

Buddy, Can You Spare Me a Problem?

The State of Play of the Global VSAT Market

by Chris Frith
President, AUSPresence

A telco PR executive once remarked to me that satellite was like a solution always looking for a problem. Given that he was looking to represent my satellite consultancy firm, I thought this was an odd way to earn my business! Dents to my ego aside, what this guy was reflecting is simply the wider telecommunications industry and a great many potential customers' perception of satellite – VSAT communications in particular.

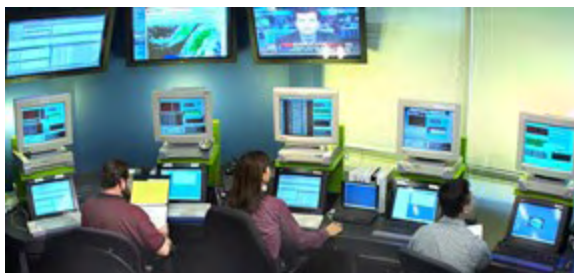
How things have changed! Now, not only do the problems exist – let's refer to them as needs (it's more marketing friendly) but also customers are willing and have the means to pay for them.

Today, we have broadband satellite providing internet access not just in the remote areas but right up close to population centres; innovative service providers are marketing hybrid satellite networks on the basis of their increased reliability and quick deploy systems which provide large scale connectivity to those first on the ground when disaster strikes.

So let's take a closer look at what needs are emerging and how leading VSAT service providers are rising to the challenge. Then we'll take a look into the crystal ball to see where this is heading.

Consumer Broadband

Yes, everyone wants to get onto the Internet. No news there! What's changed however is that governments are now actively removing the barriers to take-up for those people without terrestrial access; in the same way they have done for telephony in the past – i.e. Internet access is ranking near telephony access in terms of importance. Governments are directly subsidising the cost of the VSAT hardware and installation at premises and/or using wireless to aggregate demand within a community and are also using satellite to provide the trunks to the internet.



(photo: Viasat)

Even in markets such as the US, where the likes of WildBlue and HughesNet have generated subscriber numbers in the 100's of thousands through commercial means alone, government stimulus packages are (continued on page 4)

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The Satellite Market is Abuzz with Merger Activity



The last two weeks has seen a rash of merger activity among satellite companies. Companies who did well during the recession are consolidating and taking over companies that did not fare so well. Some are competitors and some have found complementary qualities that could solidify their market position. Among the deals we have seen include satellite operator SES taking a full stake in Sirius Satellite; EchoStar bidding on Satmex (although not a done deal as of this writing); service provider Globecom acquiring Carrier to Carrier B.V. and Evolution Communications; satellite manufacturer Orbital Sciences Corp. acquires the spacecraft development and manufacturing business of General Dynamics subsidiary GD Advanced Information Systems; Integral purchasing CVG-Avtec, the list goes on.

Many companies are rumored to be for sale or looking for "partners." Meanwhile, Tachyon Networks is getting into the satellite operator business with its purchase of the Intelsat IS-24 satellite. Sea Launch is attempting to get out of bankruptcy by securing \$12 million DIP financing from Space Launch Services LLC.

We are most likely to see more of these moves in the next few months. It's natural after a recession for consolidation among companies serving similar market segments. So, these activities clearly point to a recovery. Who will come out on top after all these mergers would be interesting to see. Stay tuned. We're on top of it and we will keep you posted.

Virgil Labrador

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EDITORIAL

Virgil Labrador
Editor-in-Chief
virgil@satellitemarkets.com

Peter I. Galace
Editor, Asia-Pacific
peter@satellitemarkets.com

Howard Greenfield
Contributing Editor,
Europe, Middle East and Africa
howard@satellitemarkets.com

Contributing Editors:

North America: Robert Bell,
Bruce Elbert, Dan Freyer,
Elisabeth Tweedie, Lou Zacharilla

Latin America B. H. Schneiderman

Europe: Martin Jarrold,
Roxana Dunnette

Asia: Tom van der Heyden,
Chris Frith

Advertising

Michelle Elbert
Director of Marketing
michelle@satellitemarkets.com

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SYNTHESIS PUBLICATIONS LLC
P.O.Box 4174,
West Covina CA 91791 USA
Phone: +1-626-931-6395
Fax +1-425-969-2654
E-mail: info@satellitemarkets.com

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The VSAT Market, from page 1

seen as an opportunity to provide higher (18Mbps) services to rural areas.

Staff Amenity

For business customers requiring workers to also spend their off duty hours away from home, on-site, on-ship, etc; staff amenity has gone from a nice-to-have to an important staff retention strategy. Shortage of skilled labor, high training costs, family trends (parents seeking to remain connected with family life when they are away), have meant workers need to be able to make phone calls and access the Internet wherever they may be – both for social interaction and to occupy their time outside work hours.

Business broadband

Email and internet access – tick! What's new is the level of data usage and the fact that application developers are recognising we don't all have fibre links and so, have to deal with latency. The need to communicate effectively over cellular/wireless networks has lead to newer versions of applications such as Citrix and MS Windows automatically sensing when they are communicating over a link with high latency and taking steps to mitigate its effect on the user experience. This is great for satellite, where stories abound of users having time to make a cup of tea waiting for their poorly designed applications to load.

Increased data usage and phone calls is also raising the bean-counters' blood pressure on the costs of using traditional mobile communications devices (e.g. Inmarsat, Iridium and the like). Whilst unchallenged for safety-of-life and hit-the-ground running (e.g. first responders in a disaster zone) communications requirements, customers are searching for a lower cost alternative; especially now they need to accommodate non-operational requirements such as staff amenity.

Happy Days?

So you're thinking: we've got customers with needs, plus the money to pay for solutions; an industry ready with the solutions - all good. Right?

Ah, no. Satellite marketing is yet to catch up with engineering.

Now, while my marketing brethren are busy coughing and spluttering as they choke on their lattes and the engineering folk are doing "high-fives" down the hallway; lets look at what's happening and then what needs to happen.



Yawning Gap between Consumer and Enterprise Markets

The bifurcation of the VSAT market into consumer and enterprise (i.e. corporate and government) providers is increasing. Consumer providers are becoming more vertically integrated, particularly in concentrated markets such as the US. Thus we have equipment manufacturers like Hughes going beyond service provision to operating their own satellites. This model has been followed by the likes of iSTAR in Asia and Viasat in the US, through its purchase of WildBlue. In terms of penetration, this model has been particularly successful in the US but some worry about whether it will stifle innovation in the longer term.

