



Texas: Leading Next Generation Communications for Public Safety

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Mike Barney

Technical Program Coordinator

Public Safety Communications Service

Texas Department of Public Safety

“4G” Long Term Evolution (LTE)



- LTE delivers vast amounts of bandwidth
 - Like comparing a garden hose to a fire hose



- 4G LTE is standards-based
 - 3rd Generation Project Partnership (3GPP) global standard



- Being rolled out aggressively by US commercial carriers





PS LTE Visions

- **Same or better capabilities than consumers smartphones provide today.**
- **Enable nationwide interoperability and mobility**
- **A network that's available, no matter what.**
- **The network handles the complex PS priorities.**
- **PS LTE manages groups, not just individuals.**
- **PS LTE allows control from multiple layers and entities: national, state, regional & local.**



Recent Developments

- **FCC issued an Order July 31 which authorizes only 2 of 21 current “Waiver Recipients” to operate, but only until 9/2/2012**
 - 1) City of Charlotte, North Carolina
 - 2) State of Texas
- **All Waivers cancelled as of 9/2/2012**
- **Entities must apply for Special Temporary Authority (STA) to operate beyond 9/3**
- ***Harris County is the first in the nation to utilize the Public Safety 700 MHz spectrum TODAY!***



Meeting Critical Needs: Applications Envisioned for Tx PS LTE

- **Internet / Intranet Access**
- **Authorized Mobile VPN (Multi-network)**
- **SMS/MMS**
- **Status/Information Splash Page**
- **Streaming Video**
- **Auditable DB Access**
- **Video transfer**



Mandated by current FCC rules

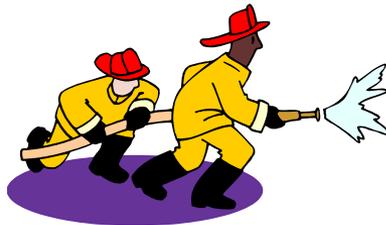
More Applications Envisioned

- SITUATIONAL AWARENESS
- CAD / Geo-based dispatch
- Location-based data & services
- Telemetry
- ISSI-based LMR Gateways: PTT / P25 Interface
- Cellular Voice Telephony (non-Mission Critical)
- **ICS-based services**
- **Field-based server apps**



LTE Enables Public Safety Users

- Provide high end, Integrated Services
- Bandwidth for high-quality, full-motion video
- Supports significant Automation, “Spidering”
- Security and Authentication mechanisms
- Experts “Virtually Be There”





PS LTE “FirstNet”

FirstNet must build a Nationwide Network and is required to provide for:

- **Architecture, infrastructure and technical standards**
- **Rules, processes and procedures**
- **Grants**
- **Advisory boards**
- **Approved equipment lists**
- **Collect Fees**



Outreach & Education Program Goals

- Ensure all jurisdictions in the State know:
 - What PS LTE is and how it works
 - What FirstNet is
 - Likely timeframes
 - Likely benefits to their jurisdictions
 - Likely costs
 - Why they have to work with their neighbors
 - They have enough information to make good decisions and plan for their jurisdiction



Outreach & Education Program

- Use Council of Governments (COG's) to deliver initial information to Texas first responder jurisdictions
- Webinars / Seminars
 - FAQ (WWW.DPS.TEXAS.GOV/LTE)
- Regional and One-on-One discussions
- Establish advisory groups to help chart State path
- Use contractors where appropriate
- Enable Universities in Texas to provide expertise

LTE Planning: Opt-In / Opt-Out

- Issue has drawn significant mis-information
 - Opt-In = State uses “RAN” infrastructure built by FirstNet
 - Opt-Out = State builds their own “RAN”
- Difficult barriers to actually Opt-Out
- State reviews FirstNet proposal (90 days)
- If Opt-Out, submits alternate plan (180 days)
 - Cost Effective requirement (vs. Federal costs)
 - Construction, O&M, Improvements of RAN
 - Meeting minimum technical interop requirements
 - Interoperability with NPSBN
 - Must receive FCC approval
- Opt –In / Out-Out is by State, and likely 2+ years away
- Texas Decision: After considering FirstNet proposal





LTE is NOT...



- **Not Ubiquitous coverage:**
 - **Cells are much smaller vs. LMR**
 - **~ 5 – 100 times more tower sites depending on terrain**
- **Not Cheap or Compatible: All new Infrastructure required**
- **Not ready for Mission Critical Voice (maybe 2020+)**
- **Not replacing LMR anytime soon**
- **Not ‘just faster 3G’**



Questions, Comments, Remarks?

Mike Barney

Texas Department of Public Safety

Mike.Barney@dps.texas.gov

LTE@dps.texas.gov

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