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DTH, HD and 3D Driving Growth in the Asia-Pacific Satellite Market

by Virgil Labrador
Editor-in-Chief

This year's CommunicAsia trade show in Singapore has a very different feel to it. I worked in Singapore in the teleport business in the late 90s and have attended most of the CommunicAsias in the last 10 years and this particular one had a quiet confidence about it that was lacking in some of the more recent shows in the West. It wasn't a "rah rah" type of confidence, but one borne out of a studied optimism and a sense that things are going in the right direction. After all, the Asia-Pacific region is booming, largely unaffected by the worldwide economic downturn.

This was evident in the increased attendance at CommunicAsia, mainly from foreign delegates, which saw a 15% percent rise from the previous year. Satellite companies filled Hall 6 of the sprawling Singapore Expo Center which attracted some 55,000 attendees who flocked to Singapore for the annual event which held contemporaneously the Broadcast Asia and several other IT and Telco events in one venue.

In his opening address at the CASBAA Satellite Forum held a day before CommunicAsia, Osamu Inoue, Senior EVP, Group President, Satellite Business Group of SKY Perfect JSAT Corporation stressed the importance of flexibility within the satellite communications industry: "The key to our success in the long run will rely on the ability to constantly monitor and adapt to changing market dynamics." He highlighted that the industry must move forward to develop new market segments in order to continue its success.

The major demand drivers in the Asia-Pacific region were identified during the panel sessions at the Forum as well as the Satellite Summit held during CommunicAsia. HDTV was earmarked as the key driver to push the satellite communications business forward, especially the sports content in HD. However, some broadcasters remained uncertain about the immediate returns that can be made from major investments in HD channels.

Jonathan Spink, CEO of HBO Asia said: "A lot of people built capacity on the theory that we will build HD content up…. While there has not been a huge clamour for HD, we expect it will increase year by year. We will be looking to do more. It is a chicken-and-egg situation."

Referring to news channels, Ian Carroll, EVP & GM of Turner Broadcasting System pointed out that the business case for HD news channels is still difficult for some broadcasters to justify: "As soon as a news story breaks, you have a trade-off between

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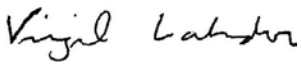
The New U.S. Space Policy

The Obama administration released on June 28 a 14-page document outlining a broad new national space policy which calls for more international cooperation in space in areas such as space science, human spaceflight, space surveillance, earth observation and disaster relief, among others.

The document could open the door for greater cooperation between military and civil satellite assets including the Global Positioning System internationally. Europe is currently building its Galileo GPS system while the aging Glonast system operated by Russia is due for an upgrade. The US GPS system, which is operated by the military and provided for free to the industry, may benefit from coordinating with the other GPS systems in terms of savings in future upgrades.

The document also touches on a new export control policy that will balance national security and economic interests. The issue of export control is one that has been nagging the US satellite industry for some time. US satellite companies are losing business to European and other entities due to stringent export control requirements. Hopefully the new policies, which was not detailed in this document but will be expounded shortly, will balance the commercial and security interest.

We are already familiar with the Obama administration's policy of encouraging private enterprise in the space program. That just made a giant leap this month with the successful debut of SpaceX' Falcon 9 rocket earlier this month. Start-up SpaceX has receive lucrative contracts from NASA under the Commercial Orbital Transport Services (COTS) program to supply the International Space Station. Our contributing editor, Elisabeth Tweedie, was present at the Falcon 9 launch which she write about in this issue. Read her article on page 7 for more details of her experience and her analysis of the impact on the industry of this milestone.



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...The Asia –Pacific Satellite Market,... from page 1

speed and quality. Speed is still the most important thing. It is a big technical challenge to get expensive equipment operational fast in places with bad power and infrastructure."

Terry Bleakley, VP Commercial Operations of Measat cites Direct-to-Home (DTH) as a key driver, especially in India where there are new licenses being issued. Indonesia will also be an interesting market in the region for DTH and new channels are coming to market there.

With relatively low penetration rates of Pay TV services in the developing countries of Asia, there is a huge market waiting to be tapped in in the provision of DTH services. In Indonesia, for example, of over 35 million TV households, only about two million are Pay TV households (about 5 percent). However, low Average Revenue per Unit (ARPU) plagued the DTH market in India and other developing countries in Asia. ARPUs range from US $3-6 dollars in markets such as Vietnam and the Philippines and in most countries there are a number of competing service providers that undercut each other's price. Measat's Bleakley acknowledges the problem of low ARPUs, but he cites the sheer size of the markets in Asia with over 3.5 Billion people might mitigate this.

Measat provided demos of HD and 3D technology at their booth which drew crowds. CommunicAsia coincides with the FIFA World Cup in South Africa and satellite companies like Intelsat and Measat were eager to show what they were doing to deliver the games in various platforms in Asia.

Most broadcasters agreed that satellite remains their dominant long-haul delivery platform in the region, even though fiber alternatives may increase. During a panel discussion, Matteo Altobelli, Marketing Director of Eutelsat identified satellite technology as the best form of delivery: "Satellite has a very big advantage over wireless and wire line. It is the means to distribute your signal to millions of customers at a reasonable price."

There were close to 2,000 exhibiting companies from 57 countries and regions at CommunicAsia2010 and BroadcastAsia2010. (photo: Singapore Exhibition Services)

The Singapore government announced during CommunicAsia the launch of a year-long 3D TV trials in Singapore with the aim of making Singapore a leader in 3D production and distribution. Coincidentally, Singapore-based satellite service provider, Singapore Telecommunications (SingTel) launched their new integrated 3D production and playout facility, the first of its kind in Asia, during the show.

A sure sign that the Asian market has come on its own is the fact that major companies have chosen to launch or introduce their products at CommunicAsia.

One company that generated quite a buzz at the show was Inmarsat, which launched its new IsatPhone, its first hand-held satellite phone. The IsatPhone promises to provide low cost satellite calls from anywhere in the world for less than US$ 1 a minute.

Sunnyvale, Calif.-based AAE Systems introduced their new Emergency Communications Trailer (ECT). The ECT is designed for rapid deployment, and provides communications to disaster stricken areas anywhere in the world in a matter of minutes.

