



## **The Case for Satellite in Today's IP Networks: Extending Reach to Gain Competitive Advantage**

Until a few years ago, it was common for telecom managers to view satellite communications as effectively “a last resort,” something to consider only when other connectivity options were found unworkable. But today these same telecom managers are increasingly relying on broadband satellite services to integrate seamlessly with terrestrial links and create hybrid-networking solutions that deliver the highest levels of performance and reliability.

Satellite-delivered IP services are growing, and growing in every region of the world, not just those with limited telecom infrastructure. In fact, North America accounts for about half of all commercial IP broadband satellite sites today – about 300,000, according to Northern Sky Research, a leading telecom consulting group. Even more impressive, the increased use of satellite broadband has occurred as the world of IP networking and converged communications has grown more and more complex.

Before you start thinking, “this is just a sales pitch for satellite by some guy in the industry,” I would ask you to consider why IP networking leaders like **Cisco Systems**, **Global Crossing**, **AT&T**, and other carriers around the world are partnering with satellite companies to drive revenue growth. The push toward greater reliance on satellite in today's telecom service market is real and gaining momentum. Read on to find out why.

### **Growth Drivers of Satellite IP Networks**

There are three main factors in the growth of broadband satellite IP services. Let's start with **performance**: many satellite operators and hardware providers have integrated advanced IP networking capabilities into their offerings. The result is that satellite users can now enjoy a “near terrestrial” experience for LAN/ WAN extension and Internet access. Advances in TCP acceleration have virtually eliminated the effects of satellite latency (the fact that a satellite signal has about a    second delay caused by the time needed for that signal to travel from the earth's surface up the satellite and back). These advances in acceleration are so impressive that satellite is playing a growing role in VoIP (voice over IP) services in many parts of the world.

Dramatic improvements in the end-user experience are impressive, but a select number of satellite operators have taken that further and now provide “performance guarantees” through service level agreements (SLAs) that are comparable to those of terrestrial carriers. These SLAs assure high levels of security and availability and are all part of satellite's demonstrably improved performance and growing acceptance.

A second driver in the growth of satellite IP is **improved cost** – both for equipment and bandwidth. Commercial satellite equipment charges can be as low as \$3,000 per site. Satellite transmission costs will vary depending on factors such as



whether the link is dedicated or shared, how much bandwidth the applications require (degree of “bandwidth intensity”), number of subscribers on a given network (contention ratio), and the SLA performance metrics specified by the end customer. Prices in the range of \$200 to \$400 per month per site can often meet the IP networking needs of demanding customers in commercial and government who seek the benefits of a satellite solution.

A third growth driver in broadband satellite IP is the *success of multi-site applications*. Most of this is occurring with large North American retailers like Wal-Mart and Target who have implemented their own in-store TV digital signage networks with advertising and content delivered by satellite. Tesco is operating a similar network in the UK in about 100 stores.

Interactive distance learning (IDL) is a similar multi-site satellite application that is seeing strong demand from both corporate and government customers. IDL networks can be in remote regions with limited infrastructure, as well as in highly developed markets where the inherent broadcast advantages of satellite make it a superior alternative to terrestrial solutions.

### **Growing Ties between Carriers and Satellite Providers**

Since the commercial satellite industry began in the 1960s, the interest of major carriers in satellite services has seen some highs and lows depending on a given carrier’s strategy and market focus. Today there is evidence that a growing number of carriers are aligning themselves with satellite operators to win new IP-related contracts. One example of this is the relationship my company has developed with Global Crossing. Together we have enjoyed some major wins using a combination of each company’s space and terrestrial infrastructure – wins that neither of us could have achieved on our own. We are now managing hundreds of satellite broadband sites for Global Crossing around the world.

### **GTB Readers Express Interest in Satellite IP Services**

The editors at Global Telecoms Business (GTB) have asked me to develop a series of articles on satellite IP services in response to requests from readers who want to know more about satellite and its role in today’s IP network implementations. In this first column, I have provided a brief, high-level intro to broadband satellite solutions and the some of the reasons why their use is growing. In future columns, I will provide additional depth on applications, customer requirements and new services. Please feel free to contact me if you have particular questions or topics of interest related to satellite IP services. I’ll work with the GTB people to publish a few exchanges that I believe readers will find especially pertinent. Till then, I look forward to hearing from you and appearing in future editions of this publication.