Federal Communications Commission
Public Safety and Homeland Security Bureau

NG911 for State and Local Governments

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Why NG911?

- Changes in consumer habits and expectations:
  - Increased adoption of smartphones and usage of text messaging (91% of Americans own cell phones; 81% of cell phone owners use text messaging);
  - Increase in the number of wireless-only households (now about 40 % of American homes); and
  - Increase in the number of wireless calls to 911 (for some jurisdictions, 70% or more of all such calls).

- Enhancing emergency service to the public:
  - Will serve all constituencies, including the 15% of the US population that is deaf, hard of hearing, or has a speech disability (85% of which use text to communicate);
  - Will provide a means of seeking emergency help in dangerous situations, network congestion, or inadequate voice coverage; and
  - Will provide enhanced data and situational awareness to first responders.

Are We There Yet?

- NG911 evolution is work in progress, with many technical, operational, financial, and governance challenges still to be addressed.

- Many communications networks that support public access to 911 are already transitioning to IP; major communications providers ultimately intend to decommission their legacy TDM networks.

- Some state and local 911 authorities have taken initial NG911 transition steps, but most PSAPs remain heavily reliant on legacy network elements.

- FCC actions recognize both short-term needs (*e.g.*, text-to-911) and long term goals and requirements (*e.g.*, Report to Congress, funding).

- Transition will take time, and will not be uniform nationwide.

Early NG911 Adopters

- Several states have begun implementing NG911, but none have transitioned completely.
  - Text-to-911 implementation
  - ESInets
- Early NG911 adopters can serve as good resources for other state and local governments as they prepare for NG911.

What is Needed to Complete the NG911 Transition?

- Enhanced consumer and PSAP capabilities to support **delivery and use of multimedia information** (voice, text, data, photos, and videos);

- Effective **location accuracy** determination for all NG911 applications;

- Comprehensive and consistent technical **standards** to ensure functionality, interoperability, and security of all system elements;

- Adequate and sustainable **funding**; **and**

- A workable framework for NG911 **governance.**

Text-to-911

Policy Statement & Ongoing rulemaking – 2nd FNPRM (Jan. 2014)

- Near-term issues for CMRS and Interconnected Text Providers
- Longer-term issues including location information, roaming
- Comments due **April 4**; Reply Comments due **May 5**
- Voluntary deployments
    - Major 4 carriers have agreed to make text-to-911 available to requesting PSAPs by May 15, 2014
    - Other voluntary agreements in early stages
- Best practices for PSAPs
    - Website: http://www.fcc.gov/encyclopedia/best-practices-implementing-text-911
    - CSRIC report on PSAP requests for services coming June 2014

Wireless Location Accuracy

Ongoing Rulemaking – 3rd FNPRM (Feb. 2014)

- E911/NG911 location accuracy proposals:
  - Indoor requirements, with near and longer term standards
    - Proposed requirements for horizontal (x-, y-axis) and vertical (z-axis) dimensions
  - Compliance would be demonstrated via test bed
  - Compliance would be measured at county/PSAP level
  - Enforcement through the FCC would require that PSAPs have implemented bid/re-bid policies
- Sought comment on long-term "dispatchable address" goal; leveraging commercial LBS
- Comments due **May 12**; Reply comments due **June 11**

NG911 Standards

- Technical Standards for IP Transition will:
  - Help transition legacy communications into all-IP environment;
  - Will impact all emergency communications; and
  - Will serve as a foundation to enabling NG911 applications.

- Technical Standards for NG911 Elements

- Cybersecurity Standards

NG911 Standards

IP Transition Order (Jan. 2014)

■ The FCC issued an order which called for experiments that would simulate how communications operate in an all-IP environment.

■ Experiments will begin in 2014.

■ FCC held a workshop on April 17-18 that discussed how, both during and after the IP transition, public safety entities would address:

  ■ Everyday incident response;

  ■ Disaster preparedness and response; and

  ■ Cyber risks to commercial, public, and governmental networks.

NG911 Standards

Technical Standards for NG911 elements

- NENA i3 Standard: "Blueprint" for basic NG911 architecture

- CSRIC IV Working Group 1 is currently investigating several technical issues for NG911:

  - Best practices for PSAPs requests for text-to-911 service (June 2014);

  - Indoor location test bed (June 2014); and

  - Feasibility of using ATIS/TIA standard for text to provide Phase II location determination (June 2014).

