



CHOOSING THE RIGHT

TEXT-TO-911

IMPLEMENTATION FOR YOUR COMM CENTER

Technical, training and public communications must be taken into account.

By Stephen Martini

At many emergency communications centers (ECCs), text-to-911 solutions are still on the way, but for many others, the solution is already here.

According to voluntary reporting by centers to the Federal Communications Commission, a little more than 40% (about 2,583 of the approximately 6,100) of communications centers in the United States are estimated to have implemented some method to receive text-to-911 by July 2020. This is up from 23% in 2018 — double-digit growth in two years. But that means six of every 10 emergency communications centers still are either exploring a solution or have yet to begin considering how to connect their telecommunicators and callers via text.

While there is no legal requirement for ECCs to provide text-to-911 service, the Americans with Disabilities Act Title II requires “all Public Safety Answering Points (PSAPs) to provide direct, equal access to their services for people with disabilities.”

For years ECCs complied with telecommunications device for the deaf (TDD) or teletypewriters (TTY) that, as technology progressed, became obsolete among their customer base. The hearing and speech-impaired community transitioned to smartphones as more aspects of business and social life could be conducted via text and messaging apps. As more agencies go live with text, performing to a consistent industry standard of care could place pressure on an agency’s liability if they do not implement a solution.

Some of the earliest states to bring text-to-911 to all ECCs — Minnesota, Connecticut, Maine, Vermont, Virginia and Maryland — took an average of three to four years to implement. To do so, they considered one of four primary delivery methods: text to TDD translation, text to web browser application, text to control center interface or text to call processing equipment via direct internet protocol.

Which of these is right for you?

Text to TDD translation may be appropriate for those seeking a solution sending text messages directly to the call taker through their call processing equipment (CPE) without incurring costly upgrades to existing hardware and software both in time and money. Identified initially as an interim solution while ECCs prepare to implement an i3-compliant solution, this solution allows only short-message-service text from the carrier. It permits no videos or pictures and only one recipient per message. About 8% percent of ECCs receiving text-to-911 use this solution. Additional resources regarding text to TDD translation can be found at www.apcointl.org/resources/ng911/text-to-9-1-1/.

Text to web browser application may be appropriate for those not seeking a connection direct to call processing equipment, but instead opting to use an internet connection and a browser-based solution to process text messages. This could deliver text messages to a specific computer logged in to receive these messages, which may work well for centers staffed by two or three people at a time but may become problematic for medium to large ECCs limited to receive and respond to these emergency messages from a single console. However, like the previous solution, this option is less costly or time-consuming than upgrading call processing hardware and software or connections to carriers. About 30% of ECCs receiving text-to-911 use this solution.

Text control center interface may be appropriate for those who want to avoid translations to TDD/TTY or directing calls away from call processing equipment to a web browser but are not yet ready to integrate text directly to call processing equipment. This solution directs text messages from carriers to a text call center, which serves as an interface to the ECC. Little more than 1% of ECCs receiving text-to-911 use this solution.

“Neighboring ECCs that have already implemented one of the four solutions discussed in this article may be the best resource to help you understand specific impacts to your geography, technology or state connection configuration.”

Direct IP integration may be appropriate for those ready to integrate text messaging directly to their call processing equipment across an ESInet or similar IP connection to the carriers. These solutions require hardware and software configurations prepared to support the receipt of SMS natively. In prepared systems, telecommunicators receive and respond to text messages via a module designed to display and process text messaging, which can be costly in both time and money to develop. These also require an IP connection between the carrier and the point of demarcation to ECC equipment. About 61% of ECCs receiving text-to-911 use this solution.

Some CPE solutions allow multiple sessions to be answered simultaneously by a single telecommunicator. We wouldn't encourage telecommunicators to manage multiple voice calls at the same time — it's impossible to verbally speak with two different callers experiencing two different situations at two different locations different instructions at the same time! But that's not necessarily the case with text messaging. In daily use, we often conduct more than one text conversation with a friend or family member simultaneously. The nature of text messaging allows for delays while one party is typing or reading, which could provide the telecommunicator an opportunity to communicate to more than one individual at a time. The ECC needs to consider their operations when determining whether telecommunicators should process one or multiple text sessions at a time. As an additional challenge, some CPE solutions consider a text message like a phone call. This prevents a console from receiving any other calls — including voice — which may be cause for concern due to the length of time required to process a conversation via text versus the significantly shorter time to communicate via voice.

Before determining how your agency should receive text-to-911 messages, consider how your center wants to operate. Regardless of which option is right for you, simply determining which way your agency connects to send and receive messages is not the end of the road. How do you intend to engage with your community?

While the hearing- and speech-impaired community has been one of the strongest motivators for implementing this solution, they certainly aren't the only potential users. Younger generations who prefer to text rather

than talk may opt to connect with ECCs via messaging. Limited English Proficient (LEP) individuals may choose to text to the ECC in their native language, relying on translation services to function as the method for language mediation to relay their request for help. Even others normally able to speak in most situations may elect to text if they find themselves in situations where speaking may increase the possibility of harm (a home invasion, an active aggressor or an abduction).

