

Satellite Executive BRIEFING

Vol. 5 No. 9 October 2012



Industry Trends, News Analysis, Market Intelligence and Opportunities

The Satellite Industry in Transition

by Elisabeth Tweedie

Compared to the ebullience of the last few years the mood was relatively subdued in Paris this September at Euroconsult's Satellite Business Week conference. Ka-Band is no longer new and at the present time the results from the broadband services already launched are too new to be pronounced outstanding successes or dismal failures. Some would argue that Electric Propulsion (EP) is new, certainly it hasn't been used to get to an orbital location before but in spite of the fact that recent innovations mean that delivery in-orbit is now possible in 30 days it failed to generate the excitement that Ka has been doing.

Rather there was a feeling that the industry is facing change both internally and externally, but where these changes are going to lead us is less clear. Internally the changes are coming from the slowing down of orders for replacement satellites from the major operators, the emergence once again of national satellite programs, the increasing strength of the Chinese manufacturing and launch industries and technology breakthroughs that are leading to increased throughput per MHz.

Externally the changes are coming from increased demand from emerging markets, the continued push to High Definition (HD) from Standard Definition

(SD) and the seemingly insatiable appetite that we all have for video, whether that video be professionally or individually produced. Bruno Fromont, VP of Corporate Strategy for Intelsat pointing out that every second 60 hours of video are uploaded to YouTube.

Richard Roithner of Euroconsult opened the conference stating that 80% of the growth in demand for FSS capacity until 2021 is going to come from the emerging markets. This was echoed by the Service Providers, Globecast, Arqiva, Encompass and RRSat all of whom stated that their growth was going to come from Africa, Asia, Latin America, the Middle East and Russia although there was no consensus as to the relative ranking of each of these regions. However this isn't necessarily good news for the existing operators. In the following panel Intelsat warned of the likelihood of oversupply in some of the emerging markets due to the presence of new national operators, a sentiment that was echoed by Nihar Shah, Director of Strategy and Market Intelligence at SES who stated that there are five new national satellites in operation, ten in development and another 20 at the concept stage, producing the very real possibility that some markets may become more restricted or even closed for the international operators.

Continued on page 4



Euroconsult indicated that TV would remain the main revenue generator for the satellite industry accounting for 60% of capacity usage in 2021.

What's Inside

From the Editor.....3



Case Study:
Satellite Digital Cinema8

Are You Ready for
the Gigabit World?
by Robert Bell.....12



Asia's 'New' Oil and Gas Dynamics.....14

Products/Services MarketPlace.....16

Featured Event:
SATCON 2012.....30

Industry Briefs.....21

Market Briefs.....25

Vital Statistics.....32
Stock Index.....33



AMOS-5 WAS SUCCESSFULLY LAUNCHED

The AMOS-5 satellite, successfully launched to the 17°E orbital location, provides a full range of satcom services with high-power Pan-African C-band and Ku-band beams.

With AMOS-2 and AMOS-3 serving Europe and the Middle East, AMOS-4 scheduled to commence operations in 2013 and AMOS-6 in 2014, Spacecom offers its vast experience to DTH operators, TV broadcasters, ISPs, VSAT broadband providers and telcos throughout Africa.

Premium capacity over Africa is now available, contact us to find out more.

E-mail: amos-info@amos-spacecom.com • Website: www.amos-spacecom.com

See us at
AfricaCom 2012

14-15 November
Cape Town, South Africa
Booth #ED7

AMOS
by Spacecom



Advantech Wireless



Advantech Wireless accredited products and advanced technologies have provided leading-edge innovations for over 20 years. We provide diverse and extensive technologies and products for video and data transmission and proven flexibility for specialized solutions.

Ultimate Mobility

from a world leader
in satellite communications

The new 25W GaN X-Band BUC is perfectly suited for harsh environments such as man-pack terminal deployments. Constructed in a compact cooling enclosure for outdoor operation is the smallest fully integrated unit on the market today.

Advantech Wireless' S5920M Ruggedized VSAT Terminal is a complete DVB-RCS modem that can be used in very harsh environment as in military and desert operations.

The AMT 73L was the World's first deployed modem with certified compliance to the MIL-STD-188-165A standard, designed to fulfill two way satellite communication requirements in Defence Satellite Communications Systems (DSCS).

The Raptor series of transportable hubs are turn-key systems which can be deployed in less than 1 hour, to enable a wide range of public and/or private network topologies with satellite interactive terminals. The RAR9160 Ruggedized Router is designed to provide best in class performance for critical applications under harsh environments. Advantech Wireless' new line of ruggedized products, the KR Series, are perfect for government and military application.



X-Band 25W GaN BUC
for man-pack terminals



Ruggedized Router
RAR9160



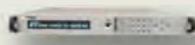
S5920M Ruggedized
DVB-RCS VSAT Terminal



Raptor - DVB-RCS
Compact Transportable Hub



KR Series - WBR-2000
Mobile Wireless WAN or LAN



AMT 73L Modem
DISA CERTIFIED



KR Series - 3G Router



Solid State
Pulse Amplifier

www.AdvantechWireless.com

- VSAT Satellite Networks • Satellite RF Converters & Amplifiers • Terrestrial Microwave Communications •
- Antennas & Controllers • Routers • Government & Military Applications •

Vision Awards



Hard to believe, but we're nearing the end of another year and from the looks of it at the IBC 2012 in Amsterdam last month, the satellite industry, coming of the heels of a successful London Olympics, will continue to grow in many different areas in the coming year and beyond.

The industry has fared very well in challenging economic times recently and with so many new applications driving demand for satellite services and products and the rise of emerging markets, the future looks bright. To honor companies, individuals and products that demonstrated forward-looking and innovative outlook towards the ever-changing satellite market, Satellite Markets and Research will be presenting at next month SATCON exhibition in New York City the First Annual Vision Awards. Awards will be given in three categories: Visionary Executive of the Year; Most Promising Company of the Year and Innovative Product of the Year. If you haven't nominated awardees yet, thee still time till October 12. Go to www.satellitemarkets.com/visionawards to enter your nominations or to reserve your place at the Awards reception at SATCON.

We look forward to seeing you at SATCON and to celebrate with your peers outstanding individuals, companies and products that has kept this industry in the cutting-edge of technological developments.

Virgil Labrador



EDITORIAL

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

Elisabeth Tweedie
Associate Editor
elisabeth@satellitemarkets.com

Contributing Editors:

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

Latin America: B. H. Schneiderman

Europe: Martin Jarrold, London
Jan Grøndrup-Vivanco, Paris
Roxana Dunnette, Geneva

Asia-Pacific: Peter Galace, Manila
Tom van der Heyden, Hong Kong
Riaz Lamak, India

For Advertising enquiries send an e-mail to:

sales@satellitemarkets.com

Satellite Executive Briefing
is published monthly by
Synthesis Publications LLC
and is available for free at
www.satellitemarkets.com

SYNTHESIS PUBLICATIONS LLC
1418 South Azusa Ave. # 4174
West Covina CA 91791 USA
Phone: +1-626-931-6395
Fax +1-425-969-2654
E-mail: info@satellitemarkets.com

©2012. No part of this publication may be reprinted or reproduced without prior written consent from the publisher.

Go online and view video and audio podcasts from IBC 2012

Sponsored by



www.satellitemarkets.com/current



Kurt Riegelman
SVP-Global Sales, Intelsat



Dr. Peter Siebert,
Executive Director, DVB



Lisa Coehlo,
CEO, GlobeCast Americas



Axel Daiber
VP-Sales and Marketing, ND Satcom



Mylan Tanzer,
Sales Director-Sports, Satlink Communications

Satellite industry in transition... From page 1

Euroconsult indicated that TV would remain the main revenue generator of the industry accounting for 60% of capacity usage in 2021.

Barry Woolston, Commercial Director of Arqiva, however stated that in his opinion people would migrate from DTH and move to broadband. Bill Tilson, President and COO of Encompass Media, disagreed saying that this was not likely to happen until the equivalent of a good Electronic Program Guide was available for on demand viewing.

Ka-Band may not be new but it is still a closely watched and debated topic in the industry. Subscriber take-up for KaSat at around 50,000 to date has been way below Eutelsat's expectations and is being attributed to poor distribution. Yohann Leroy, Strategy Director for Eutelsat commenting that they were now "mobilizing the ecosystem" for KaSat.

Michel de Rosen, CEO of Eutelsat however was quick to point out that KaSat was working well and customers were happy, while admitting that it was taking more time than anticipated to overcome "go to market" issues, saying that KaSat "will not revolutionize our industry."

More surprisingly since ViaSat already had a distribution network in place for WildBlue, Mark Dankberg, CEO of ViaSat also admitted to issues with distributors for Excede as the ViaSat-1 service is known, saying that they placed more emphasis on profit than customer satisfaction and as a result ViaSat has had to change the structure of its relationship with them.

SES has taken a different approach to Ka-Band by putting Ka payloads on several satellites rather than having a

dedicated satellite. Patrick Biewer, Managing Director of SES Broadband Services stating that the economics were similar in terms of Gbps per dollar invested but the risk was far less. SES' Ka Program will have a commercial launch in November. Of course SES is not the only company taking the non-dedicated satellite approach to Ka by putting high throughput (HTS) type payloads on other satellites and Euroconsult opened the conference by predicting major over supply. According

ViaSat have certainly had some good publicity about Excede, Mark Dankberg is particularly proud of the headline "How ViaSat's Excede makes satellite broadband not suck", but in parts of the UK and Europe many people still don't know about Hylas and KaSat.

