SiriusXM Connected Vehicle Services & RapidSoS

Working together to enhance response

An introduction to ACN+ (Advanced Automatic Crash Notification with enhanced services)

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Overview

SiriusXM Connected Vehicle Services (SXMCV) has partnered with RapidSOS to send valuable first-party sensor vehicle crash data to 911 through RapidSOS Portal and/or CAD/phone integrations. While many people know SXM as a satellite music streaming system, SXMCV is a vehicle telematics platform that provides ECCs and first responders with critical digital data to enhance response to emergencies involving SXMCV subscribers.

What does telematics mean?

Simply put, telematics is a method of monitoring cars, trucks, equipment and other assets by using GPS technology and on-board diagnostics (OBD) to plot the asset's movements on a computerized map.

How does telematics work?

Telematics systems work by connecting a device, such as a GPS tracker or other data logging tool, to an asset. Then, the tool collects key performance data about the asset. Once collected, the device will send the information to a data center where it can be collated, interpreted, and analyzed.

Vehicle telematics combines GPS systems, onboard vehicle diagnostics, wireless telematics devices, and black box technologies to record and transmit vehicle data, such as speed, location, maintenance requirements and servicing, and cross-reference this data with the vehicle's internal behavior.

How do RapidSOS and SXMCV work together to enhance response?

In order to improve emergency response times by getting 911 better information, faster, SXM created ACN+ (Advanced Automatic Crash Notification with enhanced services). By linking vehicle and crash data from ACN+ technology with the RapidSOS emergency response data platform, 911 personnel can be notified quicker and first responders can receive critical information about the nature and severity of the vehicle emergency before arriving at the scene.

What to Expect in the ECC

When a SXMCV vehicle equipped with ACN+ has been involved in an accident, the first notification of the event will be to the SXMCV call center.

- An Emergency Response Specialist communicates with the driver and determines dispatch needs while the vehicle sends incident crash data to the SXMCV Platform and to RapidSOS.

- The Emergency Response Specialist maintains communication with the driver and passengers until emergency personnel arrive on scene.

- The SXMCV Platform routes incident data to 911 through RapidSOS. 911 telecommunicators will receive a 911 call directly from the SXMCV Emergency Response Specialist to request emergency response for the event.
  - It is important for the 911 telecommunicator to be logged into RapidSOS Portal or to have access to their RapidSOS integration so that there is no delay in accessing the critical data being shared by SXMCV.

- Here is an example of what the ECC may hear when answering a call from a SXMCV vehicle equipped with ACN+:

  "This is [AGENT NAME] with SiriusXM Connected Vehicle Services. I'm reporting [DESCRIBE SITUATION / ACCIDENT TYPE] in your area. Do you have RapidSOS?"

  It is important for each ECC to be familiar with RapidSOS Portal usage and/or their RapidSOS integration.
  - For portal - sign in at the beginning of each shift to save time if/when a call from SXMCV Vehicle Monitoring Center is received.

Some of the important data shared by SXMCV to RapidSOS includes:

- Vehicle description (make, model, color and VIN)
- Seatbelt sensor information
- Airbag deployment
- Velocity and impact points
- Driver information
    - If the driver has opted to share medical data, that information will also be available to ECCs and field responders.

The SXMCV Response Center can also verbally relay on scene incident information provided by the vehicle occupants upon initial contact, such as extent/nature of injuries, description of occupants, number of vehicles involved, final resting place of the vehicle(s) and any additional location information, such as landmarks or other cross-streets.

911

All Calls
Leslie Whitham

📞	1-555-555-5547	13:32
📞	1-555-555-5548	13:32
📞	1-222-222-2248	13:32
📞	1-555-555-5549	13:32
📞	1-555-555-5511	13:32
📞	1-555-555-5513 • Veh. Crash Detected	13:32
📞	1-555-555-5550	13:32
📞	1-555-555-5552	13:32

911 calls that have associated vehicle crash data will show in the 911 call queue with **orange font** and **VEHICLE CRASH DETECTED.**

This feature allows users to identify which 911 call has critical data attached to engage more quickly with the sensor data presented on the event pane.

Understanding the Event Pane information

When an ECC receives a call from a SXMCV Emergency Response Specialist, it will be important for the telecommunicator to quickly navigate to the 911 call associated with the crash and to click on the number to open the event pane as described above.

For training purposes the event pane has been broken into three parts. It would be displayed as one long window in an actual crash notification.

The top of the event pane displays location information, including lat/long coordinates, the what3words address and the uncertainty radius.

MEDICALERT MEDICAL PROFILES
0 sec ago

First Name	Rapid
Last Name	SOS
MAF-ID	80698108261
Gender	Male
Age	21

SIRIUSXM CRASH ALERT
0 sec ago

The title reflects ACN+ crash alert data and the time lapse since the information was reported to the ECC.

