E911 for MN: ~Today and Tomorrow

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Presenter: Dana Wahlberg, DPS-ECN

Definitions

• Next Generation 911 (NG 911)
  – Technology is constantly evolving faster now than ever before.
  – It is our duty to keep up.
  – People expect to reach 911 no matter what and to be able to do so using voice, text, picture, video or any over the top application. They assume to be able to get help quickly from any device at any time.
  – Next Generation 911 transitions us from yesterday’s technology to a faster, more flexible, resilient and scalable system enabling 911 to keep up in the future.
  – Consists of hardware, software, standards, policies and training.
  – Leads to safer, faster and more informed responses.

Use Case: Vehicle Crash ~ Present

Bystander makes a voice call to 911 using iPhone

PSAP

Operator calls 911

Telematics Call Center

PSAP dispatches First Responders/Ambulance and verbally relay telematics data

HAZMAT

Hospital

Crash Data sent to Telemetry Service

Hospital Activates Burns Unit

Today

• All 104 MN PSAPs are connected to the ESInet
  – Diverse IP backbone to all PSAPs
    » MN
    » MN2
  – Providing WAN network for 3 host-remote sites
  – Selective routing for all wireline, wireless and VoIP calls
  – All 911 transfers amongst MN PSAPs include ANI/ALI
  – Exploring interoperability opportunities with other states
    » Wisconsin – wireless call transfers
    » South Dakota and Iowa – through 911.gov

~Next Initiatives

Next Initiatives Proposed Timeline

• Deploy Text to 911
  – Estimate Implementation 4Q 2015
• Migrate toward geospatial call routing and NG 911
  – Estimate Implementation 1Q 2018
• Re-home all MN telecommunication carriers 911 network from the 12 legacy selective routers to alternative aggregation points with newer technology
  – Estimate Implementation 2016-2017

~Next Initiatives

• Initiatives (Current as of March 2015)
  – Published an RFP for ESInet, statewide text to 911 solution, and budgetary pricing for i3 features and functionality
    – Closes April 6, 2015
  – Retained GIS Project Manager to lead in the development of a statewide GIS database to be used as 911 routing source for i3 and NG 911
    – Collaborative effort with State of MN Geospatial Office – MNGeo
  – Retained professional consulting services to assist with end to end circuit inventory for all 911 network components statewide
    – 67 counties completed/20 counties in process
• “The industry has done its part, the FCC has done its part. Now it’s time for the PSAPs to do their part” – FCC Chairman Tom Wheeler

Text To 9-1-1

• Situations texting may be beneficial
  – Deaf/hard of hearing/speech impaired
    • 48 million Americans are deaf or hard of hearing
    • 7.5 million Americans have speech disabilities
  – Where voice networks are congested, service is limited, or wireless phone battery is low
  – When making a voice call could endanger the caller
• However:
  – Text to 9-1-1 is a compliment to and not a substitute for existing voice based 9-1-1 service
  – Call if you CAN!! Text if you CAN’T.

Text To 9-1-1

• Limits of Text to 9-1-1
  • Location accuracy limitations
  • Speed in exchanging information
  • Language translation services
  • Absence of voice inflection and background noise

Text To 9-1-1

• “As we shift focus to the future, GIS will become the hero in the next-generation world and the basis for a lot of what happens. It’s really shifting the role from being a supporting role to being perhaps the heart and soul of call routing and many of the other functions.” – Sean Petty, Director of Technology Practice, Mission Critical Partners

~Future GIS For 911

~Future GIS For 911
~MN Carrier Rehoming

- What process ECN will follow to successfully accomplish rehoming carrier network from the old legacy selective routers to alternate (and fewer!) aggregation points?
  - Preparation steps:
    - Complete statewide and to end 911 network inventory
    - Reconcile carrier billing discrepancies
    - Evaluate existing network and complete any incurring necessary to meet the required P.01 grade of service
    - Complete a reconciliation of carrier subscribers with existing records in ALI database
    - Renew carrier ECN contracts
  - Collaboration:
    - Quarterly meetings between carriers and DPS/ECN
- Carrier Feedback and Suggestions:
  - We want to hear your ideas and understand any concerns you may have
  - Open communication is essential to achieving a mutually cost-effective solution

~Present → Future

Summary

Today in Minnesota:

- More than 3 million calls per year traverse the next generation network (ESInet)
- Nearly 80% of the calls placed to 911 are wireless
- 5.4 million population served by 104 PSAPs
- New NG911 features and functionality must continue to be implemented in order to meet the expectations of the public we serve
  - And to capitalize on the public safety broadband initiative (FirstNet)

Use Case: Vehicle Crash ~FUTURE

Questions??