



Texas Interoperable Radio Interconnect System

November 13, 2023

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Interoperable Statewide Emergency Radio Infrastructure Fund



□ History:

- 2011, the 82nd Legislature enacted HB-442 which established the fund through a portion of court fees.
- 2019, the 86th Legislature enacted HB-2952 which established the grant program
- In 2020 approximately \$20M in funding was awarded for infrastructure projects. (subscriber radio purchases are not an allowable expense)
 - \$1.16M allocated for statewide interoperability connections (TIRIS)
- In 2022 an additional \$250K was allocated for TIRIS support

TXICC – State Emergency Radio Infrastructure Grant Project



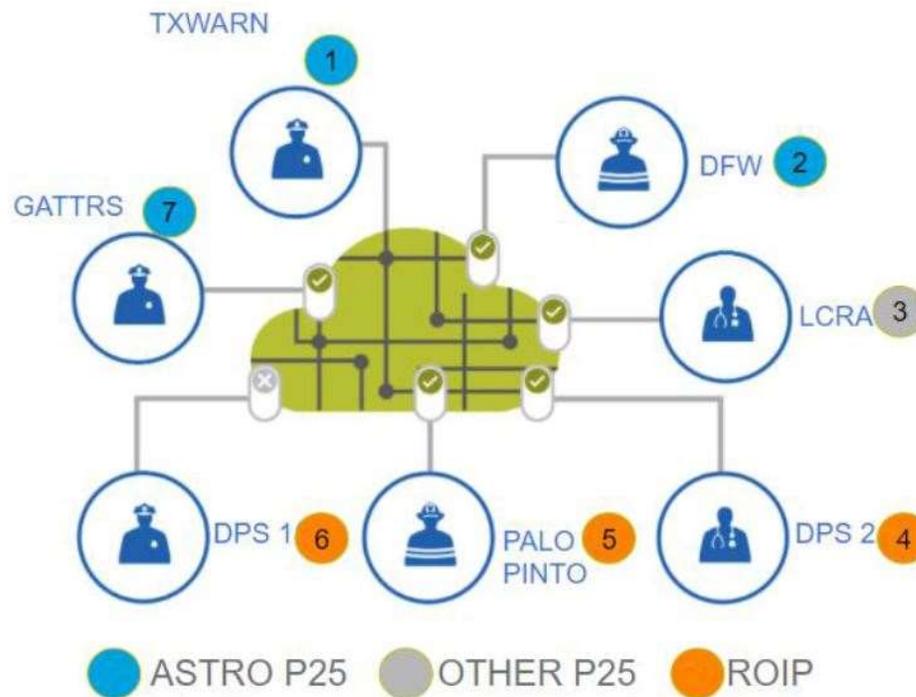
- ❑ Texas Interoperable Radio Interconnect System – Phase 1:
- ❑ GOAL: Connect Texas radio systems
 - Better Situational Awareness
 - Statewide Interoperability - achieving our System of Systems
- ❑ Multi-phased Approach
 - Phase I – Connect 5 Major Regional Systems plus 3 test sites together
 - Multiple Vendors, Multiple system types
 - 10+ Statewide Interoperability Talkgroups
 - Phase II+ : Additional coverage and system types

Texas System of Systems



Texas Department of Public Safety
January 15, 2021

Texas System of System - Phase 1



ISSI vs Critical Connect



ISSI STANDARD PROVIDES

- One-to-One Interop
- P25 CAI
- Registration
- Group Call
- Affiliation
- ID/Alias Transport
- Emergency Group Call & Alert
- Announcement Group
- Manual Roaming
- Automatic Roaming
- Messaging
- Encryption