Vehicle

Vin	3H1999522HS000786
Make	make
Model	model
Year	2020
Color	blue
Event Time	11/3/2021 1:33:55 PM

Under the vehicle heading, information regarding the make, model, year, color, and VIN will be displayed. The time stamp reflect the time the ACN+ system captured the crash event data.

Airbags

Name	ROW1_DRIVER_CURTAIN
Deployed	true

Airbags

Name	ROW1_DRIVER_CURTAIN
Deployed	true
Name	ROOF
Deployed	false

Airbag deployment can often indicate the significance of the collision.

Impacts

Rollover	DETECTED
Pedestrian Crash	NOT_EQUIPPED
Front Crash	DETECTED
Driver Side Crash	NOT_DETECTED
Passenger Side Crash	NOT_EQUIPPED
Rear Crash	UNKNOWN
Side Crash	DETECTED
Any Impact	DETECTED
Front Pretension	DETECTED
Ears Rear	DETECTED
Front High Severity	DETECTED
Front Lower Severity	DETECTED
Non Ears Rollover	DETECTED
Ears Rollover	DETECTED
Sequence	0

Impact sensors provide information regarding where the vehicle may have sustained damage in the collision. As with the airbag deployment, several impact points can also provide insight in the severity of the collision.

Depending on the information captured from the sensors on the vehicle, as well as the size of the RapidSOS display, it may be necessary to use the scroll bar on the far right of the event pane to view all of the data capture.

Seats

Row	1
Side	DRIVER
Occupancy	OCCUPIED
Belt	BELTED
Row	2
Side	CENTER
Occupancy	CHILD_SEAT
Belt	SENSOR_ERROR

In the seats pane, information regarding the number of occupants at the time of collision is provided. In addition, notes regarding child restraints is also available.

Velocity

Velocity Type	VX
Velocity Unit	MPH
Velocity Value	123
Velocity Type	VYR
Velocity Unit	KMH
Velocity Value	25

Velocity is the rate of change of its position with respect to a frame of reference and is a function of time.

Velocity is equivalent to a specification of an object's speed and direction of motion.

Contacts

Name	John Doe
Phone Number	+15555555557
Note	primary

Emergency contact information as listed by the ACN+ subscriber

Depending on the information captured from the sensors on the vehicle, as well as the size of the RapidSOS display, it may be necessary to use the scroll bar on the far right of the event pane to view all of the data capture.

How SXMCV and RapidSOS enhance response to vehicle emergencies

SXMCV and RapidSOS have developed a data-share partnership to significantly enhance response to vehicle emergencies. The following are best practices from ECC's across the country. These processes illustrate how SXMCV Emergency Response Specialists, RapidSOS, and ECC employees can connect customers in need with appropriate and efficient emergency response.

Sign into RapidSOS Portal at the beginning of each shift.
- This saves time when a call from SXMCV vehicle equipped with ACN+ is received and allows ECC employees to quickly access valuable data during a vehicle emergency.
- Remember to click on the phone number associated with the crash detection to access valuable sensor data; questions regarding make/model/color of the vehicle involved don't need to be asked since the information is provided from the vehicle itself.

Recognize that the sensor information from the vehicle may often provide better location information than the person involved in the accident.
- Drivers and passengers involved in a collision may be under stress and may not be able to provide accurate cross-streets or address information.
- By using RapidSOS Portal street view, the ECC employee may be able to have "eyes-on" landmarks or other identifying information that will help solidify the location of the event.
  - Always follow your agency's policy and procedure regarding how to obtain location information. Consider developing new policies that allow the use of sensor data to meet the location verification standards.

Using the sensor data from the vehicle may impact the type of response dispatched.
- Electric vehicles have a different response protocol than those powered by gasoline. Pay attention to any hybrid vehicles that could be damaged or

be subject to a vehicle fire. Fires in electric vehicles burn longer and hotter as they are propelled by lithium-ion batteries.

- The severity of the collision and the number of occupants may dictate additional medical response. Four occupants vs. a single occupant may require two or more ambulances. If a roll-over has been detected, perhaps notifying an airship will be necessary.

SXMCV and RapidSOS empowers ECCs

While understanding how the SXMCV and RapidSOS partnership work together is important, training for your ECC's is critical so that each call-taker and/or dispatcher is prepared to engage with the rich data available. As new features are developed, announcements will be sent to registered email addresses to encourage ECCs to remain
up-to-date with telematics technology.

Complete the 5-question knowledge assessment to document your knowledge regarding SXMCV and RapidSOS.