix, AZ or San Diego, CA	Tentative; not yet confirmed
June 2016	Midwestern State (i.e., Kansas City, MO)	Tentative; not yet confirmed
October 2016	Northeastern State (i.e., Boston, MA)	Tentative; not yet confirmed

The chair encouraged users to participate in the P25 meetings in person, if possible, as the P25 meetings moved around the country. He also invited the users to participate in the User Needs Subcommittee as schedules permitted via the conference calls.