Agenda

• Introduction
• Overview of the NISC
• RapidSOS: *Rich Data: Increasing Situational Awareness for First Responders*
• Q&A
• Quiz for those seeking Continuing Education Units (CEUs)
Today’s Speakers

• **Chris McIntosh**, NISC Board Director

• **Keith Viveiros**, Public Safety Regional Business Development Manager, RapidSOS

• **Karin Marquez**, Public Safety Regional Business Development Manager, RapidSOS
Continuing Education Units (CEUs)

- CEUs will be awarded to participants that watch the webinar and complete the quiz following the webinar
- 0.1 CEUs for this hour-long event
Learning Objectives

1. Understand how RapidSOS tools use Next Generation 911 and the internet of things to enhance first responders’ situational awareness.

2. Understand how RapidSOS tools can integrate with other systems and apps.

If you have questions during the webinar, please submit using the question feature in GoToWebinar.
NISC Mission-Focused Job Aids Webinar Series

• In-depth discussion of tools, techniques, and standard operating procedures used for information sharing

• Webinar content applicable to multiple fields, including:
  • Homeland security,
  • Emergency management,
  • Public safety,
  • First responder, and
  • Healthcare preparedness.
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• **June 21, 2018**: Rich Data: Increasing Situational Awareness for First Responders (Co-hosted by the NISC and RapidSOS)

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National Information Sharing Consortium

The NISC is a non-profit organization devoted to improving information sharing at all levels of government and for all homeland security, emergency management, first responder, healthcare, and public safety stakeholders.
NISC Members Span Multiple Domains & Disciplines

Public Sector – Private Sector – Non-profits

Communications  Information Technology
Critical Infrastructure  Law Enforcement
Emergency Management  Military
EMS  Private Industry
Fire  Public Health
GIS  & More!
Homeland Security
Member Benefits & Application

- Guidance and technical assistance
- Knowledge exchange and networking opportunities
- Access to the NISC Member Portal


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Rich Data: Increasing Situational Awareness for First Responders

RapidSOS NISC Webinar
June 2018
NextGen911:

NG911 is an Internet Protocol (IP)-based system that allows digital information (e.g. voice, photos, videos, text [profiles]) to flow seamlessly from the public, through the 911 network, on to emergency responders, and beyond.
## NG911 Data Sources

<table>
<thead>
<tr>
<th>Category</th>
<th>Icons</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>AML / Beacon</td>
<td>![Cell Phone] ![Location] ![Medical Data]</td>
<td>Location, Medical Data</td>
</tr>
<tr>
<td>Apps</td>
<td>![Plus Icon] ![Location] ![Medical Data] ![Text] ![Photo] ![Video]</td>
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</tr>
<tr>
<td>Wearables</td>
<td>![Heart Rate] ![Location] ![Blood Pressure] ![Glucose] ![Sp02]</td>
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</tr>
<tr>
<td>Connected Home</td>
<td>![Location] ![Video] ![Temperature] ![Smoke]</td>
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<tr>
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RapidSOS Emergency Platform

Sending life saving data from the Internet of Things to 9-1-1 and first responders
Device-based hybrid location: Combine ALL sensors!

**It could/should be:**

1. **Fast**
2. **Accurate**
3. **Dynamic**

**Cell Tower Triangulation:**
Reliable, but not very accurate

**GPS:**
Highly accurate and reliable outdoors

**WiFi Access Points:**
Highly accurate indoors, and it’s getting better and better

**Bluetooth Beacons:**
Potentially highly accurate indoors (Let’s see)

**Barometric Pressure:**
Altitude reading (z-axis)

**Pedestrian Dead Reckoning:**
Accelerometers, step counters, ..
Typical Wireless Triangulation
UNCERTAINTY: 180 meters

Typical RapidSOS location
UNCERTAINTY: 15 meters
Typical Wireless Triangulation

UNCERTAINTY: 180 meters
CONFIDENCE: 90%

Typical RapidSOS location

UNCERTAINTY: 15 meters
LAST UPDATED
1/25/2018 | 5:25:56 PM

LAST KNOWN LOCATION
991 Alaskan Way S, Seattle, WA 98104, USA | Latitude: 47.5924367 Longitude: -122.3367175
ELS/Clearinghouse Location Faster than traditional E911

- 70% of ELS locations delivered to 911 Center on initial call delivery
- 22% of Triangulated Locations delivered to PSAP on initial call delivery
Calling 911? Your iPhone will be able to tell a first responder where you are.

Technology

Apple to Provide More Precise Location Data for iPhone 911 Calls

iOS 12 will include a new life-saving feature for iPhone customers in the US

Apple wants to solve problems pinpointing 911 calls for help

Your iPhone Will Soon Send Your Exact Location to First Responders When You Call 911
NG911 Clearinghouse

Wireless Carrier

“Control plane” location

GLMC / MPC

Basic location

ALI Database

ALI query

Cell tower/ location estimate

Selective Router

Voice

PSAP

PSAP Integration

Request using Callback Number (HELD)

Response: Enhanced Location & More (PIDF-LO)

AML

NG911 Clearinghouse

AML Beacon App

RAPIDSOS

Supplemental data in addition to ALI – not a replacement!
VESTA Map Local
Smart911 (RAVE)
device based

WPH2
Search and Rescue Versus Rescue

24+ hours lost, helicopter crews needed

15 minutes lost, one park ranger needed
Trapped and dying in a minivan, desperate Ohio teen calls 911 for help that doesn’t find him

911 calls show confusion as rescuers tried to find beach where father drowned
## NG911 Data Sources

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How Will 911 Phone Systems or CAD Handle Additional Data?
Use Case Example: Waze Traffic & Incident Data

Receive Data from Waze

• Receive incidents reported by Users
• Monitor real-time traffic conditions

Send Data to Waze

• Create road closures on the fly
• Push incident warnings / re-routes out to users
Home Security and Fire Systems
Smart Watch Calling 911
Use Case Example: Uber
Recent Example: RapidSOS connects Uber to 9-1-1
NG911 & FIRSTNET

The two systems complement each other, and when coordinated, will greatly improve public safety communications by providing the seamless exchange of rich data between the public, 911 and first responders.

1. PUBLIC EMERGENCIES
   Public sends information and rich data to 911

2. NG911 CALL CENTERS
   Receive and prioritize information and rich data

3. FIRSTNET
   Wireless network sends information and rich data from 911 to first responders

4. FIRST RESPONDERS
   Alerted to emergency with real-time, critical information and data

Source: NASNA911.org
RapidSOS Emergency Platform

Sending life saving data from the Internet of Things to 9-1-1 and first responders

RapidSOS and the NG911 Clearinghouse
Trusted source of device location and additional data
Q&A

Please submit questions using the question feature in GoToWebinar.
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Quiz

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- Complete the quiz to receive your continuing education units (CEUs) for this session