

# Integrated solutions...

...for the dismounted soldier...

ITT is a leading supplier of sophisticated defence solutions. Leveraging more than 60 years of experience, we provide communications, sensing, surveillance, space, advanced engineering and integrated services for government customers.

ITT is the supplier of all the VHF and UHF radios and associated networking capability for the Bowman programme, the Tactical Communication System that is providing the UK MoD with the infrastructure for the UK Battlefield Digitisation Programme. ITT also supplies Head-Mounted Night Vision Systems (HMNVS) to the UK MoD. The HMNVS is a lightweight, single-battery monocular unit that provides enhanced mobility and reliability for soldiers during ground-based operations. The PVS-14, the US version of the HMNVS, has become the first choice for night vision by the US Armed Forces and several NATO and Far Eastern countries. This single-eye Monocular Night Vision Device (MNVD) system helps to provide the best overall situational awareness for the dismounted soldier: night vision acuity with one eye and, with the other eye, peripheral vision and close-at-hand awareness.

In the modern battlefield soldiers can be limited and put at a disadvantage by their communication systems. For Dismounted Close Combat (DCC) a soldier needs more than line of sight or point to point communications, they need compact and secure communications and outstanding Situational Awareness (SA).

ITT's next generation of UHF radio, which is primarily for the dismounted soldier is the hand-held SpearNet radio. It is simple to use, lightweight, robust and works using an IP infrastructure communication system. The SpearNet radio covers the basic soldier communication needs of transmitting in

near real-time information such as, individual location and location of allies and enemies, while also providing enhanced services such as simultaneous voice conferencing. This feature improves awareness in stressful situations; the high bandwidth enables the provision of high quality information in a timely manner. The radio provides individual position reporting (Situational Awareness), which reduces potential for fratricide and helps rapid recovery of isolated forces. Each radio is AES256 encrypted, providing each individual soldier with secure communications from any potential enemy.

**'Leveraging more than 60 years of experience, we provide communications, sensing, surveillance, space, advanced engineering and integrated services for government customers.'**

The SpearNet is a MANET (Mobile Ad-hoc Networking) radio, which maximises net coverage at all times, especially in urban environments and conditions where normal one-hop/point-to-point radios are unable to maintain coherent network coverage. Being a low latency multi-hop radio means that the range is only required to the next soldier. Having multiple active SpearNet radios creates a network and consequently the range is extended. The soldier does not need to manually update the radio; it is self-healing and rapidly updates the network as connectivity changes. This is transparent to the individual soldier who can concentrate on his primary task of closing with the enemy without the worry of a 'no-comms' scenario.

SpearNet has a proven high-speed data capability, which can provide near real-time video streaming and can even allow

for satellite/aerial imagery to be sent to individual soldiers. Connecting a PDA or laptop will allow the soldier to view updated images thus supporting what he is actually seeing with his own eyes. This can assist with rapid tactical decision-making when time is short.

FIST (Future Integrated Soldier Technology) is a tri-service project initiated by the UK Ministry of Defence, which will provide the British Armed Forces with a totally integrated fighting system for dismounted, close combat troops. FIST aims to provide an integrated fighting system that enhances the mission effectiveness of sections committed to DCC. FIST will be a modular, integrated and upgradeable fighting system that will equip dismounted soldiers in or out of vehicles with a range of technologically advanced features, each seamlessly interconnected into a single platform. The system will mesh each soldier into the digitised battlefield as a 'weapons system' in his own right, each man-platform contributing to the larger, network enabled environment.

ITT is able to deliver a solution to elements of the FIST programme. By offering the HMNVS and SpearNet, our products would be the eyes and ears of the British Army, a fully integrated solution.



**ITT**

ITT  
Jays Close  
Viabes Estate  
Basingstoke  
Hampshire RG22 4BA

Tel: +44 (0)1256 311600  
Fax: +44 (0)1256 840556

ittdefence@uk.itt.com  
www.ittdefence.co.uk