Next year when, if all goes according to schedule there will be another Ka-Band System – a very different one – when the first eight O3b satellites are placed

into a Medium Earth Orbit. O3b, in which SES is a major shareholder is already set to revolutionize the cruise industry having signed up Royal Caribbean and will be providing up to 350Mbps per ship; a far cry from the 4Mbps that they are currently getting. Steve Collar the CEO also talked about the 30Mbps service which will be used by the Cook Islands and how O3b can revolutionize the seismic surveying industry

which currently uses helicopters to transport data as there no existing service capable of handle the vast amounts of data that the surveys generate.

to its forecast 888Gbps will be available by 2015 but only 217Gbps will be used - a worrying scenario for the industry and consumers alike should it prove to be accurate.

There is no shortage of unserved customers in the footprints of the current and future Ka-Band systems, costs to the consumer are falling so that the differential between the satellite service and the terrestrial offering - that they can't get anyway – is pretty small, so why the projected gap? Do all those unserved households really wish to remain that way or are we as an industry doing a poor job of marketing the service and letting the old perceptions that a satellite is second class linger on?

Collar characterized the satellite industry as being in an "Innovation Cycle." He may be right, HTS are certainly innovative as is O3b being the first commercial two way MEO constellation. For Ku- and C-Band the innovation is coming from Newtec who are finding ways to pack more bits per hertz and as Serge Van Herck the CEO was keen to point out, have recently demonstrated 500Mbps over a 72MHz transponder.

In the launch industry SpaceX is the
Continued on page 7



Key industry executives outline directions for the satellite industry at the Satellite Business Week conference in Paris organized by Euroconsult. From right, Pacôme Revillon (session moderator), CEO, *Euroconsult*; Romain Bausch, President & CEO, *SES*; Michel de Rosen, CEO, *Eutelsat*; David McGlade, CEO, *Intelsat*; Daniel Goldberg, President & CEO, *Telesat*; and Eric Béranger, CEO, *Astrium Services*.

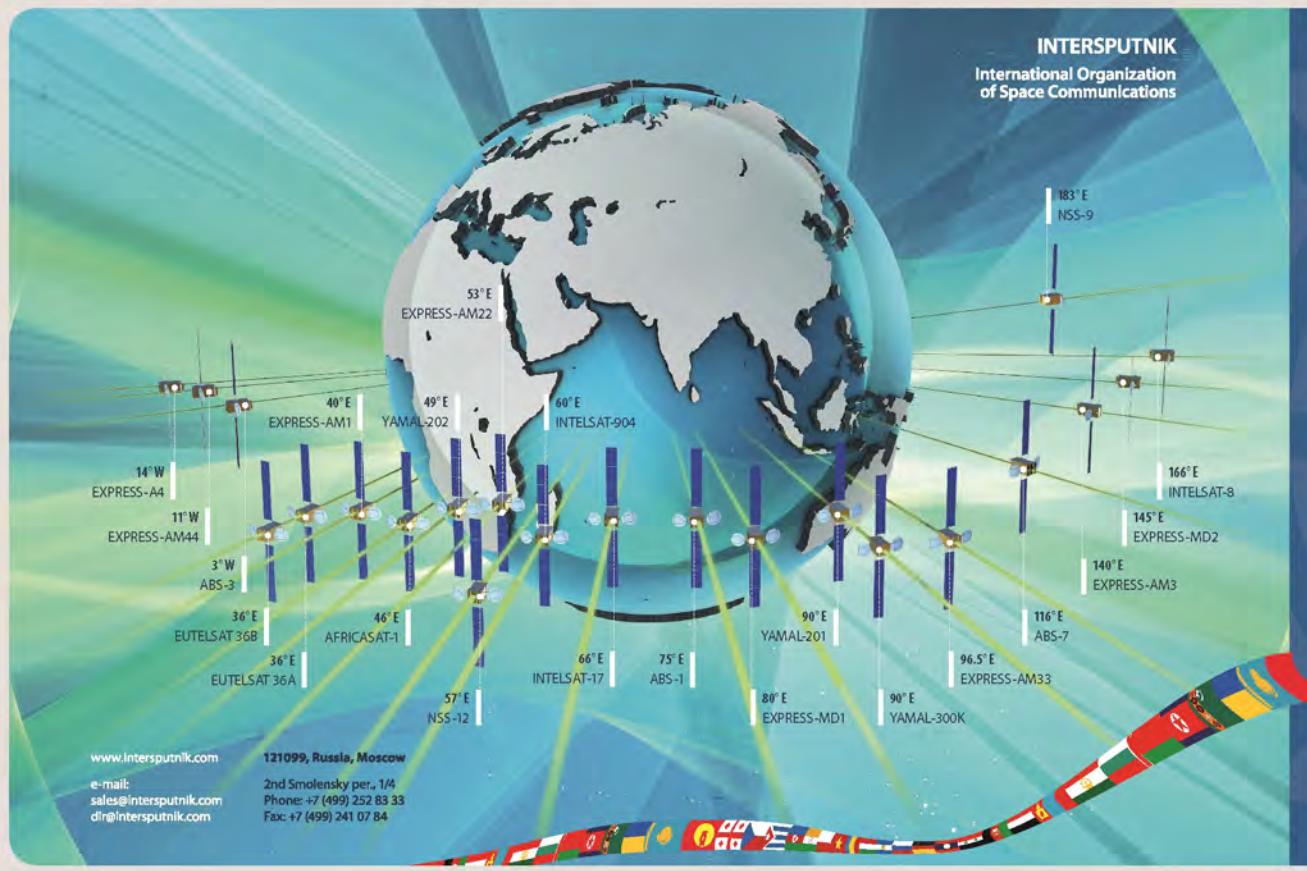
The Intersputnik International Organization of Space Communications was established 15 November 1971. Today, Intersputnik has 26 member states in practically all parts of the world, from Latin America to South-East Asia and from Europe to the south of the Arabian peninsula.



C-band on Express-AM44 at 11W available

Intersputnik's core business is to make satellite capacity available to telecoms 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 telecoms networks. Such full-scale services include access to internet backbones, uplink services, switching and digital platform services as well as the supply and integration of ground equipment.

The Russian satellite telecoms operator Isatel LLC, which is part of the Intersputnik Holding Ltd group, offers Russian and international telecoms operators and corporate customers the required technological platform for the establishment of satellite telecoms networks and provision of telecoms services based on this platform.



AMOS-5 WAS SUCCESSFULLY LAUNCHED



MINSAR & SHIFRIN

The AMOS-5 satellite, successfully launched to the 17°E orbital location, provides a full range of satcom services with high-power Pan-African C-band and Ku-band beams.

With AMOS-2 and AMOS-3 serving Europe and the Middle East, AMOS-4 scheduled to commence operations in 2013 and AMOS-6 in 2014, Spacecom offers its vast experience to DTH operators, TV broadcasters, ISPs, VSAT broadband providers and telcos throughout Africa.

Premium capacity over Africa is now available, contact us to find out more.

See us at

AfricaCom 2012

14-15 November
Cape Town, South Africa
Booth #E07

AMOS
by Spacecom

one driving innovation and cost reduction. It has a backlog of US\$1 Bil. of which 70% by volume but not by value is for commercial launches. An impressive figure considering that no commercial launch has yet taken place. It is also facing issues in scaling up to handle the anticipated 20 launches a year that it intends to do and Glynne Shotwell, Sepcex' CEO, talked about plans for a new dedicated launch site in Texas.

The Chinese are also hoping to take a share of the commercial market and are targeting 20 launches a year from their three launch sites with a particular focus on LEOs where with the new cryogenic launcher they can launch 25 tons. The same launcher can do 14 tons to a Geo Transfer Orbit.

For the MSS operators GlobalStar has been the innovator – not in technology but in its distribution system. It now has

over 10,000 retail outlets in North America and according to Jay Monroe the CEO is saving one life a day with its SPOT service. This is a simplex service that delivers pre-determined messages to emergency services or specified contacts. It's a low-end product with an ARPU of US\$8-9.

He also talked about the "data heroin" that we're all becoming addicted to and how this is helping them market the

more sophisticated products now that its network is nearly completely restored.

In going for a mass market distribution strategy GlobalStar has, like DirecTV and Dish, moved satellites out of the realm of the extraordinary into the realm of the ordinary for the consumer, maybe this is where the consumer broadband services need to be heading.



Elisabeth Tweedie is Associate Editor of the *Satellite Executive Briefing*. She 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

A large collage of numerous small satellite images showing various landscapes, space, and other scenes. Overlaid on the bottom left is a dark banner with the text "Leader in DTH platforms in Spanish and Portuguese markets".

Leader in DTH platforms
in Spanish and Portuguese markets

- Excellence in providing satellite capacity for government, video, broadband and corporate applications.
- Hispasat new beams on recently launched high powered satellites Amazonas 2 and Hispasat 1E covering America, Europe and Africa.
- Strong value added service portfolio and multimedia applications through our IP platforms.

grupo **hispasat**

www.hispasat.es

hispasat acercando culturas

hisparimar satélites

Building a Successful Satellite-based Digital Cinema Distribution Business

by Rajiv Hazaray

Several factors contribute to the success or the failure of a technology-based business. There exist several theories that narrate strategies for successful diffusion of technologies but ask a master performer and he or she will tell you that it is as much about the audience as about the performer whether a performance succeeds or fails!

Digital cinema distribution has not been an easy market to penetrate for satellite-based operators. In advanced markets where distribution logistics infrastructure operates like a well-oiled machine very cost-effectively, satellite-based distribution platforms have struggled to make their mark. Recently, EchoStar entered into a joint venture with Deluxe to give the satellite distribution business a new life in North America. An emerging market company, away from the glamorous Hollywood; made all the right choices regarding the market and the solution, showed courage to challenge the established norms, and displayed operational finesse that made it into a \$60 million a year success story. Recognizing that every market is unique and needs a different configuration of the core technology platform is what led to this success story.

