

Transforming government networks

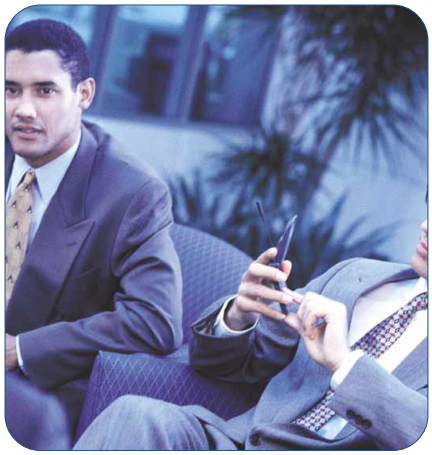
The words 'government services' embrace a wide variety of organisations and every government is aiming to do the same thing – to improve efficiency and effectiveness. How is satellite technology helping them to improve the services they offer?

Every person in every village, town and city across the world relies upon services provided by their local and national government. These services include everything from health, education, law, order and justice, welfare and benefit systems to the collection of refuse and the fighting of wars. The systems in place to facilitate these services are extremely important and must support this wide spectrum of requirements. To make this happen, the network used by a government must be fast, reliable, scalable, interoperable and most of all, secure. The network must give access to all applications in geographically dispersed locations wherever and whenever they may be required such as voice, data and video and all this must be achieved in a timely, cost-effective and efficient way. The backbone of these networks is satellite technology.

E-Government

The Internet is revolutionising government services across the world. Most of us are familiar with and have used at some point, the Internet to access these services. Now we can file our tax returns, pay road tax, or even renew our library books at the click of a mouse. Certainly, in the developed world, most households now are fortunate enough to have broadband connections and this has indicated a strong growth in the use of government services online. Not only does the Internet make life much easier for those who are homebound, for example, but it is also helping those who live in remote and rural communities with the opportunity to access information that may not previously have been available to them.

Today, satellite-based broadband links match the capability of terrestrial links and can be deployed anywhere regardless of location, giving access to government services to those who previously have had none. Access to ICT (Information Communication Technology) means access to legal documentation, education, health and nutrition information, details on good governance, business advice – it can change the status of a community and link them to the outside world therefore enabling them to participate in wider society. Voice, data and video links can facilitate dialogue with towns and cities. VSAT systems may be deployed quickly, easily and cost-effectively using a star or mesh topology allowing scalable and flexible communications.



Digital Divide

This access to ICTs provided by satellite for poor and remote communities is helping to bridge the 'Digital Divide'. Often, families are split up when the younger inhabitants are forced to move to towns and cities to earn sufficient funds to financially support their families in the rural and underserved areas. VSAT-based telephony and broadband access is helping those on the wrong side of the Digital Divide to access the facilities and information that those based in towns and cities already enjoy.

Innovations in satellite technology have meant that telephony and Internet access can become a reality such as the use of solar power to run the systems, therefore making them affordable. Satellite cellular backhaul for CDMA and GSM base stations and the compression of voice traffic means that mobile telephony can be used. IPTV delivered via satellite is helping remote villagers access educational video on demand and VoIP means that they can participate in real class situations. The potential that can be realised through satellite for the benefit of those who do not yet have access to ICTs is enormous and can literally turn lives around.

Military

The demand for satellite communications in the military context is huge. The advent of the network-centric battlefield is upon us and this requires the seamless sharing of information. The need for effective intelligence, surveillance and reconnaissance (ISR) is no more important than now when the threat from global terrorism grows from day to day. The network centric battlefield will see all soldiers equipped with the required technology to keep themselves connected at all times. Satellite communications lie at the heart of network centricity.

The immediacy of satellite links means that soldiers may stay in close contact with their commanding officers and the rest of the field no matter where they are. The unique ability of satellite to reach the places where other technologies such as fibre simply cannot is its biggest asset. The delivery of mission critical information relies upon a communications system that is robust, reliable, scalable, interoperable and, above all, secure.

The ability to communicate on the move is of paramount importance to the network-centric battlefield. On land, sea and in the air the use of mobile satellite based communications make this possible. VSATs (Very Small Aperture Terminals) have proved to be incredibly effective when it comes to providing mobile communications.

Advancements in the technology have meant they have become much smaller, lighter and easy to move around. These portable satellite solutions may be attached to vehicles giving immediate and continual connectivity.

Satellites allow real-time tracking – invaluable in a war situation. Vehicles, ships, aircraft and individuals can be identified regardless of their locations. Satellite Global Positioning Technology is an essential navigation tool used by all military aircraft, ships and vehicles and provides highly accurate timing and location information.

The role of the military has also been redefined in recent years as the fourth emergency service. We have witnessed their involvement in disaster recovery operations where they lend their expertise and equipment to help restore communications where the terrestrial links have been destroyed using satellite based technology.

Multifaceted Role

The power of satellite can have a profound effect on a plethora of government services whether they are social, political or economic. From basic needs such as connecting a government's wide range of geographically dispersed offices and embassies to helping bridge the 'Digital Divide', the applications covered by satellite technology are extensive.

Here we have covered just a few examples. For further information on how satellite can transform government networks, contact GVF.