If the bonds (shackles?) between ground equipment, service provider and satellite have become stronger in the consumer market, the enterprise market

has gone in almost the opposite direction. Newer VSAT hub manufacturers such as iDirect have differentiated themselves by lowering the cost of entry, to enable smaller providers to offer services in this market. Even customers with reasonable sized networks can now seriously contemplate operating their own hubs.

The question is whether iDirect has effectively loosened the grip providers have had on their customers. Traditionally, providers have often been able to retain customers on the basis that for them to change from one provider to another has meant replacement of the ground equipment, which has been both a hassle and costly.

Although there has been widespread adoption of the DVB-S (Digital Video Broadcast- Satellite) standards on the outbound (hub-to-customer) link, the inbound has mostly remained proprietary – i.e. manufacturer specific. So a Hughes terminal and a Gilat terminal can theoretically receive the same outbound broadcast stream, but can't operate on each others' networks. In recent times, there has been a push to standardise the inbound through the adoption of the DVB-RCS standard but the lack of a large enough installed base means that it will be some time (if at all) before this has a material impact.

With a profusion of service providers, an effective means of catering for time-sensitive traffic like voice, enterprise customers have taken to iDirect-based services with gusto. This means more iDirect terminals on the ground but unlike in the consumer market, a greater range of service providers for the customer to churn to.

Don't get me wrong. Choice is a good thing. I am concerned however, that service providers are in for a world of pain. We are pushing providers to recognise the threat early and articulate their value proposition better, so that they don't have to resort to the lowest common denominator – namely price,

in order to win business. The last thing the industry needs is more customers buying on the basis of price and then having a bad experience because the service provider cannot afford to meet their bandwidth demand.

Blood Pressure Pills for the Bean Counters

Here is good example of the industry meeting the needs of the market. It is now possible for a container ship with a VSAT terminal and stabilised antenna to maintain connectivity as it transits from the US to Australia. The VSAT terminal is able to seamlessly “roam” from one Ku beam to another, in much the same way as your mobile phone changes base stations as you drive along the highway. This provides ship owners with a cheaper, more flexible option to not only meet operational requirements but address crew retention needs. But it doesn’t end there. Sea Tel and KVH are now producing smaller stabilised antennas that are opening up opportunities serving new class of vessels. At 24” (60cm), the antenna can comfortably be carried by vessels down to 60 feet (29m), which takes it into tourist vessels and the luxury yacht market. The only problem with these small dishes is that you tend to need more bandwidth to prevent interference. Answer: savvy operators are now using the tracking capability of the onboard antennas to access satellites in inclined orbit. Inclined orbit satellite bandwidth satellite is usually heavily discounted because you need a tracking antenna. Here the cheapness of the bandwidth is being used to compen-

sate the increased bandwidth usage. Impressive.


Have the Marketers Missed the Boat?

Yes and no. There’s plenty of excellent work being done. Unfortunately, the bulk of it centres on features not benefits. But even that’s not the real problem. The real problem is that not enough is being to ring in the changes – the equipment’s better, cheaper, with products that go well beyond simple data carriage.

We have allowed ourselves to be pigeon-holed as the service of last resort – the last chance saloon of connectivity. Although this sentiment is out of place with reality, it is widely held view by

customers and governments alike, including that PR guy.

The challenge for us is to capture the customer’s imagination. As Viasat’s Mark Dankberg recently remarked, we can do this by taking a page from mobile’s marketing handbook – e.g. 3G no good for your iPhone? Don’t worry, 4G will fix it. VSAT communications marketing needs a Version 2.0 – i.e. forget about what you thought about satellite, 2.0 is here.

Then we won’t be asking for problems, customers will be asking for our solutions. 



Chris Frith is the principal consultant and founder of **AUSPresence**, a professional services firm providing thought leadership and tactical support for customers in the satellite industry, looking to lift their performance. Chris held senior positions at Optus Satellite Services before establishing AUSPresence in 2005. At AUSPresence, Chris has been successful in assisting its customers analyse their past successes, pick winning markets for future growth and put systems in place to achieve their business objectives. Chris holds a Computer Engineering Degree and a Master of Business Administration from the Australian Graduate School of Management. He can be reached at chris.frith@auspresence.com.au or phone +61 413 596 325.

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Asia-Pacific to Drive Global Mobile TV Market

The experts are predicting a boom in the take-up and acceptance of mobile TV, and the Asia-Pacific region is going to lead the way. According to market research firm, RNCOS, the Asia-Pacific region is expected to account for around 67 percent of the global mobile TV subscribers by the end of 2013. That is a remarkable figure and evidence that, once again, the Asian market is driving and popularizing new innovation.

Mobile TV is television service delivered to subscribers via mobile telecommunications networks, such as the mobile phone carriers. It allows viewers to enjoy personalized, interactive TV with content specifically adapted to the mobile medium. The services and viewing experience of mobile TV differs in a number of ways from traditional TV viewing as it offers true mobility to cellular users. In addition to mobility, mobile TV delivers a variety of services, including video-on-demand, traditional/linear and live TV programs.



The RNCOS research report "Global Mobile TV Forecast to 2013" found that the number of mobile TV subscribers are projected to grow at a CAGR of over 45 percent between 2009 and 2013 to reach around 450 million by end-2013.

There are several factors that have helped to lay down the foundations for mobile TV, not just in Asia, but other regions of the world. The digital switchover provides one key reason as it allows TV stations to broadcast in real-time on portable devices. Another factor has been the massive increase in the ownership of portable devices and mobile phones. SingTel announced recently that they had seen their regional mobile customer base grow to 285 million as of December 2009 showing an impressive increase of 25 percent or 52 million compared to December 2008.

Demand for 3G mobile services has also remained very strong with an increased penetration of smartphones. In fact, SingTel's total 3G customer base grew steadily by 65,000 in the final quarter of 2009 to 1.41 million as of December 2009.

Gilat Satellite Networks

Boundless Experience in Satellite Communications



Gilat Satellite Networks is a leading provider of satellite communications products, services and solutions. For over 20 years, Gilat has been at the forefront of VSAT technology and continues to be an innovator and developer of new satellite technologies. Gilat's solutions serve the communications needs of carriers, enterprises, governments, service providers and consumers around the globe.

