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Satellite: pushing up profits

The scope for satellite in the retail and banking sectors is enormous. In terms of retail, satellite can maximise the big stores' profits and help create profits for farmers or entrepreneurs in small rural communities. In banking, satellite will enable those farmers to manage the money they earn regardless of how remotely located they are, to enabling large retail firms to give their customers access to payments methods wherever they are. These are just examples. There are a plethora of reasons to use satellite within the banking and retail sectors.

The application used most widely in banking and retail is VSAT. Easily installed, cost-effective and deployable anywhere it is an extremely popular choice.

VSAT satellite networks send and receive data at broadband speeds by bouncing high-frequency radio signals off of satellites in geosynchronous orbit above the equator. At the customer premises,

a small dish of about one metre and transmitter are installed in an outdoor location and are connected to the LAN. This VSAT "remote" system connects over the satellite link to a VSAT "hub" that uses large, high-power dishes to communicate with one or thousands of remote sites. The hub facility connects to the Internet and private networks via redundant high-speed terrestrial links, and relays data



over the wireless satellite link to the remote VSATs.

VSAT satellite connectivity has served WAN requirements for over 25 years, ranging from single locations to over 10,000 nodes. Satellite network services are available virtually anywhere, and provide a wireless, physically diverse “last mile” connection path – which is absolutely critical for 100 percent uptime and disaster recovery applications. Satellite networks are also the preferred delivery method for true multicast data distribution, and are available in narrowband or broadband configurations.

Access to all information

In today’s society, one of the most important aspects of business is having the correct information available to the right people at all times, wherever those people are. This must also be absolutely confidential when required. Satellite technology can present a secure and reliable network that guarantees access to all information at all times regardless of location. In banking, it can link up ATMs that are even in the most rural of areas, ensuring that a banking infrastructure is made available to everyone. For retailers, broadband satellite can provide quick credit card transactions, quick and simple inventory and stock updates, digital signage and much, much more. Access to the Internet via broadband satellite connections also holds huge benefits for banks and retailers allowing 24 hour banking, browsing and purchasing from any location.

In this article, we will explore the ways in which satellite technology, and particularly VSAT facilitates efficient and cost-effective networks for the banking and retail sectors.

What can satellite do for this sector?

- Point of Sale applications;
- Credit card transactions;
- Digital signage;
- Staff training;
- Online sales;
- Security and flexibility; and
- Branch expansion.

Managed Network Services

A service such as HughesNet offers a managed network service which means that they provide a comprehensive and reliable solution that includes various different applications necessary for a company to operate effectively. Instead of dealing with multiple providers, all applications and services are placed under one umbrella making it easy to manage and very cost-effective. For example, last year Hughes began providing the 27,000 UK National Lottery sites with a managed network service - the HughesNet broadband satellite service – to connect Camelot’s new IP-based lottery terminals, which include digital media screens at lottery points of sale. The multi-year managed services contract includes provisioning of network equipment and related installation, maintenance, and ongoing support.

HNS has great experience of deploying very large networks, including more than 70,000 network nodes for lottery terminals worldwide and the satellite networks are secure and reliable.

Digital signage

Digital signage is the phrase used to describe electronic displays that are installed in public places. Being digital, there is no need for them to be removed after an offer, event or promotion is over – the content is simply changed. In addition, videos and animations may be displayed that can be adapted to the environment they are in. Digital signage can even be interactive. It is basically an advertising tool that offers Return on Investment (RoI) – something that the traditional static signs do not do.

Retail is an incredibly competitive and dynamic environment with new products being released on a frequent basis. Stores are constantly looking at how they can maximise their sales. A retailer has

specific requirements when choosing a method of promotion such as digital signage and they range from being easy to use, secure and reliable, cost-effective, flexible, based on open standards and capable of delivering audio, video and data simultaneously.

The market for digital signage is on the up with China leading the way boasting a total of 100,000 displays and a market capitalisation of \$10 billion. Often displayed on LCD or plasma screens, digital signage can be used for purposes such as imparting information, advertising, advertising by third parties, brand building and enhancing the environment. Often, the tool used to broadcast to digital signage devices is satellite and Heliuss has developed a solution that puts together a combination of satellite and terrestrial technology to deliver content.

Heliuss has teamed with PlasMedia Productions on one of the United States’ largest in-mall digital signage networks, servicing over 3,600 advertisers in 100 locations. PlasMedia selected the Heliuss digital signage solution because it allowed them to quickly expand their business and meet all of their technology requirements.

PlasMedia Productions operates an ad-funded digital signage network, serving shopping malls with localised advertisements targeting millions of shoppers. PlasMedia provides local advertisers (in-mall and off-site) an opportunity to promote their products and services through video ads and multimedia commercials. Initially, PlasMedia Productions opted to use a competitor’s digital signage solution, which required manual updates to the media players every time an ad was modified or created. By late 2006, with business growing and mall locations starting to branch out across the US, it was clear that the manual update and management solution currently in place was not going to be viable going forward. In its search to replace the existing solution, PlasMedia piloted the Heliuss Media Signage product and found it allowed for central control and deployment of content to any number of Heliuss media players.

