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December 2019

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Space commands



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## Satellite communications for national security: Don't fight the white!

Border security is a challenging matter for every nation across the globe, however, in recent years, satellite capabilities have greatly increased border security of many countries. Paul Boshier, Director of International Business, XTAR, outlines the opportunities afforded by satellite in securing a nation's borders, and the futility in trying to "fight the white."

**For those like me who went through training** at our military college in Sandhurst, or really any training establishment, you may understand the phrase, "Don't Fight the White." The white referred to instruction sheets with model answers in regards to a particular task or mission we were attempting. Debating or trying to alter these instructions was nearly always futile as it was the Directing Staff answers; hence the phrase "Don't fight the white."

Fast forward to my days now in the satellite industry, when I was recently embroiled in a conversation regarding the definition and uses of MILSATCOM, COMSATCOM and GOVSATCOM. While my erstwhile colleagues did a good job defining each, it left me wondering – does the definition really matter? As a past military user I certainly did not consider or debate the *type* of SATCOM I utilized. My concern was rather, was it fit for purpose and did it meet my commander's mission needs?

Across the globe, security can take many forms, ranging from combating terrorist activity, illegal immigration, refugee flight and transnational crime, to more general concerns over national security and defence. Denying or slowing our enemy's ability to act can effectively undermine their ability to respond which can present nations with a position of significant advantage. National security relies on having effective, available resources with the right capability to protect against rapidly evolving security threats

that have increased over the past decade and are now considered to be within, at and beyond any national borders.

We are all too aware that shrinking budgets and a need to 'do more with less' stretches any nation's ability to meet the myriad of national priorities; in fact, securing a nation has become a much more complex and dynamic problem that without the appropriate resources, becomes ever more susceptible to the threats it faces. Solutions to these dilemmas can differ widely; at the very core of national and thus global security is the pressure on nations and organisations to monitor and control activities and mitigate threats across borders, from terrorism to illegal fishing, to control the movement of weapons, drugs and people as well as direct incursion from expanding neighbours. As these national challenges have increased, satellite communications have become an indispensable tool for governments and militaries alike.

### Space-based capability

A space-based capability such as satellite communications can mitigate natural disasters, crisis situations or kinetic action that have rendered primary ground-based systems (such as fibre, cables or mobile phone networks) unreliable, disrupted or even non-existent. Add to this the vast nature of national boundaries, remote inhospitable areas and a lack of infrastructure, and satellite communications become a viable alternative. SATCOM delivers solutions to enable governments to control integral assets to defend their borders, whether they are airborne, maritime or land based. While satellite imagery is adding another dimension to the intelligence, surveillance and reconnaissance suite, the ability to communicate securely, either by voice or data, remains the force enabler that allows commanders and politicians the situational awareness to make well-informed and timely decisions.



● ● Photo courtesy of XTAR

Having established the critical need for satellite communications and noting the ever-increasing government applications that are more and more bandwidth hungry, selecting the best solution can be a daunting task, but it does all go back to meeting the needs of our satellite operator in the field. Without doubt the current and future satellite fleets (both commercial and government owned) offer new technology, increased capacity and an opportunity for the user to meet all their space-based demand forward into the future. But unlike commercial users, our governments and militaries can take strategic, operational and tactical advantage by using the X-band frequency, which has been reserved specifically for their use only.

Technically, its advantages are numerous; X-band is less susceptible to rain/dust attenuation and does not suffer adjacent satellite interference like its commercial counterparts (Ku-band and Ka-band). This combination allows the user to experience increased performance availability, better data rates in all

weather conditions, no downtime and greater reliability resulting in the delivery of critical communications on both military and commercially available satellite fleets. Using X-band to meet the demands of national security, linking land, maritime and airborne assets in a coordinated approach to combat wide-ranging threats gives our governments and war fighters available, secure and robust communications that ensure reliable command and control functionality: Critical in times of crisis.

The rate of technology growth is well-known and will be adopted by our governments as they protect us from emerging threats, but the common, underlying requirement is the need to transport and exchange that information to command centres to enable effective and timely decision making by our leaders. Satellites provide the range extension, security and vital communications channel that give government users the flexibility to pull information from anywhere in its region, mobile or static sources and deliver it to multiple locations in real time. X-band is a tried and tested solution, dedicated for government and military use and must be part of every nation's SATCOM capability. Not every nation has its own national MILSATCOM or access to another's, but there are commercially available SATCOM providers that can meet their requirements and provide a flexible, affordable solution. One such provider, XTAR, delivers X-band as a dedicated military/government resource.

For an issue as vital as national security, countries require a robust satellite solution that can cover vast terrain, access remote locations using small antennas and hold up in any weather. These characteristics allow the user to connect the decision makers instantly with problems as they occur, enabling fast, effective and decisive action to address the issues. The X-band frequency has been reserved solely for government and military use, in part because it has these distinct advantages. Don't "fight the white," or debate what type of SATCOM you are using, but instead utilize the solution that will provide optimum border security.

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