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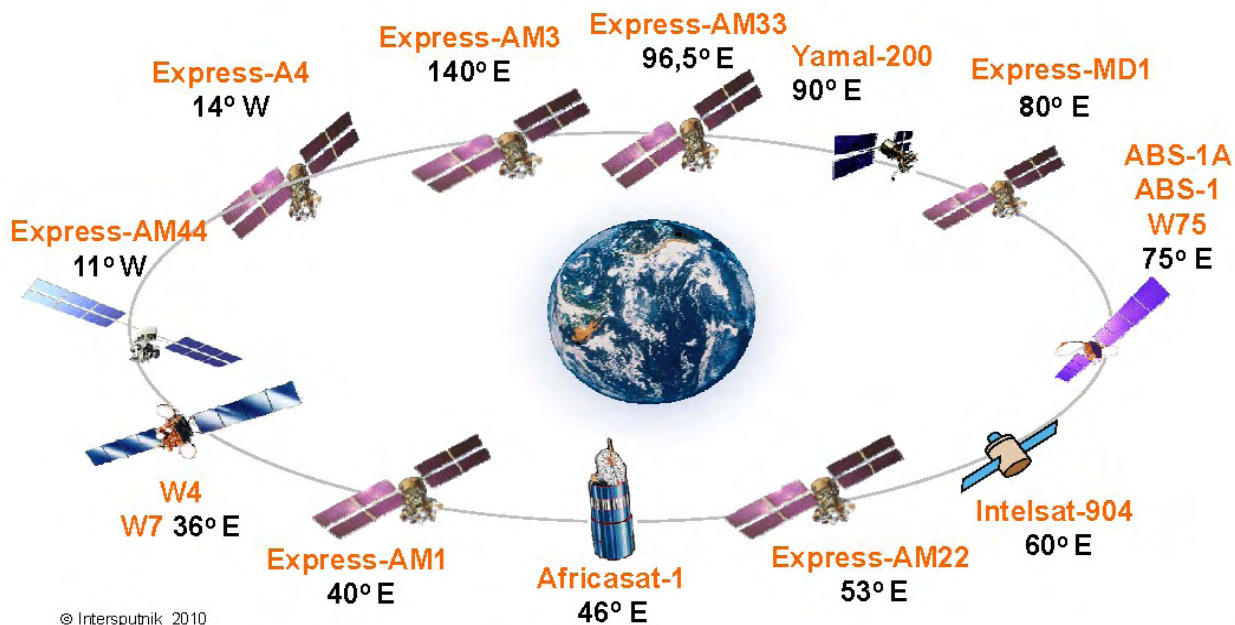
For more information, please visit www.gilat.com.



The **Intersputnik International Organization of Space Communications** was established on November 15, 1971. Today, **Intersputnik** has 25 member states in practically all parts of the world from Latin America to Southeast Asia and from Europe to the south of the Arabian peninsula.

Intersputnik's core business is to make satellite capacity available to telecommunications operators, broadcasters and corporate customers under agreements with partner operators and to offer full-scale services via its subsidiary **Intersputnik Holding, Ltd.** for the purpose of installing and operating satellite telecommunications networks. Such full-scale services include access to internet backbones, uplink services, switching and digital platform services as well as supply and integration of ground equipment. The Russian satellite telecommunications operator **Isatel LLC**, which is part of the Intersputnik Holding, Ltd.

Intersputnik Satellite Fleet Overview



group, offers Russian and international telecommunications operators and corporate customers the required technological platform for the establishment of satellite telecommunications networks and provision of telecommunications services based on this platform.

Today, Intersputnik provides to its customers the resource of telecommunications satellites located in the geostationary orbit from 14W to 140E. One of our key partners is the **Russian Satellite Communications Company**, which owns a fleet of advanced Express-series satellites. Also, Intersputnik enjoys the status of the official distributor of Eutelsat's satellite resource and Measat's resource on the AFRICASAT-1 satellite. It markets and sells Intelsat's satellite capacity and offers service on the ABS-1 (LMI-1) satellite.

Intersputnik distinctive feature and main advantage is that it is an all-purpose supplier of satellite capacity and technological solutions. This is why Intersputnik's government and private customers in over 40 countries have a very wide choice of satellite resources in various systems operating on the global market and can receive all kinds of information from a single source.

Intersputnik's principal asset is its long-standing experience while the availability of its own orbit and spectrum resource guarantees its successful development. Using this resource, Intersputnik is implementing projects aimed at procuring and deploying spacecraft in its own orbital positions to provide service in the most rapidly developing regions with growing demand for satellite telecommunications services. For more information go to:

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Photo: Telecoms Sans Frontières

Quick Response to Haiti Disaster Saves Lives

By Dan Freyer

Communications in the first 24 hours can mean the difference between life and death in a disaster as the Haiti earthquake sadly reminded us.

In emergencies and natural disasters wired communications systems are often lost, destroyed, or overwhelmed. Satellite communications can provide crucial communications infrastructure. It can be deployed rapidly, virtually anywhere within hours. For example, within a day of the earthquake in Haiti, humanitarian agency Telecoms Sans Frontières (TSF) deployed Inmarsat BGAN terminals for search and rescue teams. It also installed fixed VSAT services to provide lines of communications for the UN's operations center. Using Intelsat capacity, Haiti's leading broadband service provider reestablished its network in just days. This meant Haiti's general hospital had a communications link that became vital for the coordination of international supplies and teams with the doctors in Haiti. As a result, the Red Cross, Haiti Government/Police and Doctors Without

Industry Relief Help

Numerous satellite industry organizations and their employees responded quickly to support Haiti earthquake relief efforts (see "Satellite Industry Responds to Haiti Relief Efforts," *Satellite Executive Briefing*, Jan. 31, 2010.). Intelsat was on the ground in Haiti and four hours later began to distribute news feeds. SES World New Skies donated satellite capacity on five of its spacecraft and access to teleport facilities. Cobham Satcom Land Systems donated communication systems in support, and with partner IT Broadcasting, chartered flights to Haiti delivering scores of its TracStar auto deployable flyaway systems, Patriot manual point flyaways, fixed dishes as well as food, medical supplies, and satellite gear donated by Comtech Xicom, iDirect and Wavestream. The flyaways and gear supplied by this group helped local carrier, Haiti Satellite, provide critical links for the International Federation of



Tracstar auto flyaway system helping the Red Cross in Haiti. (Photo courtesy of Cobham Satcom Land Systems)

the Red Cross, Haiti Government/Police and Doctors Without Borders.

Preparedness Pays Off

We learn from failure – the Indian Ocean Tsunami of 2004 and Katrina Hurricane were brutal lessons in how critical it is to have contingency communications plans in place should disaster strike. A key reason for the effective satellite responses in Haiti was preparedness born from experiences like these.