Sanjay Gaikwad, the CEO of UFO Moviez (www.ufomoviez.com) and his partner, Mr. Narendra Hete, found themselves in a unique market - the Indian Film Industry (popularly now known to world as "Bollywood"). It produces the most number of movies in a year (with revenues approaching US\$100 billion according to the FICCI-KPMG report on Indian Media and Entertainment Industry) and yet epitomizing many lost revenue opportunities for studios and exhibitors due to the logistic nightmares haunting the physical distribution of content and the evil of piracy. In 2005, Sanjay, an entrepreneur with no prior exposure to the film

industry, formed UFO Moviez with his partners to change the distribution paradigm of this 100+ year old fragmented industry. They were initially supported by angel investors (Apollo Group). After its formation in early 2005, UFO quickly went from the drawing board to the market in a short span of 6 months. They launched their first system with digital equipment and satellite delivery in July 2005.

Mapping the Market

The UFO team quickly mapped the opportunity and found the market characteristics as follows:

India produces a large volume of home-grown content – only 10% or less of the film content watched in India is produced in Hollywood.



India is the largest movie-going market in the world but it lacks the logistic infrastructure to distribute digital masters cost-effectively to widely dispersed markets.

Indian film budgets are typically much smaller than that of their Hollywood brethren – this also meant that many Indian producers cannot afford large distribution costs including that of creating multiple digital masters

India, like many other emerging economies, lacks the logistic infrastructure necessary to distribute digital masters cost-effectively to many far-flung markets in time for the film to be released in a tight theatrical distribution window. This left many regional and rural markets out of the first release window when the film would be shown in Metro theaters. According to the FICCI-KPMG report, due to fragmentation of viewers, even large distributors avoid all-India distribution.

What made the matter worst is total lack of intellectual property rights enforcement mechanism in India, where piracy is not only prevalent but had to be accepted as a given in planning any digital content business. Hence, if lack of logical infrastructure prevented simultaneous release of films in all

market segments, the evil of digital piracy would kill the chances of any profit flowing from the content in subsequent releases. Data compiled by Reliance Big Cinema that shows opening week collections to be 50% of the total box-office collections illustrates the economic impact of this problem.

The theater owners in India were prisoners of their own inertia. They did not like change from a system that was working for a century, even though they were at the losing end of the system. The only way out of this trap was to make this totally painless for them in terms of the initial capital expenditure required to implement a new technology.

The Critical Decisions

Though the market seemed to be ideal for a satellite-based distribution, UFO team had to cross some crucial hurdles and make some decisions that proved critical to their success.

Technology Choice

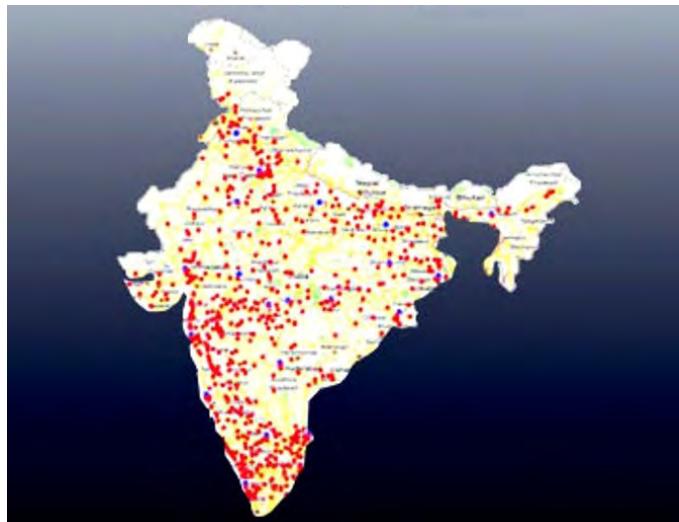
Hollywood studios decided to adopt the digital technology standard called DCI to the theatrical distribution of motion pictures. One of the impacts of this adoption was higher transition and operating costs. Use of JPEG compression in the DCI standard makes the file heavier by an order of magnitude when compared with the one compressed using non-DCI MPEG compression. UFO team made an obvious choice in a market characterized by the low-cost thresholds that had 90% of its revenue arising from non-Hollywood content. It chose to stick to non-DCI technology that will keep the content files lighter, reducing the bandwidth cost significantly. Subsequently, UFO bought its competitor, Scrabble Entertainment, which had adopted DCI standard to cater to the Hollywood audience.

Business Choices: New Pricing Model, Revenue Streams

UFO had to cope with the tremendous inertia from both ends of the distribution value-chain; the distributors and the theater owners. That naturally meant that any business model to achieve successful penetration could not have possibly burdened these counter-parties with the initial investment. The challenge was to make a distribution alternative available to distributors and exhibitors that is more secure and cheaper than physical media distribution without any “switching costs.” UFO offered its platform on a pay-per-drink model charging exhibitors as little as US\$3.50 per show and charging distributors another US \$5 per show. This, however, meant taking on upfront capital risks without getting paid back for 5 to 6 years.

While the increased box office collection benefitted the distributor and exhibitor, UFO did not share in this added value. Obviously re-inventing part of the revenue model was not enough to make the business economically viable.

Exhibit hall advertising was just 1% of the total advertising pie in India. It was not that advertising in cinema was a bad medium, but had not taken off due to the sheer logistics chal-



UFO Moviez' satellite-based digital cinema distribution network reaches theaters (represented by red dots) in every corner of the Indian sub-continent.

lenge for advertising in Exhibit halls. UFO realized that by creating a satellite-based ubiquitous distribution platform, it was creating a unique network of otherwise fragmented (4,000+) exhibitors that was very valuable to the advertisers. When UFO started installing our equipment in cinemas, it started acquiring advertising inventories of these cinemas. This added a new revenue stream to the business model that helped UFO keep the costs burden on distributors and exhibitors low.

Becoming a Key Player in the Industry

UFO began as a rank outsider in the Indian film industry. However it quickly turned this handicap into its strength by posing as a neutral technological platform not backed by any production or distribution house. Starting with just 58 screens in 2005, today UFO system serves more than 3,100 screens with another 1,000 DCI screens through a recent acquisition, Scrabble Entertainment, which caters to the remainder 10% of the Indian audience that has interest in Hollywood content. In 2007, UFO obtained a funding of approximately US\$21 million from 3i Inc. It was followed by an investment of further US \$52 million by Providence Equity Partners in 2011.



Rajiv Hejray is the Managing Principal of Business Analytix (www.business-analytix.com), an advisory firm that has served many leading satellite, broadcast, and technology companies as well as investors in strategic analyses covering new ventures & projects, partnerships & acquisitions, public policy issues, techno-economic studies, market profiling, pricing, and valuations. He can be reached at: rajiv.h@business-analytix.com.

Rajiv Hazaray spoke with Sanjay Gaikwad, CEO of UFO Moviez on the challenges he faced in building a digital cinema network in a developing country. Excerpts:

Rajiv Hazaray (RH): What triggered the idea of UFO Moviez?

Sanjay Gaikwad (SG): I have always perceived technology as an enabler to improve services and products. The film exhibition scenario presented a challenge especially in the Indian context, as there were many hurdles for rolling out such a service in India. I used to read about Hollywood films earning hundreds of millions of dollars at opening weekends. Hollywood would release films in 8,000 to 10,000 theatres simultaneously while in contrast the biggest Bollywood film would not go in more than 500 theaters pre-2005. This was killing the industry as these 500 prints were also being released in the second round in Tier II and Tier III theatres in a staggered manner and this was giving a window of opportunity to pirates. It was this realization that triggered the UFO concept in my mind.

RH: What were the initial challenges faced by you in acceptance of a satellite-based distribution solution for the digital cinema? How did you mitigate these challenges?

SG: It was very clear from the very beginning that the content has to be delivered via satellite since this was the only way we could grow organically across the length and breadth of the country. Being a satellite-based platform, we were not limited by any geographical constraints since the footprint of the satellite can deliver the films simultaneously to any location in India. Satellite delivery came with its own set of challenges. Primary being the adverse site conditions of cinemas. The biggest hurdle at the exhibition hall end was the power condition where electricity is not available for hours at end and cinemas have to run on generators. Even when electricity is available, it is highly unregulated and extremely harmful for electronic equipments. Fluctuations are high, earthing levels are high at many exhibition halls and all these issues needed to be regulated to protect the equipment from malfunctioning.

Secondly, delivering films via satellite across thousands of screens is challenging, especially when some of these theaters operate at different time schedules. There could be potential transmission breaks due to site conditions. Hence, we had to develop a proprietary technology platform for delivering the films in packets that will receive an automatic feedback from the onsite system. On receiving the feedback, missing packets are retransmitted to achieve required picture

quality. . Initially, we used CDMA for this feedback mechanism. However later, we installed 2-way VSATs at the cinemas and now the information comes to us in real time via VSATs installed at cinemas. The advantages of satellite delivery are numerous. At present, we release an average of 22 films per week on our network and have more than 200 films running across the platform at any given time. The entire delivery of content, trailers, advertisements, and licences for playing out films is delivery via satellite in a seamless manner without any human intervention.



Sanjay Gaikwad

RH: You decided to make the transition to your platform by the theater owners painless by offering a ‘pay by drink’ pricing model. Why do you think it is a good financial decision to fund theater owners’ transition?

SG: The fundamental challenge we faced initially was inertia. People were reluctant to change from a technology, which has been working for the last 100 years albeit in a limited manner. I realized early on that if we require the cinema owners to invest in the technology, it would have significantly slow down the rollout. Hence, I decided to own the onus of investing in the technology upon UFO to make the business proposal a no-brainer for the exhibitor. We worked out a pay-per-show model wherein we supplied equipments to the exhibitors free of cost against a nominal and refundable deposit and asked them to pay an amount of INR 175 per show on a “pay-as-you-use” basis. This immediately changed the paradigm of the commercials for digital cinema. The end-to-end risk of investment, technology deployment, content availability, equipment obsolesces, and maintenance shifted to us with the exhibitor having no fixed cost or risk on their books. We also worked out a similar pay per show model of INR 250 for the distributors. Our contract with the exhibitors is typically for 10 years, and the payback period was still around 5 to 6 years. That was too long a payback period to make a viable business model, especially since the life of the equipment is finite and short. We addressed this issue by tapping into another revenue stream not tapped hitherto – theater advertisement.

