





# TEXT-TO-9-1-1

## The View from Cassidian Communications/

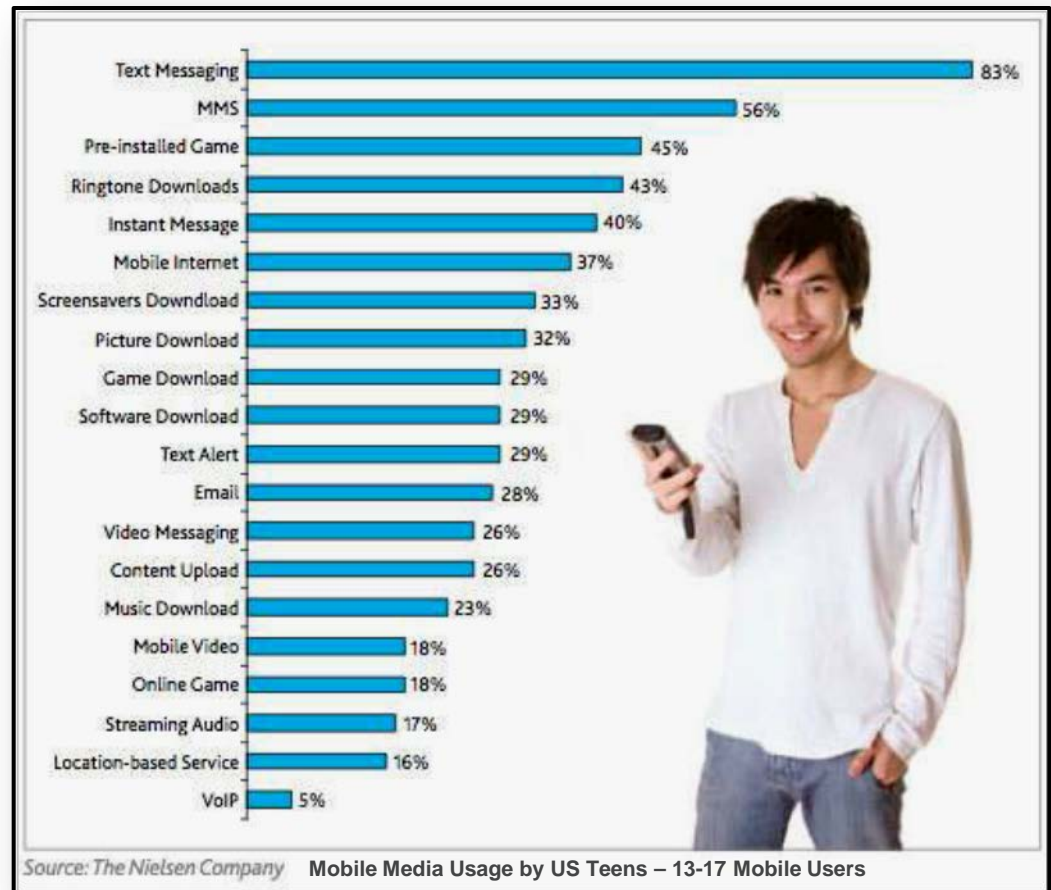
Bob, Freinberg CEO  
September 12, 2013

# HOW WE COMMUNICATE HAS CHANGED/

## ...and it is not just teens

- 80% of all cell phone users text
- Averaging 35 texts per day
- Totaling more than 9.8 Trillion texts in 2012

Pew Research Center, 11/25/2012



# THE FCC TOOK NOTE/

## September 2011 FCC Text-to-9-1-1 Notice of Proposed Rulemaking

- Sought to accelerate development and deployment of NG9-1-1 including multimedia (text, video, data)
- Proposed use of SMS for Text-to-9-1-1 in the short term
- Encouraged development of real time solutions in the long term
- Requested comment on “over-the-top” applications, traffic prioritization and other topics



# AS DID THE MAJOR WIRELESS CARRIERS/

## **December 2012 Letter of Voluntary Commitment**

- Signed by AT&T, Verizon, Sprint, T-Mobile, APCO and NENA
- PSAPs to select format for message delivery
  - Consistent with ATIS draft standard for Interim Text-to-9-1-1
- '9-1-1' short code to be implemented
- National bounce-back (Auto-Reply) by June 30, 2013
- Carriers will offer service no later than May 15, 2014
  - Based on existing SMS capabilities of the carrier or it's Gateway Service Provider

# AND OUR INDUSTRY/

## **Text-to-9-1-1 trials**

- Blackhawk County, Iowa
- Durham, North Carolina
- Frederick County, Maryland
- State of Tennessee
- State of Vermont
- York County, Virginia

No text-related problems encountered during industry trials; trials have demonstrated that SMS text-to-911 is reliable and available

# WHERE TEXT-TO-9-1-1 STANDS TODAY/

## Dec 2012 FCC **Further** Notice of Proposed Rulemaking

- Builds on FCC NPRM issued September 2011
- Leverages letter of agreement signed by major Wireless Carriers, NENA, and APCO
- Outlines near-term options to enable all PSAPs to accept Text-to-9-1-1 messages
  - Pre-NG9-1-1 capable PSAPs
  - NG9-1-1 capable PSAPs



# PRE-NG9-1-1 PSAPS/

## Three technical options for PSAPs to use

- Text-to-Voice Gateway
  - PSAP receives text messages via a gateway center where emergency-trained telecommunicators translate between text and voice
- Text-to-TTY Gateway
  - Text messages converted into TTY calls that PSAPs receive over existing TTY facilities
- Web Browser Application
  - PSAP receives text messages via a web browser installed at one or more terminals used by call-takers and connected to a third-party service provider