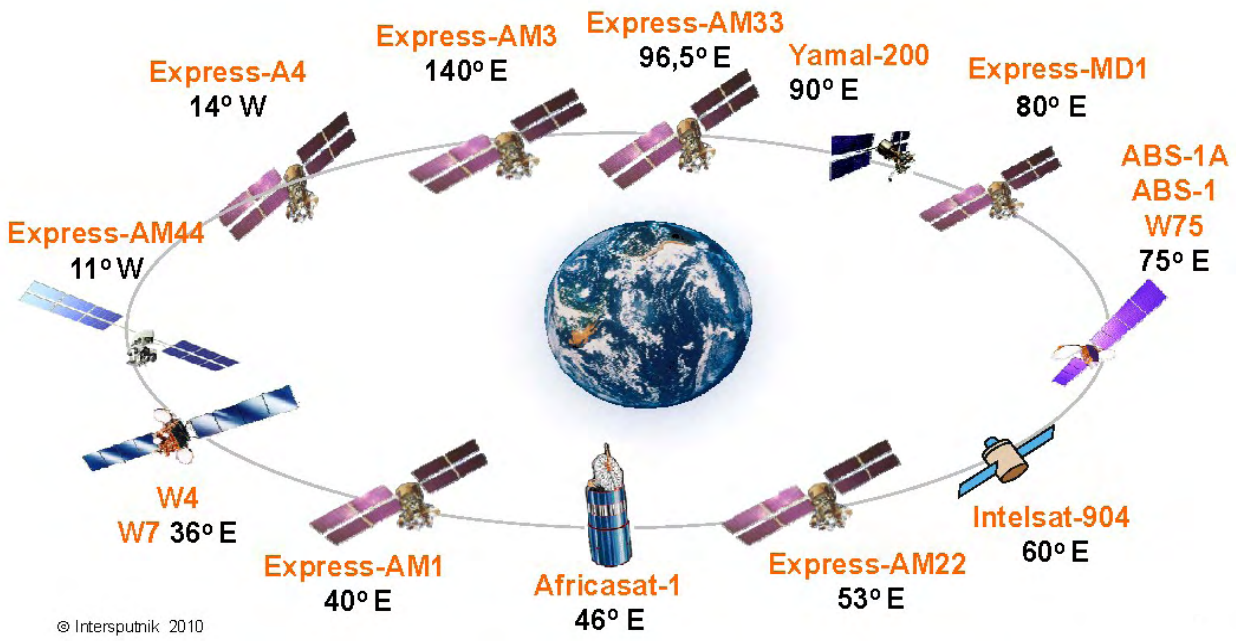
Israel-based Starling Advanced Communications sees the potential for Satcom on-the-move applications in Asia with its launch of its StarCar 3000 self-contained vehicular antenna system and its StarPack all-in-one flyaway system. Jacob Keret, Starling's VP for Sales, anticipates that most of their revenues will come from the Asian market. "There are large areas of Asia that is not and will never be covered by terrestrial services, so the opportunities are here," said Keret. (See Products and Services **Market*Place*** on pages 12-14 for more details on products showcased in CommunicAsia).

Another key driver in the Asia-Pacific region is mobile telephony. With over 2 Billion cellular phones in Asia, ther is huge potential in the provision of cellular backhaul services for satellite companies. This was highlighted in a panel discussion on the subject at the CommunicAsia Satellite Summit. "The demand for Satellite-based cellular backhaul services will grow exponentially in

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: **www.intersputnik.com**

(Advertisement)

the region as prices of satellite services go down and be competitive with terrestrial solutions," said Tom van der Heyden, President of Sky Fiber Asia.

The challenges for the coming year rounded off the CASBAA Forum with the regional industry leaders providing predictions for the next 12 months. Even after going though a process of consolidation in the last year, t he potential for further consolidation in among the satellite operators in Asia was highlighted by Tom Choi, CEO and Co-Founder of Asia Broadcast Satellite, who confirmed that his company has been exploring potential opportunities. "There is room for consolidation. All smaller satellite operators are in a situation where they are constantly competing with the larger operators. I believe there needs to be a second round of consolidation," said Choi.

Asian satellite operator such as ABS and Measat have not been content in just the Asian market but have expanded into other markets such as the Africa as well. Measat has two satellites serving the African market while ABS derives a good deal of its revenues from the Eurasian and Middle East markets.

Of course, there are many challenges in the Asian market. Piracy remains a major concern. Regulatory regimes also need to be updated and markets such as India and China are still pretty much closed to foreign entities. But there is a growing sense of optimism that progress is being made and that things are headed in the right direction.

Watch MarketCast videos with key industry executives at CommunicAsia 2010
~~www.satellitemarkets.com/current~~

Virgil Labrador is the Editor-in-Chief of ***Satellite Markets and Research*** based in Los Angeles, California. He is the author of two books on the satellite industry and has been covering the industry for various publications since 1998. Before that he worked in various capacities in the industry, including a stint as marketing director for the Asia Broadcast Center, a full-service teleport based in Singapore. He can be reached at *virgil@satellitemarkets.com*

Feature

SpaceX: The New Kid on the Block is Up and Flying

By Elisabeth Tweedie

Photo courtesy of Tom Patton, Broad Reach Communications, tom@tcpatton.com

SpaceX was never going to be a "quiet" company. From its early days in 2002 it has attracted publicity, some good but much of it highly critical both of its objectives and of its ability to achieve them. Given that SpaceX was founded in 2002 by internet entrepreneur Elon Musk – who at the time had no history in the space business and the two stated objectives of the company were:

- to reduce the cost and reliability of space access by a factor of ten, and
- to enable humanity to become a space faring nation.

It is hardly surprising that those with a longer history in the business felt somewhat sceptical about those two very ambitious goals. Particularly in view of the fact that the unlike other US launch vehicles the initial development was not going to be supported by government money.

Eight years later SpaceX has made some significant strides and along the way picked up a third objective: that of transporting supplies and eventually crew to the International Space Station (ISS).

The COTS (Commercial Orbital Transportation Services) Program announced in January 2006 was NASA's response to President Bush's 2004 directive to promote commercial participation in Space. In August 2006 after two rounds that attracted over a dozen entrants, including some well established names in the industry, two awards were made. One to SpaceX for US $278M and the other to Orbital Sciences for $170M.

The COTS awards are to demonstrate delivery and return of cargo to the ISS, something very necessary given the retirement of the Space Shuttle at the end of this year and pending cancelation of the Constellation Program. SpaceX will receive the $278M ONLY when it has met the requirements of the award. If it fails to meet any of the milestones the award can be withdrawn or renegotiated. For SpaceX this means three Falcon 9 demonstration flights carrying the Dragon spacecraft. On the first flight the Dragon will have to perform a series of manoeuvres in space and return to earth. On the second COTS flight the Dragon will have to manoeuvre within grapple range of the ISS and maintain position and the third flight will be a cargo run to and from the ISS. The award also contains an option for COTS-D which would be three demo flights of a manned version of Dragon.

