



Connecticut Interoperable Communications Executive Committee

ADOPTED TECHNICAL STANDARD

SUBJECT: **MINIMUM P25 SHARED CONTROLLER TRUNKED RADIO SUBSCRIBER REQUIREMENTS**

ISSUE/REVISION DATE: Adopted February, 16, 2016

PURPOSE: The purpose of this Standard is to provide guidance on the minimum standards for subscriber units to use of the standards based (P25) shared trunked system.

DISCUSSION: Although the P25 suite of standards provide a base for subscriber unit compatibility, there can be significant variations in the implementation between manufacturers. Manufacturers may include some proprietary features that aren't available on other manufactures equipment. This standard provides guidance for those who wish to utilize the State P25 controller.

REFERENCE:

- FCC Rules and Regulations
- Region 19 700 MHz and 800 NPSPAC Regional Plans
- CICEC Standard – Use of Interoperable Encryption

1.0 P25 Compatibility

- 1.1 The radio must meet the requirements of the P25 Compliance Assessment Program as specified by the Public Safety Communications Research branch of the U.S. Department of Commerce for demonstrated compatibility with a Motorola Phase 2 P25 trunked radio system.
- 1.2 Radios utilizing 700 Mhz or 800 Mhz must be delivered with P25 Phase II (TDMA) or be capable of TDMA with a firmware upgrade at the radio owners expense.
- 1.3 Subscriber Unit compatibility with the State of Connecticut P25 controller is the responsibility of the equipment manufacturer and/or the manufacturer's representative.

2.0 Encryption

- 2.1 Encryption is an optional feature that is not required for radios using the P25 system.
 - 2.1.1 Encryption capability is encouraged for law enforcement and homeland security applications.
- 2.2 IF a radio is equipped with encryption, the following requirements must be met:
 - 2.2.1 The radio must be equipped with AES encryption.
 - 2.2.1.1 The use of DES or non-standard encryption schemes is prohibited.
 - 2.2.2 The radio must be equipped with Over-The-Air-Rekeying
 - 2.2.3 The radio must be capable of multiple encryption keys.
 - 2.2.4 The DESPP CTS Unit will be responsible for all SLN/KID assignments.
 - 2.2.5 The DESPP CTS Unit, through the use of the Key Management Facility, will generate all encryption keys used on the system.

3.0 Subscriber Programming Security System

- 3.1 All subscriber radios must use a Subscriber Programming Security System (SPSS) for programming, if so capable
- 3.2 All subscriber equipment so capable must be ordered with the SPSS option

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- 3.3 The DESPP CTS Unit will administer the SPSS and issue permissions specific to the radios and/or talkgroups authorized on the system. Any SPSS permissions may not be shared to program subscriber units not owned by the partner agency.

4.0 Additional Information

- 4.1 The following features, options, or devices are not permitted:
 - 4.1.1 Interconnect
 - 4.1.2 Scan
 - 4.1.3 Over-The-Air-Programming (OTAP)
- 4.2 Key Fill Devices will be permitted only on a case-by-case basis based on documented and demonstrated need. To facilitate loading of encryption keys, the P25 system is equipped with a "Key Management Facility" (KMF), which when used with "Over-The-Air-Rekeying" (OTAR) permits the appropriate loading and updating as required of encryption keys.
- 4.3 Audio recording will not be provided by the Department of Emergency Services and Public Protection (DESPP). System users should make arrangements to record talk groups they are assigned, if so desired. In the case of P25 regional or campus systems, CTS will supply access to system data required for recording, with the cost of such access – if any – to be borne by the requesting agency. Users recording solutions must be compatible with the DESPP NICE™ recording system.
- 4.4 The end user will be ultimately responsible for programming of all subscriber units. All subscriber units may only be programmed with preapproved talk groups. All subscriber radios must include the minimum template as approved by the Connecticut Interoperable Communications Executive Committee. No user may add additional talk groups to subscriber radios without written preapproval from CTS. Templates must be approved by the CTS Unit.
- 4.5 Common subscriber programming standards will be distributed with each approved request for access to the system. These programming standards will address such features as time-out-timers, regroup talkgroups, etc.
- 4.6 The State system is based on mobile coverage. The provision of this coverage is reliant upon using antennas and transmission cable as specified by the CTS Unit. Use of other antennas/transmission cable may negatively impact coverage. Portable coverage is NOT guaranteed, however portable coverage may be enhanced by using a ½ wave antenna and no speaker/microphone. Conversely, using speaker/microphones and/or ¼ wave antennas and/or mounting on a belt will definitely degrade coverage.

CONNECTICUT INTEROPERABLE COMMUNICATIONS EXECUTIVE COMMITTEE
TECHNICAL STANDARD
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RECOMMENDED FOR ADOPTION:




Chairman, Connecticut Interoperable Communications Executive Committee

3/17/16
Date



Statewide Interoperability Coordinator

3/18/16
Date

APPROVED:


Deputy Commissioner
Division of Emergency Services and Homeland Security
Department of Emergency Services and Public Protection

22 March 16
Date