“Working with Heliuss has helped us overcome significant growth obstacles,” said Dean Talley, CEO and founder, PlasMedia Productions. “We had reached a tipping point in the growth of the company and technology was becoming a major obstacle. Heliuss has been instrumental in overcoming specific technological and logistical challenges, helping us achieve our growth objectives.”

The Heliuss network management software provides PlasMedia



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with an intuitive interface to upload and target content as well as gain visibility into the reporting aspects needed to effectively manage the system. Working with PlasMedia to address specific needs, Heliuss integrated cellular broadband access to each of the media players, thereby enabling connectivity at each remote play-out device. "PlasMedia Productions has been a great partner to collaborate with," said Jeff Curtis, Senior Vice President, Sales and Marketing, Heliuss, Inc. "We are excited to offer digital signage technology that removes the barriers to growth and opens up new market opportunities for PlasMedia. We look forward to providing additional services in support of their growth."

The foundation of all Heliuss servers, receivers and appliances is the Heliuss MediaCore. This software module encapsulates all traffic into IP packets prior to multicasting or broadcasting the traffic to remote locations. In its simplest form, all traffic is sent in one direction. More complex implementations require two-way communications with terrestrial return. Heliuss' method and system for asymmetric satellite communications for Local Area Networks solves this complex technical challenge.

Training

Training personnel is of the utmost importance in retail today. The most important part of a business is the people working on the front line and the service they give to customers. If customers are not satisfied with the service they receive, they vote with their feet. They must be highly knowledgeable and must represent the company impeccably. Training new recruits and updating existing employees with further training is a core part of any retail company. The 'traditional' methods of training take employees out of the place of work, often to a different location meaning that accommodation must be paid for plus the hire of facilities. It also stunts the productivity of those employees being trained – not good from an employers' point of view. In today's world, training must be flexible, must be held on-site and must be highly effective.

Satellite solutions enable every branch of a company, no matter how huge the chain is, to participate in standardised training. The branches of a retail chain or bank may often be geographically dispersed and some are more remote than others. By using satellite technology, the geographical location of a branch becomes irrelevant as the same training can be delivered across the board in an interactive classroom style.

HughesNet Business IPTV Services, from Hughes Network Systems is focused on employee training. The service manages the broadcast of information to one site or multiple locations through live broadcasts or programmes delivered for local on-demand playback. The service manages both the network and the content therefore providing a complete training solution.

Banking

How is satellite used?

- Faster transaction processing/data communication;
- Security and reliability;
- Improved corporate communications;
- Fast and easy enterprise-wide deployment;
- Frame backup;
- Point of Sale applications;
- Broadband Internet connectivity;
- Multicast delivery; and
- VPN services and management.

Everybody needs a backup plan. This is especially true for banking and business networks where any loss of connectivity could mean millions of dollars lost. In order to avoid any financial catastrophes in the event of a terrestrial outage, financial institutions and other businesses are turning to satellite to ensure connectivity. When an outage occurs, the connectivity shifts seamlessly from terrestrial to sat-

ellite with no fuss, no matter where the affected site is. The service must always be reliable and, of course, cost-effective.

CISCO & Spacenet keep up continuity

The Cisco VSAT Satellite Module with Spacenet services provides a unique solution for mission-critical backup networking and other applications, integrated directly with existing Cisco router equipment. Leveraging the industry's most advanced satellite technology, it delivers available-anywhere broadband capabilities that can be used for digital content delivery, IP telephony, Internet/VPN access, backup/disaster recovery WAN service, instant mobile communications and more.

The Cisco VSAT Module solution comprises a Cisco hardware component and a network services subscription offered by Spacenet. Taken together, these two provide a complete package for integrated on-demand networking.

The Cisco IP VSAT Module solution is well suited to nearly all popular IP applications including Internet access and private network access. Backup connectivity is available through the VSAT wireless link, with near - instantaneous switchover time. Multicast data delivery for file updates or digital content distribution is easily implemented. VoIP and video are also readily supported with excellent performance. When combined with a Cisco Integrated Services Router, the IP VSAT Module can further enable a host of combined applications such as secure data, voice, switching, wireless LAN (WLAN) access point service, Content Engine and Land Mobile Radio (LMR) base station usage.

Key Advantages include:

- Provides a physically diverse path for backup – ensuring your network stays up even in the case of a significant terrestrial network outage;
- Integrates directly into Cisco infrastructure for easy management and delivery of add-on services;
- On-demand bandwidth or always-on connectivity for Internet/private network IP data, voice telephony, video content and more;
- Based on the most advanced satellite broadband technology available, with data acceleration, strong security and advanced QoS capabilities;
- Supports native multicast for easy distribution of data to tens, hundreds or thousands of sites simultaneously from a single server;
- Available anywhere with a view of the southern sky, or on self-pointing transportable units; and
- Services delivered by the leader in enterprise and government satellite solutions.