Iridium, for example, had palettes of satellite products ready to be shipped for its response-agency customers such as the Federal Emergency Management Agency (FEMA), the Red Cross, the United Nations and food organizations. Company officials said Iridium saw an 18,000% increase in voice traffic in Haiti after the quake struck. For perspective, this is nine times the spike after Hurricane Katrina.


CapRock Government Solutions was also ready. The U.S. Navy has been using CapRock's new CommandAccess™ service to communicate on local logistics to bring food, medical supplies, fuel, and aid to Haiti. "After Hurricane Katrina, we had huge demand from government agencies for 'instant office' type solutions in disaster situations, so we provided packages of equipment and capacity, but they were ad-hoc at that time," says CapRock Government Solutions Systems, Executive Vice President and General Manager David Myers. "Today we have a pre-packaged solution that provides these mission-critical 'instant office' communications, connecting very small aperture terminals (VSATs) to the Internet and public switched telephone network (PSTN), and secure government networks," he says.

Being Prepared Means Having a Satellite Solution

An issue for satellite players is how to best prepare to deliver effective satellite solutions for emergencies. But a vastly more important message to convey beyond our industry is this: a satellite solution should be in your contingency plans wherever communication infrastructure is critical. One of Haiti's leading industrial corporations that was already using satellite technology prior to the earthquake said the only communication system that was operational in Haiti without interruptions was its Intelsat-based network. According to Intelsat, the network was back online within hours, as soon as electrical utility power returned.

One month after the disaster, nearly one million Haitians are homeless in refugee camps, and dependant on international aid. According to the Red Cross, thousands of Haitians still do not know if their relatives survived. "Hope can

replace despair" with just one phone call according to Telecoms Sans Frontieres officials. The humanitarian organization set up free satellite-phone calling stations around Haiti that connected over 8,000 families since the quake struck.

Once heavy users like the U.S. military reduce their presence, the surge in emergency mobile satellite communications should taper off, and mobile systems will be replaced by fixed communications links such as VSAT systems. However, given the damage to Haiti's infrastructure, satellite technology will continue to be crucial for connectivity to rural locations, wireless local services, and the rest of the world for quite some time to come – and quite literally to saving more lives. 

Dan Freyer is the principal of **Adwavez Marketing**, a full service marketing communications company based in Los Angeles. He has 20 years of experience in satellite communications. He wrote the chapter on "Satellite Services" in the industry reference book, *The Satellite Technology Guide for the 21st Century* (Synthesis Publications, 2008). He can be reached at: inquire@adwavez.com



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Navigating North to the Next Oil and Gas Communication Horizon

by **Martin Jarrold**
Director, International Programs, GVF

The 3rd Annual GVF Oil & Gas Communications Europe Conference (O&GCE3) on 12th & 13th May 2010 is also the 9th event in the global Oil & Gas Communications Series organized by GVF and UK-EMP. Continuing the Series into its fifth year, the 2010 conference takes the 'Digital Applications & Communications Dynamics' focus beyond the territory of the hydrocarbon-bearing sectors of the North Sea, continuing far to the north to the Arctic Ocean region.

Once again to be held in Aberdeen, Scotland, the program for this latest event for the European "oil & gas patch" – which will examine the role of satellite, and satellite-wireless, technologies and services in continuing to bring mission critical operational success to the maturing oil & gas fields of the North Sea – will additionally explore the communications imperatives and the delivery of networking solutions for the extreme northerly boundary of Europe's new hydrocarbon exploration & production opportunity. This program will thus lead us 'From the North Sea to the Arctic Ocean'.

The Arctic is, indeed, ocean surrounded by land, not the other way around, like Antarctica, and the floor to the Arctic Ocean comprises a series of basins some 3000-4000 meters deep separated by ridges. The continental shelves of the Eurasian land masses around the edge of these basins are not at great depth – rarely exceeding 100 meters – but are of great width – the widest being up to 900 kilometers. Studies indicate that the Arctic basin as a whole is a very likely source of oil. Discoveries of fossil fern species in drilling sites on opposite sides of the basin indicates that the basin was once a landlocked sea in which organic sediments accumulated.

Dealing with both the latest updates to the themes that are still current from earlier programs in the conference series, and also with the most up-to-date developments in the communications solution and digital application requirements of offshore exploration and production, the 2010 program will turn to look at the future of those themes and requirements as will in the future be dictated by the geographical and climate

conditions of the Arctic's sub-sea fossil fuel reserves.

As the North Sea continues to realize reducing yields, the Arctic Nations of Europe – Denmark, Norway and Russia – as well as Canada and the United States, have already begun to indicate their claims to the continental shelf hydrocarbon resource potential of the Arctic Basin rock strata.

In May 2008, representatives from these five nations met in Greenland to decide on the Arctic Basin ownership split. All five reaffirmed the view that existing international treaties – for example, UNCLOS, the United Nations Convention on the Law of the Sea – were the correct basis for negotiation. However, whilst the price of a barrel of crude is at a relatively low level it is possible to see how such friendly agreement might prevail, but, post-financial crisis, when the price of oil rises strongly again, covetous eyes, and the competi-

tive urge for a major hydrocarbon-fueled economic recovery, will point to the far north.

For other parts of the globe with only recently discovered offshore reserves of oil & gas, or with offshore reserves at the very earliest stages of full commercial exploitation, many of the lessons learned from, and communications solutions developed during, the evolution of North Sea offshore E&P have become applicable, albeit using more

modern and sophisticated technology platforms, sometimes within the context of even more geographically challenging physical environments.

But, the continuing growth in the long-term global thirst for supplies of hydrocarbon-based energy, even despite climate change-related pressures to increase the use of "renewable" energy sources, means that the most profound exploration and production challenges of the Arctic must also be faced and tackled.

Thus, two very important, and closely related, questions arise. Firstly, how is the latest generation of cutting-edge communications solutions and digital oilfield/gasfield applications – with their genesis in the hostile offshore environment of the North Sea, and now with their current and continuing development taking place in the context of offshore exploration and production in South East Asia, West Africa, etc – now being re-applied to the context of the depleting



reserves of the North Sea? And secondly, how might the ICT-related lessons of this North Sea-to-currently-emergent energy regions history be applied to the totally new prospects offered by an increasingly ice-free Arctic Ocean?

