



Forward momentum for TETRA in the Americas

The year 2011 got off to an auspicious start for the state of Wisconsin, USA. One of its football teams, the Green Bay Packers, won the coveted Super Bowl in February, just a few weeks after North America's first ever TETRA pilot was launched, also in Green Bay. The pilot was an initiative of Nielson Communications.

A WINNING TEAM PIONEERS THE FUTURE OF PMR

To comply with the narrowbanding mandate issued by the Federal Communications Commission (FCC) that's due to take effect in 2013, users will need to migrate to spectrum efficient technologies for critical communications systems.

The Green Bay pilot was designed to test and evaluate TETRA technology and demonstrate its features and benefits to professional Land mobile radio (LMR) users at first-hand.

Organisations who need fast one-to-one and one-to-many critical radio communications for voice and data in their daily operations were able to experience a fully implemented TETRA set-up – which remains in place for further demonstrations.

The pilot took place across three of Nielson's existing analogue sites and antenna structures, which form part of its existing multiple site UHF trunking network in Northeast Wisconsin: Green Bay, Appleton and Oshkosh. The installation of a TETRA system, comprising three IP-connected base stations alongside the existing analogue network, offered direct performance comparisons and provided unique insights for potential LMR users.

Sepura supported the pilot with the provision of STP8000 portable radios, customisable up to 1.8 watts, and SRG3900 mobile radios, offering world leading 10 watts maximum power. Sepura accessories helped demonstrate and deliver the capabilities of TETRA in a best-in-class deployment, since they provide the highest achievable power output available to TETRA users.

CHALLENGE

Support professional mobile radio (PMR) users in the Americas in their migration from analogue to digital TETRA-based communications for critical voice and data delivery, in response to regulatory changes demanding more efficient use of precious radio frequency Spectrum. This includes US Federal Communications Commission mandates requiring implementation of narrowband or equivalent efficiency radio systems by 2013 that can be fully satisfied with digital TETRA radio solutions.

SOLUTION

A pilot carried out under the auspices of the TETRA Association by Nielson Communications, showing that Sepura radios and mobiles are fully interoperable and independently proven to deliver reliable, robust and secure communications for business critical LMR (Land Mobile Radio) users.

RESULTS

A tried-and-tested, flexible and cost-effective alternative to traditional analogue systems, TETRA is now poised for widespread adoption across the mid-West region and beyond. Numerous business critical and heavy-industry customers are investigating the adoption of Sepura radios and accessories to ensure full readiness for the migration to narrowband.

RELIABLE COMMUNICATIONS, WHATEVER THE HAZARDS

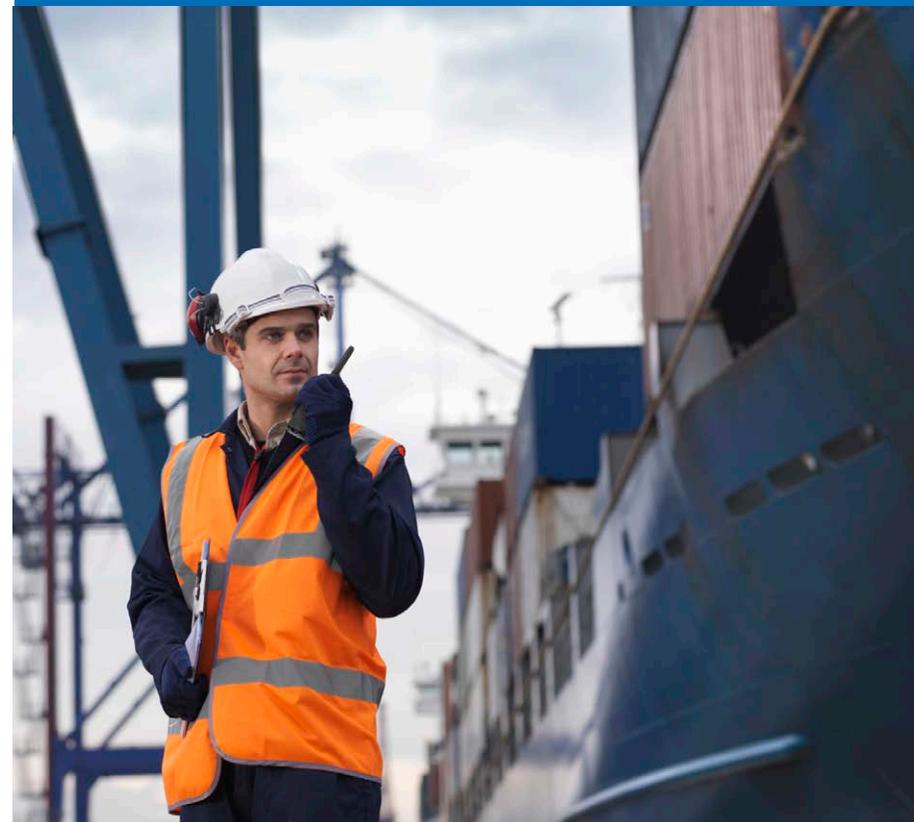
In addition to the superior power output of Sepura radios, offering peak performance in the most adverse conditions, numerous other voice and data features were demonstrated during the trial, giving Nielson the confidence to press forward in investigating further TETRA system implementations.

