

Rapid response vehicles enhance incident response

In the world of mobile broadband, Exceleerate Technology pioneered the initial concept of providing access to high speed broadband using automatically deploying satellite platforms fitted to command and control units used by the UK's emergency services. It provides a wide range of specialised satellite and wireless based broadband solutions that improve incident management and enable emergency services to achieve interoperability and share information to meet their responsibilities under the Civil Contingencies Act. The company is now the acknowledged expert in this field with more installations than all its competitors put together.



Exceleerate Technology has been responsible for equipping some of the largest and most advanced mobile command and control vehicles for organisations such as Strathclyde Fire and Rescue and South Central Ambulance Service NHS Trust (SCAS). The latest to be unveiled include Royal Berkshire Fire and Rescue Service's (RBFRS) new Incident Command Unit (ICU) and a smaller multi role vehicle. These state of the art units are packed full of the latest satellite and communications technology enabling them to function as standalone command and control facilities – in fact, senior officers can run Royal Berkshire Fire and Rescue Service operations from the ICU if necessary.

At their launch, Deputy Chief Fire Officer, Olaf Baars, said, "These vehicles will play a key part in ensuring that we are able to meet our statutory duty under the Civil Contingencies Act to maintain operational functionality regardless of circumstances. The ICU provides a 21st Century platform for incident command, not only in terms of its technological capabilities in terms of operations, but also because of its capacity to act as a multi agency command centre, linking directly to police and other emergency response organisations."

RBFRS's multi role vehicle was designed to not only deliver rapid response command and control facilities at incidents, but also to be used for community programmes at schools and shopping centres across the region. These programmes can be scheduled in advance, enabling the usage of the vehicle to be extended.

"The multi role vehicle will be used for community outreach work in helping us work with our communities to make them safer as well as functioning as a forward incident command unit and communications hub when required," concluded Olaf Baars.

Rapid Response

The ability to deliver broadband to command and control units via satellite regardless of location is now established. The emergency services are now actively seeking ways of achieving the same communications capabilities in smaller, more flexible rapid response vehicles that can reach the incidents in the shortest possible time to determine the requirements for additional, specialist support vehicles and equipment.

A new Land Rover Discovery recently completed by Exceleerate Technology is a typical example of what can be achieved. It is equipped with the same technologies as deployed in larger vehicles including a transportable satellite, private GSM, VoIP, wireless network, CCTV and video streaming. The vehicle has also been fitted with four drop down touch screens, body worn camera kits and a mobile BGAN solution that delivers high speed broadband access while on the move.





The demand for these smaller, rapid response vehicles is increasing and some of the latest to be completed by Exceletrate Technology include a new fleet of incident command and control vehicles for the Garda in Dublin and a mobile incident unit for Kent Fire and Rescue Services. Other contracts recently awarded include Fife Fire and Rescue Service, South Yorkshire Fire and Rescue Service, Wiltshire Fire and Rescue Service, West Midlands Ambulance Service NHS Trust and South West Ambulance Service NHS Trust.

Voice, Data and Video Communications

Exceletrate Technology has developed many innovative voice, data and video solutions that are now being installed on this new generation of rapid response vehicles. RapidNet Private GSM generates GSM fields to provide full telecoms capabilities in situations where either none exist or are unavailable and enables operational personnel to maintain communications totally independently of existing mobile network providers.

The company was the first in the UK to design and install fully converged private GSM solutions for the emergency services and remains one of the few with the expertise to make this work properly. Interestingly, RapidNet is now priced at a level where it provides a cost effective solution for deploying on buildings in areas where there is no coverage or at HQ locations to provide greater resilience and flexibility.

Another innovation is ECMS (Exceletrate Communications Management System), that provides satellite and GSM based VoIP (Voice over IP) PBX switching functionality. This enables commanders to use VoIP handsets as fully featured extensions of any HQ based PBX and use the satellite links to route calls under normal conditions when the vehicle is stationary. It enables different voice devices including UHF and VHF radios, mobile and VoIP phones to be patched into each other as well as providing real time voice recording of all voice communication channels.

Satellite communications enables command and control vehicles to receive and transmit data from all responders and emergency teams and achieve a Com-

mon Operating Picture. Combined with wireless networks, personnel using PDAs, laptops mobile phone and data terminals can access tactical plans, live video streaming or information from strategic emergency planning software anywhere within a 100m range. This range can be extended almost indefinitely using self powered, rapidly deployable mesh wireless nodes – another of Exceletrate's operational innovations. For maximum resilience, vehicles can communicate directly with each other as well as their appropriate HQs and other locations.

To provide important video data, vehicles can also be equipped with dual function cameras giving normal, high quality colour CCTV with full PTZ (pan, tilt and zoom) as well as thermal imaging. Live video can viewed on monitors installed inside vehicles or streamed via secure satellite links to a secure video server for online access in virtual real time by authorised personnel using internet connected PCs anywhere in the world. In addition, body worn cameras can be used by field personnel to transmit high quality pictures from inside buildings, tunnels or other areas where there is no line of sight. This is achieved through using the latest COFDM transmission technology in addition to wireless, 3G and GSM.



Resilient Communications

Exceletrate Technology operates and manages its own satellite and private GSM network, holds all VSAT Network Licenses required by Ofcom and ensures that every customer is equipped with the appropriate equipment operating over approved frequencies. As a result, users are able to simply turn up, switch on and get down to business without the intervention of Ofcom. In addition, Exceletrate Technology delivers high quality bandwidth, which can be tailored in real time to suit specific client needs, budgets and service level requirements – something that other suppliers often promise but are ultimately unable to deliver.

While there are many potential manufacturers and suppliers that claim to provide a complete solution to meet any requirement, few are able to match Exceletrate's experience, technology expertise and track record of delivering successful solutions. This view was endorsed at the highest level in 2008 when Exceletrate Technology was appointed technology supplier nationally for the Department of Health's HART programme, which is delivering a new generation of civil contingency vehicles equipped to provide high levels of real time information and resilient communications to enhance patient and victim care at major incidents.

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