Thus, on one hand we accelerated the deployment of digital cinema equipment in the theatre on the exhibitor front, while on the other hand, distributors were motivated to release the film as wide as possible without having to worry about the print cost.



Radio links

line-up
surveillance
troubleshooting



... with **NRA**, the **Narda Remote Spectrum Analyzer**.

- **Install:** 19", 1 U, no fan, no noise
- **Integrate:** via Ethernet with simple remote control commands
- **Operate:** Application-oriented operating modes, resolution bandwidths up to 32 MHz, I/Q data recording

NRA-2500, 5 MHz to 2.5 GHz, optimized for use in D-SNG vehicles, teleports and V-SAT stations

NRA-3000, 9 kHz to 3 GHz, optimized for use in broadcasting stations and function-critical transmitter locations

NRA-6000, 9 kHz to 6 GHz, for comprehensive analysis including the latest mobile communications (GSM, UMTS, WiMAX, LTE)



Choose your analyzer –
and only pay for what
you need.



For contact in North America:
www.narda-nra.com
narda-sales@agfranz.com
phone: (800) 351-1894



Are You Ready for the Gigabit World?

by Robert Bell

Put together Tooway, Exede, EPIC, Hughesnet, Hylas, Jabiru, NS3 and Clear Channel, and what have you got?

You probably recognize the brand names, because of the accelerating pace of announcements about Ka-band satellites and higher-order modulation emerging from satellite operators and technology companies. And if they have given you the feeling that the satellite business is bracing for some big changes, you're right.

Just how big that change will be is the topic of the day. WTA has just published a report, *Teleports in the Gigabit World*, for which we interviewed top executives from satellite operators, teleport operators, technology companies and customers. Picking up from our *Ka-Band and the Teleport* study in 2010, it explores how the continuing evolution of the high-throughput satellite (HTS) is mostly likely to affect ground-based service providers. It examines the threats and potential opportunities and offer advice on what service providers can do today to defend against the downside and seize the upside.

There is a potentially a lot of upside to seize. Our experts see transformative growth opportunities in media & entertainment, government & military and remote and mobile communications. They predict that these technologies will, for the first time, make satellite cost-competitive with fiber in applications where it is not today. That's revolutionary.

The big drivers of this change are bandwidth and architecture. The potential for much, much higher throughput on Ka-band – but also on Ku and C – will change the economics of the business. In the short term, it will let us do more of what we already do – such as giving an enterprise customers 40-50 Mbps at a competitive price, instead of the 4-5 they use today. In the long term, it should generate opportunities to sell completely new applications to new market segments – and to find ourselves competing with companies we have never faced before.

The first generation of Ka-band HTS have been designed to provide consumer broadband. To get the throughput and price-point they need, they have established closed networks which can be accessed by a fixed number of gateways. No other teleports need apply. We asked our experts if they thought this would become the dominant architecture of the future – which could spell trouble for teleport operators – or if other architectures would evolve. As the American baseball player Yogi Berra once said, "It's tough to make predictions, especially about the future." But our respondents did, and you can decide how close to the mark they got.



Whatever their views – and they ran the gamut – our respondents were united in providing some good advice for service providers.

Bet on Change. In both the short and long terms, HTS will create winners and losers in the market, and service providers need to think through what it takes to be on the winning side.

Prepare to Sell New Applications to New Customers. If the prophets of HTS revolution are correct, the satellite services business may well see its best growth opportunities in completely new lines of business. That is a major challenge to any company. You will need to stay alert to opportunities that might have seemed absurd in the past. They may still be absurd now, but they might just be a door opening to a new market.

Prepare to Compete with New Players. As HTS continues to evolve, satellite service providers are likely to compete with companies they have never faced before. Succeeding in these markets may require teleport operators to do something they have typically shied away from: investing in their own proprietary solutions. And creating your own technology solutions may require very different skills in business analysis, planning and operations.

My thanks to Eutelsat, with its KA-SAT satellite providing 90 Gbps of capacity over Europe, for underwriting *Teleports in a Gigabit World*. The study is available free to members of WTA and for purchase from www.worldteleport.org. For a quick video introduction, go to <http://youtu.be/el5bz7d7hH4>.



Robert Bell is Executive Director of the World Teleport Association, which represents the world's most innovative teleport operators, carriers and technology providers in 20 nations. He can be reached at: rbell@worldteleport.org



Connectivity Anywhere. Under Any Conditions.

Globecomm provides scalable, enterprise-class communications solutions enabling critical transmissions to reach their intended targets instantly and efficiently.

Offering hosted and managed communications services, our engineers design and integrate individual systems, complex networks and “Everything Over IP” architectures.

From earth stations to professional services, Globecomm delivers turn-key total solutions for connectivity anywhere, under any conditions!

GLOBECOMM®

1.877.452.5728

www.globecomm.com

info@globecomm.com



Satcoms and the Geopolitics of Asia's 'New' Oil and Gas Dynamics

by Martin Jarrold

One of the GVF's conference series will be returning to Kuala Lumpur in around seven weeks time, leveraging, in a timely fashion, new dynamics in the South East Asia oil & gas environment. Malaysia is always a great location in which to continue to grow the South East Asia dialog between the satellite communications solutions environment and the energy solutions end-user sector. More so as, right now, certain countries in the region are in process of attempting the opening-up of their oil & gas industry to increasing engagement with international capital, as well as making early efforts to bring greater transparency and liberalization to their telecoms sectors.

The Crowne Plaza Mutiara Hotel, Kuala Lumpur, will be the venue for the next conference in the GVF-EMP Oil & Gas Communications Series, entitled '**Oil & Gas Communications South East Asia 2012: Re-Defining the Digital Oilfield – Onshore, Offshore, Deep & Ultra-Deep Water**'. This will be the 16th event in the global conference series, and sponsored by **Inmarsat, Intelsat, and Hermes Datacomms**, the conference will also be the 5th for the South East Asia region.

As noted above, and also in one of my previous columns in this publication, new oil frontiers are being opened up across the region, bringing exploration and production (E&P) activity to deeper waters and to countries – such as the Philippines and Myanmar (Burma) – which did not previously have any significant levels of offshore hydrocarbons activity. Such developments will greatly

increase demand for subsea units in a region which traditionally has been dominated by shallow water production. Such new demand will make the region the third highest investor in the world in terms of offshore oil & gas CAPEX.

This presents an opportunity to again bring new regional developments into the context of a two-day conference program which will examine a combination of satellite-based communications, and integrated satellite-terrestrial hybrid communications solutions, to which the oil & gas industry upstream segment turns to play a vital role in providing the essential connectivity to access the vital applications necessary to facilitate:

- Regional oil & gas industry optimization of production and exploration activities;
- Efforts to enhance the region's upstream domestic production;
- Maximized use of the potential for Information & Communications Technologies to enhance oil & gas recovery.

As at the time of preparing this column the organizations lined-up to leverage this opportunity includes **Inmarsat, Intelsat, Hermes Datacomms, Spacenet Thailand, SkyWave, ND SatCom, MT-Marine Technologies, Iridium, Northern Sky Research, PTS Thailand/GVF Training**, with others joining as their topic choices are confirmed.

It is often forgotten that Myanmar (Burma) was one of the world's first oil producing territories, but resource de-

velopment and exploitation over a lengthy period has, until very recently, been stifled by the consequences of almost 50 years of military government, international pariah-status, and economic and political isolation.

Some seven or eight years ago I had the privilege of visiting Yangon (Rangoon) and Mandalay, representing GVF within an eASEAN delegation participating in a telecoms conference and attending the official opening of a new teleport. Whilst the experience of being escorted around by my extremely courteous senior army officer hosts was certainly more enlightening and entertaining than rule-by-junta might usually suggest (after all, I was deemed to be an honored international guest), today's developments in the direction of democratic change are likely to foster processes that were signally absent at that time, processes that will now help to bring the people of Myanmar (Burma) out of their economic dark age.

However, despite a civilian government having taken office, some political prisoners being released, more media freedom allowed, protests legalized, and peace talks with ethnic rebel groups begun, many international groups have distinct reservations about maintaining a balance between human rights concerns and exploiting new business opportunities, specifically as to how governments should proceed in easing the investment, trading, and financial services restrictions that have been extant in the former relationship with Myanmar (Burma).

Continued on page 18

SATCON®

The Satellite Communications Conference & Expo

November 14-15, 2012

Jacob Javits Convention Center
New York, NY



Connecting the Satellite Industry

FEATURED AT:



At SATCON, you stand at the crossroads of innovation and communication. Thousands of attendees and exhibitors alike participate in the ever-changing conversation surrounding content management, distribution and delivery. From video and voice, to data and Internet over satellite, fiber, mobile and wireless... interact with the latest products and technologies and network with peers, potential partners and solutions providers.

For complete event information, visit www.satconexpo.com.

**End-users: Register NOW for your
FREE SATCON ALL-ACCESS PASS***
**Use VIP Code CCE12 when registering at
www.satconexpo.com**

*All government and military professionals are qualified end-users. Other qualified end-users are defined as those who are currently employed by a broadcast/media/entertainment firm, telco, or a private sector company that uses information and communications technology (ICT) or media equipment and services, but does not sell these products, services, integration or consulting. See www.satconexpo.com for full details.

