



Public Safety Communications Research

# Public Safety Mission Critical Voice over Broadband

Where are the gaps?

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# Mission Critical Voice – Agenda

- What is it?
- Why does it matter for broadband?
- Is it different for broadband than narrowband?
- Qualitative versus quantitative
- What are the technology gaps?

# What is Mission Critical Voice?

- Many first responders have a strong intuition for what mission critical voice is
- When working to articulate that vision, we find that while there are many common ideas, there are also many unique ideas
- There are many ways to begin to define mission critical voice, but let's start with:
  - Qualitative features
  - Quantitative requirements

# What is Mission Critical Voice? Cont'd

- In order to help have a consistent conversation about Mission Critical Voice, the National Public Safety Telecommunications Council (NPSTC) reactivated the Broadband Working Group to develop a definition
- Over a period of 8 months, the BBWG developed a descriptive list of qualitative features that are required for Mission Critical Voice

# What is Mission Critical Voice? Cont'd

- Qualitative features:
  - Direct mode
  - Group communications
  - PTT and cellular modes
  - Emergency alerting
  - Talker identification
  - Audio quality

# Why does it matter for broadband?

- Public safety's technology of choice for broadband in 700MHz is 3GPP's Long Term Evolution (LTE)
- It will take some time before the vision of a nationwide public safety broadband network is realized
- Land mobile radio will continue to be used for mission critical voice with the broadband network providing data services, but...

# Why does it matter for broadband? Cont'd

- There are many that expect public safety to transition to broadband for mission critical voice at some point in the future
- If public safety starts to address its needs in this space now, they will ultimately have more control over how and what the transition looks like

# Is Mission Critical Voice different for Broadband?

- Absolutely, probably, maybe, no?
- Will the way public safety operates change as it has ubiquitous access to broadband data services?
  - Examples include cellular telephony vs. PTT
- Are there some aspects of mission critical voice as it stands today that must exist?
  - What, if any, are those aspects?

# What are the technology gaps?

- Let's go back to the features from the NPSTC BBWG
  - Direct mode
  - Group communications
  - PTT and cellular telephony
  - Emergency alerting
  - Talking identification
  - Audio quality
- At first glance, where are the gaps?

# What are the technology gaps?

- My initial take
  - Direct mode
  - Group communications
  - PTT