So with those three bold objectives it is not surprising that there was a great deal of interest and tension surrounding the June 4th first launch attempt of Falcon 9.

As would be expected first launches are prone to failure as SpaceX experienced with the initial Falcon 1 launches. On

June 4th there was an additional handicap – a 40% chance of cancellation of the launch due to unsuitable weather conditions. The launch window was between 11am and 3pm EDT. Given that a major storm was expected at 1pm it was hoped to launch early in the window. The first attempt was scheduled for 11:20. At 11:05 it was announced that the launch had been delayed; at the time no explanation was given but subsequently we learnt that there was a problem with the Flight Termination System – which had been one of the last items awaiting certification – and that SpaceX were looking at using an alternate antenna.

The next launch attempt was scheduled for 1pm, but was aborted just before the 15 minute countdown started. This time the problem was a sailboat that had strayed into the no-sail zone off the Florida coast. The Air Force were sent out to intercept it.

At 1:15 the 15 minute countdown started again. Although the cloud cover was low there was no sign of the expected storm. For the next 14 minutes everything went smoothly and CNN, Fox and local TV stations were all manning their cameras, surrounded by reporters sporting everything from massive SLRs overweight with lenses to tiny cameras on cell phones....but we were all looking in the same direction and holding our breath. At T minus 1 second the launch was aborted. At this point the launch was being controlled entirely by computers and an engine parameter had fallen out of range.

At 2pm with only an hour left we learnt that SpaceX was going to try again. The clouds were still heavy but still no storm.

At 2:30 the 15 minute countdown resumed. By now the clouds had cleared and we were looking at blue skies with only a few scattered clouds – much better for launch viewing! For the fourth time that day we all assumed the launch position – cameras at the ready. This time we – and more importantly SpaceX – were rewarded by the sight of a perfect launch at 2:45!

Subsequent press releases from SpaceX indicated that Falcon 9 achieved all of its primary mission objectives, including a "nearly perfect insertion" of the dummy Dragon into a 155 mile high circular orbit. SpaceX is intending to make all parts of Falcon 9 reusable as part of its program to reduce cost. On this occasion it proved impossible to recover the stage one rockets and Elon Musk (Founder, CEO and CTO) commented that it may take several flights before they succeed in this.

So where does SpaceX stand now, in relation to the three objectives? Even before the launch SpaceX boasted an impressive manifest with over 30 launches booked representing a mixture of commercial and government contracts. Twelve of these are part of the CRS (Cargo Resupply Services) contract with NASA to deliver a total of 20,000kgs of cargo to the ISS. This contract is valued at $1.6bn and there is a possibility of an additional $1.5bn for subsequent missions. Even without the follow-on missions, IF Falcon 9 and Dragon meet the COTS requirements then SpaceX will be well on the way to meeting its third objective. The second Falcon 9 - which will be the first COTS flight - is assembled and waiting transport to Cape Canaveral for a launch later this year.

As for "enabling humanity to become a space faring nation", the Dragon capsule that will be used to ferry cargo to the ISS has been designed so that it can easily be converted into a crew ship and the CRS cargo includes live plants and animals. SpaceX claims that it can provide a rapid transition to transporting astronauts within three years of receiving a contract to do so. Nevertheless transporting crew to the ISS hardly makes humanity space faring nation. It is likely to many years before this objective is achieved and I very much doubt that it was ever intended to be otherwise.

The commercial contracts are both for Falcon 1 and Falcon 9 and include orders from ORBCOMM, Astrium and SS/L. Falcon 1 got off to a shaky beginning with three launch failures, but last July it successfully launched RazakSAT for Malaysia. Falcon 1e is capable of putting 1,010Kg in a LEO orbit. Falcon 9 when it's not ferrying cargo to the ISS is slated to be capable of putting 4,680Kg to a GTO or 8,500 to a LEO orbit putting it roughly on par with a Delta IV or Proton. Falcon 9 Heavy which will follow on is slated to be capable of taking 19,500kg to a GTO, making it one of the most powerful launchers around.

There are not many websites that I know of that quote fixed prices when those prices involve millions of dollars, but that is exactly what SpaceX does. A Falcon 9 GTO launch is $56M, just over half the cost of a similar Proton launch. So maybe not a reduction by a factor of ten yet, but a very impressive start and one that has the potential to change the face of the commercial launch industry if things continue as envisaged.

Elisabeth Tweedie has over 20 years experience at the cutting edge of new communication and entertainment technologies. She is the founder and President of **Definitive Direction** a consultancy that focuses on researching and evaluating the long term potential for new ventures, initiating their development and identifying and developing appropriate alliances. During her 10 years at Hughes Electronics she worked on every acquisition and new business that the company considered during her time there. www.definitivedirection.com She can be reached at: etweedie@definitivedirection.com +1 310-292-0755 or +44 (0)7768 610574.

Asia Leads in Broadband Growth

Singapore, June 16, 2010-Broadband subscription growth took an upswing during the first quarter of 2010, supported in part by healthy DSL growth in every region, strong fiber rollouts in Asia and aggressive IPTV service offerings. These statistics were revealed by the Broadband Forum at a CommunicAsia press conference, in conjunction with research by industry analysts Point Topic.

The figures show that global broadband lines now top 484 million lines (484,788,597), representing a 3.12% growth in the quarter and 12.41% in the last 12 months to end of Q1 2010. The first quarter growth rate increase shows a swelling of positive growth for worldwide broadband. At the same time the number of IPTV subscribers grew to 36.3 million. China and the USA are the top two countries for both broadband and IPTV.

Based on the research by Point Topic GBS database (at http://www.point-topic.com) Asia was responsible for more than 53% of the broadband lines added, with mainland China alone accounting for 45% of the total lines added worldwide in Q1 2010. China continues to be at the top of the table in terms of broadband with continued healthy growth at 5.67% in the quarter and 20.96% in the twelve month period, taking it to 112,594,000 subscribers. This made China the fastest growing country in both percentage and in absolute terms in the first three months of 2010.

Photo: Singapore Exhibition Services

Six of the top ten countries improved their performance in Q1 2010 compared to Q4 2009; China, the USA, Germany, the UK, South Korea and Brazil all grew more quickly in the first quarter of 2010 against Q4 2009.