FEATURED SPONSORS



SPACE NEWS

MILITARY/GOVERNMENT
SPONSORS



XTAR

MEDIA
SPONSOR



For a complete list of Media Sponsors,
visit www.satconexpo.com



Products and Services MarketPlace

■ A guide to key products and services showcased at Milcom 2012 exhibition in Orlando, Florida from October 29-November 1, 2012.

Advantech Wireless

www.advantechwireless.com

Advantech Wireless accredited products and advanced technologies have provided leading-edge innovations for over 20 years. We provide diverse and extensive technologies and products for video and data transmission and proven flexibility for specialized solutions.

The new 25W GaN X-Band BUC is perfectly suited for harsh environments such as man-pack terminal deployments. Constructed in a compact cooling enclosure for outdoor operation is the smallest fully integrated unit on the market today.

Advantech Wireless' S5920M Ruggedized VSAT Terminal is a complete DVB-RCS modem that can be used in very harsh environments as in military and desert operations. The AMT 73L was the World's first deployed modem with certified compliance to the MIL-STD-188-165A standard, designed to fulfill two way satellite communication requirements in Defence Satellite Communications Systems (DSCS).

The Raptor series of transportable hubs from Advantech Wireless are turn-key systems which can be deployed in less than 1 hour, to enable a wide range of public and/or private network topologies with satellite interactive terminals. The RAR9160 Ruggedized Router is designed to provide best in class performance for critical applications under harsh environments. Advantech Wireless' new line of ruggedized products, the KR Series, are perfect for government and military application.

To schedule a meeting at MILCOM send an e-mail to marketing@advantechwireless.com

Agile Milcoms

Booth no. 430

www.agilecoms.com



Agile Milcoms is part of the Agile Communication Systems (ACS) group of companies. Our focus is to offer the highest level of service and expertise for customers in the military and government communications sectors by assimilating the latest in both digital and analog communications technologies and products.

The specifications and skill requirements needed to effectively perform in any environment are absolutely critical to a project or program's success. ACS understands this, and has established Agile Milcoms to focus solely the intricate variables in this specific global communications market.

With its operations based in the Silicon Valley, ACS is a leader in communication system design and integration and has secured projects throughout numerous continents working with Federal, State and local agencies.

Product & Service offerings include:

- Satcom Networks including; iDirect, DVB RCS2 with TRANSEC
- Forward Reconnaissance, Man-Pack & Disaster Recovery Comm. Systems
- Low Profile Comms On The Move Satcom Terminals
- Satcom Space Segment for both CONUS & OCONUS applications
- FVM and WAMI Video solutions, including encoding, decoding, transcoding and IP Networks
- Secure ISR information with video to the Warfighter using compatible Android tablet and smart phone devices
- Intelligence, Surveillances & Reconnaissance Systems
- CONUS & OCONUS Installation, Sustainment and Training

A.G. Franz LLC

www.agfranz.com



A.G. Franz, LLC is a wholesale logistics and business consulting firm providing a broad range of services to the satellite, broadcast and cable industries, satellite users, wireless and cable system providers, system integrators, aerospace, government and electronics companies.

Our Sales Representation in the US includes Importer and Distributor Services, as well as Marketing Activities and Market Research. Our partners include:

Narda Test Solutions—specialized RF test equipment for interference measurements: IDA (Interference and Direction Analyzer) and NRA (Narda Remote Spectrum Analyzer)

Advanced Broadcast Components—XTASI and 4T2 family of RF and digital video-stream analyzers

Peak Communications— high performance frequency converters, block converters, uplink power controllers, line amplifiers and test-loop translators

Blankom Antennentechnik— digital encoders and headend equipment

Hilkom Digital— multi-format receivers and digital video processing equipment

To schedule a meeting at MILCOM send an e-mail to andrea@agfranz.com or call +609-947-1459

Cobham Tracstar
Booth no. 705
www.cobham.com/tracstar

Cobham TracStar Land Systems is an international provider of mobile satellite communications technology to Government (military and civil), Commercial Media, Energy and Mining, and Enterprise markets. We have a comprehensive offering of products and services including Comm-on-the-Move, Comm-on-the-Pause, and Man-Packable antenna systems delivering video, data and voice connectivity worldwide.

The TracStar LVT Series of Manual Backpack Terminals provides a heavy duty, ruggedized, self-contained mobile system designed for easy portability and field-swappable Ku-, Ka- and X- band operations. Pictured here is the LVT 750P8, with an 8-segment carbon fiber reflector and tripod. BUCs, LNBs, and manual pointing tools for smartphones are also available.

For more information, contact Cobham at +1 (407) 650-9054 or sales@tracstar.net.

Comtech Xicom Technology
Booth no. 1612
www.xicomtech.com

Comtech Xicom Technology, Inc., is introducing at MILCOM a new, compact, LCD (liquid crystal display) touch screen controller for high-power amplifiers (HPAs). The new LCD touch screen provides an easy-to-use interface for monitoring and controlling multiple amplifiers and switches.

Comtech Xicom Technology's new generation of XTCT rack-mount controllers provide an easy to use, intuitive touch screen interface for monitoring and controlling out-

door amplifiers (ODUs) used for commercial or military satellite uplinks. The new full-color LCD touch screen front panel displays the HPA's operational status, including power output, temperature, graphical displays of parameter trend analysis, and event logs. Local and remote diagnostics can also be easily performed via an Ethernet interface.



Comtech Xicom's New XTCT Controller



Tracstar LVT 750P8 Terminal

The new model XTCT controller is housed in an industry-standard 3RU, 19-inch rack unit and can be configured for controlling a single amplifier or multiple amplifiers in 1:N redundancy systems. The controller can be reconfigured for different system requirements without expensive hardware changes. Another valuable feature is that all operational data is saved within the controller's non-volatile memory for up to fourteen years, providing a complete history of the HPA system in the event of service or repair. The XTCT controller measures 19-inches wide by 5.22-inches high by 9-inches deep and weighs less than 7 pounds. It includes redundant AC power supplies.

Globecomm
Booth no. 1603
www.globecomm.com

Globecomm's hosted 4G LTE solution significantly reduces the time, money and manpower needed to add, migrate to or launch a fully managed, secure solution for mobile voice, data and video. This rapid-deploy solution is an ideal choice for First Responders and mission-critical operations due to its compact size and cost-effective IP Offload design. User-based pricing and hosted or managed services allows for flexible, custom options from Globecomm as well as vendor agnostic, compatibility to legacy systems (2G, 3G & 4G).



Globecomm's 4G LTE Solution

This solution eliminates the use of expensive transport to the core network with no compromise to network security, control, visibility or reliability. All data resides within your network. Globecomm can also provide network and RF planning, UE user devices, eNodeB radio gear, backhaul solutions, converged packet gateway, LTE core, NOC service and network management tools as needed. Globecomm engineering teams provide interoperability testing and implementation in its state-of-the-art wireless laboratories.

Narda Test Solutions

Visit Narda at the L-3 Booth no. 1019

www.agfranz.com/products_narda.html

At MILCOM two new test equipment analyzers from Narda Test Solutions (an L-3 Company) will be presented.

The portable, low-weight **IDA Interference and Direction Analyzer** is a highly sensitive signal analyzer, with an extremely fast sweep time at 12 GHz/sec and a real-time bandwidth of up to 32 MHz for intercepting short term signals. The unique smartDF direction finding mode manages triangulation results and automatically calculates emitter positions. These features are ideally suited for the warfighter to quickly localize emergency transmitters and jammer locations, as well as support close range reconnaissance and signal monitoring for border patrols.



Narda Interference and Direction Analyzer

The **Narda Remote Spectrum Analyzer NRA** is a family of 19" 1RU rack mountable high speed test equipment that is easily integrated and remotely controlled in measurement environments. The fan-less design enables silent continuous operation. The wide bandwidth (9kHz to 6 GHz) of the NRA-6000 enables the warfighter to simultaneously monitor radio, cellular and WiMAX Signals. The NRA-3000 is capable to analyse signals from 9kHz to 3GHz for line-up and troubleshooting of satellites. It is also available with an integrated LNB control making it ideally suited for military satellite communication systems.

The IDA and the NRA are available in North America through A.G.Franz, LLC www.agfranz.com

NEWTEC

Booth no. 100

www.newtec.eu

Newtec's has recently launched a new satellite modem portfolio. The range features a variety of specs appropriate for consumers, enterprise markets, service providers, governments and large-scale operations over satellite requiring even higher speed returns:

The Newtec **MDM2200** IP Satellite Modem, designed for consumers and SME's, offers download speeds up to 16 Mbps and 3.5 Mbps upload alongside the lowest power consumption available on the market.

For high throughput B2B applications the Newtec MDM3100 IP Satellite Modem will easily handle up to 45 Mbps download and 5 Mbps upload; with a future release

increasing this to 10 Mbps.

Finally the hotly anticipated Newtec MDM6000 Satellite Modem completes the portfolio and will also be launched at the show. This modem bundle is capable of handling speeds up to 2 x 380 Mbps, and already has the upcoming S2-extensions candidates (including new modulation codes up to 64 APSK and 72 Mbaud) on board. These S2-extensions promise an efficiency increase of 15 to 37% on top of DVB-S2. The new modem portfolio fully integrates Newtec technologies including:

Clean Channel Technology™ (CCT) which increases efficiency up to 15% by using low roll-off factors, advanced filter technologies and optimal carrier spacing.

FlexACM® switches between maximum efficiency and robust modulation when needed, giving maximum throughput and availability in all circumstances.

Automated **Equalink®** provides significant improvements by pre-distorting the modulated signal, which gives up to 10% extra efficiency on a transponder.



Newtec's new Satellite Modem Portfolio

Newtec's **Bandwidth Cancellation** combines the forward and return transmission in the same satellite bandwidth giving up to 30% extra efficiency gain.