No one would deny that mission critical operational success in the oil & gas exploration and production environment has been dependent on access to the most efficient ICTs, and to the wealth of sophisticated applications these technologies bring to the disposal of the teams of geologists, geophysicists, drilling engineers, seismic data analysts, etc., who not only locate new oil & gas reserves but assist in developing more effective and efficient techniques for yielding them from beneath the ocean floor. Equally, no one would deny that satellite, satellite-wireless hybrid, and wireless platforms, have made, and continue to make, a vital contribution to this ICT access, providing essential connectivity to vital applications in a range of challenging geographic environments.

However, this is a role which, though well developed, still has potential to evolve and expand. Therefore, O&GCE3 will explore this future evolution and expansion, not only with reference to the later stages of North Sea E&P, but with reference to the emergence of the fresh energy-yielding potential of the high northern latitudes.

To this end, the Conference will bring together key leaders

and experts from the oil & gas sector as well as the communications *and* commercial applications sectors, creating a high-level discussion forum, and providing extended networking opportunities for demand (end-user) and supply (vendor) expert practitioners. This networking dialogue will be set against the backdrop of a conference program in which the nature of the applications and communications imperatives of the dynamic 21st Century energy market vertical will be fully addressed through a series of themed Interactive Sessions, Case Studies and Technology Showcase Presentations.

More information may be obtained from martin.jarrold@gvf.org or from paul.stahl@uk-emp.co.uk. The Conference website may be accessed by following the banner link in the GVF homepage Calendar of Events at www.gvf.org.



Martin Jarrold is the Chief of International Program Development of the GVF. He can be reached at: martin.jarrold@gvf.org



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Spacecom is the operator of the **AMOS** satellites, which provide high-quality broadcast and communication services to Europe, the Middle East, and the Atlantic bridge to the United States. The AMOS satellite constellation, consisting of AMOS-2 and AMOS-3, co-located at the prime orbital position of 4°W, serves Direct-To-Home and other

Television platforms in Europe and the Middle East, as well as provides a secure and stable transmission to government agencies. The extensive signal strength and prime location makes the AMOS platform particularly suitable for DBS and DTH operators, as well as a wide range of broadcasters, ISPs, telecommunications operators, and network integrators with Internet, voice, data and digital TV services.

The AMOS-5i satellite, is the latest addition to the AMOS fleet. With a position at 17°E, a new orbital position, Spacecom's coverage is expanding to Africa. AMOS-5i provides powerful C-band and Ku-band coverage over Africa and is serving as an interim satellite until the AMOS-5 satellite's scheduled launch in mid-2011. Once operational, the AMOS-5 satellite will replace the AMOS-5i in its orbital position, expanding both coverage areas and capacity, to deliver high-power C-band and Ku-band capacity to the entire African continent. AMOS-5 and AMOS-5i complement Spacecom's existing satellite fleet consisting of AMOS-2 and AMOS-3, and together with AMOS-4, slated for launch in 2012 to serve Asia, will establish Spacecom as a true global satellite operator.

For more information go to www.amos-spacecom.com

at Satellite 2010
Visit Amos Spacecom at Booth # 1241



AVCOM of Virginia is a vertically integrated company with over 20 years of experience in designing and manufacturing high quality, low cost spectrum analyzers. AVCOM's ability to generate unusual design solutions repeated itself many times over the history of AVCOM and lead to several patents. It's this resourcefulness that has allowed AVCOM to remain a market leader in providing affordable spectrum analyzer solutions to customers and markets worldwide.

The new **Avcom High Performance Portable Spectrum Analyzer** is finally available. A full VGA color display with availability of two frequency ranges 950-2150MHz or 5-2500MHz, giving the Satellite Technician an easy to use tool for finding, peaking and even remote monitoring satellite carriers.

For more information go to www.avcomofva.com

at Satellite 2010
Visit Avcom at Booth # 643

NetEdge™ Dedicated solution for multi-star networks

Star network efficiency combined with network-wide connectivity

Gilat Satellite Networks' NetEdge™ is a high-performance satellite communications platform, specifically designed to meet the requirements of multi-star private networks for corporations and for cellular backhaul applications.

NetEdge brings a true technological advance into the world of private networking over satellite. As a dedicated solution for multi-star networks, NetEdge addresses two common challenges; the lack of a terrestrial connection between the corporate headquarters and the satellite hub and the need for single-hop connectivity between offices as well as single hop connectivity to the Internet. NetEdge builds on Gilat's industry-leading SkyEdge II high-performance platform and can easily be added to existing SkyEdge II networks.



The NetEdge solution is composed of remote sites using SkyEdge II Access or SkyEdge II Pro VSATs, NetEdge Gateways, and a SkyEdge II hub. Single-hop connectivity is provided network wide between the NetEdge components. This enhances the user experience and application performance for all inter-corporation, cellular backhaul and Internet traffic.

The NetEdge Gateways support a forward channel of up to 10Mbps with up to eight return channels providing a total of up to 8Mbps and serving up to 100 remote sites. With NetEdge, bandwidth savings of 30% - 50% can be achieved when compared to SCPC solutions, depending on the network topology.

For more information go to www.gilatnetworks.com

at Satellite 2010
Visit Gilat at Booth # 1343



Globecomm Systems Inc. provides end-to-end value-added satellite-based communication products, services and solutions by leveraging its core satellite ground segment systems and network capabilities, with its satellite communication services capabilities. The products and services Globecomm offers include pre-engineered systems, systems design and integration services, managed network services and life cycle support services. Globecomm's customers include communications service providers, commercial enterprises, broadcast and other media and content providers and government and government-related entities.

Based in Hauppauge, New York, Globecomm Systems also maintains offices in Washington, DC, Maryland, New Jersey, the Netherlands, Hong Kong, Germany, Singapore, the United Arab Emirates and Afghanistan.

For more information go to www.globecommsystems.com

at Satellite 2010
Visit Globecomm at Booth # 1143



Rockwell Collins is a global leader in communication and aviation electronic solutions. Our satellite-based communication solutions enable highly complex networks that are critical to military, civilian government and commercial organizations.

The newly-developed miSAT-X is a SATCOM terminal in a briefcase, that can be stowed in the overhead compartment of an airplane and deployed by one person in 5 minutes.

The SWE-DISH CommuniCase® technology is an innovative, modular architecture that allows maximum flexibility since components including modems, transceivers and antennas can be swapped between fly-away and drive-away units.

From man-portable terminals to communications on-the-move systems, to large fixed-site SATCOM installations, we develop and deploy networks anywhere, with software to manage and control them.

