Case Study
Motorola Managed Services

Managed Services Provider Delivers Secure Communications to Austria

Tetron brings secure, cross-organizational communications to Federal and State agencies

TETRON
Sicherheitsnetz Errichtungs- und BetriebsgmbH

Bernhard Krumpel, Managing Director of Tetron, and Mr. Guenther Platte, Austrian Federal Minister of the Interior

About Tetron

Tetron is an Austrian network operator that provides essential digital radio communications to all public safety organizations in the country. The company is jointly owned by Motorola (65%) and Alcatel (35%). The joint venture was formed in response to Austria's need to affordably upgrade its emergency services communications network.

In 2004, the Government of Austria ran a European-wide tender process to upgrade the communications networks for Austria's emergency services or "Blue Light Organizations" on a technology neutral basis. Tetron's bid was selected as the best solution based the Motorola's highly regarded TETRA technology. The company's license to operate lasts for a period of 25 years after final completion of the network build-out.

Tragic Events Highlighted the Need to Upgrade Infrastructure

In the years prior to the Government tender, several events unfolded that highlighted the country's need to upgrade the communications infrastructure of its emergency services organizations. In 1999, a tragic fire resulting from a 60-car traffic accident in the Tauern Tunnel led to the deaths of 12 and injury to 47 people. In the emergency services response, over 300 men arrived from 32 different corps. Calls between different agencies became unmanageable. In fact, not even calls between the same organization from different Austrian states could establish a radio call from one end of the tunnel to the other. The existing communications infrastructure failed to support the needs of the "Blue Light Organizations" in a critical time of need.

Another less fatal occasion, but nonetheless important in demonstrating the need to upgrade the emergency services organization's communications infrastructure, was Austria's annual Opera Ball demonstrations. One year, demonstrators utilized an inexpensive and easily available radio scanner to determine where barricades would be erected in order to evade them. Then demonstrators with an interference transmitter in a rucksack scrambled one of the emergency force's channels and broke the police chain of command. It became crystal clear that the communications infrastructure used by the police and other Blue Light Organizations were in desperate need of upgrade.

"Generally, the new digital radio network has a very positive feedback from the users. The interest from other European countries in the Austrian project is huge. Therefore the project is seen as a very important reference. For example the concept for the Underground (Metro) solution is inquired very often."

Peter Skorsch, Project Director of the Austrian MOI

Addressing the Need for a Network Upgrade

Recent events had put a spotlight on the need to enhance security of the communications infrastructure and cross-organization communications. However, the Government had a multitude of other stringent requirements. Key system requirements included simple operation with short call set-up times that was secure and fail-proof. Voice and data transmission capability required access to central databases and robust emergency call functionality. In order to address inter-agency communications, the Government wanted individual and group call capability as well as interfaces to other communication networks. Frequency was at a premium in Austria, therefore economy with available frequency would be an important attribute of the proposed system.

Austrian Government Chooses to Outsource Network Operation to Tetron

The upgrade of the Austrian emergency services communications networks was not standard technology procurement but rather a tender for a private company to run the networks on behalf of the Austrian Government. The Government outsourced the operation of the network to Tetron who guaranteed to protect the security of service provisioning through the implementation of extensive right control and takeover rights. Tetron is responsible for the complete end-to-end solution of network design, build, deployment, as well as operation which includes running the Network Operations Center (NOC), providing first line and preventative maintenance and ongoing performance management. Tetron's license to operate lasts 25 years after final completion of the network build-out. As part of the deal Tetron agreed with the Government, that States would benefit from "free system usage" of three call channels plus "priority matrix" functionality. States would only have to pay for terminal equipment and any special requirements (e.g. additional capacities, interfaces for PBX or control rooms, etc.).

Build out of the network began in September 2004 with the launch of the project. Early 2005 saw the start of the pilot phase in Tyrol. Services to police, fire and rescue emergency services were initiated on the new network in the States of Tyrol and Vienna at the beginning of 2006. By 2009, all emergency services in the country will be covered by uniform network services from Tetron's TETRA IP network. During the process, several technology options were tested and with network security as a high priority coupled with economic factors, TETRA has proven successful. With the safety of Austrian citizens at heart, the States of Styria, Lower Austria, Tyrol and the City of Vienna are now leading examples.

Benefits are Widespread and Touch Many

The Emergency Service organizations in Austria enjoy multiple benefits provided by Motorola's managed services provider company Tetron:

- Beneficial business model for the Federal and State Governments
  - The Austrian Federal Government can focus its resources appropriately while Tetron builds and operates the new TETRA communications network to better serve its agency needs
  - Economic participation in the project is made easier for the states
  - Locations are a critical project component: States have greater capabilities in that they own many locations or have a close relationship with them
  - Minimization of total costs (the system significantly costs lower than earlier proposed solutions)
- Facilitation of cross-organization communications
  - Since call groups will be available throughout the entire network, the different organizations can communicate freely
  - Group call is no longer tied to individual radio location or limited to a geographical region as they were in the old analog system
- Greater Security
  - Thanks to significantly enhanced encryption, police communication can no longer be overheard
  - Interference with a base station is no longer effective as the station recognizes the attempt and automatically takes counteractive measures

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