Next Generation 911 Implementation

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CTIA—The Wireless Association®

Maryland Emergency Number Systems Board

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Consumer Access to Evolving Devices

- By mid-year 2011, CTIA estimates there were more than 322 million active wireless subscriber units or "connections" in the U.S., equal to 102.2 percent of the total U.S. population.

- More than 95.8 million Smartphones and wireless-enabled PDAs were active on carriers' networks at mid-year 2011, up 57 percent from mid-year 2010.

Source: CTIA Semi-Annual Wireless Survey

General Points on the Transition to NG-911

- The wireless industry fully understands the crucial importance of wireless communications to 9-1-1 and NG911 systems and is committed to effectuating a smooth and efficient NG911 transition.

- Coordinated, technically feasible action must be taken to avoid fragmentation of NG911 deployments.

General Points on the Transition to NG-911

- While NG911 standards development processes are moving into the advanced stages, significant technical challenges remain.

General Points on the Transition to NG-911

- NG911 envisions a much broader system incorporating new communications media and service providers, the implications of which are unclear.

General Points on the Transition to NG-911

- New types of information, entities and applications involved in the provision of NG911 services raise questions regarding the roles and responsibilities of the various actors, and the potential liability of each under federal, state, and local law.

  - Stakeholders may face liability under new causes of action that never posed a concern in the legacy 911 environment.

General Points on the Transition to NG-911

- NG911 deployment could be impeded unless there is an appropriate and responsible 9-1-1 funding environment.

Consumer Education and PSAP Evaluation and Input are Required

- A successful NG911 transition will require substantial public education, training and revised operating procedures for public safety answering points ("PSAPs").

Consumer Education

- Consumers need to be informed about potentially different NG-911 service capabilities and implementation periods from state to state or even intrastate.

PSAP (R)Evolution

- PSAPs need to prepare for a new communications paradigm, as increases in the day-to-day work flow and influx of new data can be expected.

- PSAPs must develop internal best practices and ongoing training procedures to ensure they can handle this new influx of data.

General Points on Messaging to 911

- Providing location information and nature of the emergency in the first text message is imperative since PSAPs may not be able to access the cell phone location or speak with the person who is sending the text.

General Points on Messaging to 911

- NG911 messaging should only be via technologies that are responsive to Public Safety's needs for user authentication and call back, rather than inadvertently making NG911 less reliable and more burdensome for PSAPs and the public.

  – For example, the FCC's "all calls" rule, while previously supported by PSAPs, has resulted in false calls and calls from devices that cannot be called back by the PSAP to verify an emergency.

Messaging to 911 – Shortcomings of SMS

- SMS lacks the native functionality for the provision of voice communications to 9-1-1.

    – Not designed with location information for routing or for PSAP location determination.
    – Not real-time, "best effort," store-and-forward service
    – Subject to latency and congestion, *i.e.*, there may be delays receiving or sending the message.
    – SMS messages may be lost / delivered in different order than sent.
    – Non-verifiable, non-authenticated.
    – Lacks security mechanisms, concerns over spoofing, denial of service, malware, etc.
    – Non-carrier "Over-the-Top" message applications.

General Points on Messaging to 911

- Stakeholders should support solutions that provide text-based communications directly to a PSAP that:

  - Meet consumer, industry and Public Safety expectations of any emergency service (*i.e.*, 9-1-1, routing, location, and ease of use);

  - Have minimal technical and economic impact on consumers, industry and Public Safety (*i.e.*, commercially available and technology neutral); and

  - Address key regulatory and legal issues (*i.e.*, FCC's "all calls" rule, liability protection, and regulatory jurisdiction).

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- Stakeholders should <u>not</u> support solutions that put lives at greater risk and deter from the common goal of ensuring that everyone, especially persons with disabilities, can utilize the technology of their choice to directly contact a PSAP.

General Points on Messaging to 911

- Industry stakeholders must work with Public Safety, consumers and policymakers to conduct a cost-benefit analysis of _any_ text-based communications solution