Rockwell Collins also offers comprehensive life cycle service solutions with world class support through our Field Services Engineers, training, logistics programs and a Customer Response Center that operates globally 24 hours a day, seven days a week.

Backed by this global network of service and support, we stand committed to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

For more information go to: www.rockwellcollins.com/milsatcom

at Satellite 2010
Visit Rockwell Collins at Booth # 829



SES WORLD SKIES is the newly combined SES division that brings together SES AMERICOM, the leading supplier of satellite services in the U.S., with the global satellite services of SES NEW SKIES. SES WORLD SKIES serves broadcasters, cable programmers, telecommunications companies and networks, governments, aeronautical and maritime communications integrators, Internet service providers, and educational institutions with efficient communications and content distribution solutions. An extensive range of broadcasters, Internet Service Providers, network integrators, telecommunications carriers, corporations and governments rely on our satellite fleet to provide high quality video, Internet, data and voice communications services.

Recognized as a major innovator of advanced satellite communications services, the SES division operates a fleet of 25 satellites in key orbital positions capable of providing coverage and service throughout the world. SES WORLD SKIES also has six spacecraft under construction and access to global ground facilities. SES WORLD SKIES has offices in Princeton, The Hague, Washington, D.C., Mexico City, Sao Paulo, London, Accra, Johannesburg, Beijing, Singapore, and Sydney.

Altogether, SES WORLD SKIES fulfills the diverse communications needs of around 500 customers located in over 100 countries. We offer the reliability and adaptability you need to perform in today's demanding and fast-changing business environment. We grow for and with our customers.

SES WORLD SKIES is part of the SES satellite operator group. SES also owns market-leading satellite operator SES ASTRA in Europe; 90% of SES SIRIUS in Europe, and has strategic participations in Ciel in Canada and Quetzsat in Mexico. SES provides outstanding satellite communications via a global fleet of 40 satellites in 26 orbital locations.

For more information go to: www.ses-worldskies.com/

at Satellite 2010
Visit SES World Skies at Booth # 1511

The *sat-nms* LFRXTX Fiber Optic Interfacility Link

SatService The *sat-nms* LFRXTX fiber optic interfacility link is one of **SatService GmbH**'s most exciting product. Launched in 2007, this product has been widely distributed to numerous broadcasters and SATCOM service providers.

These interfacility links transmit and receive an entire L-band analog multi-carrier frequency band from 950 to 2150MHz over single mode fibers from a satellite antenna to reception equipment over a long distance while preserving signal quality. But also broadband modules from 50MHz to 2150MHz are available.

They are developed to cover all applications in the field of satellite communication, satellite ground stations, VSAT and cable networks.

One novelty is, that the commonly used 10MHz reference frequency, which is multiplexed on the L-band signal for a block up-converter by a satellite modem, can be transferred via the same fiber optical link. Another feature is the capability to switch complete optical links and restore operation within a second if one of the optical links gets defective

which effectively increases the availability of optical transmission systems with N:1 redundancy.

Key Features

- 10MHz reference over the same fibre
- Ethernet (TCP/IP, HTTP and SNMP)
- RS232-Interface
- Integrated Web Server
- local operator interfaces via LCD and keypad
- Reliable and stable design
- Quality Made in Germany



As all *sat-nms* products the optical link equipment includes an elegant and useful combination of RF and microwave hardware along with user-friendly application software. All products benefit from the experience of our engineers in efficient system integration. *sat-nms* products are developed from hands-on experience in practical applications.

For more information go to:

www.satnms.com/en/products/lf.html

or call: +49 7738 97003



W.B. Walton Enterprises (Also known as Walton De-ice) designs and manufactures the broadest line of equipment available for preventing the accumulation of snow and/or ice on satellite earth station antennas. The original Walton De-ice product includes a behind the antenna main reflector plenum (enclosure) which is heated with hot air. These systems are for antennas ranging in size from 5-meters to 32-meters in diameter. Walton De-ice offers several options for heating including, gas heaters with their economical operation advantages or the low maintenance

Stainless Steel Electric Heaters.

Early de-icing products designed by W.B. Walton Enterprises include a behind the antenna heated system for antennas ranging from 2.8 to 32 meters in size that are still sold today. More recently, a line of de-icing products called the Snow Shield and IceQuake was designed and manufactured for antennas ranging from 0.6 to 5 meters in size using a PTFE Coated GORE-TEX® Fabric stretched over the satellite antenna. This system can include automatic heating and remote activation & monitoring.

With its vast experience and customer-service orientation, W.B. Walton Enterprises is committed to providing products of the best quality backed by superior customer service and support.

For more information go to www.de-ice.com

**At Satellite 2010
Visit W.B. Walton at Booth # 1217**

SSPI to Honor Recipients of the 2010 Industry Innovation Awards at Satellite 2010

The Society of Satellite Professionals International (SSPI) announced the recipients of its 2010 Industry Innovators Awards. The Industry Innovators Awards, introduced in 1993, identifies and recognizes outstanding new contributions to the field of satellite communications by both private-sector and public-sector organizations. Honorees are chosen by a committee of industry experts for accomplishments ranging across a broad spectrum of advanced satellite technology and business applications.

The 2010 Industry Innovators Awards will be presented at a ceremony, sponsored by Booz & Co., on March 16, immediately prior to SSPI's annual Gala. Held on the opening day of the annual SATELLITE conference, the Industry Innovators Awards and Gala will take place at the Gaylord Hotel & Convention Center, National Harbor, Maryland.

The recipients of the 2010 Industry Innovation Awards include the following:

SERVICE DEVELOPMENT & APPLICATIONS

The US Broadcast Networks: In the for-profit sector, SSPI honors the four US terrestrial broadcast networks – ABC, CBS, NBC, and FOX – for successful completion of a nationwide conversion from analog to digital over-the-air broadcasting. In addition to meeting a Federal Communications

Commission mandate, the US broadcast networks also took the digital conversion as an opportunity to re-invent their satellite-based program distribution networks. While all four networks completed their conversion by the deadline, CBS also cut over nearly 200 affiliate stations to an all HD distribution platform using 8PSK and DVB-S2 modulation that provided more efficient use of satellite bandwidth to accommodate the more demanding HD program format. ABC migrated to a completely new compression, multiplexing, modulation and satellite delivery system in the same month.

