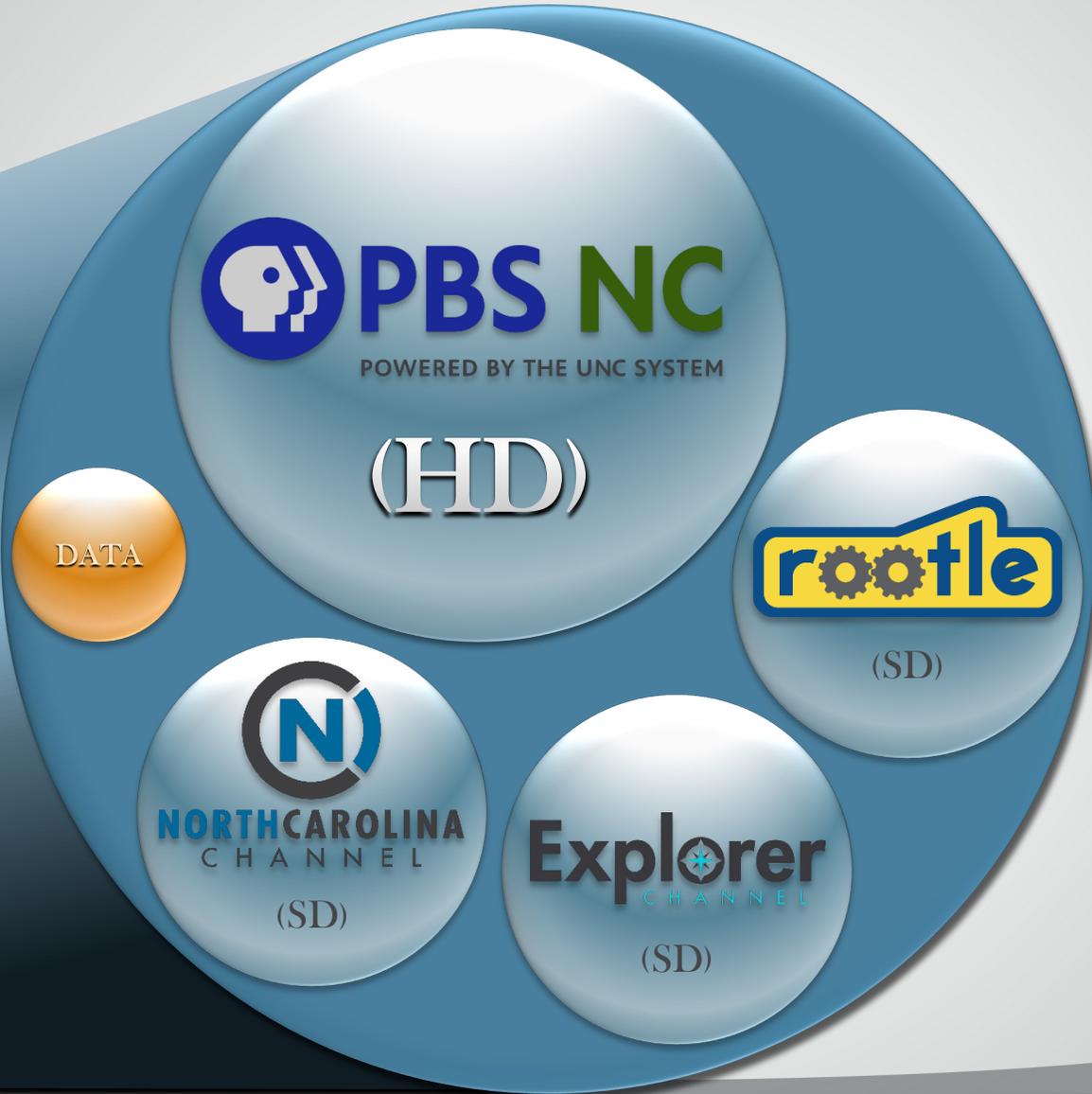


NEXTGEN TV AND PUBLIC SAFETY PAGING

- Advancements in Digital Television
- Current state of public safety paging
- Concept of using DTV for paging
- Research and development
- Opportunity for a statewide system

