



CASSIDIAN

Project 25 PTT over LTE (P25oLTE)

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NIST PSCR Stakeholders Meeting

Standardization of P25oLTE

Short Background

- FCC PS Docket 06-229
 - 3rd R&O, 4th NPRM, Jan 26, 2011
 - Para 58, § IV.A.13, “Interconnection With Legacy Public Safety Networks”
- All respondents that addressed this question replied that the P25 ISSI is a basis for this interconnection
 - Harris, Cassidian, Motorola, & TIA responded
- Interested parties discuss TIA as a venue for exploration of open standard interoperable P25oLTE solution

Project 25 and TIA Directions

- Reactivate the Broadband Task Group (BBTG) of the APCO Project 25 Interface Committee (APIC)
 - Users and manufacturers have 1 vote each
 - Ensures user input to proposed standard
 - BBTG does not formalize standards – this is responsibility of TR8.8
 - P25 Steering Committee and User Needs review
- Reactivate the TR8.8 Broadband Data Systems standards subcommittee of TR8 Mobile & Personal Private Radio
 - TIA is a Standards Development Organization, formalizes stds
 - TIA members have 1 vote each
 - P25 Steering Committee review/approval as P25 Standard
 - Published standards can be forwarded/voted as an ANSI standard

Goals

- Interoperable P25 PTT between narrowband and LTE
- Interoperable P25 PTT Client on LTE
- Leverage P25 ISSI protocol
 - Session Initiation Protocol (SIP)
 - Session setup, in-session management, and session tear-down)
 - RFC 3261 SIP, RFC 3264 (Offer/Answer SDP), & RFC 4566 SDP
 - Real Time Transport Protocol (RTP)
 - Conveys P25 voice frames
 - RFC 3550 RTP
- All IP connectivity, IPv4 based, compatible with IPv6

Initial Use Cases Outlined

1. Ability to connect to a home P25 network as a home subscriber from a LTE network, which may be a PS private network, but may also be a public network
 - P25 narrowband to LTE
 - Includes LTE public/private network roaming
2. Ability to connect to a geographically defined server on the local jurisdiction
 - LTE to LTE
3. Additional cases to be discussed as required

Issues to address

- Security
 - Communication between UE and the P25 server must be protected
 - Authentication (inc mutual), signaling integrity, & encryption
- Mobility Management
 - Addresses mobility management of the P25 client
 - P25 server located in the P25 network
 - Re-registration on periodic basis for security
 - Home based mode (P25 to LTE)
 - Local Jurisdiction mode (LTE to LTE)

What does it look like?