Télécom sans Frontières: In the non-profit sector, SSPI

honors Télécom sans Frontières, or Telecommunications Without Borders, a relief organization in southern France founded by Monique Lanne-Petit and Jean-Francois Caizenave. Funded by the UN Foundation and Vodafone Foundation as well as corporate partners including AT&T and Inmarsat, the group provides satellite phone service and Internet connections to relief workers and governments in the heart of any disaster within 24 hours. Through satellite uplinks, they provide free three-minute calls for people desperate to reach family to let them know they have survived. TSF also advises governments on the role of communications in disaster preparedness, and establishes satellite-based telecom centers in developing nations to improve people's lives.



Télécom sans Frontières (TSF) nerve center during the Haiti disaster. TSF is one of the recipients of the 2010 Industry Innovation Awards. (photo : TSF)

SYSTEMS DEVELOPMENT & APPLICATIONS

Inmarsat-4 Spacecraft: In the for-profit sector, SSPI honors Inmarsat as the creative innovator and EADS Astrium as systems engineer and project manager for the complex, multi-year effort to develop and launch the Inmarsat-4 system of spacecraft. Serving about 98% of the global population, the I-4 satellites use onboard processors to adapt to changes in traffic across the globe, and can generate nearly 256 spot beams for users on earth while dynamically allocating bandwidth based on demand. A unique feature of the I

-4s is the ability to generate beams of variable size to adjust the performance of the link with user terminals of different size and capability. The main technical challenges faced in developing the six-ton I-4s were design and manufacture of the digital processor, plasma propulsion system, payload engineering and system engineering by EADS Astrium in the UK and France; the L-band reflector by Astro Space (Northrup Grumman, USA); and the L-band feed by EMS (now MDA, Canada).


Satellite Users Interference Reduction Group and WBU-ISOG: In the non-profit sector, SSPI honors the Satellite

Users Interference Reduction Group (SUIRG) and the World Broadcasting Union – International Satellite Operations Group (WBU-ISOG) for leadership over many years in the effort to reduce the impact of satellite radio frequency interference (RFI). Interference in the satellite network disrupts transmission, reduces quality of service and threatens the economic fundamentals of the world's most successful space business. SUIRG has surveyed the industry in order to establish a baseline for interference measurement, tested interference from WiMax devices, and developed recommendations for access and uplink procedures and a universal carrier ID system for faster identification of interference sources. This work has dovetailed with that of WBU-ISOG, whose Rogue Carriers Working Group has won the support of equipment manufacturers, satellite operators and end-users to include a WBU-ISOG Carrier ID standard in all new models and, where possible, in software upgrades for older models. The award also honors other organizations for their contributions, including the Global VSAT Forum, CASBAA, SIA and WTA, and major global and regional satellite operators led by Intelsat and SES.

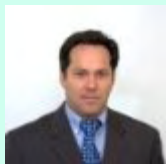
TECHNOLOGY DEVELOPMENT & APPLICATIONS

Cisco Systems Internet Router in Space: In the for-profit sector, SSPI honors Cisco Systems for developing and placing into operation a hosted satellite payload offering the ability to route IP traffic on the satellite, which eliminates the need to send the data to and from an extra ground station to implement the circuit-switched function. Routing IP traffic on the satellite with the router's built-in software can increase throughput, reduce latency and enable flexible bandwidth-on-demand applications between users in different geographic regions without static configuration. IRIS pro-

vides an end-to-end IP service leveraging open standards that allows faster integration and converges with the US government's service-oriented-architecture approach. SSPI also acknowledges that the IRIS payload offers proof-of-concept for the hosted payload approach to deploying government communications capability aboard commercial satellites, and as such, establishes a new model of collaboration between government customers and commercial operators of satellite fleets.

NASA Innovations in Space Communications and Robotic Operations Related to the Deep Space Network, Mars Exploration and the Hubble Space Telescope: In the non-profit sector, SSPI honors the National Aeronautics and Space Administration (NASA) for innovations in deep space communications and robotics in support of Mars exploration programs and the reconditioned Hubble Space Telescope. Through improved cryogenic amplifiers and advanced electronics, the Deep Space Network now allows NASA to relay many gigabytes of video imaging and scientific data from the Mars rovers across two hundred million kilometers of space. These state of the art communications systems – both on Earth and in space – have contributed to a new level of understanding of Earth's sister planet and its surface makeup, its atmosphere and its potential for sustaining life. SSPI also recognizes the spectacular improvement in performance of the reconditioned Hubble Space Telescope through an augmented gyro, remote positioning system, robotics control system and communications system. SSPI believes that the latest control, positioning, robotic and telecommunications technologies introduced by NASA are likely to benefit the development of the commercial satellite industry for decades to come. 

WTA Names Jaime Dickinson Teleport Executive of the Year



The World Teleport Association named Jaime Dickinson, President of NewCom International, its 2010 Teleport Executive of the Year. Mr. Dickinson will be honored during WTA's Teleport Awards for Excellence luncheon on March 16 during SATELLITE 2010.

The Teleport Executive of the Year award is presented to an individual for demonstrated entrepreneurship, leadership and innovation in the development or operation of a teleport-based busi-

ness. In honoring Mr. Dickinson, WTA noted NewCom's recent contract to provide satellite transport services to 600 remote locations throughout Colombia. The initiative was signed in the spring of 2009 and funded through Colombia's Ministry of Communications. Launched in partnership with Colombia-based telecom provider Con-tecol, the initiative provides high-speed Internet access to hospitals, schools, police and fire departments, city government offices, and cyber cafes. Thanks to the speed, efficiency and quality of NewCom's work, the company was awarded an additional

350 sites in 2009 and another 1,000 sites in the first quarter of 2010.

On March 16, during a luncheon ceremony sponsored by SES, WTA will honor the winners of the 2010 Teleport Awards for Excellence, including Teleport Executive of the Year, Independent Teleport of the Year, Teleport Technology of the Year, and the newly created Green Teleport of the Year. Additional luncheon sponsors include Crystal Computer, JSAT International and Newtec. 