Digital TV

19.3
Mb/sec



Datacasting

19.3
Mb/sec



Small data pipe available

- TV sets 'ignore' this data stream
- Useful for private video
- Firmware to remote systems
- Encrypted files distributed
- Updates to cars or vending machines

Advancements in Digital Television

Current Standard is ATSC 1.0

Next Gen TV is ATSC 3.0

Reliable mobile reception



More content in the same signal

ATSC 3.0

NEXTGEN TV

Larger Capacity
Higher Efficiency

19.3
Mb/Sec



Current State of Public Safety Paging



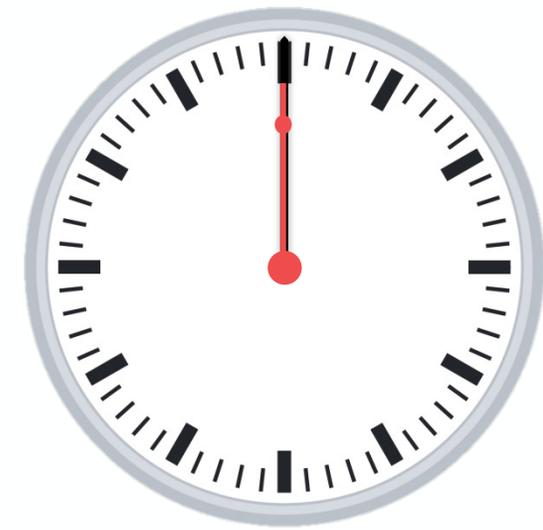
TONE ALERTING AND TODAY'S ANALOG PAGERS

- Tone & Voice Pager
- Technology from 50+ years ago
- Extremely reliable & durable
- 70% of firefighters are volunteers
- Volunteers might not be located at the fire station
- Most have no display, voice only
- Might allow responders to hear on-scene radio traffic

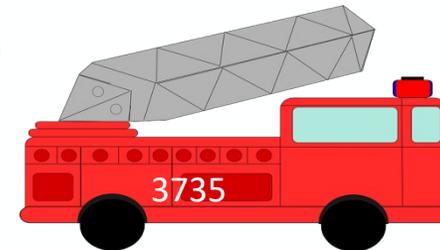
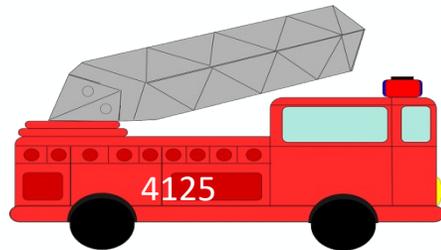
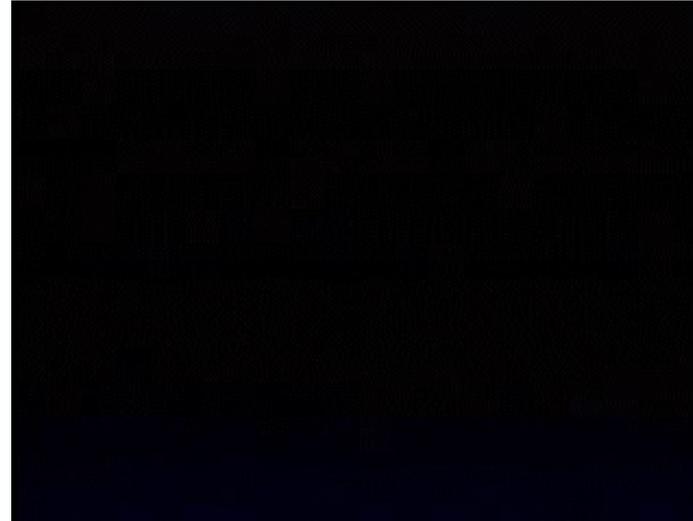




