DRASTIC

How do you buy a VSAT system?

You need to know two major things right away:

- Its not as simple as buying a DSL or Cable connection at home. Neither is the performance in any way comparable. A 512kbps VSAT connection should NOT be compared with a 512kbps DSL or Cable connection!

- There are quite a number of factors to consider and understand before you understand enough to make a sensible decision about VSAT offerings. There is no shortcut.

We considered over 70 factors when we chose our suppliers. We've tried to boil down the essential issues here which you should look at.

3 Big misleading questions:

Most people initially ask just three totally misleading questions:

- How much is the equipment?
- How much is the monthly payment?
- How fast is the connection?

Consider this: The world's biggest VSAT reseller outside of the USA has sold 6000 systems over the past 4 years. Only 50% of these systems are still in use. Why? Because not all connections are created equal! If you want to get a system which will actually perform as you want it to, you need to know how to ask the right questions, and which answers you are willing to accept. If you want to optimize the service you get for the budget you have, you need to know where you can afford to cut corners, and where you should avoid doing so.

The costs you will have to pay to get the performance you want depend on a number of factors:

Where are you?

Your geographical location will determine the services which are available from satellites which cover that part of the world. The available services will in turn determine:

- Viability: If the satellite you wish to use is too low on the horizon, or obscured by mountains, tall buildings or trees, you may be forced to use an alternative.
- Suitability: In areas of high rainfall, such as the tropics, C-band will give a more consistent service than Ku-band during rainfall. However, C-band will typically require a bigger dish antenna, which is typically more expensive. The signal strength provided by different satellites at your location may also mitigate for one option more than others. The power rating of the electronics which are fitted to your dish should also be modified to match the available signal.

What do you want to do with the connection?

The characteristics of the internet traffic created by different applications are different, and give rise to differing priorities for the connection you should buy. Voice over IP and particularly Video Conferencing are demanding applications and need a properly specified connection to work well. Even web surfing and sending email become painfully slow unless your connection is adequate.

How many people will typically use the connection simultaneously?

Do the simple Math: If you have a 512kbps connection at 50:1 contention, each user might get as little as 10kbps at peak times. If you and all the other subscribers that you contend with all have 10 users on a network, each user might get as little as 1kbps. Bear in mind that the download speeds are

usually higher than the upload speeds. In this example, if the upload speed is nominally 128kbps, each user might get as little as 0.1kbps upload. Try sending a 400Kb word file on that!

How much variability of performance can you tolerate?

Again, in simple terms, if you buy dedicated bandwidth with a guaranteed throughput (Committed Information Rate), you will almost always have the full performance you bought, but it is very expensive. If you buy a highly contended link, with a "best effort" contract, it can be very much more affordable, but you will probably be very frustrated with the lack of performance. The trick is to balance these.

A third major consideration here is Quality of Service (QoS). QoS management enables different applications to be given priority. With applications like Voice over IP (VoIP, Internet telephones) it is critical that the data you send ends up at the other end promptly and in the right order, otherwise, the conversation is unintelligible. With other applications like email, it is not so critical. QoS would give VoIP data priority over email data, increasing the usability of the VSAT link.

Other things can provide interruptions to service:

- "Rain fade" – especially in the tropics – when it is raining, Ku band service may be interrupted whilst C band is not.
- If you have parts failure, or need on site service, how long will it be until your suppliers can be there?

How much additional equipment do you need?

Some satellite equipment is pretty basic and you may need to buy additional equipment besides your satellite modem to make your connection really work well – other manufacturers have a range of additional functionality built in, which might save you another $4-5000. Be sure you are comparing like with like.

So how you improve your "bang for the buck":

Chose a package which will really perform for your needs, balancing contention ratio, CIR, and QoS management
There are considerable economies of scale if you can buy in large volumes. If not, aggregate your requirement with others if you can.
You will get lower prices quoted if you commit to a longer contract. Beware though: at the moment, the trend for bandwidth costs is downwards.
Limit the bandwidth passing through the connection by the use of such features as:

- Proxy caching
- Spam filtering and content filtering at hub.(i.e. BEFORE it goes over the satellite link)
- Web compression
- Bandwidth efficiency / throughput enhancement technologies built into some equipment

These measures will ensure you get maximum performance for a given connection.

Of course, DRASTIC have addressed all of these issues. We'll provide you with excellent performance for an attractive price.

See more about the work of DRASTIC at www.drasticom.org or email us at info@drasticom.org