



APCO
International

Leaders in Public Safety Communications™

Emerging Technologies – Regulatory and Legislative Developments

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Texting 9-1-1

Background

- December 2012: Carrier-NENA-APCO Agreement
 - 4 largest carriers agreed to make text-to-911 available by May 15, 2014
- May 2013: Report & Order
 - Required bounce-back by September 30, 2013
- August 2014: FCC Order & FNPRM
 - Required text-to-911 for “covered text providers,” sought further input, established a Task Force on optimal PSAP architecture

What's Required

- “Covered text providers” must, starting December 31, 2014, deliver texts to PSAPs within 6 months of a valid request
- Voice calls always preferred if possible
- Key questions:
 - What is a valid PSAP request?
 - What is a “covered text provider”?
 - What’s not yet in place?

Valid PSAP Request

- PSAP has notified the covered text provider that it is technically ready and authorized by governing authority
- FCC plans to create an online database to register text-readiness
- Until then, PSAPs may file electronically with the FCC

"Covered Text Provider"

- Includes cellular service providers
- Providers of "interconnected text messaging services" that enable consumers to send and receive texts using telephone numbers

What's Not Yet in Place

- Texts while roaming
- Location information
- Non-interconnected text messaging
- Texting via non-CMRS networks (WiFi)
- Rich media text services
- Real-time text
- Vehicle telematics services offering text

Additional Proposals

- Covered text providers would be required to deliver "best available" location information within 2 years
- Covered text providers would support roaming
- Applying requirements to non-interconnected text service providers

Implementing Text to 9-1-1 Services

- Volume to date is minimal, expansion not yet predictable due to small subset of PSAPs who have implemented.
- Location challenges exist (routing vs. dispatchable)
- Liability and Security Issues

Implementing Text to 9-1-1 Services

- Solution challenges for PSAPs
 - Protocols for complex calls not yet established
 - Triaging calls and data
 - Translation issues (both language and short codes)
 - PSAP operational models vary
 - How do we train and prepare

Implementing Text to 9-1-1 Services

- Text is here and it is a good thing
- Carriers have built to standard and implemented accordingly
- PSAPs need to train and prepare based on that implementation
- SMS is only the beginning
 - Recent FNPRM seeks comment on enhanced location info; delivery over WiFi; roaming support - - NG9-1-1 and MMES are just around the corner and should provide better solutions for all.

PSAP Text-to-911 Readiness and Certification Registry

- Lists PSAPs that are ready to receive texts and provides notice to covered text providers of the PSAP's notice date of readiness.
- Lists each PSAP by FCC PSAP ID and name, the county of operation, the primary point of contact for coordinating text-to-911 service, the method by which the PSAP will accept texts, and the state or local governing entity authorizing the PSAP to accept texts.
- <http://www.fcc.gov/encyclopedia/psap-text-911-readiness-and-certification>

Task Force on Optimal PSAP Infrastructure

- Established by the FCC's text to 9-1-1 Order
- Purpose is to explore whether (1) PSAP consolidation could lead to more efficient and effective operations and (2) state & local governments that divert 9-1-1 fees should be ineligible to participate in FCC committees and working groups

The IP Transition and 9-1-1

Wireline Communications Technology is Changing

- Copper telephone lines are still very much in use throughout the United States
 - However, new technology has emerged which leverages internet protocol (IP) based networks and modern hardware to deliver landline phone service
 - This “IP Transition” will impact current and future 9-1-1 services:
 - Enabling NG9-1-1
 - Introducing vulnerabilities

NG9-1-1 Basics

- IP-based
- Standardized interfaces & interoperability
- Enables new inputs to 9-1-1
 - Ex - pictures, live video, and other data
 - Initial step with SMS

Public Safety Issues

- Consumers must know they are able to reach 9-1-1 whether they use PSTN, a VoIP service or a wireless phone
- The facilitation to an all IP network must be done without compromising any of the fundamental principles that made our phone system a model for the world
 - Reliable
 - Redundant
 - Secure
 - Power