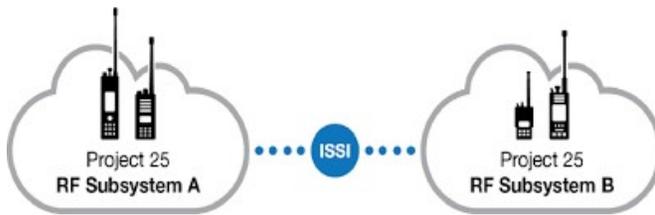
CRITICAL CONNECT DELIVERS MORE

- ALL OF THE ISSI CAPABILITIES...***
- P25 CAI
 - Registration
 - Group Call
 - Affiliation
 - ID/Alias Transport
 - Emergency Group Call & Alert
 - Announcement Group
 - Manual Roaming
 - Automatic Roaming
 - Messaging
 - Encryption
- +
- Many-to-Many Interop
 - Private Calling
 - Ruthless Preemption
 - Grouping/Regrouping
 - Data Communications
 - Location
 - Presence
 - Status
 - Status/Query Update
 - End-to-End LMR Encryption

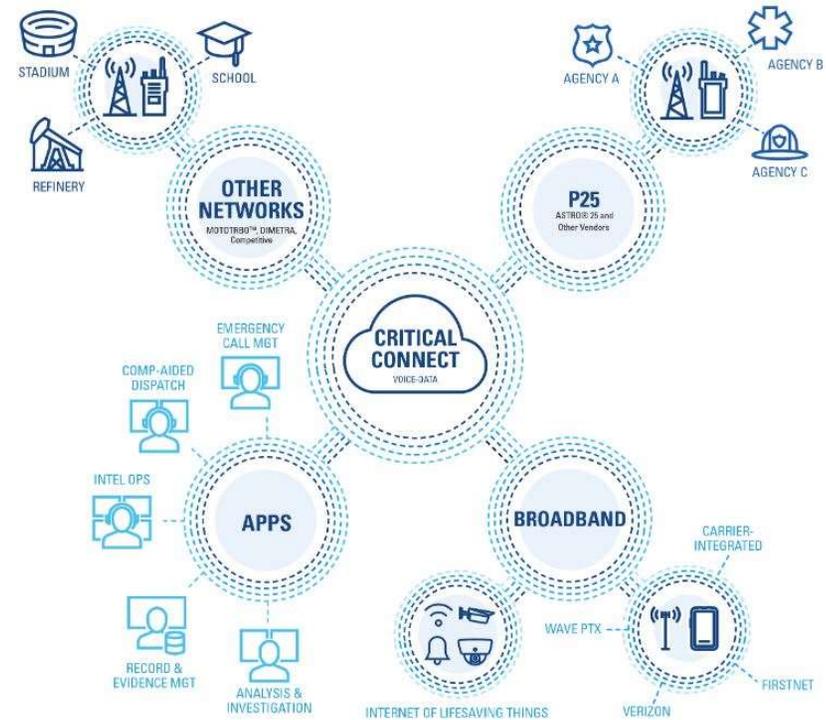
ISSI vs Critical Connect



ISSI



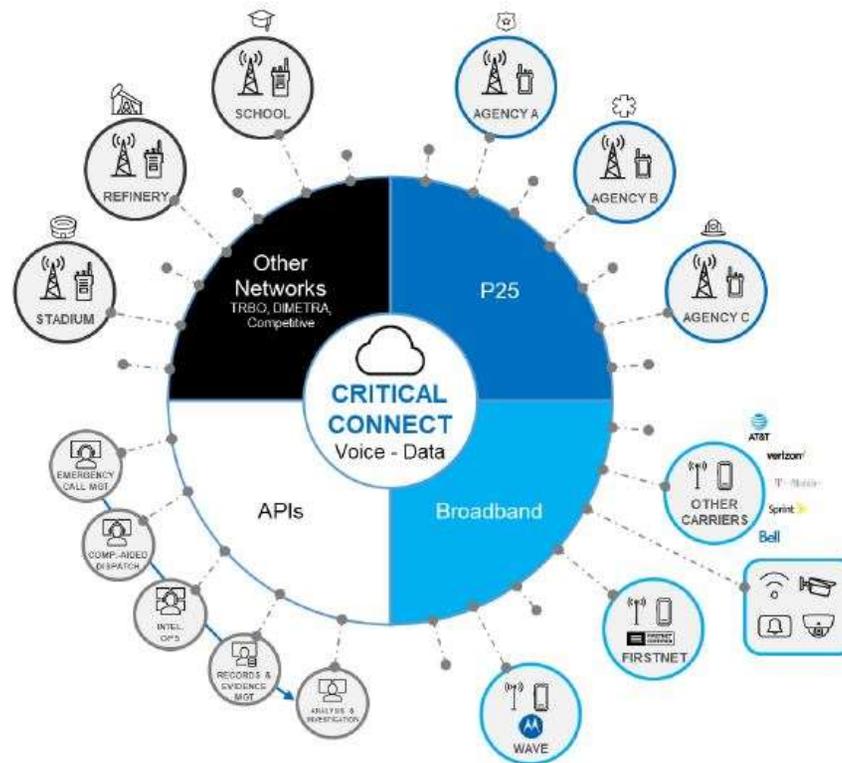
Critical Connect



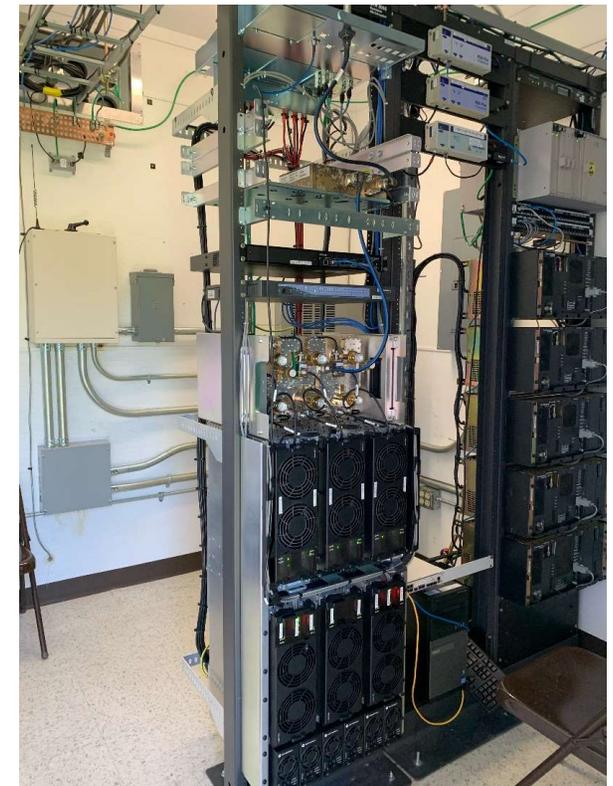
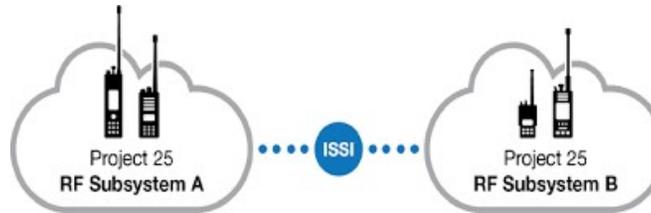
Critical Connect Concept



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Phase 1 connectivity options