Sepura TETRA radios were proven to deliver all the traditional business critical radio benefits and the additional the type of user experience commonly associated with mobile phones – they support full duplex calls and telephony, enabling users to communicate directly into a company's PBX system with no need to press and release the 'talk' button. The portable radios provide clear voice communications; a prime consideration for user organisations whose operations entail noisy environments.

The RF power is fully customisable up to 1.8 Watts in TMO, DMO and as a DM Repeater, delivering reliable communications when most needed, and extending coverage beyond the reach of typical handheld radios. Users can speak with each other, or to central command posts, regardless of the noise around them created by heavy machinery, poor weather or extreme working conditions. The radios are also robust; withstanding the hazards of extreme weather conditions including water, dust, smoke and fumes.

A distinct advantage which TETRA also offers over analogue communications is delivery of both voice and simultaneous data on the same network and the same radio channel to all mobile, portable and fixed radio devices. With most traditional analogue, data transmission is heard during the conversation or requires separate or secondary channels and the data capabilities are either proprietary or limited in capability and flexibility.

The trial also evaluated Sepura's GPS location capabilities relating to features such as lone-worker location monitoring and safety, both of which are addressed through the radios' highly-sensitive, integrated GPS receivers.



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RESPONDING TO USER NEEDS AND REGULATORY REQUIREMENTS

“TETRA is a mature technology that is continually being improved upon. TETRA is widely used by government, public safety, transportation, utilities and business and Industry organizations throughout the world. TETRA is a digital technology that works, period. This pilot has confirmed that TETRA does meet all the voice, data, security and coverage criteria now demanded by LMR users and has also offered clear proof that Sepura radios are interoperable within the TETRA regime,” says Rick Nielson, PE President, Nielson Communications Inc.

Sepura is committed to supporting critical communications driven by the FCC’s narrowbanding mandate designed to increase spectrum efficiency and is taking a proactive role in developing TETRA in the USA, including building relationships with key users in the transport, utilities and commercial sectors. A central element in this process is working with innovative channel partners such as Nielson, to offer support in introducing TETRA technologies in their markets; wherever users require reliable, robust and secure communications.

Nielson is also satisfied with the cost-effectiveness of Sepura solutions: “I can say that the cost of TETRA falls within the range of comparative analogue equipment; and its feature set and the business critical advantages provided outweigh the small difference in cost when compared to other technologies.”

A CLEAR ALTERNATIVE FOR CRITICAL COMMUNICATIONS

Kenneth Hubner, VP New Markets Development at Sepura, says: “Many users of Sepura TETRA radios are astounded by the voice quality, even in extremes of background noise. This clarity is important for most critical communications whether to a dispatcher, a landline user or another radio user. The Green Bay pilot has shown that TETRA is a clear winner, in more ways than one and ensures a customer’s initial investment is protected due to the open standard nature of the technology and the flexibility of voice, data, location and security services that can be deployed now or in the future during the system lifetime.”