Motorola Managed Services enhance performance, minimise risk for State of Victoria's interoperable network

Motorola build-own-operate radio networks

"To our knowledge, no other administration in the emergency services arena provides such a wide-ranging approach to communications – a multi-agency approach to service development and delivery which has moved so extensively across the key areas of infrastructure in such a short period of time."

Ken Loughnan, Chair of the Victorian Government Ministerial Steering Committee for Emergency Services Telecommunications

From handling routine traffic incidents to controlling bushfires that destroyed nearly 1.2 million hectares (2.9 million acres) in 2006, the ability to communicate and collaborate is a mission critical objective for the State of Victoria's public safety personnel. To address this need, the government wanted to provide its public safety agencies with tools that would help them respond to emergencies quickly, safely and effectively.

In 2001, the Victorian Government endorsed the State-wide Integrated Public Safety and Communications strategy, providing a ten-year vision to develop and upgrade the communications capability of Victoria's Emergency Services Organization (ESO).

ESO consists of the Victoria Police, Metropolitan Ambulance Service and Metropolitan Fire and Emergency Services Board, each of whom had independent analogue radio systems which were nearing end of life.

Assigned responsibility for carrying out the State's strategy, the Bureau of Emergency Services Telecommunications (BEST) identified the development of a digital interoperable shared network as one of its Stage One projects and issued a Request for Proposal (RFP). BEST's goals were to enhance communications security through digital encryption; improve voice quality; expand channel capacity and flexibility; and provide interoperability to support multi-agency response to major incidents.

Adding to the complexity of the initiative, the network needed to be fully operational in time for the Commonwealth Games in March 2006, just 24 months after the contract signing. Because of the

condensed timeframe, BEST needed a network supplier that could deliver the required network expansion and upgrade on time and with the highest quality of service.

BEST chose Motorola based on experience, proven methodologies and processes, and the ability to provide a true end-to-end integrated solution that covered everything from financing to network design and build to maintenance and support.

Metropolitan Mobile Radio ASTRO® 25 Network

The Metropolitan Mobile Radio (MMR) network was designed as a 70-site Motorola ASTRO® 25 advanced digital communications network for integrated communications, information management, regional coordination, and incident command. MMR meets Project 25 standards for public safety and digital communications and ensures enhanced functionality of public safety communications that deliver effective, efficient, reliable intra-and-inter-agency communication across greater metropolitan Melbourne.

The single shared network is partitioned to provide each agency with guaranteed bandwidth that can be dynamically configured to accommodate evolving needs and guaranteed service availability. The system supports approximately 2,300 police cars, 500 fixed VicPol stations, 165 fire engines and 197 ambulances, including portable units provided to 3,300 police, 517 fire officers and senior staff, and 468 paramedics and senior staff. The network will eventually scale to support 10,000 subscribers.

Motorola assumes risk, ownership, and management for MMR

BEST's original goal for the network was to consolidate the combined needs of the State's emergency service agencies and develop a single technology built upon a single platform to reduce costs gained from leveraging economies of scale. The organization then wanted to create public-private partnerships whereby a vendor would assume the risk and agree to specific Key Performance Indicators (KPIs) that met the State's requirement for network availability, reliability, maintenance and support.

According to contract terms, Motorola will own, operate and manage reliability and serviceability for the first seven years, at which time the State will have the option to purchase the network and contract with Motorola for ongoing support and maintenance services.

Motorola assumed risk for the network and proposed a comprehensive monthly service payment solution based on KPI performance, meaning that if KPIs were not met, Motorola would not be paid. Robust and transparent reporting capability was designed into the network to accurately measure network availability, packet transit time, fault repair time and other critical KPIs, making it easy for BEST to determine the level of compliance as well as maintain oversight of network performance.

"MMR is based on Motorola's refined and proven technology, which is highly reliable and secure, with a guaranteed reliability of more than 99.5 percent." said Andre Haermeyer, the then Victoria Police and Emergency Services Minister.

In order to ensure that the network met or exceeded the contracted levels of availability and reliability, Motorola built a Network Operations Centre (NOC) in Melbourne. The NOC provides a maintenance and support hub with 24x7 operations.

Public Safety agencies share information and communicate more effectively

In spite of the condensed project timeline, Motorola delivered the network on time and migrated police and fire services onto the new digital service prior to the 2006 Commonwealth Games. Ambulance services were migrated onto the network in Phase Two which took place in early 2007.

With Motorola Managed Services, Motorola not only assumes the risk and responsibility for the public safety networks but the strategy has also proven critically important for Victoria's ongoing emergency and disaster planning response capabilities. MMR has helped the government achieve its goal to better serve the people of Victoria through efficient and effective response to public safety emergencies.

The MMR network provides the State of Victoria's public safety agencies with a secure, shared network that provides:

- Full Interoperability: Direct communications between multiple emergency services organizations enable more efficient event coordination and response.

- Increased Security: Through the transition onto the MMR system, emergency service users now have digitally encrypted communications on all channels.

- Enhanced coverage: Extends portable radio coverage to difficult locations such as tunnels, basement car parks, major buildings, and shopping centres.

- Improved capacity: Expands channel capacity and flexibility for major events such as the 2006 Commonwealth Games and the World Economic Forum.

- Increased voice quality: Digital communications improves voice quality for clearer communications.

"This investment in technology is part of the Victorian Government's commitment to providing safer streets, homes and workplaces." said Minister Haermeyer . *"Most importantly, we are building a new emergency communications network, independent of the existing mobile data communications system, which will provide mutual redundancy."*