KITCHEN FIRE DISPATCH: CURRENT

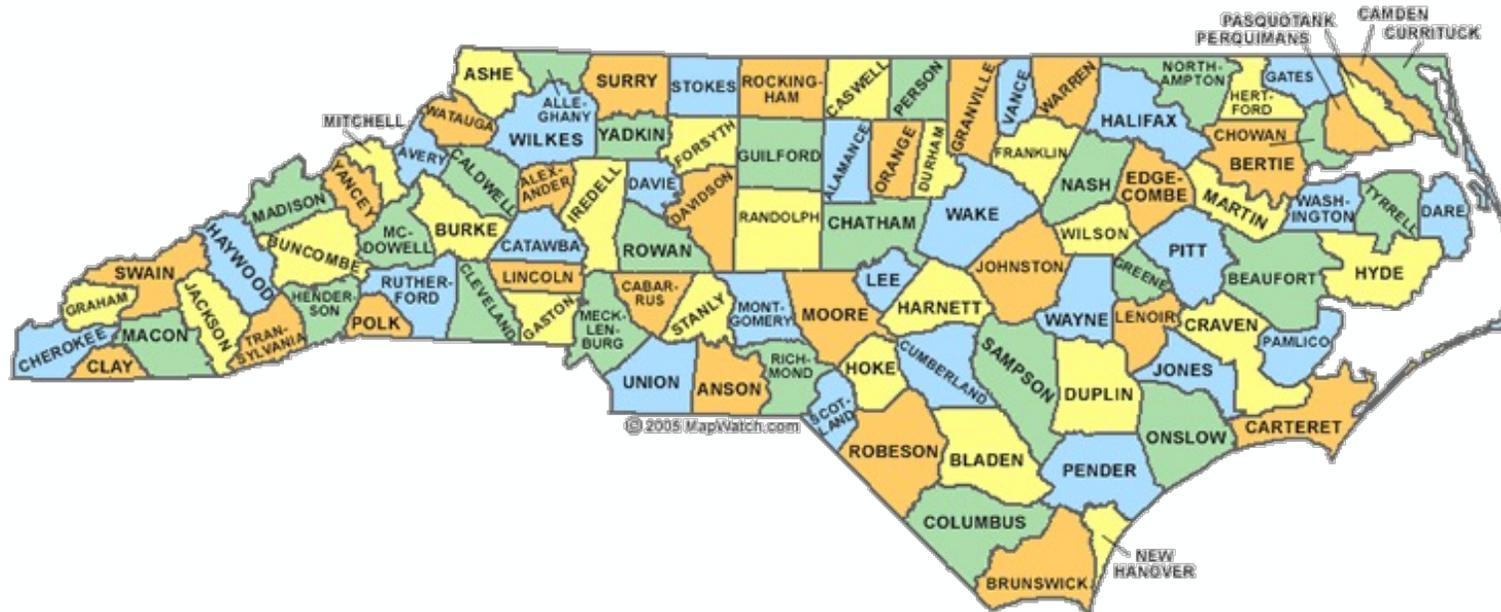


- 5 tones to 9 units – 26 secs
- Voice announcement only after all pager tones
- 11 secs to read unit numbers
- Location announced 42 secs after alert initiated
- Full alert = ~67 secs