Combining these technologies brings significant gains to your transponder efficiency, as demonstrated in the recent world record-breaking announcements by Newtec.



Publications / Books / Research Reports
Market Studies / Consulting



MarketBriefs

www.satellitemarkets.com

Against this geopolitical background the world's biggest oil and gas firms want to explore in Myanmar (Burma) and in the waters of its economic zone. As the trend towards the relaxation of global sanctions continues, and as the country launches an onshore and offshore exploration round, Myanmar (Burma) could offer over 10 offshore and around 10 onshore blocks. As one of the world's poorest countries, Myanmar (Burma) needs revenue, and the government is seeking to maximize national earnings from oil & gas, easily the number one source of export income.

Lack of oil & gas exploration work over the decades of political isolation now make Myanmar (Burma) an attractive investment target for the very oil & gas companies which increasingly recognize that mission critical operational success in the upstream E&P environment is increasingly dependent on access to the most efficient information and communications technologies (ICTs).

Growth in energy resource demand in parts of Asia continue to point out the fact that Asia's offshore energy industry does indeed have significant potential to deliver on the need for assured oil & gas supplies, and this potential will ultimately depend on satellite communications. The Kuala Lumpur conference agenda will be discussing these issues, as follows:

- The Analysts View of the Future Evolution of Oil & Gas Patch Communications: Global SatComs Trends in the Asian Sphere
- 21st Century Asian Oilfield Connectivity Trends: Maximizing Growth Opportunity from E&P ICT
- Evolution of Asia's Offshore Communications up to the 21st Century
- Onshore, Offshore, Deep & Ultra-Deep Water E&P: Redefining South East Asia's Mission Critical Communication Requirement
- New Communications at the Cutting-Edge of Digital Oil & Gas: Leveraging on HTS and the Ka-Band
- New Satcom Capacity Business Models: Achieving More bang per Buck (or Barrel)!
- Expanding the Portfolio of Satellite Services for the Oil & Gas Industry
- Advanced Oil & Gas ICT: High Demand Communications for Crew Welfare Applications
- First Mile/Last Mile Networking Solution Innovations in Oil & Gas
- New Features in Digital Oilfield Applications Collaboration: Where does Cloud-over-Satellite Networking fit?
- The South East Asian Digital Oilfield: Real-Time Data Monitoring, Data Management Remote Collaboration & Operations Support Centers
- Development, Deployment & Return on Investment: Advanced Networking Communications Infrastructures & Value-Added Services to Realize Asian Deepwater Reserves
- The Satellite Operator in the Asian Oil & Gas Patch: Planning Capacity Provision & Deploying Service Supply
- Evolving Commercial Oil & Gas Applications to Satellite & Satellite-Hybrid Communications Environments
- The Business Mission Critical Link: Maintaining Oil & Gas Communications When Disaster Strikes
- Defining the Wireless World of the Oil & Gas E&P Environment
- Wireless Connectivity in the Energy Sector: A Gas Network Case Study & Analysis
- The Remote Application of Auto-Deploy Antenna Technology for Oil & Gas
- Oil & Gas Communications at the Environmental Extreme: Case Studies
- The Spectrum: Interference Challenges & Challenging Interference

More information about '**Oil & Gas Communications South East Asia 2012: Re-Defining the Digital Oilfield – Onshore, Offshore, Deep & Ultra-Deep Water**' is available at www.uk-emp.co.uk/future-events-2012-13. Or contact me at martin.jarrold@gvf.org.



Martin Jarrold is Director of International Programs of the GVF. He can be reached at martin.jarrold@gvf.org



SatService GmbH

your system integrator for satellite ground stations including
extensive portfolio of own products "Made in Germany"

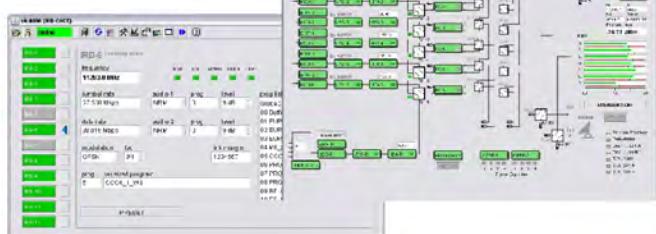
1.8 and 2.4m Electrical Motorized Antenna



Antenna Control and Step Track System

Ku- and C-Band Power Sensor

L-Band Beacon Receiver



Monitoring & Control System

Network Management System

Carrier Monitoring System



L-Band Switch Matrix with Optical Interfaces

50-2500MHz Optical Transmitter and Receiver

L-Band Distribution Amplifier





■ Major industry news and developments

MERGERS & ACQUISITIONS

Eutelsat Finalizes GE-23 Acquisition

Eutelsat Communications announced closure of the transaction to acquire the GE-23 satellite, associated customer contracts and orbital rights from **GE Capital**, having obtained all required regulatory approvals.

The satellite, renamed EUTELSAT 172A, is now part of Eutelsat's fleet, with technical and commercial teams working to ensure a smooth transition for existing customers.

Built by Thales Alenia Space, the satellite was launched in December 2005 with expected performance for 15 years. From geostationary orbit at 172° East, it offers unique coverage over the Asia-Pacific region via a payload of 20 Ku-band transponders accessing five inter-connecting beams and 18 C-band transponders connected to a trans-Pacific beam.

Asiasat Disposes of Interest in Speedcast

Asia Satellite Telecommunications Company Limited (AsiaSat) has signed an agreement with **SpeedCast Acquisitions Limited** for the disposal of its entire interest in its wholly owned subsidiary, SpeedCast Holdings Limited (SpeedCast).

Since its inception in 1999, SpeedCast has used AsiaSat's satellite capacity for the provision of satellite-based broadband services and is currently offering high-quality managed network services in more than 30 countries throughout Asia, the Middle East and Africa. Following the conclusion of the transaction, AsiaSat will continue to be a significant supplier of satellite capacity and technical services for SpeedCast.

SpeedCast Acquisitions Limited is 100% owned by TA Associates, a private equity firm.

Astrium Fully Integrates Vizada Subsidiaries

Astrium has announced that the satellite telecommunications services offered by **Vizada**, **Vizada Networks** and **Paradigm** will be marketed under the Astrium brand name from October 2012. The products and services of the company's **London Satellite Exchange** (LSE) and **TDCOM** subsidiaries will also be renamed Astrium.



This rebranding gives Astrium Services a new, unified organisational structure and marks the final phase in the full integration of the Vizada group, which was acquired in December 2011. Now comprising four business lines (Business Communications, Government Communications, Satcom Systems and Solutions, and Geo-Information Services), Astrium is the only company in the world to provide both telecommunications services and Earth observation satellite services.

"By bringing Vizada fully into the fold, we have opened up a new business line in commercial satellite communications (Business Communications) and enhanced our range of solutions and global presence in the government domain," said Astrium Services CEO Eric Beranger.

ITC Global Acquires Spidersat

ITC Global announced that it has entered into a definitive agreement to acquire privately-held **Spidersat Communications Limited**, an integrator of global communications solutions focused on providing mission critical satellite-based communication services for mining, exploration, and mining ser-

vices companies operating in Africa.

Spidersat provides custom networks and bandwidth access to enterprise customers throughout Africa. Spidersat is headquartered in Tanzania and has additional offices, accredited engineering, and support personnel in Ghana and Western Australia. Spidersat offers a broad range of services on the African continent, including fixed VSAT solutions and mobile satellite solutions, and has many years of experience of deploying reliable communication solutions within some of the most remote areas of Africa.

ITC Global's announcement of its intent to acquire Spidersat follows the recent completion of its acquisition of the remaining interest in ITC Guinee SARL, bringing ITC Global's ownership to 100% of ITC Guinee SARL.

EXECUTIVE MOVES

Globalstar Names Bell as President of Global Sales and Marketing

Globalstar, Inc. announced that **Frank J. Bell II** has been appointed President of Global Sales and Marketing for the company effective October 1, 2012. Bell will be responsible for Globalstar's sales and marketing operations, worldwide customer care, international gateway operator (IGO) partners and for all aspects of the company's worldwide revenue growth.

Bell has over 25 years of sales and strategic management experience with a number of wireless industry companies. He served as General Manager at MetroPCS for four years and prior to that was Area Vice President for Sprint. Most recently he served as the President and COO of PR Wireless, a wireless provider in Puerto Rico and President of Wireless Consulting Services, Inc. He



MILCOM'12

TRUSTED COMMUNICATIONS... AWARENESS TO ACTION

ORLANDO, FLORIDA October 29–November 1

Don't miss this rare opportunity to join your military, government, academic and industry colleagues in Orlando for this year's premier military communications conference. All general sessions, panel discussions, tutorials, technical sessions, industry exhibits /demos and special events will be held under one roof at the Gaylord Palms Convention Center near Walt Disney World.

Registration for MILCOM'12 will officially open in June. For more information, including a technical program outline and call-for-papers, visit www.milcom.org.



CO-SPONSORS



IEEE
COMMUNICATIONS
SOCIETY

APL
JOHNS HOPKINS UNIVERSITY
Applied Physics Laboratory

HARRIS
assuredcommunications™

ACADEMIC ADVISOR

HOST COMPANY

See What's
New
for 2012



Antenna Systems

COBHAM

The most important thing we build is trust.

Video, Data, Voice . . . Anytime, Anywhere

LVT 750P8 Ka



75cm, Ruggedized,
Lightweight MultiBand
Manual Backpack Terminal

TracStar 1200P6



1.2m Pack-in-the-Box
Multiband Flyaway Terminal

TracStar 1000



1.0m, Vehicle-Mount
Flyaway Antenna System,
Ku and Ka capable

Sea Tel 4012 GX



The first 1.0m maritime antenna
system that is Ku-band ready
and field upgradable to Ka-band

For more information on Cobham Antenna Systems,

Call TracStar Land Systems: +1 (407) 650-9054 or Sea Tel Maritime Products: +1 (925) 798-7979

www.cobham.com/satcom



Industry Briefs

■ Major industry news and developments

has a Bachelor of Science in Business Administration from Old Dominion University and a Masters degree in Human Resources Management from Pepperdine University.

