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# Satellite Network Consulting White Paper



Streams Network Services

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Over the last decade, there has been an explosion in the growth of satellite technologies and solutions as the demand for connectivity in remote areas has skyrocketed. The increase in available technologies and solutions has been a boon for corporate ITC decision makers in several areas;

- Being presented with many different technologies has provided the benefit of choice
- An increased competition amongst equipment vendors has resulted in a drop in equipment prices
- Equipment reliabilities have increased
- Customer side equipment have become much easier to install and operate
- Shared managed/collocated platforms have helped considerably in bringing down the total cost of ownership of wide area networks

However, these gains have brought a new set of problems;

- The unexpected increased demand for satellite capacity in Africa, brought about by the advent of cell phones, has caught satellite operators off guard and has resulted in a increase in the cost of space segment because of a shortage of supply. It takes about 4yrs to design, build and launch a satellite and its life time is limited to 15yrs due to payload limitations
- The multiplicity of alternative solutions, has made it more difficult for ITC staff to wade through thick marketing and technical documentation of competing vendors in choosing the solution that best meet their needs
- The high rate of technological obsolescence has made the development of in house expertise redundant.

The key advantage of shared/collocated solutions has been the lower cost of ownership and the fact that the client ICT staff end up managing their network in full. Though a very interesting attribute, it can also be a major Achilles' heels of the solution. The reason being that most Corporate ICT,s are ill equipped to manage these kinds of networks especially when one factors the regular hardware and software updates, and upgrades, it becomes clear how difficult it is to keep the networks optimized. Networks that may have been properly designed can over time, become un-optimized due to: un-announced bugs, undocumented and improper network modifications, changes in user patterns and applications.

To address these issues, it has been incumbent on ICT staffs to outsource network designs, installations and management to companies that specialize in these areas and are adept with the technologies.

The first option that comes to mind is to outsource this service to the organization's satellite space segment or WAN provider. This is a very attractive option since these operators own the core hubs, switches and WAN infrastructure. The flip side of this option, however, is the fact that the satellite provider's primary business is selling space segment and as such it's hardly in its interest to optimize the client's usage of space segment, especially when optimization results in the need for less space segment.

The second option is to collocate with the equipment vendor/manufacture and purchase space segment separately. This can yield some optimization in space segment. However, since the equipment vendor is an interested party in selling equipment, there's a tendency for them to use this as a vehicle to force unwarranted equipment and software upgrades at the client's expense. Also, being locked to an equipment manufacture/vendor reduces the organizations flexibility in choosing more cost effective and smarter newer technologies that have not been developed by the manufacturer/vendor.

The third option thus would be to choose a systems integrator that is technologically agnostic and free of your space segment provider. With staff certified and specialized in many different technologies and regularly updated, clients are provided the most objective and cost effective ideas and solutions possible. Also, since these solutions' providers' primary interest is network design management and implementation, optimization becomes key to them as that's a verifiable reason for their relevance.