"With all the recent technology advancements and service provider pushes, it is great to see how strong broadband continues to grow on a global basis and now backed by some major national Government initiatives- we expect this to accelerate even more in the coming years," said Robin Mersh, Chief Operating Officer of the Broadband Forum. "At the Broadband Forum, our members are very much the architects of the connected lifestyle. We are working on a wider range of activities than ever before to support our industry's ongoing commitment."

IPTV growth nearly 8% in last quarter, making 46% increase in last 12 months - the most rapid expansion yet recorded

IPTV is certainly a big part of today's connected lifestyle. The 12 months from Q109 to Q110 saw global growth of 46% in IPTV subscriber terms. This equates to 11.4 million new IPTV subscribers, the most rapid growth in any 12 month period yet recorded. In the first quarter of 2010 the world-wide IPTV market has grown by just under 8% (7.8%) and there are now 36.3 million IPTV subscribers as at March 31st 2010. IPTV penetration is therefore running at around 7.7% of total broadband lines. This is significant penetration, given the established position of cable, DTT and satellite alternatives in many mature markets.

Europe and especially France continues to lead the IPTV subscriber market in total subscribers and continues to grow quickly. Regionally Asia is beginning to challenge that global dominance by adding approximately 2.9 million customers over the last year, and 1.2 million in the last quarter alone. This has resulted in Asia increasing its regional share of the market to 32.4% - almost one-third of the global market.

China was the top IPTV growth market with over five million lines, with South Korea, Japan and Hong Kong also among the top ten countries. The Americas grew to 18.17% market share, representing the only other region to increase its share in the quarter, while the Middle East and Africa is beginning to show serious growth for the first time as numbers from the UAE and Egypt contributed to a record quarter.

DSL continues to be the most popular access technology for broadband. Fiber continues to grow quickly, and the figures for Q1 2010 show that Asia now has over 50 million fibre subscribers. The growth in fibre is expected to be the dominant theme over the next few years although DSL still has its place particularly in the second wave broadband countries like Indonesia and the Philippines.

Internet Traffic to Grow Fourfolds by 2014-Cisco

SAN JOSE, Calif. - June 16, 2010 - Cisco announced the results of the annual Cisco® Visual Networking Index (VNI) Forecast, 2009-2014, which projects that global Internet traffic will increase more than fourfold to 767 exabytes, or more than 3/4 of a Zettabyte, by 2014. This amount is 100 exabytes higher than the projected level in 2013, or an increase the equivalent of 10 times all the traffic traversing Internet Protocol networks in 2008.

The growth in traffic will continue to be dominated by video, exceeding 91 percent of global consumer IP traffic by 2014. Improvements in network bandwidth capacity and Internet speeds, along with the increasing popularity of HDTV and 3DTV are key factors expecting to quadruple IP traffic from 2009 to 2014.

The Cisco VNI Forecast, which focuses on two primary user groups—consumers and businesses—was developed as an annual study to estimate global IP traffic growth and trends. Projections are based on Cisco analysis and modeling of traffic, usage, and device data from independent analyst sources. Cisco validates its forecast, inputs, and methodology with data provided by service providers worldwide.

Downloaded file	2000 Download time	2010 Download time
DVD-quality movie (4GB)	3 days	2 hours
MP3 audio file (3MB)	3 minutes	5 seconds
Email attachment (1MB)	1 minute	2 seconds

Source: Cisco Systems "Visual Networking Index (VNI) Forecast, 2009-2014"

Research Highlights:

Total Global IP Traffic in "Bytes"

- Global IP traffic is expected to increase more than fourfold (4.3 times) from 2009 to 2014, reaching 63.9 exabytes per month in 2014, up from approximately 56 exabytes per month in 2013. This is equivalent to 766.8 exabytes per year - almost three-quarters of a zettabyte, by 2014.
- The nearly 64 exabytes of global IP traffic per month projected for 2014 is equivalent to 16 billion DVDs; 21 trillion MP3's; or 399 quadrillion text messages.

Regional IP Traffic Trends

- By 2014, the highest IP-traffic generating regions will be North America (19.0 exabytes per month), Asia Pacific (17.4 exabytes per month), Western Europe (16.2 exabytes per month) and Japan (4.3 exabytes per month).
- The fastest growing IP-traffic regions for the forecast period (2009-2014) are Latin America (51 percent compound annual growth rate [CAGR], 7.9-fold growth), the Middle East and Africa (45 percent CAGR, 6.5-fold growth), and Central Europe (38 percent CAGR, 5.1-fold growth).

Primary Growth Driver: Video

- By 2014, the sum of all forms of video (TV, VoD, Internet video, and peer-to-peer) will continue to exceed 91 percent of global consumer traffic.

Video to Surpass Peer-to-Peer as Top Internet Traffic Contributor by End of 2010, Global Online Video Community

- Global Internet video traffic will surpass global peer-to-peer traffic by the end of 2010. For the first time in the last 10 years, peer-to-peer traffic will not be the largest Internet traffic type.
- The global online video community will include more than 1 billion users by the end of 2010.
- By 2014, it would take more than two years to watch the amount of video that will cross global IP networks every second; to watch all the video crossing the network that year would take 72 million years.

3DTV and HD (Advanced Video)

- Globally, advanced video traffic, including three-dimensional (3-D) and high-definition TV (HDTV), is projected to increase 13 times between 2009 and 2014.
- By 2014, 3-D is expected to account for 4 percent of total Internet video traffic.
- By 2014, 3-D and HD video is forecast to comprise 42 percent of total consumer Internet video traffic.

Global File Sharing

- Global file sharing traffic is projected to reach 11 exabytes per month in 2014, 22 percent CAGR from 2009-2014.
- P2P will grow at a CAGR of 16 percent, while web-based and other file sharing will grow at CAGR of 47 percent from 2009-2014.
- By 2014, global P2P traffic will be 17 percent of global consumer Internet traffic, down from 36 percent in 2009.

Global Business IP Traffic

- Global business IP Traffic is forecast to reach 7.7 exabytes per month in 2014, more than tripling from 2009-2014.
- Business video conferencing is projected grow ten-fold over the forecast period, growing almost three times as fast as overall business IP traffic, at a CAGR of 57 percent from 2009-2014.
- Web-based video conferencing is the fastest growing subcategory, growing 180-fold from 2009-2014 (183 percent CAGR from 2009-2014).

Products and Services MarketPlace

A guide to key products and services showcased at the CommunicAsia exhibition in Singapore from June 15-18.

AAE Systems, Inc. manufactures satellite equipment and engineers customized turnkey solutions. With over 25 years of experience, the company has a world-renowned reputation for developing intelligent satellite-based technologies. As a satellite communications industry leader, it provides innovative and cost-effective voice, video and data solutions that meet and exceed the operational needs of its customers.

