St John Ambulance

Metro Ambulance Service Improves Patient Care with In-Vehicle Communications Hubs



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ST JOHN AMBULANCE WESTERN AUSTRALIA (WA)

St John Ambulance WA has been serving the Western Australia and the Northern Territory for more than 100 years. As a community-basedorganization, its primary role is to provide fi rst aid training and care for the sick and injured.

BUSINESS CHALLENGE

St John Ambulance WA recently introduced several signifi cant technology upgrades throughout its organization. These included improvements to theComputer Aided Dispatch (CAD) system, rollout of the new AmbiCAD system for ambulance and Patient Transport vehicles, and the development of an Electronic Patient Care Records (ePCR) system.

The new ePCR system replaces the paper forms used by paramedics to record patient information. Moving to digital records improves access topatient information by medical staff and allows paramedics to input critical data while in-transit using an Apple iPad tablet. St John Ambulance WA believes it is the fi rst solution of its kind in Australia.

“We wanted the iPads in the hands of each paramedic and ensure every

ambulance was confi gured so that any team member could jump into anyvehicle, and their iPad would just work,” said Ashley Morris, Technical Services Director at St John Ambulance WA.

In order to communicate with the CAD and ePCR the tablets require connectivity. St John Ambulance WA was hesitant to use 3G SIMs in thedevices and didn’t want iPads to be tied to specifi c vehicles. “We did not want to sign infl exible data contracts that would cost theorganization even when units were not in use,” explained Morris. “Nor did we want to have to manage more than 850 3G accounts.“

So they decided a more cost-effective solution was to create a Wi-Fi hotspot in and around each ambulance. This allows them to utilize the Wi-Fi-onlyiPad, as opposed to the more expensive Wi-Fi+3G version, as well as reduce the number of SIMs required.

SIERRA WIRELESS AIRLINK® SOLUTION

St John Ambulance WA evaluated three device options over a six-month period. “The SierraWireless units just worked,” said Morris. “The other units we trialed had all sorts of teethingproblems; with the Sierra unit, we installed it and it just did what we expected.” St JohnAmbulance WA selected the ultra-rugged Sierra Wireless AirLink® in-vehicle gateway to provide a reliable in-vehicle Wi-Fi network connection regardless of location.

“We use the web application to remotely troubleshoot and confi gure devices,” said Morris. “This feature is certainly an advantage for us.”

In addition to the ePCR rollout, St John Ambulance WA was also deploying a mobile dataterminal system called ‘AmbiCAD’. This system delivers built-in satellite navigation for vehicletracking, large screens for increased functionality, the capability to operate an exclusive radionetwork, 3G coverage where the radio network does not reach, and Wi-Fi connectivity when at the station.

These mobile data terminals also required 3G SIMs, so St John Ambulance WA was able toremove the SIMs from the mobile terminals and connect them to the AirLink devices, creating a single communications hub in each vehicle.

“All of this means we’ve been able to consolidate technology from an account point of view,effectively halving the number of SIM cards in the fl eet,” said Morris. “Also, AmbiCAD is built intothe dash, so it’s hard to get to. Using the AirLink devices makes the SIM card more accessible, and it allows us to put AmbiCAD behind a fi rewall for added security.”

RESULTS

St John Ambulance WA now has a complete in-vehicle solution, enabling each ambulance to become a Wi-Fi hot spot, to achieve greater operational effi ciency and economic benefi ts.

“The Sierra Wireless AirLink devices were the right choice for our organization,” said Morris. “Thecompany’s track record and 5-year product warranty was also important to us. We expect to getfi ve years or more out of the units, and Sierra Wireless is really standing by their product.” Morrisdescribed Sierra Wireless as being “very responsive to our needs. Overall, this solution is an enabler for future information availability.”

St John Ambulance WA has additional plans to connect defi brillators through the AirLink devicesto send data back to hospitals before arrival of the patient. They now have the infrastructure in tocontinually build out applications that help them provide better patient care.

APPLICATION

- Field Service & Healthcare

CUSTOMER CRITICAL CHALLENGE

- In-vehicle communications solution for ambulances
- Required persistent, secure 3G and Wi-Fi connectivity and rugged design

SOLUTION

- AirLink® gateways provided reliable, secure broadband communications for mobile data terminals in ambulances and a Wi-Fi hotspot for paramedics to utilize tablets to input patient data while in-transit

BENEFITS

- Secure, reliable connectivity for access to mission critical patient data and emergency communications
- Rugged design for use in harsh, mobile conditions
- Seamless installation and integration with third-party systems
- Portability for easy re-deployment if vehicles are replaced or temporarily out-of-service