

Oil and Gas Exploration:

Satellite telecommunications answers the call

Reliable, cost-effective communications is a must in any industry. Oil and gas exploration is no exception. With drilling sites frequently situated in the middle of the ocean, desert or other equally inaccessible location, a well thought out satellite telecommunications infrastructure can be the answer where more traditional methods of communication are either too costly or inadequate.

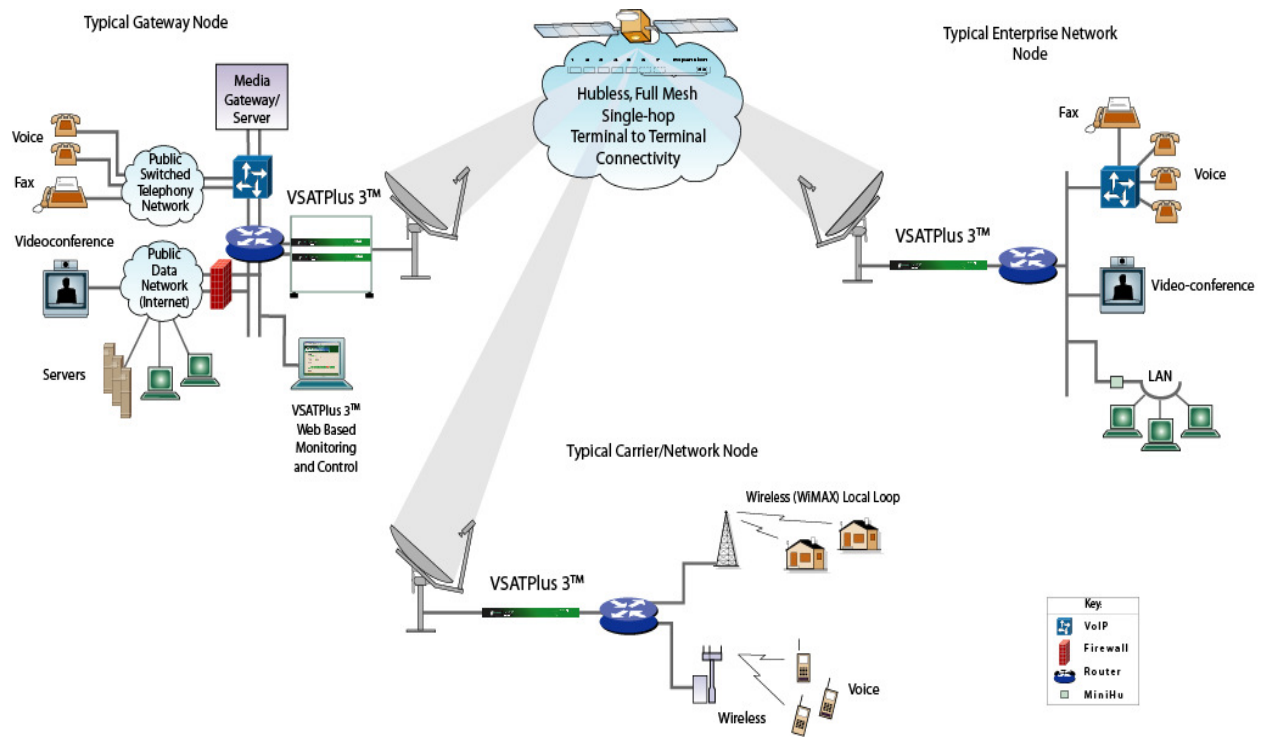


Answering the need for reliable, low-cost communications

Powerful, low-cost VSAT (very small aperture terminal) earth stations have opened remote areas of the world to instant telecommunications. This technology enables governments and businesses to have access to the latest communications services, those that support voice, data and the Internet from remote locations, without being hampered by inadequate terrestrial infrastructure. VSAT networks can be deployed rapidly – usually within a few days. Once the network is operational, remote sites can be deployed or re-deployed in two weeks and at minimal cost. Furthermore, the use of satellite communications allows bandwidth to be applied to match the applications' requirements. These inherent features make VSAT communication very attractive for applications such as oil and gas drilling.

Mesh configuration:

A mesh network is by definition a decentralized architecture. Each remote site can communicate with any other remote without going through a central hub, thus removing any single point of failure. The system allows this connection among many users sharing a limited "pool" of satellite transponder space. The result is economical and flexible bandwidth sharing with a mix of voice, FAX, video and data traffic.



LUKoil, Russia's leading oil producer, has a private network using PolarSat's VSATPlus 3 mesh configuration that provides services at 50 sites all over Russia including oil drilling sea shelf platforms. The use of a satellite network as a solution to providing communications to remote sites, many of which are located in the middle of the ocean, enables LUKoil to continue to be a leader in their field. A further benefit of using VSAT technology, is the ease and speed of adding new sites. LUKoil has upgraded from VSATPlus 2 to VSATPlus 3, which is easy to do with this type of architecture. The VSATPlus 3 provided considerable greater throughput in the same space segment through the use of 8PSK modulation vs. the previously deployed QPSK.

Schlumberger deployed a VSAT Plus II network (consisting of a hub and 15 remote stations) in Northern Africa. This technology answered a number of Schlumberger's needs: The remote sites are easily relocated to new drilling sites as the need arises. Furthermore, if required, the network can be expanded by adding more carriers with no hardware change to the remote stations. The mobile station, a VSAT terminal mounted on a truck, is ideal for exploration. And, because of the reliability of the technology, accidents that occur in remote areas can be relayed to headquarters for quick medical response.

Quality of Service (QOS) ensures that LAN and VoIP traffic has priority over the less critical Internet surfing. The use of an intelligent VSAT network allows all rigs to share the same satellite bandwidth and reduce space segment charges by 50%, thus often paying for itself in just a few months.

One thing to keep in mind:

When choosing an equipment provider, make sure you find a company who will not only sell you "a box", but also will

:

- Assist with designing the network - tailored to fit your needs
- Offer and assist in the integration of specialized applications and software
- Install and bring the system online
- Provide network support, day or night
- Expand your network, from the hub to countless remotes

PolarSat is such a company based on proven technology, our products provide efficient, secure and reliable transmission of voice, data and video over satellite. With corporate headquarters in Montreal, Canada and a presence in every major international market, PolarSat is able to service customers around the world.