

# Hybrid Devices: the Best of Both Worlds

Soldier Modernisation talks to Rob Lovelace, MD, TETRATAB

**W**hen changing networks from a mobile radio system such as TETRA to an LTE based system, the biggest concern is the transition from one network to another – this article looks into how Hybrid devices are the way forward.

The best network is the one that you are connected to. This old saying still stands true, particularly when mission critical users need to communicate. TETRA networks for example are proven in terms of coverage, reliability and use case, which is why they are used as mission critical bearers for both public and private users around the world.

TETRA networks however can seem out of date as 4G and 5G networks are now being implemented. The capability of LTE is opening the world of data and HD streaming video, as well as secure push to talk applications with a much more visual user interface.

The dilemma comes from transferring from one network to another. This is a particular concern where national TETRA networks exist with strong geographical coverage, such as in the UK.

The UK has an ambitious programme to switch from TETRA to LTE. This programme is known as ESMCP. This transition is causing a lot of concern as the TETRA network that is being left behind has given a very reliable service for 15 years and it is not known how well the LTE network will perform in comparison. The switch over will happen over many months, but even now emergency service users are



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working on their device strategy to be prepared for this.

So how do you get the best of both bearers – TETRA and LTE?

The networks can provide a solution by connecting the two networks together, effectively allowing an LTE user connection to a TETRA user and vice versa. That is fine as long as the LTE user has connection, but if not they are out of contact.

Existing TETRA devices can connect to LTE devices via a PEI connection or via bluetooth, but this means the user needs to carry, maintain and charge 2 devices at any one time – This is not practical for the end user, particularly in a mission critical environment.

TETRATAB, who have manufactured hybrid devices for over 7 years believe that having both connections is the only practical solution. If the device you have can access the best available network seamlessly, it will give the most reliable service and the lowest costs per user solution.

But why a hybrid device? Who will need such a product?

The UK case has highlighted where the users are and why. For a good period of time the network will have regions where TETRA is switched off and LTE is switched on. Therefore roaming police officers such as transport police would use a hybrid solution to be able to roam seamlessly from region to region. Neighbouring regions that have not yet switched can talk with colleagues directly on the new network.

A hybrid device can also feedback information enabling police forces to determine in real time the coverage of both TETRA and LTE. This will allow the force to make an informed decision about the network switch over.

Switch over ready devices are however the main appeal – officers often have mobile phones as well as the TETRA radio. If they both can be replaced by one device now then the users are not required to buy TETRA only devices which will become obsolete before the end of their planned life. As budgets are restricted, buying a network ready device that still works on the current network is the logical choice.

TETRATAB can offer products and design capability to help you connect to you best available network. Contact us regarding hybrid products. ■

<http://tetratab.com>