# NG9-1-1 PSAPS/

## Text messages delivered to PSAPs in an NG9-1-1 environment

- Compliant with NENA i3 standards
- Compliant with ATIS standard\*\*
- NG911 IP standards-based interface will support delivery of text messages
  - Independent of mobile device technology
- Ensures consistent format for delivery of text messages

\*\*Note: Joint ATIS/TIA Standard for Native SMS to 9-1-1 (J-Std-110) approved in March 2013

# CASSIDIAN COMMUNICATIONS & TEXT-TO-9-1-1/

## Pre-NG9-1-1 Capable PSAPs

- 9-1-1 call taking systems currently support all three options for receiving Text-to-9-1-1 identified by the FCC

## NG9-1-1 Capable PSAPs

- Actively pursuing the incorporation of Text-to-9-1-1 functionality **directly** into VESTA®/Sentinel® platform
  - **Compliant** with NENA i3 and ATIS/TIA J-STD-110 industry standards



# VESTA®/SENTINEL® 4 USER INTERFACE – TEXT-TO-9-1-1 EXAMPLE/

The screenshot displays the VESTA®/SENTINEL® 4 User Interface, a software application for emergency services. The interface is divided into several sections:

- Toolbar:** Located at the top, it contains various icons for call management, including Ready, Answer, Release, Local Hold, System Hold, Conference, Transfer, No Hold Conference, Blind Transfer, Drop Last, Drop All, Network Conference, Network Drop Last, Information, Connectivity, and Notifications.
- Queues:** On the left, there are buttons for In Calls, Sms, Email, and 1691-1, 1691-2.
- Call Information Display:** The central panel shows details for a call from (909) 731-3902. It includes the caller's name (WEEKEND BEACH HOUSE), address (3620 SWEETWATER MESA DR, MALIBU, LOS ANGELES, CA 90265), service information (Environment: Business, Service: NPH2, Mobility: Mobile), and location coordinates (POS (LAT/LONG): 34.037299 -118.6795).
- Smart 911:** On the right, this section provides additional context for the call, including the phone number (909 731-3902), ticket number (09102013-48730), and a map view showing the location. It also lists the address (Building T2, 42555 Rio Nedo - Temecula, CA - 92590) and structure details (Color: Off-White, Siding: Other, Apt. Building 1, Floor: 2, Floors (#): 2).
- Dial Directory:** At the bottom left, there is a search bar and a grid of buttons for various law enforcement agencies, including Barstow Sheriff, Big Bear Sheriff, Brea PD, Chino Police, CHP Barstow 9..., CHP Indio, CHP Riverside, CHP SBD0, Claremont PD, COMM Center, Corona PD, Desert Hot Springs/R, Indian Wells/RSD, Joshua Tree Sheriff, Lake Elsinore/RSD, La Quinta/RSD, Montclair PD, Ontario Dispatc..., Ontario PD, and Perris/RSD.
- Conversation:** The bottom right panel shows a text conversation between the caller and the agent. The caller's message is: "9-1-1. What is your emergency? There are intruders in my house." The agent's response is: "Are you calling from your primary residence at 3620 SWEETWATER MESA DR, MALIBU? Yes. I'm hiding in the master bedroom closet." The agent then states: "Stay where you are. Police have been dispatched to your location."

The interface also includes a status bar at the bottom showing the time (4:39:48 PM) and date (Tuesday, September 10, 2013).

# CASSIDIAN INTEGRATED TEXT-TO-911 SOLUTION BENEFITS/

- A single, integrated application from which all NG9-1-1 “calls” are received
  - No context switching, no loss of functionality, no compromise on service
  - Same user experience between voice, and SMS service requests for assistance
  - One application to train
- SMS calls are queued similar to voice calls and processed based on ACD, Priority Answer, or Select Answer
  - PSAP Administrator can assign SMS skill set to only certain Agents.
- SMS calls receive similar call handling treatment as voice calls
  - Conference, transfer, supervise, call history, etc.
  - Transferred SMS calls to other consoles or PSAPs include all NG9-1-1 info, including the entire SMS conversation, location of caller, additional data, etc.

# CASSIDIAN INTEGRATED TEXT-TO-911 SOLUTION BENEFITS/

- A call that started as voice and then switched to SMS is treated as one session (SMS is routed to same Agent).
  - Eliminates duplicated effort
  - Increases response time
- Supports multiple concurrent SMS sessions.
- Fully configurable policy-based routing (PRF) in the network as well as within the PSAP.
- Allows single workflow to support SMS messages from all wireless carriers
  - Over-The-Top applications may be wireless carrier specific

# WHAT WE SEE IN THE MARKET/

- Operations will need to be adjusted, but...
  - Prioritizing text and voice calls; handling prank texts; interpreting abbreviations and slang; reconnecting with dropped text sessions; logging text sessions
  - Measuring and reporting duration of text sessions
- ...Benefits are significant
  - Enhanced emergency communications for hearing impaired
  - Viable communications alternative when voice is not possible

**“As a 9-1-1 Center, we have the responsibility to accept calls from any medium that may be used to declare an emergency situation”** Dave Larton, *Text to 9-1-1: Things to Consider*, 9-1-1 Magazine 12/18/2012



# THANK YOU /

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