Cybersecurity Standards

- In an all-IP environment, all public safety entities should have in place cybersecurity plans and procedures.

- Cybersecurity Framework:
  - Framework developed by NIST
  - Outlines how to systematically evaluate cyber risks, to prepare and protect assets from cyber events, and to recover after a cyber event
  - Developed for private enterprise, but model also works for PSAPs

NG911 Funding

- Funding for 911 and NG911 is left to state and local government discretion.

- NET 911 Report:

  - Fifth report (for FY2012) released Dec. 31, 2013

  - Highlighted disparities between state spending: "Estimates of funds collected ranged from a low of $2,010,341.58 by Nevada to a high of $212,788,623 by Texas." (*Fifth Annual NET 911 Fee Report* at 2)

NG911 Governance

NG911 Legal Framework Report (Feb. 2013)

- Next Generation 911 Advancement Act directed the FCC to submit a report to Congress containing recommendations for the "legal and statutory framework" for NG911 services.
- The report was issued to Congress on February 22, 2013.
- Report contained recommendations for:
    - A legal and regulatory framework for the development of NG911 services and the transition from legacy 911 to NG911 networks;
    - Legal mechanisms to ensure efficient and accurate transmission of 911 caller information to emergency response agencies; and
    - Removing jurisdictional barriers and inconsistent legacy regulations.

NG911 Governance

911 Transparency & Reliability

- Clear need to address problems with wireless network performance during major storms:

    - Hurricanes Sandy and Isaac resulted in outages of service for more than 25% and 20% of cells sites, respectively, in designated coverage areas.

    - Americans rely increasingly on mobile wireless networks to communicate; 38 percent of households have "cut the cord," and a majority of 911 calls come from wireless phones.

    - Overall, mobile wireless networks do not perform adequately during major disasters, but some do better than others.

    - The public currently has no means of comparing how well each wireless provider withstands and recovers from disaster conditions.

    - Providers lack sufficient incentives to compete on the basis of their resiliency during disasters.

NG911 Governance

911 Transparency NPRM (Sept. 2013)

■ Proposed to require wireless service providers to report to the FCC, on a daily basis during and immediately after disasters, the percentage of operational cell sites for each county within a designated disaster area;

■ Proposed rules that would enable consumers to compare the performance of wireless providers during emergencies, and thereby encourage competition in the wireless industry; and

■ Sought comment on alternative measures that could improve wireless network resiliency (*e.g.*, alternative forms of disclosure; back-up power or other mandatory performance standards).

■ Comment window closed **Feb. 18, 2014**; consumer groups (*e.g.*, Consumers Union) actively support the proposed reporting and disclosures; carriers strongly oppose.

NG911 Governance

911 Reliability Order (Dec. 2013)

■ The Order defines "covered service providers" as entities that provide 911, E911, or NG911 capabilities such as call routing, ALI, ANI, or the functional equivalent of those capabilities, directly to a PSAP, or that operate a central office that directly serves a PSAP.

■ "**Reasonable Measures**" Rule: Covered 911 Service Providers must take "reasonable measures" in three key areas to provide reliable 911 service.

■ **Annual Reliability Certification**: Covered 911 Service Providers may demonstrate compliance with the "reasonable measures" obligation by implementing the industry best practices specified in the rules or reasonable alternative measures.

■ **PSAP Outage Notification**: Covered 911 Service Providers must: (1) provide initial notification and contact information to affected PSAP within 30 minutes of discovering an outage that potentially affects a PSAP; and (2) follow up with additional material information as it becomes available but no later than two hours after the initial contact, including the nature of the outage, its best-known cause, the geographical scope, and the estimated time for repairs.

■ If a PSAP believes that it is not receiving proper notifications from a covered service provider, they may inform the FCC at http://www.fcc.gov/document/psap-outage-reporting.

What's Ahead

- FCC Technology Transitions proceeding and trials – launched January 2014

- Continued FCC engagement with other NG911 stakeholders (federal, state/local/tribal, industry, consumer groups)

  - Web resources for state and local governments

- May 15, 2014 deadline for 4 major carriers to provide Text-to-911 service for requesting PSAPs

- Approaching comment deadlines:

  - April 4 and May 5: Text-to-911

  - May 12 and June 11: Location Accuracy

Thank You!

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