At CommunicAsia, AAE is launching its new Emergency Communications Trailer (ECT). The ECT is ideal for military and defense organizations. The ECT is designed for rapid deployment, and provides communications to disaster stricken areas anywhere in the world in a matter of minutes. A self-contained communications platform equipped with fully integrated and interoperable communications systems including satellite, WiMax, and auxiliary two-way radio, the ECT extends voice, video, and data communications to the deployed area in an Everything-over-IP environment. With an on-board generator, extended run fuel tank, and environmental controlled electronics enclosure, the ECT supports up to 48 hours of continuous operations without refueling. It is best suited for disaster and emergency response; command and control communications; forward operating extension services; gateway extension services; and voice, video, data, and radio interoperability in an EoIP environment.

www.aaesys.com

at CommunicAsia 2010
Visit AAE in Hall 6 at the US Pavillion Stand # 6H1-07

AvL Technologies delivers superior mobile satellite communication antenna systems and positioners. AvL's visionary approach to mobile satellite antennas and positioners has established the company as a global leader in innovation and reliability. The product line features a full range of lightweight, rapidly deployable, self-contained antenna and positioner systems. AvL antenna systems enable efficient and cost-effective voice, video, and data connectivity to be established quickly without the need for specialized training

AvL is also one of the largest producers of high-performance, Ka-band ready, solid carbon-fiber CF antennas. AvL's growing CF product line includes 1m, 1.2m, 1.6m, 2.0m and 2.4m apertures. Each of these apertures can be configured for case-based or vehicle-mount systems for diverse applications.

www.avltech.com

at CommunicAsia 2010
Visit AvL in Hall 6 at Stand # 6H1-14

CET Teleport GmbH is one of the biggest European teleports offering a wide range of media broadcasting and corporate VSAT services. It has extensive disaster recovery facilities, a 24/7 Help Desk and with over 50 antennas on site allows access to over 200 geostationary satellites located from 58°W to 76.5°E.

Recently CET has presented their new DTH platform on EUROBIRD™ 9A satellite located on 9˚E. This new video neighborhood is adjacent to the premium HOT BIRD™ position at 13°East giving virtually the same coverage over Europe, North Africa and the Middle East, but is much more attractively priced.

CET also offers competitive pricing for services within the T11N (37.5˚W) satellite footprint. The iDirect Evolution® platform delivers significant gains in bandwidth efficiency and data throughput and uses the integrated features of iDirect's Intelligent Platform™ to support enterprise and government applications.

www.cetteleport.com

at CommunicAsia 2010
Visit CET Teleport in Hall 6 at Stand # 6D1-01

Gazprom Space Systems (formerly Gascom) –is a private commercial, non-governmental satellite operator based in Russia. The main shareholder is Gazprom, one of the largest energy companies in the world. Gazprom Space Systems' orbital fleet consists of three mid-size satellites under the Yamal brand.Gazprom Space Systems' ground infrastructure consists of four teleports in the city of Moscow and in the surrounding Moscow region, which are connected to the main telecom backbones by means of fiber-optic lines. The company also has a wide network of earth stations across Russia. In Russia Gazprom Space Systems is not only a satellite operator but also a service provider and system integrator. Within Russia, along with satellite capacity, it provides satellite services including satellite links, video distribution, Internet access and network development and management.

Gazprom Space Systems has more than 200 clients in Russia and abroad. One fourth of Gazprom Space Systems' revenues come from the international markets. By 2015 the company intends to increase its satellite capacity by 400 percent from current levels and to build a new teleport in the Moscow region. Currently, the new Yamal-300K and Yamal-401&402 satellites are under construction.

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www.gazprom-spacesystems.ru

Gilat Satellite Networks Ltd. is a leading provider of products and services for satellite-based broadband communications networks. Gilat has shipped over 750,000 VSATs to more than 85 countries. Gilat markets a full line of high-performance VSATs under the SkyEdge™ and SkyEdge II Product Family..

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- Value-added solutions for specific markets and industries, integrating SkyEdge and SkyEdge II with other technologies and applications.
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www.gilatnetworks.com

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.

We are the only company in the industry that can, under one roof, design, install, integrate, support, manage and operate your systems and networks. Or we can provide turnkey services that offer the same features and functions as a customer-owned facility.

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.

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www.globecommsystems.com

Newtec is a recognized global market leader in the satellite communication industry, offering highly innovative products and solutions for the ground segment of television, telephony and data networks. TV broadcasters, Telecom Service Providers, Integrators and Satellite Operators from all over the world have been relying on the unequalled performance, flexibility and reliability of our equipment, systems and software:

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- **Horizon** is a range of integrated transceivers used in terrestrial or mobile television networks.
- **Sat3Play** is a satellite broadband access system providing 2-way connectivity from cost effective, easy-to-use and easy-to-install interactive terminals.
- **Menos** – Multimedia Exchange Network Over Satellite is a unique satellite system for the exchange of television and radio material in a broadcast network.

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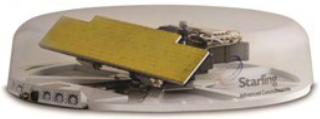

StarCar™ flat panel vehicular antenna systems provide on-the-move, real time video, voice and high speed data connectivity in any terrain, off or on road, at any speed. StarCar lightweight, compact, low profile design makes it easy and quickly to install on top any vehicle, keeping aerodynamic and mobility of vehicle in check. StarCar features ultra fast acquisition anywhere on the globe, seamless tracking and exceptional transponder efficiency. Even in the most remote locations, with no terrestrial backbone, rugged StarCar vehicular antenna systems enables immediate reliable and continuous 2 way streaming video, voice and data for emergency, police, search and rescue, homeland security, broadcasters and military vehicles, with no need for set-up. Starling's StarCar rugged line of vehicle mounted antenna systems includes:

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Wavestream sets the standard in the design and manufacture of next generation high power solid state amplifiers. Wavestream's family of C, Ku, Ka and X-band Solid State Power Amplifiers (SSPA) and Block Upconverters (BUC) provide systems integrators with field-proven, high performance, high reliability solutions designed for mission-critical broadcast and defense satellite communications systems worldwide.