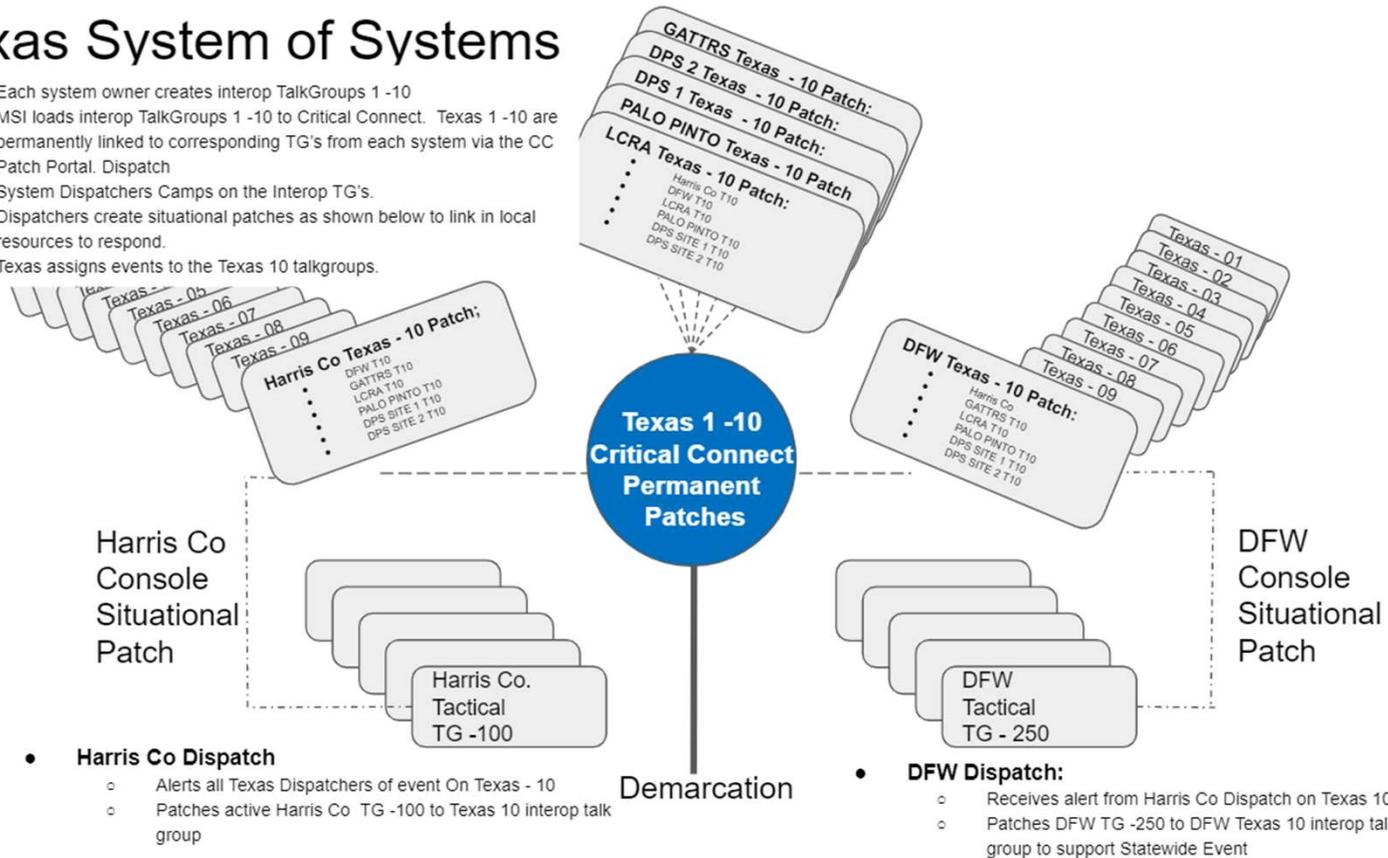


Initial Talkgroup – “Patching”