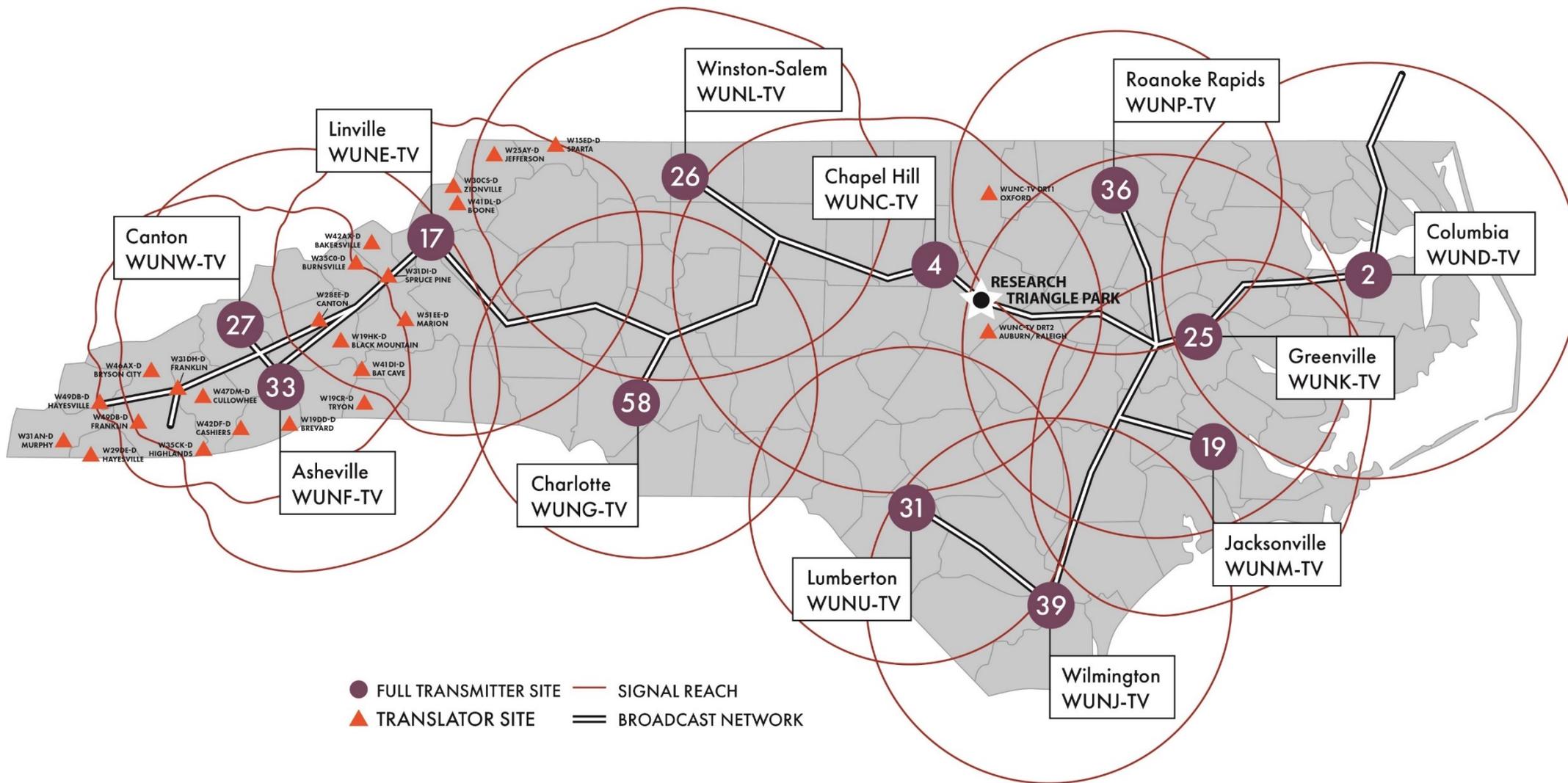


COVERAGE DESIGNED FOR THE RESPONSE AREA

- County level is common
- Every county is a different shape and size
- Each system is separate



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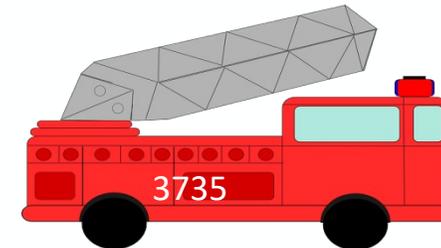
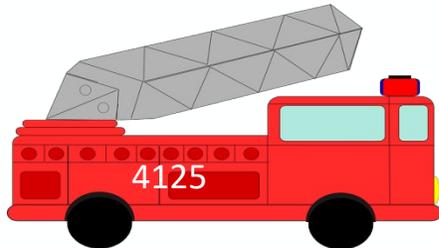




KITCHEN FIRE DISPATCH: DTV PAGER



- Full alert \approx 1 second
- All information delivered as text
- On-board text-to-speech