Satmex Hires Hansen as Director of Sales

Satélites Mexicanos (Satmex) has hired **Erik Hansen** as its director of North American sales.

Hansen has more than 12 years of experience in the North America telecommunications market, with a main emphasis in satellite communications. He previously served in diversified engineering and sales positions at PanAmSat, Norcomp, the U.S. Army and Intelsat. His most recent position was at Tachyon Networks, where he served as VP of sales.

Thuraya appoints Huddle as Head of Media Services

Thuraya Telecommunications Company appointed **John Huddle** as its new head of Market Development for Media Services. Mr. Huddle will oversee the development and execution of the company's global market strategies, pricing and operations of its MediaComms suite.



John Huddle

Huddle has over 12 years of experience in the satellite communications industry. Prior to joining Thuraya, he held a number of commercial roles at Loral Space & Communications and more recently at Intelsat as Global Accounts Director focused on the media sector.

Fenech joins Eutelsat's Skylogic affiliate as CEO

Eutelsat Communications announced that **Jean-François Fenech** has joined

Skylogic as CEO of Eutelsat's broadband affiliate.

Fenech brings to Skylogic over 25 years of international telecommunications experience. He joins Skylogic from Antenna Hungária (part of the TDF group) where he was CEO, notably launching subscriber broadcast services across Hungary and consolidating the market for satellite-based enterprise services. Prior to this, he steered the development of TDF's international activities and its affiliates, and was CEO of Axión, the TDF-owned Spanish transmission company. He succeeds Achille de Tommaso, who has left Skylogic

RigNet Names Alexander VP Corporate Development

RigNet, Inc., a global provider of managed remote communications solutions to the oil and gas industry, announced that it has appointed **Brad Alexander** to the new position of Vice President, Corporate Development.

Alexander has over twenty years of expertise in hands-on mergers and acquisitions, due diligence and integration of businesses. He has held a variety of key executive positions for Fortune 100 companies, including serving as operations leader and board member of a \$2 billion financing company owned by American Express and as the financial executive for four business units with \$5 billion in assets as well as the small business Internet investments and partnerships group.

Alexander holds a B.S. degree in Finance Business Administration from Old Dominion University.

Senior Executive Appointments at ABS

Asia Broadcast Satellite (ABS) announced the appointments of **Willy Chow** as Chief Commercial Officer (CCO) and **Samuel Wong** as Chief Financial Officer (CFO).

In his new position, Chow will spearhead commercial activities and will work closely with the Chief Development Officer on business development initiatives and Chief Financial Officer on financing activities.

As the new CFO, Wong will be responsible for the overall finance and accounting functions and will be working closely with other department heads to drive efficiency and create shareholder value. He has over 25 years of experience in financial management.



Samuel Wong

Prior to joining ABS, Mr. Wong had worked as CFO and EVP at the Hong Kong Exchanges and Clearing, Finance Director at Hutchison Port Holdings and CFO at i-Cable Communications.

Chow is a Chartered Accountant and holds an MBA from the University of British Columbia and a B.Com from the University of Toronto.

Oberst to Head SES' Regulatory Team

SES announced that **Gerry Oberst** will join SES in the position of Senior Vice President, Global Regulatory and Governmental Strategy.

In this newly-created position, Oberst will have responsibility for overseeing the regulatory and advocacy work of SES. He will report to John Purvis, Executive Vice President and General Counsel and will be based in Luxembourg initially and then in Washington, D.C. He will start in his new position on October 1, 2012.

Oberst brings three decades of professional experience advising the satellite communications industry and most recently was a partner in the law firm Hogan Lovells.



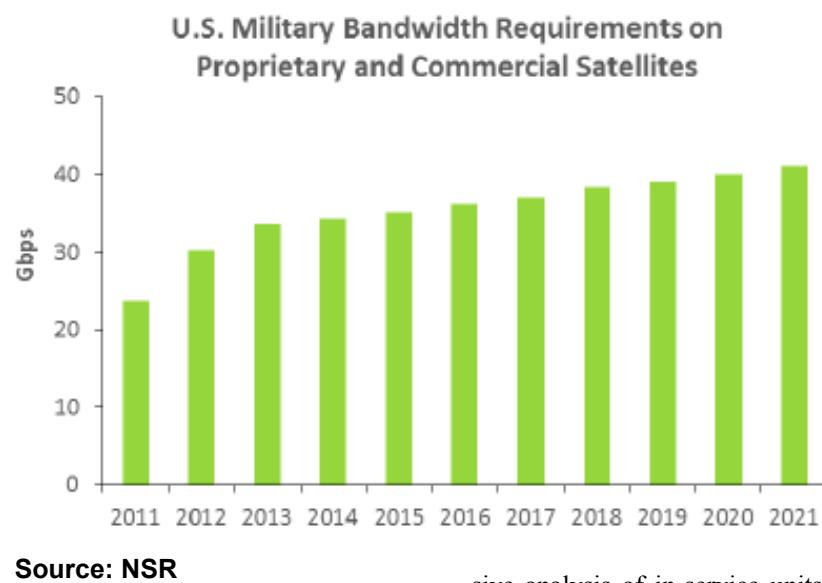
Key industry trends and opportunities.

Government/Military Satcom Demand Slows Down

Cambridge, Mass., September 25, 2012 - According to NSR's newest market research report *Government and Military Satellite Communications, 9th Edition*, despite near term uncertainty driven by troop withdrawals and budgetary challenges, government and military demand for commercial satcom services looks solid in the long term. In fact the commercial industry will supply 68% more satellite capacity to government and military users over the next decade.

The U.S. and NATO allied nations troop pull-out from the Middle-East,

coupled with severe budget situations, is certainly a major preoccupation for satellite services in the coming years. Government and military budget reductions will impact some markets more than others, but the short- to mid-term will see the most effects of these challenges.



However as recent events in Libya and Afghanistan have shown, the war on terrorism is not over and the next hotspot could well be North Africa. With more intelligence, surveillance reconnaissance (ISR) manned and unmanned aircraft to assist in this endeavor, increased mobility requirements and higher overall demand for agile and nimble systems at a lower cost will spur long-term revenues but at a slower rate than the past few years.

"The market performance in the short-term will be overshadowed by the pull-out from Afghanistan, but the bottom will certainly not fall out" stated Claude Rousseau, Senior Analyst for NSR and author of the study. "The total revenues grew by almost 10% in 2011 and despite questions today, the market should reach \$9.7 billion from 1 million in-service units, while transponder demand is set to increase substantially due to UAVs and ISR missions" continued Rousseau.

While there are continuing needs for narrowband communications, demand for capacity is clearly moving towards broadband services with video and large data files as well as social media being strong drivers for bandwidth usage in all segments. The growth in the equipment side is driven by land-mobile units, but the UAV market will absorb the largest portion of commercial satellite capacity in the coming decade. As the U.S. shifts its military strategy towards Asia, there is an expectation that more satellite units and capacity will move to this region.

NSR's annual *Government and Military Satellite Communications, 9th Edition* continues to be the most influential industry-guide on assessment of government & military satellite markets. With more added value and unique analysis, this new NSR report provides the most detailed quantitative analysis of any report within the industry. The report provides a complete and comprehensive analysis of in-service units, revenues, and transponder and capacity demand in the new HTS market for eight regions of the world. It further provides segmentation such as comms-on-the-move (COTM), comms-on-the-pause (COTP), fixed VSATs, narrowband and transponder bulk leasing for the period 2011-2021.

Government and Military Satellite Communications, 9th Edition is a multi-client report now available from NSR. For additional information on this report, including a full table of contents, list of exhibits and executive summary, please visit www.nsr.com or call NSR at 617-576-5771

Go to www.satellitemarkets.com for the latest analysis, trends and opportunities in the global satellite industry.

 Key industry trends and opportunities.

Cloud, OTT, MultiScreen are Key to Operators' Future

London, UK, September 27, 2012- A new report from Informa Telecoms & Media warns telecom operators that the days of the old-style triple or quad-play bundles are numbered. Going forward, operators will have to offer a whole range of new content and applications within their bundled products – including OTT content from companies like Netflix and Spotify and even VoIP from providers like Skype – to keep their subscribers happy.

The *Beyond Quad-Play: How Multi-Screen, OTT and the Cloud Are Transforming Next-Generation Bundling* report takes a global snapshot of the fast-changing bundling market and shows how operators across the global market are offering new services and applications to bring more value to their bundled products.

However, Tony Brown, Senior Analyst at Informa Telecoms & Media and lead author of the report, cautions operators that the next-generation bundling market will be a challenging one in which they will not necessarily reap direct financial rewards from the new products that they include in their bundled offers.

"We have already seen from the early deployment of multi-screen TV services by operators that many subscribers are highly resistant to paying extra for new services – so many of these new services really have to be included as part of the existing bundled price," he says.

"Operators need to see the addition of these new services, such as cloud storage or OTT content, as something that brings extra value and increases customer loyalty – and go at

least some way to neutering the threat posed by OTT players in a number of fields."

Furthermore, the report also details how operators – particularly those in developing markets such as Africa and the Indian sub-continent – are now looking to take advantage of their existing relationship with subscribers to sell a whole range of nontelecoms services such as insurance and banking service, with operators like Safaricom in Kenya leading the charge.

"These operators are really stealing a march on their counterparts in developed markets by using the position of trust and ongoing relationship that they have established with their subscribers to open up much wider commercial opportunities – the possibilities they have created are potentially game-changing in the wider telecoms market," Brown says.

