



MOTOTRBO™ the Foundation for Thessaloniki Network



Wide Area digital Radio Solution Improves Safety and Efficiency

To improve critical communications through extended coverage and enhanced security, the Ministry of Interior (MOI) in Greece's second largest city, Thessaloniki has deployed a radio network based on Motorola's MOTOTRBO™ and point-to-point wireless Ethernet bridge technology.



Designed and commissioned by local partner Helecom, the implementation has replaced a moribund analogue system. It incorporates SafeDispatch, a sophisticated GPS-based tracking application from Motorola Application Partner SafeMobile.

Principal users of the network are field personnel from the MOI who not only require highly-secure communications but contiguous coverage to ensure radio contact between users and headquarters. The older analogue network had been vulnerable to potential security breaches and fraught with communication 'dead zones'.

Meeting the MOI's stringent criteria and the additional requirement to accurately track personnel across the city and further afield was no easy task. After evaluating a number of solutions, the decision was made to design a robust network with a MOTOTRBO digital radio system at the core.

MOTOTRBO offers numerous benefits over traditional analogue systems. These include: double the call capacity on an existing frequency which reduces equipment costs, improved voice quality at greater range, simultaneous voice and data transmission, text messaging, encryption, and GPS location tracking.

Industry name
Government

Solution Features

- DR 3000 VHF repeaters
- DP 3601 portables
- DM 3601 mobiles
- IP Site Connect
- PTP 100
- SafeDispatch (AVL/GPS, text messaging, email)

Benefits

- Improved voice quality
- Elimination of dead zones
- Improved communication security
- Double the call capacity
- Encryption
- Simultaneous voice and data transmission

“The MOTOTRBO-based network opens up a myriad opportunities and benefits for the MOI’s operations. In addition to providing a reliable, scalable and cost-effective platform to deliver secure, digital communications country-wide, the inherent features of the system will help them respond quickly in the event of an emergency. “

Demitris Kekas, Director at Helecom.



One of the first steps was to install a primary MOTOTRBO DR 3000 VHF repeater on the mountain of Xortiatis, high above the city with a Point to Point 100 Series Ethernet bridge (PTP 100) link to the MOI’s headquarters which hosts a DM 3601 mobile radio and a router to provide access to the internet.

This was required for the IP Site Connect feature which enables the MOTOTRBO system to work through an IP network, allowing users to share voice and data applications, create widespread coverage and eliminate the problems caused by interference and physical barriers. It gives field personnel, equipped with DP 3601 MOTOTRBO portable radios, the ability to roam seamlessly between sites without having to physically change channels.

A second DR 3000 VHF repeater connected to a PC is installed in one of the MOI’s vehicles to provide internet access through a GSM-based 3G router to ensure continuous communication when out of the main coverage area.

“This can effectively work across the entire country, even when the vehicles are mobile; the only downside being the lack of available 3G services nationwide where, in certain areas users will have to resort to lower GPRS speeds - but they still maintain that vital communication link,” notes Demitris Kekas, Director at Helecom.

Taking advantage of MOTOTRBO’s GPS capability, the SafeDispatch application, installed on a server at the headquarters and on the PC in the vehicle, provides real-time tracking of users while maintaining a date-stamped archive of movements. The system also offers enhanced functionality including text messaging for SMS communication and the ability to send and receive emails between radio users.

The PTP 100 platform provides a reliable and cost effective high-speed connection which can be synchronised via GPS stopping the interference from other systems or frequencies. It integrates well with existing networks and in combination with IP Site Connect and SafeDispatch, the city gained seamless communication through VoIP and simultaneous data transfer. The solution helped increase efficiency and personnel safety for the customer.



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