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GAZPROM
SPACE SYSTEMS

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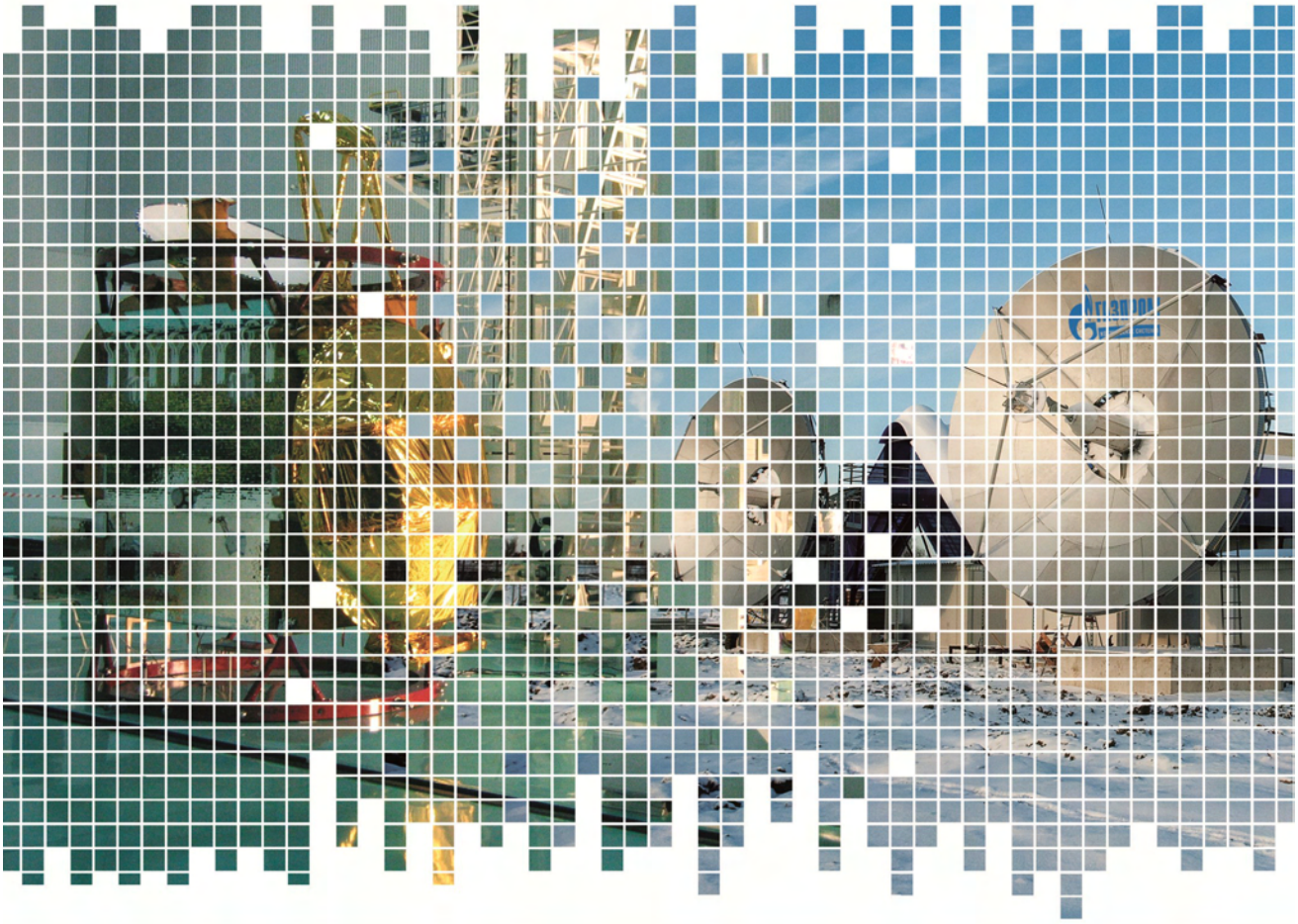

Gazprom Space Systems' orbital fleet consists of three mid-size satellites under the Yamal brand. The Yamal-100 and Yamal-201 satellites are co-located in 90E position. These satellites serve mainly the Russian/CIS market. The Yamal-202 satellite operating in 49E orbital slot has a wide service area covering most of the Eastern Hemisphere and caters to the international satellite market. The Yamal-300K, 401 and 402 satellites are under construction, while the Yamal-601 is in development.

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For more information go to www.gazprom-spacesystems.ru

(Advertisement)

Back and Forth with ASC Signal Corporation-President and CEO Keith Buckley

By Lou Zacharilla

In January, the Society of Satellite Professionals International elected as its new President Keith Buckley. Not long before he was also named President and CEO of ASC Signal Corporation, where he is tasked with turning around an earth station and radar antenna and services company that was spun out from Andrew Corporation about two years ago.

His roles are a study in polar opposites. SSPI, like much of the satellite industry, is thriving and finds its challenges to be forward-looking. ASC Signal is a classic business "turnaround" challenge. Fortunately, Keith is no stranger to turnarounds. Most of us know him from his work at InSight Telecommunications, where he started this business and in his six-year tenure generated 1400% return on investment for investors. However, at digital media company Trusonic, Inc. he came onboard and immediately built a new management team, refocused sales and marketing efforts and achieved a 34% revenue growth, 30% EBITDA improvement and a 350% increase in contract backlog in 18 months, which enabled the parent company's successful IPO. Many years before, as an Executive Vice President at Globecast, he turned around a USD$10 million loss. In between these two ventures, he led Juke Systems in developing a mobile phone start-up technology which became commercially viable in a mere eight months and is today part of the Microsoft's HealthVault platform.

He and I worked together to grow SSPI's corporate sponsorship revenues significantly when he headed the Society's corporate development function. We both share a taste for coming into undermonetized environments, finding the organization's core strengths and packaging them for profitability.

I thought his diverse and simultaneous roles at ASC and SSPI would allow him to discuss the industry from two unique perspectives, both representing the changing face of the satellite industry. We talked about it recently and follows are excerpts of our conversation:

Keith Buckley

***Lou Zacharilla (LZ)**: When you look at the global satellite industry today, with the perspective of your tenure at GlobeCast and InSight, what would you say is the biggest change?*

Keith Buckley (KB): No doubt it is the dramatic shift in the role technology plays in our business models. When you look at what's possible today from a technology standpoint – new coding models, satellites with a great deal more power, changes in feed technologies, higher performing (yet smaller) aperture antennas – and the opportunities that they present, we can do things that were unheard of not all that long ago.

***LZ**: But this also presents the possibility for a lot of disintermediation. Technology gives and technology takes away – quickly. The factor which separates the successful from the desperate is the degree to which of innovation can be fused to an organization's daily activities. My concern with our industry is that, often, our heritage of being cautious and government-backed keeps us from taking daring leaps.*

KB: Maybe. But I think we're seeing a lot of change in the industry. Coming from the equity financing side, I can tell that there is more of a demand now to move companies along to profitability, which places a premium on innovation, responding to the market and creation of value-added services.

