



Screenshot courtesy TCS

Text to 9-1-1 Gains Traction

Momentum builds as more deployments go live and public-safety stakeholders help public-safety answering points (PSAPs) prepare to launch the service. **By Kristen Beckman**

May 15 marks the voluntary deadline by which the four major U.S. wireless carriers agreed to offer text-to-9-1-1 service to public-safety answering points (PSAPs) that have requested the service and are prepared to receive texts. Text-to-9-1-1 deployments are gaining momentum, with many PSAPs already reporting smooth roll-outs despite some challenges unique to texting.

As of mid-January, 14 states had live text-to-9-1-1 deployments in at least one county, according to data supplied by carriers to the FCC. Iowa and Maine both offer text-to-9-1-1 capability statewide with at least one carrier, and Vermont covers its entire

state with two carriers.

The majority of the live deployments are with Verizon Wireless. The carrier reported it has deployed text to 9-1-1 in 46 jurisdictions as of its quarterly status report submitted to the FCC Jan. 2, and it is responding to additional requests.

T-Mobile reported one live deployment with Montgomery County, N.Y. Sprint has chosen a text control center (TCC) vendor and is finalizing the terms of its agreement. It has responded to requests from several jurisdictions but had no live deployments as of Jan. 2, Sprint's filing said. AT&T reported it is conducting a trial in Tennessee set to run through the first

quarter and is finalizing terms with a TCC vendor. The carrier said it has received 26 requests for service as of the end of 2013.

Meanwhile, the four carriers have implemented bounceback messages to alert customers who try to text 9-1-1 where the service is not available that they should call instead.

The FCC is pushing to expand text to 9-1-1 beyond the four largest cellular carriers. In January, the commission adopted a policy statement and proposed rules that would require all covered text providers to support text-to-9-1-1 service by the end of 2014.

Text Volume

When text to 9-1-1 started gaining traction, many PSAPs were concerned that their centers would be overwhelmed by texts or would receive nonemergency or frivolous texts.

"We have seen this not to be the case in our more than 60 deployments," says Girish Sivaram, Security Group product manager at TeleCommunication Systems (TCS), a text-to-9-1-1 provider. "The most common situation that causes any significant uptake of short message service (SMS) to 9-1-1 traffic is a broad geographical event, such as a hurricane. SMS has proven to be a very effective vehicle for emergency services in situations where cellular voice signals may be unavailable or congested for whatever reason."

Vermont, which has been an early adopter of the service since launching its first trial in April 2012, has experienced minimal text volume, says David Tucker, executive director of the Vermont Enhanced 9-1-1 Board. Text volume increased from a text every few weeks with one carrier to a couple texts per week following a public education campaign launched last fall and the addition of a second carrier, but the fear that people would abandon making voice calls in favor of texting 9-1-1 has not happened, he says.

Tina Carson, operations manager for the city of Rochester (N.Y.) Emergency Communications Department,

says her PSAP has fielded 73 texts since text to 9-1-1 launched in July 2013. Thirty of those texts were legitimate calls that were entered into the CAD system, and 10 were secondary texts related to calls that were already being processed. Sixteen texts were messages seeking information about the service or its boundaries. Seventeen were considered inappropriate.

“We were concerned we would be bombarded with texts, and we were worried we might even have to shut it off at some point,” says Carson. “However, it has been very manageable.”

Similar reports have emerged from other PSAPs.

Bruce Romero, emergency dispatch director for the Aspen-Pitkin County Communications Center in Colorado, says text volume has been low since its launch in October 2013.

“We have only had one real text-to-9-1-1 experience, and it was in Spanish,” says Romero. “This provided a bit of a challenge because the translation services that are currently available do not yet deal with text. We were able to successfully use an online interpreter.”

James Soukup, director of the Durham Emergency Communications Center in North Carolina, says the volume of texts his center has received since launching in August 2011 is minimal.

“It is very easy to learn, will not cause any significant volume impact and is a great tool for the public to be able to use for those rare occasions where talking puts you in jeopardy,” says Soukup.

Why Text to 9-1-1?

The text-to-9-1-1 initiative is driven largely by the need to provide 9-1-1 service to the 37 million people in the United States who are deaf, hard of hearing or who have a speech impairment. This population largely abandoned legacy forms of communications including video relay and TTY — a telecommunications device for the deaf — in favor of texting.