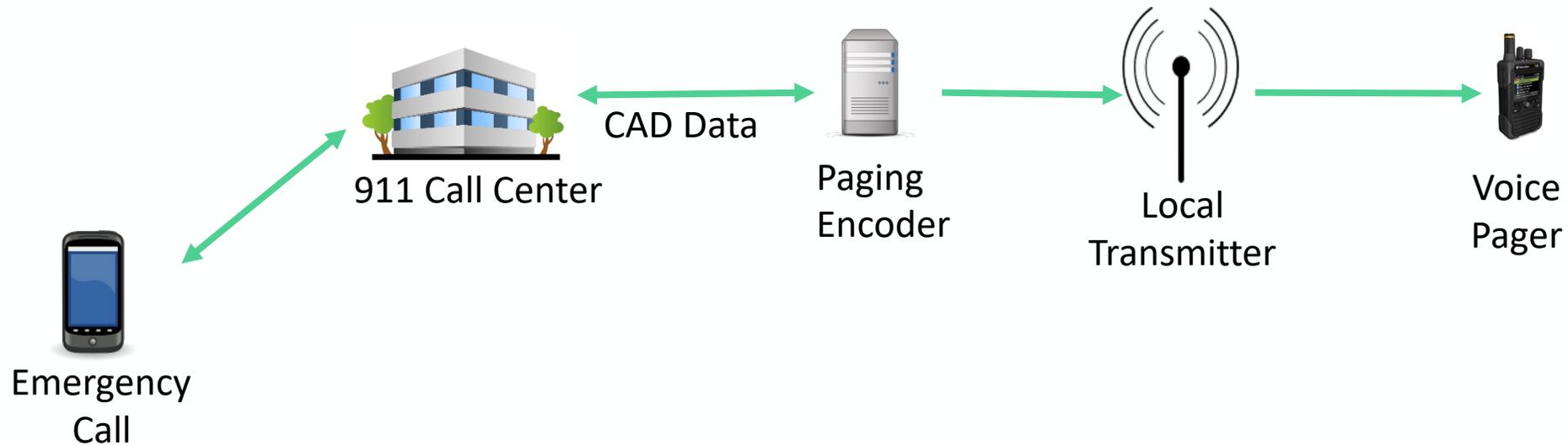


Using DTV for Paging

- High Tower & High Power
- Infrastructure already exists
- Instantaneous
- Encrypted
- Scalable bandwidth
- Simultaneous dispatches
- Maps, preplans, ICS forms, audio, video
- Device is always aware of coverage



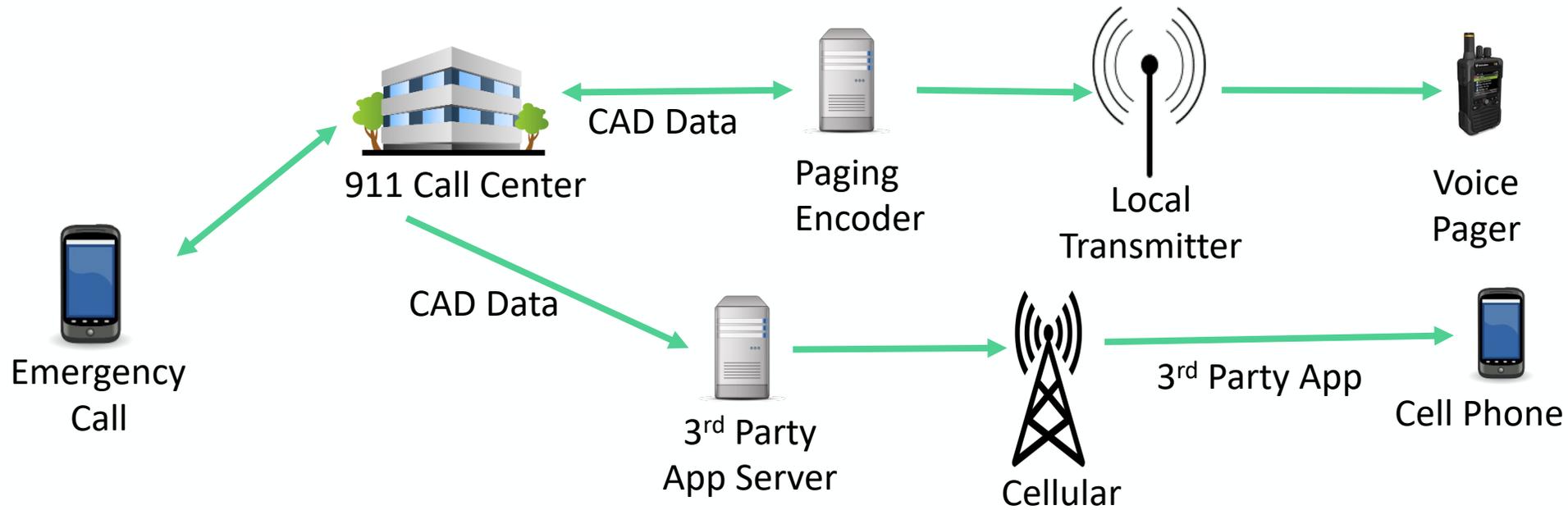
EXISTING EMERGENCY PAGING SYSTEM



End Users:

- Firefighters
- Medics
- First Responders

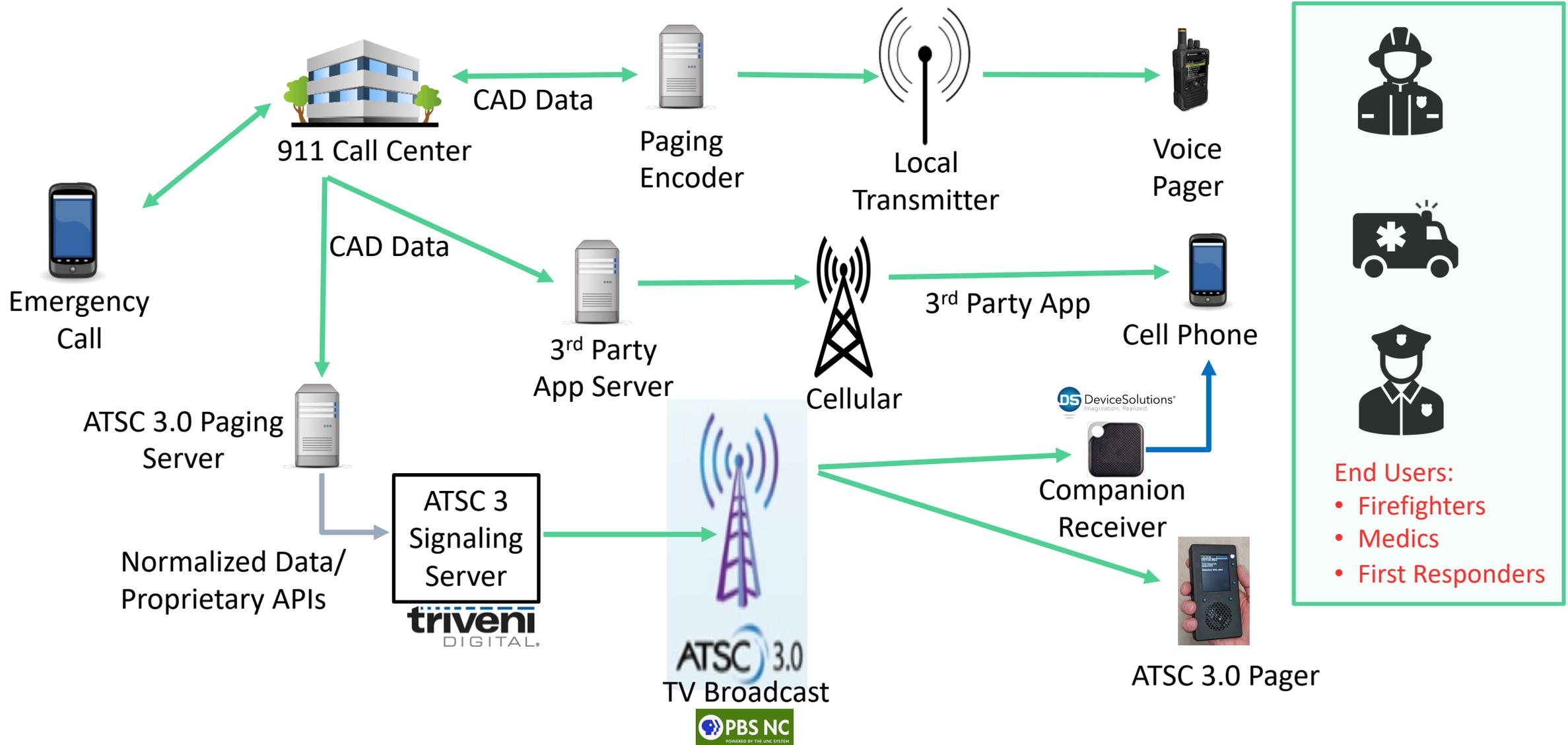
EXISTING EMERGENCY PAGING SYSTEM & CELLULAR



End Users:

- Firefighters
- Medics
- First Responders

ATSC 3.0 COMPANION DEVICE PAGING ECO-SYSTEM



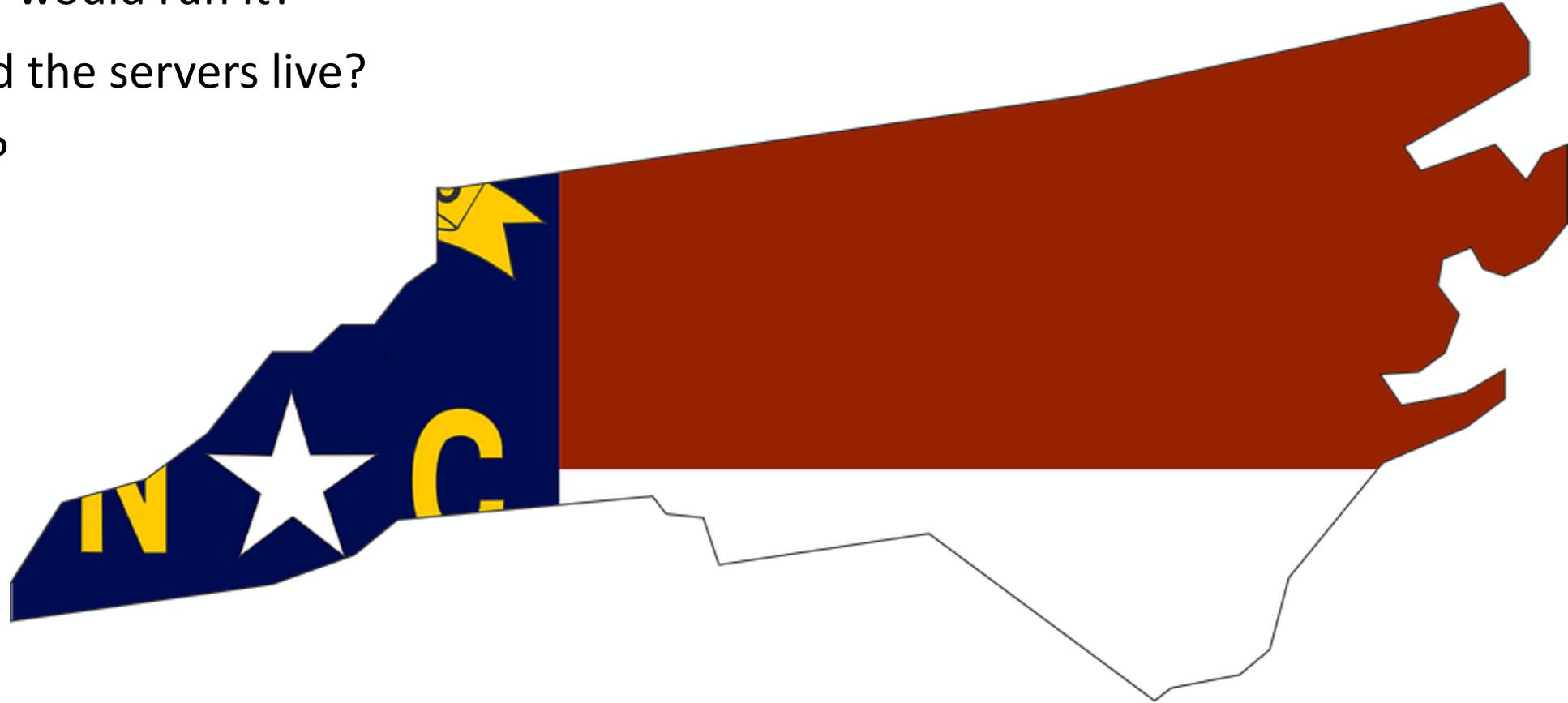
Research and Development



- DHS Funded a SBIR at \$1m
- Company located in Morrisville, NC
- Testing in Pitt County
 - Plans to test in Morrisville and Franklin
- Results are very promising

Ideas for a Statewide system?

- What agency would run it?
- Where would the servers live?
- Governance?
- MOUs?



Q&A / Contact info

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