

**FirstNet developing base stations for police cars, but deployment still several years away**

Fierce Wireless Tech By Nicole Blanchard

July 23, 2015

FirstNet, which has been tasked with building a nationwide LTE network for emergency workers, is working to create portable cellular base stations that can ride inside police cars and other vehicles, thereby allowing emergency workers to quickly and easily deploy wireless networks in remote areas. However, FirstNet said the technology likely won't be deployed for several more years.

Specifically, FirstNet said it expects to deploy the technology--which it calls the mobile communications unit (MCU)--around 36 months after it manages to find a network partner, like a Tier 1 wireless carrier. FirstNet's deputy director of communications, Ryan Oremland, told *Fierce WirelessTech* that FirstNet's MCU deployment schedule is based on satellite connectivity development timelines.

FirstNet's MCU would connect a satellite modem and rooftop satellite antenna technology to FirstNet's main system, thereby allowing MCU vehicles to act as base stations for the network. FirstNet said MCUs will likely include in-vehicle routers, local eNodeB and antenna (for use in the vehicle remote base station) and local evolved packet core elements.

Oremland said FirstNet is working with the Public Safety Communications Research lab to develop and test the base station technology, as well as "mounting options for the MCU platform on standard public safety vehicles, portable small cells" and more.

FirstNet said it is taking into account 3GPP standards that it believes will be relevant to MCU creation and deployment. Those standards, according to FirstNet's website, are "isolated E-UTRAN operations for public safety (IOPS, 3GPP TS 22.346) of Release 13 (support for an isolated eNodeB configuration) and proximity-based services (ProSe, 3GPP TS 23.303 and TS 23.703) of Releases 12 and 13 (support of device to device (D2D) communication mode, commonly called direct mode)." FirstNet said it will closely monitor the progress of those standards as the MCU platform release draws closer.

FirstNet's blog also said there are two key elements to its proposed MCU.

"First, MCUs are built into first responder vehicles that are used every day, so MCUs are there when first responders need them, without calling for a conventional deployable to be sent to the incident," the blog reads. "Second, the MCU also supports local and remote communications when first responders are outside of terrestrial coverage. MCUs can coordinate local communications if the size of the incident expands and additional first responders are needed."

Ideally, the FirstNet network would seamlessly recognize MCU technology as part of the regular network, allowing first responder devices to continue operating normally.

Beyond the MCU, FirstNet said that it is also looking at other options such as balloon or drone deployable aerial communications architecture (DACA), cell on light trucks (COLTS), cell on wheels (COWS) or system on wheels (SOWS). FirstNet said those options would be considered for incidents requiring more capacity, coverage or time.

[Link to Article](#)

[Link to Fierce News Articles](#)