***LZ**: Then you have a challenge at ASC Signal because, with the Andrew heritage, your company could easily be pigeon-holed as a commodity earth station and milcom antenna provider. But I note that you are banking on the company's engineering capabilities to carry it successfully back to the market. That is a value-added approach, so far as I can tell. Can you explain this decision and tell me how it's going?*

KB: It is going really well. We have new products that capitalize on our significant engineering and manufacturing expertise in ways that many of our competitors' business models do not allow because, frankly, they are too big and move too slowly. What is good, first and foremost, is that this competitive

advantage assures us that we can compete in the marketplace. The difference is focus. There are some great products in the industry but we're focusing on making sure that ours are the best in each of the categories we target. We are not targeting *every* application. It would not work. Our choice was simple: we could take the company in the direction of commoditized products and race our competitors to basement-level prices, or we could use our great engineering capabilities and workforce to make products that our customers really need and for which they understand the value.

LZ: *When I started managing SSPI, it was in need of a turnaround. We had the Gala, which was underperforming and a few corporate sponsors, but nothing to extend the value beyond one night in Washington. The real value of the Society had not been made available to the industry. Once we did that, we really took off and built a brand with activities, events and a network of professionals that are connected year-round. That was our turnaround moment. Turnarounds and start-ups have always been your strengths as an executive. The satellite industry is not necessarily seen as one in constant need of either, but because of what appears to be a sea change in the media industry, you see this changing, right?*

KB: Certainly, but not just in the media industry. The great news for every entrepreneur in the world, as well as the limited group of folks with the skills (and stomachs!) for guiding turnarounds, is that there will always be something to do. As consolidation continues as the natural course of the business cycle - in any market - opportunities are created for new businesses to form. That is a good, good thing. While you and I probably have a bias for our industry, the satellite industry is no different from any other.

***LZ**: Given the intensive capital costs required in the satellite business, does the business really lend itself to entrepreneurial initiatives? Or does bigger always mean better?*

KB: It depends. Even the bigger companies that feed on great amounts of capital have to think about being more flexible and "turning things around" today. I see plenty of companies revising their business plans and entering new markets, for example. And as the excuse that the "global economy" causes inertia and poor performance eventually goes away, investors will demand results from businesses, which opens the door for people who innovate and are able to monetize assets inside a company more effectively.

"...Investors will demand results from businesses, which opens the door for people who innovate and are able to monetize assets inside a company more effectively..."

***LZ**: Mobility and broadband seem to be really hot areas now. If I said that Ka-band is the path forward for our industry and probably for ASC Signal, would I be way off the mark? Are there other aspects, from the technical side, that are more important?*

KB: Not way off, but it is not the only path forward. It is going to continue to emerge in significance, of course. We are definitely seeing a tremendous amount of activity in Ka-band networks worldwide, which is why we've devoted so much energy and resources to ensuring we're a leader in Ka-band antenna and systems design. But there are also major opportunities with on-the-move antennas, terminals and systems, both commercially and in the defense sectors.

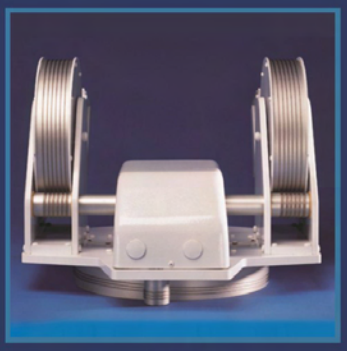
***LZ**: A major role of SSPI is to expand the market for satellite products and services and to generate more visibility for the industry in order to attract the next generation of knowledge worker. Speaking as SSPI's president, what is essential to make this happen?*

KB: SSPI needs to continue its focus of encouraging growing ranks of corporate sponsors – the leaders in this industry who believe in its future – to find ways to develop talent when people are in college or high school. When we look at all of the innovative ideas outside of our industry that have come from young entrepreneurs, everyone in the satellite industry should ask, "How do we make this innovation happen inside the satellite business?" We have very talented people working in the segment today, but we need a constant influx of new and creative thinking. There are great ideas being developed in the Internet and mobile spaces, to name a few. Why shouldn't the satellite industry be seeing a similar flow of talent? That's what SSPI has been trying to do for a few years now, but we need our members and their companies to focus on this.

***LZ**: We have some ideas for this. In the Fall we are going to announce a new book highlighting careers in the industry. It will be announced at our Future Leaders Dinner and we hope it does the job to begin to inspire people to look at an industry that is really transformative.*

Lou Zacharilla is the Director of Development of the Society of Satellite Professionals International (SSPI). He can be reached at lzacharilla@sspi.org

Advanced



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The GVF Installer Program: From Strength to Strength and Sea to Sea

by Martin Jarrold
Director, International Programs, GVF

In a recent column in this space I made reference to the fact that GVF runs the satellite industry's global VSAT Certification Program, which one the STARs 'Best Skills Developer Award' at SatCom Africa in 2009, and more recently was cited in the SSPI's Industry Innovator awards ceremony.

At that time I noted the GVF VSAT installation training curriculum because it includes a focus on the deployment of systems used in the maritime environment, and would be included in one of the program sessions of the forthcoming GVF Broadband Maritime Europe conference in London on 28th and 29th June (www.uk-emp.co.uk/BMEu.Ldn.2010/).

(photo courtesy of Gilat)

Specifically, in the maritime space, GVF has developed and has been delivering a Schlumberger Spacetrack 4000 installation course for that company's stabilized antenna platform. Similarly, GVF has an agreement with Cobham to develop Seatel courses, and plans are under development for a course tailored for those who install VSATs in the yachting market. Additional maritime interests which have embraced the GVF training include KVH, Seatel, iDirect, Viasat, Gilat, Hughes, and others, including most of the world's largest satellite operators.

Of course, the maritime focus is but one element of the VSAT Certification Program – a series of highly interactive, 3-D animated, simulator-driven courses provided online, and including topics beginning with satellite basics, progressing to installation techniques to mitigate uplink interference, VSAT fundamentals, and practical VSAT installation techniques. The certification process includes a Hands-On-Skills-Test (HOST) for Basic and Advanced certification, and there is also a series of manufacturer specific "specialist" certifications for certain VSAT equipment.