However, it isn't clear whether the deaf community so far has been the



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Quick Response

The city of Rochester's (N.Y.) emergency communications center created a database of short text replies to expedite text-to-9-1-1 sessions. Canned replies include:

- If it's safe to do so, can you make a voice call to 9-1-1?
- What is the address where you need assistance?
- Is that a single home or an apartment?
- What is the closest cross street to the location?
- What town is that in?
- What telephone number can you be reached at?
- Okay, tell me exactly what happened.
- Please keep abbreviations to a minimum.
- Is the suspect nearby?
- Are there any weapons involved or mentioned? If so, what kind?
- Are drugs or alcohol involved?
- Please reverify the location of the emergency to make sure I have it correct.

primary users of the available text-to-9-1-1 services. Tucker says dispatchers in Vermont don't routinely ask texters if they are deaf, so they don't know how widely the service is used by deaf citizens. However, he says Vermont has been able to intervene in several domestic violence cases, and a surprising number of cases related to suicide ideation or attempts have come via text. Rochester's PSAP also has experienced a significant proportion of texts related to suicidal parties, says Carson.

In addition to the deaf community, people who can't call 9-1-1 or use text because of its anonymity, texting is also important for younger generations who might be more comfortable with texting than making voice calls.

"One such instance occurred on Oct. 7, 2013," says Sivaram. "Although the availability of text-to-9-1-1 had not been publicized to the community, the Dauphin County (Pa.) Emergency Communications Center received its first legitimate text-to-9-1-1 call from a 10-year-old girl. The dialogue took approximately 22 minutes and required police and EMS dispatch. A potentially tragic situation was averted. Apparently a 10-year-old never considered the possibility that texting '9-1-1' might not work and chose the communication that she was most familiar with — texting," he says.

Despite the increasing use and familiarity with texting in the U.S.,

public-safety groups are encouraging people to use texting only when placing a voice call is not possible or would be dangerous. Voice calls often provide better information to call-takers such as whether the caller is male or female, the urgency of the situation based on the caller's tone and even background noise that can help responders.

Challenges

As text-to-9-1-1 deployments increase, PSAPs have had to overcome a few challenges specific to texting.

When the Rochester emergency communications center started planning its deployment early in 2013, the PSAP engaged with the deaf and hard-of-hearing community in its area to learn how to most effectively communicate with its constituents, and the deaf community in turn helped the center educate its members about the service through newsletters and a presence at meetings. John Merklinger, director of the city of Rochester Emergency Communications Department, says the Rochester area is home to 78,000 deaf and hard-of-hearing citizens.

Through its partnership with the deaf community as well as months of testing, the PSAP learned several lessons that helped it better field text calls when it went live in July 2013. Some of the questions PSAP employees considered prior to launch were how to

determine when a text call was complete and how to overcome the increased time required for call-takers to type responses.

The center created more than 20 pre-canned responses that call-takers can choose from to quickly communicate with text callers. The first canned message texters receive is a prompt to call 9-1-1 if they are able to. Additional messages ask the caller for location information and details about the incident.

Getting Started

To help public-safety managers understand text to 9-1-1 and begin the deployment process, several 9-1-1 stakeholders formed the National SMS Text Service Coordination Group led by Roger Hixson, technical issues director at the National Emergency Number Association (NENA). The ad hoc group released an information and planning guide in February that includes a description of SMS text to 9-1-1, an explanation of why it is used for interim text-to-9-1-1 service and the reasons why it should be deployed.

The document also provides a standardized request for service letter and a carrier questionnaire. Currently, PSAPs must make a separate request for service to each carrier.

"One of the major things we are advocating is that the public-safety community look at this from a county-wide or regional standpoint," says Hixson. "The people using the service don't understand the geographic boundaries. The guide stresses the idea of a county or multicounty approach."

Hixson predicts an uptick in the number of deployments as the May deadline approaches.

"Most PSAPs are not going to jump on this until it's a real thing, but I think uptake will accelerate at least by May 15 if not before," he says. "It is in their interest to provide a capability that has been lacking and is needed." ■

Kristen Beckman is assistant editor at *MissionCritical Communications*. Email comments to kbeckman@RRMediaGroup.com