

The advanced mobile battlefield; keeping things clear in the fog of war

The battlefield is a complex environment in which to operate; communications must be reliable, secure, and smooth, in order for defence forces to operate to their fullest abilities. Demand for these services, particularly in a mobile environment, is high, as are expectations. Ken Peterman, President of Government Systems at Viasat, outlines how satellite can solve the communications challenges of the modern mobile battlefield.

Today's battlefields are in some ways no different to those of the past: Ultimately, the critical factor is being able to decide if someone is friend or foe, often in a matter of seconds. Whether front-line infantry, or a pilot tasked with conducting a precise air-strike, these decisions are critically assessed in some of the most stressful environments a person will ever face. Situational awareness is vital, both for enhancing decision making abilities and taking swift action when it's needed most. As more technology and data enters the battlefield, it should be easier than ever to keep forces connected and informed, but that isn't always the case.

The connection conundrum

One of the greatest technological issues for warfighters across today's modern battlespace is how to harness the vast amount of data available in order to operate seamlessly and pave the way for new concepts of operations. With so many moving parts – from aircraft and maritime vessels, to unmanned vehicles and emerging artificial intelligence (AI) applications – combined with the time it takes for new capabilities and technologies to be developed, trialled and eventually introduced, the pace of innovation can be highly varied.

Vast amounts of data and fragmented connectivity solutions



● ● Ken Peterman, President of Government Systems at Viasat

can cause a variety of issues. As more data driven applications enter today's battlespace, so do the chances of a lack of interconnectivity. As a result, warfighters are left with a challenge that can put them at a disadvantage.

Looking outside the box

Traditionally, the Ministry of Defence (MoD) and other government agencies would move through a lengthy procurement process to identify and develop a communications technology that could connect all of these moving parts. Yet today, private sector technology leadership is supporting the speed and interoperability needed to ensure military forces can harness the power of big data on the battlefield. As the private sector technological development cycle continues to accelerate



● ● Photo courtesy of Viasat

at an unprecedented rate, the MoD and other coalition forces should look to leverage this rapid technology trajectory and employ non-traditional methods of procurement to fully exploit this trajectory to solve real warfighter problems today.

A great example of this private sector trajectory can be found in satellite communications. The sheer amount of capacity, resilience, speed and security commercial satellite systems have been designed to provide can be taken advantage of by militaries around the world. New high capacity satellites, such as Viasat's global Hybrid Adaptive Network architecture, can provide access to seamless communications and emerging AI applications required to provide our forces with a tactical edge across all domains. In addition, by leveraging private sector satellite communications investment and technology leadership, the MoD will be able to rapidly take advantage of new capabilities, future-proof expensive equipment and significantly reduce overall cost of equipment.

Private sector technology and connectivity solutions designed for civilian use can also conform to many of the same standards used by today's militaries, allowing them to coexist as part of the defence ecosystem. Communication technologies are the perfect example of this, with advances in satellite communications capabilities and a fully-integrated active cyber defence resulting in services able to reliably transmit large amounts of data and analytics, paving the way for new civilian cloud and AI based applications. This too can apply to the defence sector. As recently demonstrated by Viasat at the

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Association of the United States Army conference in Washington, D.C., this same cloud-enabled connectivity can be applied to emerging military concepts of operation to make the Internet of Battlefield Things (IoBT) a reality for the MoD and coalition forces.

The path forward

Providing a modern, connected military isn't just about creating and adopting new technologies. The impact of today's unified, high capacity communications can be a huge advantage on the battlefield – giving forces through faster, more accurate information sharing that allows for swifter and more confident action. As with so much in military operations today, partnership is the answer: Not only between nations, but between the defence and commercial technology sectors operating in tandem to bring the most advance technology and capabilities to the warfighter in real time.

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