Text to 9-1-1

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Overview

• Case Study from Black Hawk
• How SMS to 9-1-1 works
• Reliability of 9-1-1 SMS Messages
• Location for 9-1-1 SMS Messages
• Foundation for the Future
• Q&A
People are constantly incriminating themselves with poorly timed or damaging text messages, but one Iowa county is finally allowing people to get themselves out of trouble with their texting thumbs. According to the AP, the emergency call center located in the county jail in Waterloo, Iowa is the first in the nation to accept texts directed to 911. The responders can even reply to the emergency messages via computer.
Black Hawk Consolidated Communications Center

- Calls Stats - number/types
- The usefulness
- Ease of integration into the Center
- Fake calls - get them with any type of 911 call
- Locating the caller – currently routed based on caller info. Option when unknown: have them to hang up and call 911 – they don’t have to talk, but this will help us receive the lat/long info.
- Not just for Deaf & HOH! Can also be used for people with various disabilities that may affect their ability to speak such as stroke patients, cerebral palsy, MS, etc.
User to PSAP SMS Messages

1. 9-1-1 SMS from Cellular Network
2. ACK from Location Server
3. 9-1-1 SMS Message to 9-1-1 Call Center (PSAP)
4. What cell or MSC is Phone using
5. Location Response
6. 9-1-1 Text Call to PSAP

CARRIER

SMSC

Cellular Network

Location Server

9-1-1 SMS AGGREGATION

ETG

9-1-1 Call Center (PSAP)

PSAP
I need help at 10659 Wolff Way.

This is an automated response from 9-1-1. To properly route your message, please reply with the nearest CITY or the nearest zip code.

Longmont

What is the emergency? What do you need help with?

My ex BF is here. He is threatening me and won’t leave!

What is his name? Does he have any weapons? Has he assaulted you or anyone else?

Jim Fox. He owns a gun but not sure if he has it.

Police are on the way.

The officers should be at your door now.
PSAP to User 9-1-1 SMS Messages

1. Message Back to Caller
2. Message Back to Caller
3. Where is Phone
4. On "ABC" switch
5. SMS message to Caller
6. ACK I received it
7. Delivery receipt
8. The Mobile got the message

9-1-1 SMS AGGREGATION
Managing Traffic in SMS

SMSCs

Premium SMS Queue

User SMS Queue

9-1-1 SMS Queue

Metered Output

Carrier Network
Typical Carrier Network

MSC

MT SMSCs

HLR

SMPP Gateway

SMS HUB Providers

Other Carriers

Premium Applications

MO SMSCs

MT SMSCs

SMSC

SMSC

SMSC

SMSC

MSC

MSC

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SMS as a Foundation for the Future

Location Aware HS Application

Wireless Data Network

9-1-1 Texting Gateway

IP Conversation

Conversation

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SMS to 9-1-1

- Many users are very familiar with SMS. Over 3.5 Billion Text Messages are sent a day.
- A vast majority of the Cell phones today support SMS Messaging.
- SMS messaging can work in areas and times where voice networks and data networks may not.
- Reliability and minimal delay can be achieved through existing network mechanisms.
- Location of SMS to 9-1-1 callers can be obtained through existing commercial mechanisms.
- SMS to 9-1-1 creates a foundation to support other Text to 9-1-1 solutions such as RTT.