Mobile banking

Mobile Banking or M-Banking is growing in popularity. The term is used to describe the banking services available on a mobile device, such as a mobile phone, where the user can access balance checks, transactions and even make payments. After the revolution of Internet banking, financial institutions are always trying to find new ways to make banking services available on the move, 24 hours a day, 7 days a week. The exponential rise in ownership of the mobile phone and other mobile devices mean that there is a ready-made, enormous target market for mobile banking. According to Celent, a financial consultancy, 35 percent of online households will be using mobile banking by 2010. Eventually, mobile banking will allow users to make payments at the physical point of sale (contactless payments). In Asian countries such as China, Indonesia and the Philippines, mobile infrastructure is quite substantial and mobile banking has already made an impression through companies such as Globe. However, in more remote locations, satellite cellular backhaul can complete the 'last mile' making mobile banking available where cellular infrastructure does not reach.

Mobile banking is having quite an impact in Africa where Ken-



ya's Equity Building Society has been regularly dispatching a fleet of four-wheel drive vehicles to remote parts of the country using GSM satellite backhaul technology. The mobile units work from an existing bank. Account information is continually transferred from the mobile unit to the bank using GSM technology and satellite dishes located in each village.

The mobile banks services around twenty villages and visit each location once or twice per week. The satellite technology helps GSM overcome its geographical limitations. The mobile banks offer goods and services to many small businesses and smallholder farming households. Banking services include savings and essential borrowing to encourage new and existing businesses. The ability to bank also increases economic activity in poor areas and improves the living standard and opportunities for the poor. The improved financial services encourage investment in infrastructure.

Banking on the VSAT

In June, Gilat Satellite Networks announced that it had been selected by Alldan Satellite Networks of Kenya, a leading African satellite service provider, to deliver a SkyEdge II network that will serve banking and enterprise customers throughout Kenya.

The new network, comprising SkyEdge II IP VSATs and a SkyEdge II hub that supports multiple satellites, will initially cover sites in various parts of Kenya. Alldan chose Gilat following the successful operation of Gilat's SkyEdge II platform and the demonstration of the system's ACM capabilities, among other important features. The new network is expected to provide private networking services, including interactive data, broadband Internet access, Voice over Internet Protocol (VoIP) and client-server banking applications to Kenyan enterprises and financial services firms.

Alldan is a long time customer of Gilat, having deployed Gilat 360e, DialAway and FaraWay VSAT networks in the past. SkyEdge II is a standards-based system using DVB-S2 and DVB-RCS. With better efficiencies and full adaptivity for both the inbound and outbound channels, it provides higher performance that serves the growing requirements of end-users. SkyEdge II is well-suited for diverse environments including enterprises, rural networks, cellular backhaul and government network applications.

"We have worked with Gilat for many years, and are very im-

pressed by its ability to continually meet the evolving needs of our market segments with the development of advanced technology platforms," said Muin Malik, Director of Alldan Satellite Networks. "We found Gilat's SkyEdge II ACM capabilities to be the best in the market. This is of key importance, particularly when considering the current space-capacity environment." Nir Korman, Regional Vice President of Sales, Africa, for Gilat Network Systems said, "We are delighted to continue our long-term partnership with Alldan and to work together to provide a superior satellite platform that serves their growing customer base. Alldan has joined our fast-growing SkyEdge II customer base that is benefiting from the significant space-segment savings enabled by our competitive ACM capabilities, among other features."

SkyEdge II adds new capabilities to Gilat's industry-leading SkyEdge family of VSAT products. Gilat's SkyEdge portfolio enables the delivery of high-quality voice, broadband data and video services. SkyEdge represents Gilat's extensive knowledge base and field-proven product offering, acquired through two decades of experience. SkyEdge's flexible architecture and efficient space-segment utilisation make it an ideal platform for operators and service providers. With Gilat's comprehensive SkyEdge portfolio, service providers can choose the most suitable product for their application needs.

Using satellite for ROI

Without exception, every business wants to maximise their return on investment (ROI). That's what business is all about – making a profit. The flexibility of satellite means that it can be used for a wide variety of different applications and can be managed for a business by the service provider. The cost-effective nature, especially of VSAT technology, means that new stores and branches can be easily set up and managed even in remote areas. By using a mixture of satellite and terrestrial connectivity there is always backup in times of outages. Always – on connectivity makes the communication between retailers and suppliers much more efficient and also means that they can be accessed at any time. Retailers and banks can slash their operating costs by using satellite in so many ways. The importance of these networks cannot be underestimated as they have enabled the growth of both the retail and financial service industries and these are the very things that underpin any economy. ●