A recent edition of the GVF Training Newsletter from the Forum's training partner-organization, SatProf, cited the endorsement of GVF training by the Satellite Operators Interference Initiative – currently 19 satellite operators wordwide and growing.

The Satellite Operators Interference Initiative has the objective of controlling the serious problem of uplink interference. In recent years, the satellite communications industry has experienced an escalation of signal interference, adversely affecting broadcast and telecommunication services, and the Initiative has launched a multiple front campaign to combat this trend.

One of these fronts is a carrier ID working forum to pursue industry implementation of carrier ID: a means to identify interfering signals. The second aspect is the formation of the Space Data Association to facilitate collecting and sharing interference event data amongst its satellite operator members. The third aspect is the GVF VSAT installer training.

Installation by inadequately trained technicians is one of the main causes of interference identified by the Initiative. GVF has responded by enhancing the established VSAT Installer Training program to focus even more strongly on the skills necessary to avoid accidental generation of adjacent-satellite, cross-pol, and re-radiation interference.

As part of the Initiative, Intelsat intends to train 400 installers per year through GVF for the next three years, and SES has also formally adopted the GVF program, saying the training would help in its efforts to refocus the industry's approach to managing and preventing interference. They have been joined by other satellite operators such as Eutelsat, Inmarsat, Telesat, Asiasat and others in endorsing the GVF's new Basic Certification level and the associated online train-

ing course – course number GVF510 – specifically targeted at delivering the core skills needed by field technicians to avoid creating VSAT-generated interference.

The courses available, and the processes and steps required to achieve GVF certification are fully detailed at the GVF/SatProf training portal at http://gvf.coursehost.com, but the three levels of certification can be quickly summarized as follows:

- **GVF Basic VSAT Installation Certification.** Basic skills that ***all*** VSAT installers ***must have*** to help prevent interference. Requires completion of online course GVF510 and the formal GVF Hands-On-Skills-Test.

- **GVF Advanced VSAT Installation and Maintenance Certification.** Knowledge and theory for all expert VSAT field technicians. Requires completion of online courses GVF510, GVF520, GVF521, and the formal GVF Hands-On-Skills-Test.

- **GVF Speciality Certifications.** Requires GVF Advanced Certification plus completion of one of the online specialty courses, such as iDirect (course GVF503i) or Hughes (course GVF503H).

Much more information is centrally located within the training portal, including details of the Andrew Werth Scholarship Program for trainees from developing countries – defined as those nations classified as Least Developed Countries by the UN (http://www.un.org/ohrlls/), or as those classified by the World Bank (http://web.worldbank.org/) with economies in the low income, low-middle income, IDA, or HIPC groups – as well as details on how to become a GVF Certified Examiner.

I am looking forward to making my own next, and modest, effort towards the continuing success of GVF training, by delivering the maritime-focused GVF training presentation at the London Broadband Maritime Europe event, as noted above. This will be another prime opportunity to further expound on the message of the significance of this important contribution to the continued growth and success of the VSAT industry worldwide, a growth that is also very clearly becoming increasingly evident on the high-seas!

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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The Satellite Markets 25 Index™

Company Name	Symbol	Price (Jun 30)	% Change from 2-Weeks Ago	52-wk Range	% change from 52-wk High
Satellite Operators					
Asia Satellite	1135.HK	11.84	1.20%	8.85 - 12.80	7.50%
Eutelsat Communications	ETL.PA	27.53	0.51%	17.31 - 28.89	4.62%
Hughes Communications Inc.	HUGH	24.75	-7.68%	20.25 - 31.52	21.73%
Inmarsat	ISAT.L	715.00	-8.98%	491.00 - 831.00	14.02%
SES Global FDR	SES.F	17.30	1.76%	13.07 - 18.97	8.80%
Satellite and Component Manufacturers					
Boeing Company (The)	BA	63.60	-1.10%	38.92 - 76.00	16.33%
COM DEV International	CDV.TO	1.97	-25.94%	1.78 - 4.15	52.53%
Lockheed Martin Corporation Com	LMT	74.84	-6.11%	67.39 - 87.18	14.15%
Loral Space and Communications	LORL	43.44	9.53%	19.27 - 45.45	4.42%
Orbital Sciences Corporation Co	ORB	15.78	1.41%	12.19 - 19.63	19.61%
Ground Equipment Manufacturers					
C-COM Satellite Systems Inc.	CMI.V	0.2850	0.00%	0.26 - 0.37	22.97%
Comtech Telecommunications Corp.	CMTL	30.25	3.31%	27.59 - 38.39	21.20%
CPI International, Inc.	CPII	15.68	1.36%	8.37 - 16.14	2.85%
EMS Technologies, Inc.	ELMG	14.99	-3.79%	12.00 - 23.17	35.30%
ViaSat, Inc.	VSAT	33.10	-0.69%	23.53 - 36.74	9.91%
Satellite Service Providers					
Gilat Satellite Networks Ltd.	GILT	4.56	2.70%	3.95 - 6.25	27.04%
Globecomm Systems Inc.	GCOM	8.07	-0.86%	6.34 - 8.99	10.23%
International Datacasting	IDC.TO	0.27	1.89%	0.22 - 0.34	20.59%
ORBCOMM Inc.	ORBC	1.80	-12.62%	1.49 - 3.23	44.24%
RRSat Global Communications Net	RRST	8.80	-2.22%	8.54 - 13.21	33.38%
Consumer Satellite Services					
British Sky Ads	BSYBY.PK	41.96	24.51%	29.67 - 42.72	7.40%
DIRECTV	DTV	34.24	-13.71%	22.81 - 39.87	14.17%
DISH Network Corporation	DISH	18.45	-13.62%	14.17 - 24.16	23.59%
Globalstar, Inc.	GSAT	1.65	-14.95%	0.61 - 2.11	21.80%
Sirius XM Radio Inc.	SIRI	0.98	-2.97%	0.35 - 1.25	21.81%

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	Index Value (June 30)	% Change 2 Weeks Ago	% Change Jan. 2010	% Change Jan. 2008
Satellite Markets 25 Index™	1164.92	-1.74%	+15.39%	+11.49%
S & P 500	1110.88	- 7.12%	- 7.68%	-28.52%

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AAE has an international customer base, with systems deployed in the Americas, Europe, the Middle East, and Asia. It has extensive experience developing solutions for customers in government, military, and enterprise.

The company also designs solutions for a number of industry specific applications including : oil and gas; retail; banking; disaster recovery; emergency response; mining; education; medicine; rural communications, aid relief and rehabilitation, satellite news gathering, among others.

For more information go to: **www.aaesys.com**