



Case Study



Dekbera RadioNET Network Update

Europe's Largest NEXEDGE® Digital Trunking System

The completion of the fifth phase of deploying Kenwood NEXEDGE® digital trunking infrastructure sees Dekbera's RadioNET communications network firmly established as Europe's largest NEXEDGE® trunking system.











Further to extensive field trials and system expansion since the first phase of the network's development in 2012, Dekbera's RadioNET network now covers over 90% of the Republic of Lithuania's 65,300 km² landmass and around 92% of its population.

The latest phase provides coverage in the most remote inhabited regions of Lithuania and allows its main client, the Lithuanian Ambulance Service to connect its furthest outposts to the national communications network.

The Ambulance Service has already realised significant improvements in service efficiency and effectiveness since joining the network with reduced call to arrival times and optimisation of regional crews and fleet.

The system incorporates CAD (Computer Aided Dispatch) software jointly developed by Dekbera for the Ambulance service and integrates the proven NexeTalk IP dispatch application suite to provide advanced dispatch, real time status and asset tracking capabilities along with data logging and transmission of GPS and optimum routing information to each ambulance displayed on their Garmin navigation units.

The first Ambulance Service region to connect to the network was the nation's capital Vilnius, which serves a population of around 600,000.



Vilnius Region provides further insights behind the system development: "The Ambulance Service has a fleet of 265 vehicles and used to operate from over 56 dispatch centres, each employing a variety of communications systems from

analogue to TETRA.

Tadeušas Rodz, Director of the Ambulance Service for the

Tadeušas Rodz

When the Ministry of Health made the decision to improve service efficiency by streamlining the dispatch into 10 county based centres it became clear that a key requirement would be for a mission critical communications system which would cover the country and link all ambulance services to each other. The two main systems considered were TETRA, based on past experience, and NEXEDGE® from Kenwood.

Following testing, evaluation and a competitive tendering process we decided on NEXEDGE® and Dekbera. The team from Dekbera worked closely with our IT, Telecoms and dispatch experts to deliver a system with the reliability, functionality and 100% availability we need. As the 'pilot' for the national system, I take some pride that my team played an integral part in the development of the system and the advanced capability it offers".

The system operates from 75 sites and offers a capacity of more than 170 channels.

Most of the networks' sites are installed in close proximity of GSM operator masts, with heights ranging from 60 m to 78 m and each typically employs one, 4 dipole antenna at the top of the mast and a combining system for four repeaters.





The sites are interconnected by a microwave IP network supported by a number of dedicated 99.99% fibre optic lines.

There are around 1,000 NEXEDGE® devices already in use on the network, comprising mobile and hand-portable radios.

NEXEDGE®

The system currently handles over 4.1 million GPS tracking transmissions, 270,000 SMS Status messages, 68,000 SDMs and thousands of voice calls each month and as capacity continues to grow, so too will utilisation.



Deividas Barzda

Keeping a close eye on the networks' performance is *Deividas Barzda, Network Development Manager at Dekbera* who has been involved throughout all stages. He believes the NEXEDGE® solution was ideal for building the network and reports: "When the decision was made to develop a digital radio communications system to cover the country we were keen to employ Kenwood's NEXEDGE® platform. We had already had

good experience with smaller NEXEDGE® systems and knew the flexibility and scalability it offered was likely to make it the most cost effective solution. Fewer sites, optimum bandwidth utilisation, significantly streamlined infrastructure, bullet-proof reliability and relatively simple interoperability interfaces were just some of the additional benefits realised".



Gledrius Meškauskas

Gledrius Meškauskas, Dispatch Manager for the Kaunas region is a fan of the RadioNet system and the support from Dekbera: "We deliver a service to a region of some 15,000 km² which includes cities, industrial areas and vast forests. Our service operates 24 hours a day, 365 days a year and I'm delighted to say, so too does the backup provided by the team at Dekbera – they are always on hand to give us the support we need

when we need it; and they not only listen to but respond to our requirements quickly and efficiently."



Nerijus Mikelionis

Nerijus Mikelionis is Director of the Ambulance Service for the Kaunas region and President of the Lithuanian Ambulance Association.

His perspective on the RadioNet network and the value it brings is very clear: "We can talk a lot about cost effectiveness, resource optimisation and technology advances, but ultimately it's all about serving our communities. If we are able to provide a faster and more

responsive service we will save more lives and this new system along with other initiatives we are undertaking allows us to do just that".

Delivering a world-class mission and business critical radio communications network



Albertas Dekinas

Albertas Dekinas, Managing Director of Dekbera, the official Kenwood Distributor for Lithuania comments: "The RadioNet system has evolved in each of its deployment phases and we have been able to enhance its functionality as we increased coverage and capacity for the Ambulance Service. We are delighted to have delivered the entire network on time and on budget with the assistance of the technical teams from

Kenwood at their European HQ and Japan and the continuous input from technical and dispatch staff from the Ambulance Service." He concludes: "We're continuing to invest in building system capacity and software applications so that we can offer RadioNet to other blue chip customers as a world-class mission and business critical communications infrastructure"



On completion of the final phase in 2015, the RadioNet network capacity will grow to:

- ■10 million + GPS tracking transmissions
- ■5 million + Status Messages
- ■200,000 + SDM
- ■Tens of thousands voice calls each month

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