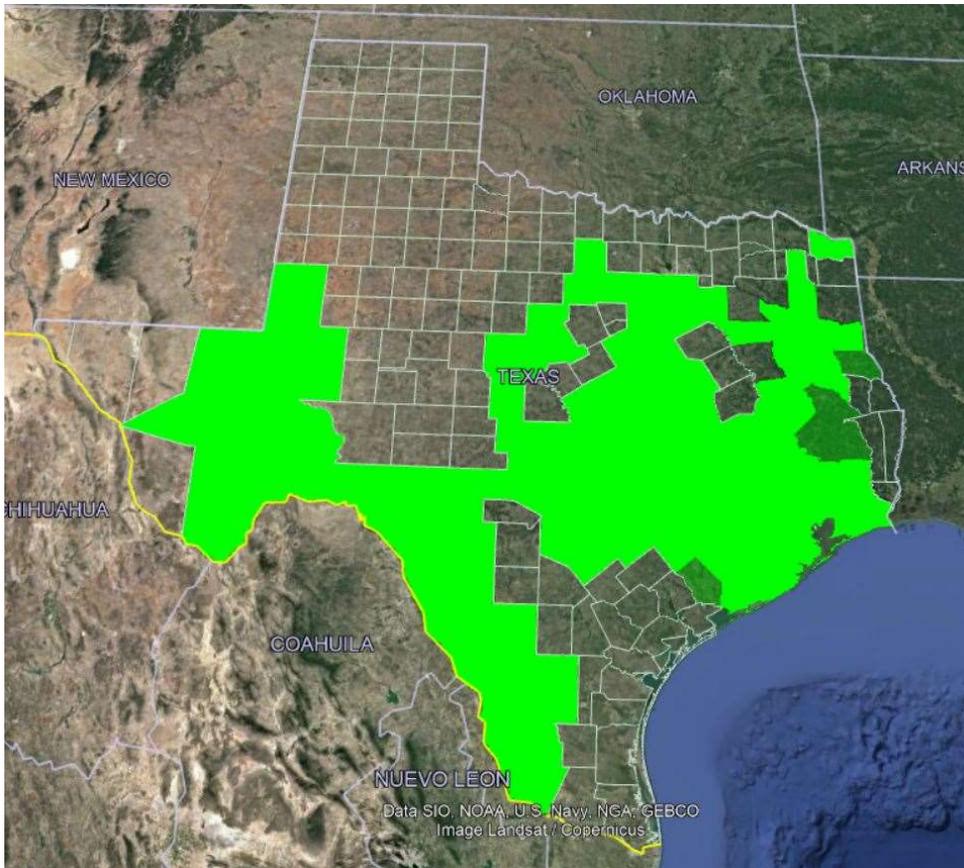


Texas System of Systems

1. Each system owner creates interop TalkGroups 1 -10
2. MSI loads interop TalkGroups 1 -10 to Critical Connect. Texas 1 -10 are permanently linked to corresponding TG's from each system via the CC Patch Portal. Dispatch
3. System Dispatchers Camps on the Interop TG's.
4. Dispatchers create situational patches as shown below to link in local resources to respond.
5. Texas assigns events to the Texas 10 talkgroups.



TIRIS – Phase 1



Trunked Systems:

- TXWARN System
- GATTRS
- LCRA
- NTIRN

Conventional:

- DPS – P25 Conventional
- Palo Pinto County - Analog

110 Counties Served!

PHASE I - Initial Operational Feedback



❑ Deployment Challenges

- Broadband Access is NOT universal...yet.
 - LTE connectivity isn't everywhere in rural locations.

❑ Operational Results

- Audio Quality is exceptional between analog, conventional and trunked systems
- Critical Connect Portal requires vendor intervention. Several Releases.

❑ Operational Challenges

- Local "Patched" talkgroups due to ISSI limitations
- Manual talkgroup reservation (Call SWIC!)
- Cabling for Analog / P25 Conventional Systems

PHASE I – First Year Operational Experience



❑ Deployment Status

- DPS Dispatch sites all going to GATTRS rather than Vocality
- Palo Pinto Site exceptionally reliable on JPS-Z2 / direct Internet connection
- LCRA system upgrade / firewalls complete. Fully integrated.

❑ Operations

- LOTS and LOTS of “Can you hear me now?” tests.
- MS150 in Central Texas
- Uvalde Eclipse Full Scale Exercise

❑ Operational Challenges

- Inconsistent CC-backhaul outage reporting.
- DPS working to deploy a Trello-based Reservations System

TIRIS Reservations Board



A screenshot of a Trello workspace titled "TIRIS Reservation System". The main board is "TIRIS Reservation Board v1.1". The board is divided into two columns: "Active Reservations" and "History". The "Active Reservations" column contains six cards, each representing a reservation (e.g., TIRIS-1, TIRIS-2, TIRIS-4, TIRIS-5, TIRIS-5, TIRIS-6) with their respective request numbers and dates. The "History" column contains six cards representing completed reservations (e.g., TIRIS-4, TIRIS-3, TIRIS-5, TIRIS-3, TIRIS-7, TIRIS-9) with their request numbers and dates. A red circle highlights the "Add a card" button at the bottom of the "Active Reservations" column. Another red circle highlights the "Add a card" button at the bottom of the "History" column. The left sidebar shows the board's settings and a list of boards, with "TIRIS Reservation Board v1.1" highlighted. The top navigation bar includes "Trello", "Workspaces", "Recent", "Starred", "Templates", "Create", and a search bar. The bottom left corner has a "Try Premium free" button.