So, who is your audience? If you serve a population of LEP individuals (nearly 28 million in the United States identify as such), then seeking a solution offering native language translation may be more important. If you serve a student population in a college or university, you may see higher rates of use than those areas serving an older demographic. How are you going to communicate the oft-shared industry mantra — “Call if you can, text if you can't” — to each group to avoid needless texts that could or should have been a voice call?

Regardless of which option is right for you, simply determining which way your agency connects to send and receive messages is not the end of the road.

Another concern worthy of consideration is how cellular calls are routed. Unlike traditional plain-old-telephone-system (POTS) lines that route calls directly to the appropriate ECC tasked with dispatching the right responders to the appropriate address, cellular calls are routed via cellular towers often sitting on the edge of jurisdictional boundaries. This routing reality often sends calls intended for one ECC to a neighboring center due to busy cell site equipment. Because of this reality, persons within your jurisdiction relying on text to reach your telecommunicators may be routed to neighboring centers. Are they ready to receive the call? Does your jurisdiction have multiple primary answering points tasked with receiving 9-1-1 calls nearby that would make this more frequent for the majority of callers?

If so, these challenges may impact your deployment timeline as you coordinate with neighbors to ensure text-to-911 implementation isn't announced at anything smaller than a countywide basis. This will avoid confusing callers attempting to text for help near a border between city or town and county or parish.

Once you identify how you want to receive and send text messages and how you will engage the members of your community likely to benefit from this latest method of communication, you will need to connect with the four major carriers identifying your intent to move forward with receiving text messages to your center. The National Emergency Number Association (NENA) website contains a helpful guide — “Interim SMS Text to 9-1-1 Information and Planning Guide” — at apcointl.org/resources/ng911/text-to-911 providing sample letters to initiate that conversation with phone carriers.

Once your center successfully tests with the four major carriers, you will need to train your personnel. How will you prepare your team to answer these calls for help?

Many public safety communications professionals find the amount of time required to train telecommunicators to process these calls is minimal — less than two hours. Most of the training can occur at the console, on the job, allowing telecommunicators to send and respond to text messages between employees, engaging the equipment in non-emergency situations.

To assist your personnel, your agency may choose to configure some pre-scripted messaging into your CPE, allowing telecommunicators to quickly select and send questions and directions used most often. Training resources developed jointly between APCO and NENA can be found in a helpful guide at apcointl.org/resources/ng911/text-to-911 called “PSAP Interim Text to 9-1-1 Training Documents.” For those implementing native solutions within your CPE, additional coordination is likely required with your CPE vendor to understand how to engage with software at the console.

Where can you go for help? Your call processing equipment provider likely has insight on the efforts they've made to implement a solution. If your state has a governing body overseeing 9-1-1 coordination, they will likely serve as a reliable source of information. Neighboring ECCs who have already implemented one of the four solutions discussed

in this article may be the best resource to help you understand specific impacts to your geography, technology or state connection configuration.

Advancements in text-to-911 focus on multimedia emergency services, which requires implementation within carrier service and individual cellular devices and an IP connection between carrier networks and NG9-1-1 systems. Standards are still in development, which will guide future testing

and implementation, allowing the simultaneous delivery of videos, pictures, text and voice to the dispatch console. ●

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CDE EXAM #58166

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|--|---|---|
| <p>1) A little more than 40% of emergency communications centers in the United States have implemented some version of text-to-911 solution.
a. True
b. False</p> <p>2) Approximately how many ECCs reported to the FCC in July 2020 they are handling text-to-911 calls?
a. 1,600
b. 2,583
c. 4,503
d. 8,012</p> <p>3) Which population group has been the strongest motivator for text-to-911?
a. Hearing- and speech-impaired community
b. Young adults
c. Older adults
d. Limited English proficient individuals</p> <p>4) There are four different ways to direct text messages from the carrier to the ECC.
a. True
b. False</p> | <p>5) This method translates text messages to existing communications methods for telecommunications devices for the deaf/teletypewriters.
a. Text to TDD translation
b. Text to web browser application
c. Text call center interface
d. Direct IP</p> <p>6) This method delivers text messages to an internet browser separate from the center’s call processing equipment.
a. Text to TDD translation
b. Text to web browser application
c. Text call center interface
d. Direct IP</p> <p>7) This method features a call center serving as the link between carriers and the ECC to deliver text-to-911 calls.
a. Text to TDD translation
b. Text to web browser application
c. Text call center interface
d. Direct IP</p> | <p>8) This method delivers text messages directly to the call processing equipment at the ECC via an IP connection.
a. Text to TDD translation
b. Text to web browser application
c. Text call center interface
d. Direct IP</p> <p>9) Additional resources can be found on both the APCO and NENA websites to assist with researching, connecting, testing equipment, training personnel and informing the public about text-to-911 solutions in your jurisdiction?
a. True
b. False</p> <p>10) Currently offered text-to-911 solutions allow for pictures and videos to be sent directly to the ECC via Direct IP?
a. True
b. False</p> |
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