April 2014 9-1-1 Outage

- Software coding error at a 9-1-1 call routing facility affected service to 81 PSAPs
- Over 6,600 calls never reached a PSAP
- FCC Report notes that “sunny day” outages are on the rise

FCC's Recent NPRM

- Seeking comments on issues arising from transition from traditional copper line networks
- Notes potential implications for public safety communications
- Comments Feb. 5; Reply Comments Mar. 9

APCO's Comments

- Power outages could limit ability to call 9-1-1
 - Backup power for 9-1-1 is essential (voice, and eventually NG9-1-1 capabilities)
 - Public education and standardization needed
- Supports provisions to ensure PSAPs and the public receive timely, accurate, and informative notices of transition from copper
 - Alarms and alerts are a critical part of public safety

APCO's Comments (continued)

- Cybersecurity increasingly important
 - IP-based technology and increased interconnection introduces vulnerabilities
- Automatic location information (ALI)
 - Need consistency with ALI provided over copper
 - Ensure no additional costs for PSAPs to receive ALI

9-1-1 Governance and Accountability

Improving 9-1-1 Reliability

9-1-1 Reliability Rules

- December 2013 Order in response to 9-1-1 outages during the June 2012 “derecho”
- “Covered 9-1-1 service providers” must take reasonable measures to provide reliable service
 - Critical 9-1-1 circuit diversity
 - Central office backup power
 - Diverse network monitoring
- Initial certification due October 15, 2015

9-1-1 Reliability Rules (continued)

- Amended outage notification; effective November 2014
- Covered providers must:
 - Notify PSAP “as soon as possible but no later than thirty minutes after discovering the outage” with “all available information” and contact information for follow-up
 - No later than two hours after the initial contact, provide “additional material information” including the nature of the outage, best-known cause, geographic scope, and estimated time for repairs

9-1-1 Governance and Accountability; Improving 9-1-1 Reliability

- Policy Statement and NPRM adopted Nov. 2014 proposed:
 - Expanding the definition of covered service providers
 - Increasing info sharing during 9-1-1 disruptions
 - Ensuring transparency/accountability for changes to 9-1-1 service through public notification
- Comments due March 23

Cybersecurity

Cybersecurity Bills – A Few Examples

- Cyber Intelligence Sharing and Protection Act
 - Would allow for the sharing of Internet traffic information between the U.S. government and technology and manufacturing companies
 - (passed the House in previous session but failed in Senate)
- Cyber Threat Sharing Act of 2015
- Cybersecurity Information Sharing Act of 2015

Other Cyber Action

- White House
 - February 2015 Summit on Cybersecurity and Consumer Protection
 - Government-industry collaboration
 - Calls to improve cyber for critical infrastructure, information sharing, improving cyber workforce, etc.
- NIST
 - Cybersecurity Framework created in February 2014
 - Sets standards, guidelines, and practices to help organizations protect their information and physical assets from cyber-attack
 - Being used by organizations to evaluate and plan cyber programs

FirstNet

Oversight Hearing

- Senate Commerce, Science, and Transportation Committee
- March 11 at 10:00 EST
- Examining FirstNet's progress
- Witnesses:
 - Bruce Andrews, Deputy Secretary of Commerce
 - Mark Goldstein, Director (Physical Infrastructure, GAO)
 - Sue Swenson, Chairwoman, FirstNet
 - Todd Zinser, Inspector General, Dept. of Commerce
 - Chief Keith Bryant, President and Chairman of the Board, IAFC

Public Notice

- Released March 9; comments due 30 days after publication in Federal Register
- Seeking comments on issues such as:
 - Equipment to be used on the network
 - Network policies
 - State opt-out

Thank you!

- APCO website: www.apcointl.org
- AppComm: www.appcomm.org
- Twitter: @GRO_APCO

- APCO events: www.apcointl.org/events.html
 - May 4-5: Broadband Summit in DC
 - August 16-19: APCO's Annual Conference in DC