

## THE AGENDA



# SHARING SATELLITE BANDWIDTH

**NetworkAdvantage provides the technology to manage bandwidth**

In many situations, satellite is still the most economic communications choice. With business and service providers alike demanding better utilisation of resources and greater flexibility, NetworkAdvantage is responding with several solutions enabling increased satellite bandwidth sharing. Here are just two applications finding significant interest in Asia; addressing communications Quality of Service issues and the opportunities provided by talking face-to-face.

**Business continuity Insurance: ping statistics - four packets transmitted, 0 received, 100 per cent packet loss, time 3058ms**  
Transmission failure ... bad news

for any business that relies on communications. Natural catastrophe, accidental excavation and terrorist activities can all break a terrestrial link. A satellite link however, is celestial, 36,000 kilometers above our heads. Beyond the reach of earthmovers and extremists, but satellite bandwidth is an expensive resource, right? The correct answer is 'sometimes'.

Satellite allows bandwidth to be shared. When managed appropriately, one piece of bandwidth can serve to back up many terrestrial links, as not all will fail at once. The same bandwidth is available at every site in the network and at sites you'd never dreamed of stretching your network to, until now.

NetworkAdvantage provides the technology to manage bandwidth and make the same small piece of sky serve any of your scattered sites within seconds. With a backup link so flexible, the Quality of Service (QoS) of the network can be improved dramatically. Network redundancy and the insurance of satellite bandwidth in place when you need it, ensures business continuity.

**Problem**

To meet high-availability communications requirements of their business customers, Cyber.Net, a leading ISP and telecoms service provider in Pakistan, needed redundancy for critical links. Outages cause major disruption, resulting in lost productivity, lost opportunity and lost business!

These businesses place significant weighting on the ability of a communications service provider to provide a reliable and high-availability service – and often write such performance into Service Level Agreements.

**Requirement**

To meet this need, Cyber.Net needed the ability to quickly and automatically restore transmission in the event of failure of their primary circuits, for example between Karachi and Islamabad. In many cases, alternate terrestrial routes are not available because geography, politics and the simple cash required to string additional cables from place to place. With these limitations, Cyber.Net looked to the satellite industry for an answer.

**Possible solutions**

Circuits can be restored over satellite manually, by phoning a satellite service provider to request bandwidth, configuring satellite equipment at each end of the link, and re-routing communications. However, this is difficult to achieve

their current and future needs. With direct connection to Cyber.Net's network management system, communication is restored automatically within seconds making economical use of satellite bandwidth.

Rolling out a variety of telecoms services throughout Pakistan, Cyber.Net are now able to sign Service Level Agreements with confidence to maintain their customer's mission-critical communications.

Astute telecoms operators within Asia are reviewing the resilience of their networks and turning to the benefits offered by satellite for circuit restoration – effectively a Business Continuity Insurance Policy.

**Bringing people closer with video communications****Opportunity ... rings?**

The same techniques that allow the network to be transformed from terrestrial to celestial in seconds, also permit the transparent use of shared bandwidth by videophones scattered across a region. This drops the cost per minute for video communication applications by a factor of 10, ushering in a whole new world of dial-up videophone.

Increased difficulty of travel due to security measures, increasing travel costs, travel time and the widely recognised value of a picture (equal to a 1,000 words, right?) in personal and business



**Michael Elwood-Smith**  
CEO – NetworkAdvantage Corporation Limited

Michael has spent his professional career in the communications industry and has held senior positions in the multimedia communications, cable television and telecom sectors. Past positions include Director of Applications Engineering for Scientific Atlanta Europe (UK), Senior Vice President of Product Management at the Fantastic Corporation, Switzerland, and Business/Technology Advisory services within GOA AG, Switzerland. Michael brings to NetworkAdvantage over 16 years of experience in communications technology, operations, product management, alliances and partnerships, including over eight years experience of living and working in Europe. He holds a Bachelors degree (Hons) in Electrical Engineering from the University of Canterbury, New Zealand.



**When managed appropriately, one piece of bandwidth can serve to back up many terrestrial links, as not all will fail at once ”**

in less than 15 minutes – far too long for high-availability service and mission-critical communications.

Reserving bandwidth for each link with automatic switch-over is possible, but very expensive.

**Optimal solution**

Cyber.Net selected NetworkAdvantage automatic circuit restoration as the most cost-effective and flexible solution to

communications, is fuelling an increased use of video communications for both business and personal needs. Opportunity no longer knocks, it rings.

At the time of writing, the cost to make video calls between countries is still very high. International video calls cost upwards of \$US20 per minute between public rooms, require advance booking (two to three

days) and have minimum call times of up to one hour.

Using shared bandwidth over satellite, however, such cost obstacles for international video can be overcome.

**Public Switched Videophone Network - PSVN**

An alliance of service providers is now forming across Asia-Pacific to

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### Business bio

NetworkAdvantage Corporation Limited is a technology company located in Wellington, New Zealand, developing satellite bandwidth management solutions for satellite service providers and enterprise private satellite networks. NetworkAdvantage is an open software and appliance system, bringing control and management of valuable satellite bandwidth to both new and existing satellite networks.

Applications of the NetworkAdvantage satellite bandwidth management system include automatic circuit restoration ensuring business continuity, satellite backbone videophone/videoconferencing management, digital video contribution and mobile telephone backhaul management.

Through a global network of partners and with advanced software techniques, NetworkAdvantage is well placed to provide and support solutions worldwide. □

**“ In many cases, alternate terrestrial routes are not available because of geography, politics and the simple cash required to string additional cables from place to place ”**

usher in a new age of international video telephony – the Public Switched Videophone Network. The direct-dialled, on-demand satellite backbone video service will offer international call rates of only a few dollars per minute, with no advance booking or minimum call time. Connecting into the USA digital telecoms network (providing access to more than 500,000 existing video terminals), the first satellite City Gateway has been commissioned in Bangalore, India. Video calls are now being made between India and the USA.

Backbone international communication is facilitated by a flexible and scaleable satellite management system allocating guaranteed bandwidth to each video call, thereby ensuring a high Quality of Service. The satellite videophone

management system connects via standard interfaces to IP Broadband networks and digital ISDN networks allowing calls to seamlessly pass from IP to ISDN.

As videophones are added to broadband networks, video-payphones located in public places such as airports and hotel lobbies will provide ready access for business and private users alike to connect face-to-face with their office, customers or family. A similar network of public access videophones is available and rolling-out in the USA.

Video is poised to become the new medium of communication in the global economy. The satellite-based Public Switched Videophone Network is uniquely suited to usher in a new era of cost-effective Asia-Pacific video communication. □