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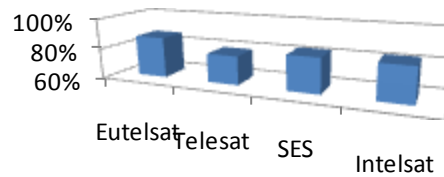
Bringing High Technology Down to Earth



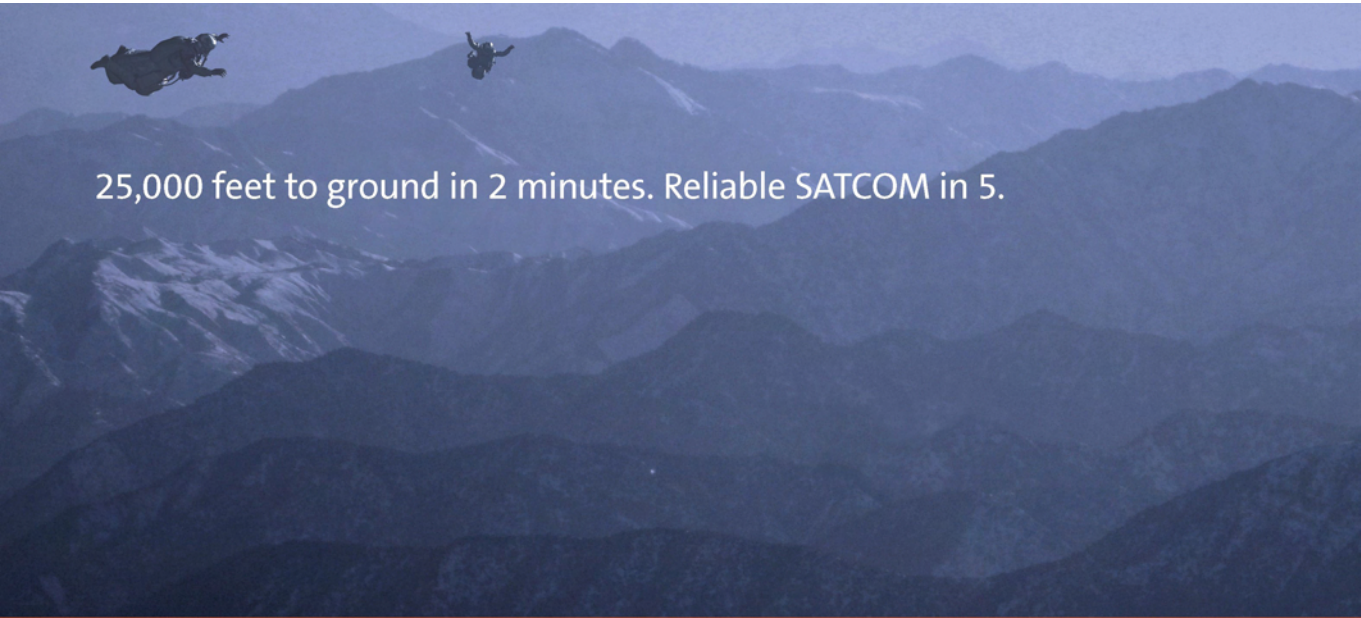
Vital Statistics

A key performance indicator among fixed satellite operators is the “Transponder Fill Rate” or the percentage of utilization of its available transponders. Among the so-called “Big 4” operators (the ones with global coverage) Eutelsat continues to lead with 87.4% fill rate of its transponders as of the end of 2009.

Transponder Fill Rates of the Major Satellite Operators (end-2009)



Source: Company financial reports.



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The Satellite Markets 25 Index™

Company Name	Symbol	Price (Mar 15)	% Change from 2-Weeks Ago	52-wk Range	% change from 52-wk High	
Satellite Operators						
Asia Satellite	1135.HK	11.30	3.67%	7.60 - 12.80	↓	11.72%
Eutelsat Communications	ETL.PA	24.93	2.21%	14.90 - 25.85	↓	3.54%
Hughes Communications Inc.	HUGH	26.76	-5.01%	10.60 - 31.52	↓	14.78%
Inmarsat	ISAT.L	779.50	6.34%	450.00 - 793.00	↓	1.70%
SES Global FDR	SES.F	18.14	2.02%	12.76 - 18.38	↓	1.31%
Satellite and Component Manufacturers						
Boeing Company (The)	BA	69.17	9.52%	32.50 - 70.49	↓	1.96%
COM DEV International COM NPV	CDV.TO	3.20	-2.14%	2.52 - 4.15	↓	6.99%
Lockheed Martin Corporation Com	LMT	83.94	7.95%	60.46 - 87.06	↓	3.68%
Loral Space and Communications	LORL	36.04	10.79%	13.72 - 35.98	↑	0.33%
Orbital Sciences Corporation Co	ORB	18.73	1.52%	11.60 - 19.13	↓	2.14%
Ground Equipment Manufacturers						
C-COM Satellite Systems Inc.	CMLV	0.28	-6.67%	0.22 - 0.39	↓	17.95%
Comtech Telecommunications Corp.	CMTL	31.22	-1.27%	20.08 - 38.39	↓	18.69%
CPI International, Inc.	CPII	12.66	2.68%	5.67 - 14.48	↓	12.71%
EMS Technologies, Inc.	ELMG	15.96	16.33%	12.00 - 23.17	↓	31.12%
Viasat, Inc.	VSAT	32.98	8.56%	17.80 - 33.90	↓	2.74%
Satellite Service Providers						
Gilat Satellite Networks Ltd.	GILT	5.80	10.69%	2.90 - 5.98	↓	3.01%
Globecom Systems Inc.	GCOM	7.71	1.05%	4.40 - 8.57	↓	10.04%
International Datacasting Corp.	IDC.TO	0.2950	5.36%	0.22 - 0.43	↓	23.26%
ORBCOMM Inc.	ORBC	2.42	0.00%	1.16 - 3.23	↓	25.08%
Skyterra Communications	SKYT.OB	4.85	-0.41%	2.00 - 4.95	↓	45.20%
Consumer Satellite Services						
British Sky Broadcasting Group	BSY	35.09	5.34%	23.58 - 38.54	↓	8.79%
DIRECTV	DTV	34.55	2.07%	20.75 - 35.18	↓	1.85%
DISH Network Corporation	DISH	21.53	7.81%	10.25 - 22.18	↓	3.07%
Globalstar, Inc.	GSAT	1.29	30.30%	0.27 - 2.00	↓	35.50%
Sirius XM Radio Inc.	SIRI	0.92	-9.80%	0.19 - 1.18	↓	22.27%

The Satellite Markets 25 Index™ is a composite of 25 publicly-traded satellite companies worldwide with five companies representing each major market segment of the industry: satellite operators; satellite and component manufacturers; ground equipment manufacturers; satellite service providers and consumer satellite services. The base data for the Satellite Market Index is January 2, 2008--the first day of operation for Satellite Market and Research. The Index equals 1,000. The Satellite Market Index™ provides an investment benchmark to gauge the overall health of the satellite industry.

	Index Value (March 15)	Percentage Change 2 Weeks Ago
Satellite Markets 25 Index™	1117.65	↑ 5.07
S & P 500	1148.72	↑ 3.85

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