PHASE I – Governance



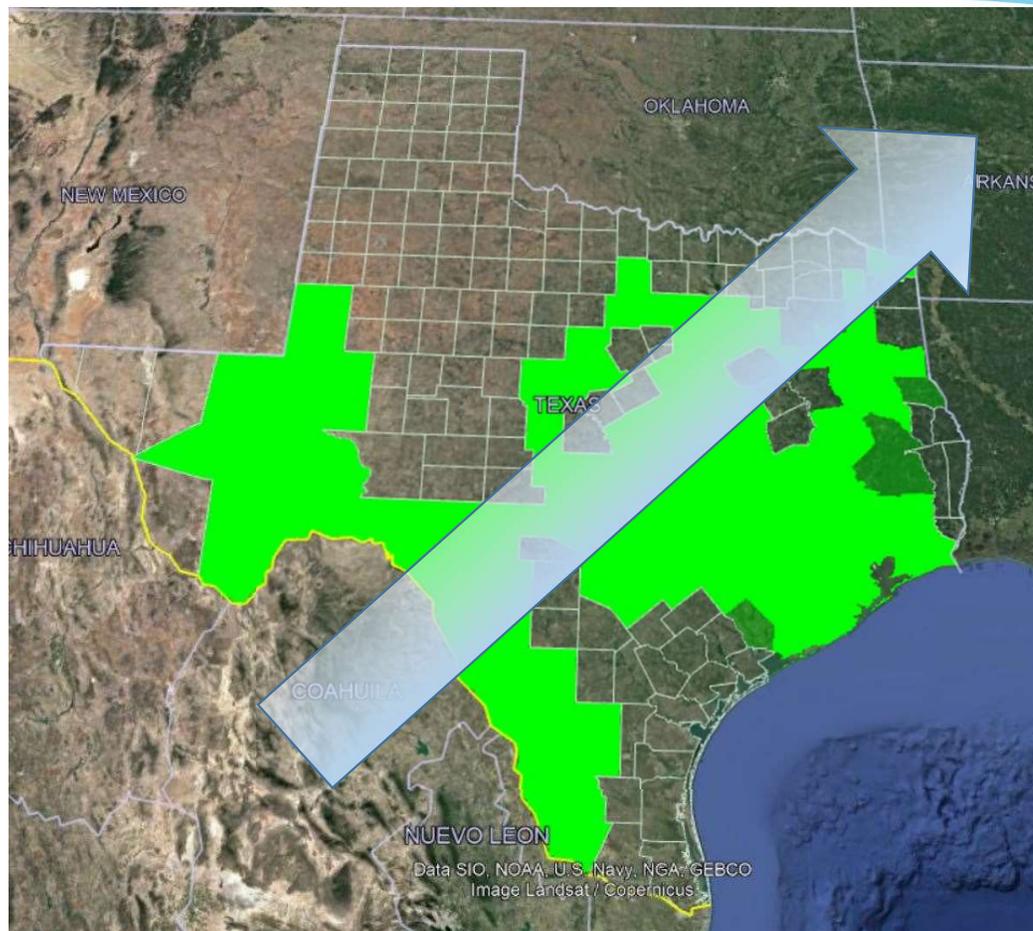
❑ Governance Documents

- TIRIS Governance Committee developed TIRIS Governance Board Agreement
- DPS Office of General Counsel has approved
- Final Document reviewed and ready to send to partner agencies

❑ CALL TO ACTION -

- Provide Partner Signatory Contact information
 - Send to TXSWIC@dps.texas.gov
- Provide Partner Reservation User List
 - Send to TXSWIC@dps.texas.gov

TIRIS – Use Case: Solar Eclipse 4/8/2024



Phase II and Phase III



❑ Phase II funding – Completed

- Renewal of Network Connectivity

❑ Phase III Planning

- Additional areas under consideration
 - Lower Rio Grande
 - SETTRS
 - Corpus Christi
 - Victoria
 - Bexar County
- Additional Conventional System Support
- Deployable Support for TIRIS (Using re-purposed Vocality boxes)



QUESTIONS?