Meanwhile, Brown also says that, in addition to offering new services such as OTT and multiscreen content and cloud-delivered services within their bundled offering, many global operators are now also revamping their customer loyalty programs to make sure that their bundled subscribers are well rewarded.

"Orange has long been an excellent exponent of providing very effective customer loyalty programs to its subscribers, giving away products such as half-price movie tickets and discounts at various types of retail outlets – this is a strategy we expect to be more widely adopted by other operators to reward their most valuable subscribers," he says.



Global STB Shipments to Hit Record High

San Jose, Calif., September 12, 2012--Even while experiencing some significant challenges, the global set-top box market continues to expand. Demand for digital set-top box products is rising, particularly in Asia, Latin America, and a number of countries in Europe. The expansion of pay-TV services in developing markets, along with the ongoing shift from standard-definition products to high-definition products in developed markets, is fueling market demand, according to Multimedia Research Group Inc. (MRG).

Overall, MRG projects that the annual growth rate for unit shipments of digital set-top boxes in 2012 will exceed 15%, with total worldwide unit shipments ending the year at 250 million, a new record high. However, there are some significant challenges to the set-top box market looming on the horizon. Foremost among these is the potential

"virtualization" of the set-top box. Virtualization could shift the functionality of the set-top box into a software platform or even the Internet cloud. While MRG is closely watching this potential shift, we do not see it having any significant impact on the market for the next few years.

The report examines the global set-top box market and forecasts worldwide unit shipments and revenues through 2016. It discusses and analyzes demand drivers and product development trends in all four digital set-top box market segments: cable, satellite, IPTV, and terrestrial. It also identifies leading set-top box vendors and details near-term market trends that are currently shaping the set-top box market. For more information go to: <http://www.mrgco.com/reports/the-global-set-top-box-market/>





o3bCell

o3bCell redefines satellite mobile backhaul by offering **higher downloads, superior voice quality** and **faster web response**. We do all this and still promise to save you at least one third of your current transmission costs.

www.o3bnetworks.com/o3bcell



o3b
Networks
Fiber Speed. Satellite Reach.

Key industry trends and opportunities.

The Role of Teleports in a 'Gigabit' World

New York, NY, September 24, 2012-The World Teleport Association today released a new white paper, *Teleports in a Gigabit World*, exploring how the continuing evolution of the Ka-band market and the technology race for gigabit throughput in C- and Ku-band are most likely to affect service providers. Based on interviews with senior executives of teleport, satellite and media companies, the report examines threats and potential opportunities and offers advice on what service providers can do today to defend against the downside as well as seize the upside.

High throughput satellite (HTS), a term coined in 2007 by research firm NSR, has pretty much been synonymous with the Ka-band of frequencies. But innovations in modem technology and satellite architecture are taking HTS mainstream, with big implications for the delivery of services to customers in media, government, military, oil & gas, mining, maritime and other markets.

WTA Executive Director and report author Robert Bell said, "In the short-term, service providers will implement HTS technologies as customer contracts renew and satellite leases

come due. They will naturally include HTS in the options they offer to customers, and some customers will take the plunge. But those near-term opportunities should not blind service providers to the revolutionary impact of HTS on their business and the entire industry. Entry into the Gigabit World may be the biggest transition in the history of satellite."

The report also lays out a specific steps providers should take to position their companies for the future.

Teleports in a Gigabit World is available free to WTA members from the [World Teleport Association website](#). Non-members may purchase a copy of the report from the site. (www.worldteleport.org)

Teleports in a Gigabit World

How the high-throughput satellite revolution will change the business of the ground-based service provider - and what you should do about it now



Future Tech REPORTS

WTA World Teleport Association
©2012 World Teleport Association.
All rights reserved.
September 24, 2012
USD 495.00. View for WTA members



Being green just got easier.

Xicom's new highly-efficient SATCOM HPAs and BUCs can help you go green.

Xicom Technology is introducing NEW high power amplifiers and BUCs with radically improved efficiency that will help you achieve your green goals.

- ❖ As much as 50% Space Savings
- ❖ Up to 40% Lower Power Consumption
- ❖ One-Third Lighter than Traditional Amplifiers
- ❖ Transportable for On-the-Move SATCOM
- ❖ Optional RF Input and Waveguide Locations



750W
Ku-Band
HPA



High Linear
Power
Ka-Band
HPA



400W
Ku-Band
HPA



40W
Ku-Band
BUC



FREE Android
Link Calc App

COMTECH
XICOM TECHNOLOGY

Amplifier Quality & Reliability Since 1991

3550 Bassett Street • Santa Clara, CA 95054 USA
www.xicomtech.com • e-mail: sales@xicomtech.com
Phone: +1-408-213-3000 • Fax: +1-408-213-3001



YOUR TRUSTED, QUICK RESPONSE, FIELD TACTICAL MILCOM SOLUTION

Reliable and theater experienced,
Agile Milcoms “gets it” and delivers.

Your SMALL BUSINESS SATCOM
Solutions Provider

CALL 408.782.1371 OR VISIT AGILECOMS.COM

See us at Milcom 2012 Booth 430

SATCON 2012: Connecting the Satellite Industry

SATCON 2012 Exhibition and Conference
Jacob Javits Convention Center, New York City
November 14-15, 2012

Now on its 11th year, SATCON 2012 stands at the crossroads of innovation and communications. Thousands of attendees and exhibitors alike will participate in the ever-changing conversation surrounding satellite-enabled communications and content delivery.

Government/military, media & entertainment, telecommunications, commercial, mobile satellite and enterprise organizations attend SATCON to see the latest products and technologies, network with peers and find potential partners and solution providers.

SATCON provides you with actionable information and knowledge to keep pace with the ever-changing global communications market. SATCON is part of the **Content & Communications World** (CCW) family of events which includes **HD World**, **Production+Post Expo** and 3D World, all co-located in the sprawling Jacob Javits Convention Center in New York City.

The SATCON Conference, which is free to qualified industry executives, features senior satellite industry executives and key military and government officials tackling the most important issue facing the industry, covering such areas as:

- Military and Homeland Security
- Federal, State and Local Government
- Government contractors
- Broadcast, Media & Entertainment
- Telcos & ISPs
- Utilities
- Education & Training
- Emergency Response/Relief Agencies
- Enterprise Markets such as Retail & Hospitality, Financial, Banking & Insurance, Energy, Oil & Gas, Healthcare & Pharmaceuticals, Maritime & Shipping, Transportation & Fleet Management
- Service Providers, Integrators and Resellers

There are also numerous networking opportunities and special events at SATCON including the Society of Satellite Professionals International (SSPI) Future Leaders Awards reception on the eve of SATCON and Satellite Markets and

Research's First Vision Awards reception at the end of the first day of SATCON on November 14.



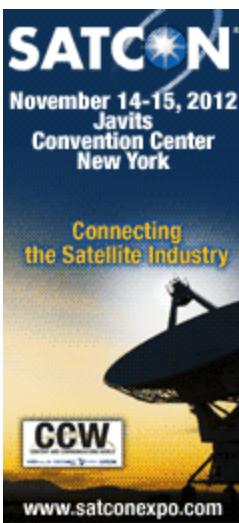
The **Vision Awards** will be granted in the following categories:

Visionary Executive of the Year- Awarded to an outstanding senior executive of a satellite company that demonstrated a keen sense of mission for his company and a forward-looking vision of where his company and the industry is heading.

Most Promising Company of the Year- Awarded to a start-up company that has experienced growth in the markets they serve and demonstrated long-term viability of their enterprise.

Most Innovative Product or Service of the Year – Awarded to a product or service launched during the year that makes a substantial improvement to existing technology or performs a vital service.

To nominate products, individuals or companies for the Vision Awards or to reserve a place at the reception go to: www.satellitemarkets.com/visionawards. Deadline for nominations is October 12.



“You can really cover a lot of ground in just two days at SATCON, in terms of meeting many of the most influential people in the satellite industry in an intimate business environment. Nowadays it is important for attendees to be as productive as possible whenever they travel, and we want to help attendees maximize their time spent at SATCON. New York City is premier destination, which helps us to attract a great quality audience,” said David Reynolds, Event Director for SATCON.

“We are the only show that provides free conference passes to end-users and greatly reduced conference passes to industry and vendors for as little as \$175 (early bird pricing) for a full conference pass. We want to serve the industry by making attendance more affordable for our attendees. This is the best way for us to help industry-leading exhibitors, industry partners, speakers and end-users gather at the event and discuss business expansion in the most important global markets for satellite-enabled communications.” Reynolds added.

To register for SATCON go to: www.satconexpo.com. Use **VIP Code CCE39** to register for a free all-access exhibition and conference pass at SATCON 2012.

Minimize The Impact of Ka-Band Rain Fade with **Walton Rain Quake**

Your Signal Without Walton Rain Quake



With Walton Rain Quake



Rain Fade is a serious challenge with the new Ka-Band systems.

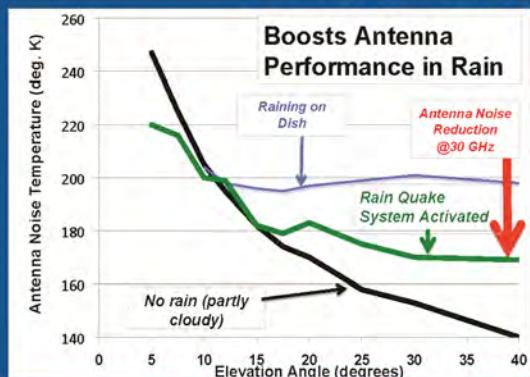
Signal attenuation at Ka-Band during heavy rainfall can be up to four or five times that of C/Ku-Band. Antenna wetting alone can add 2.7 to 3.9 dB of link losses at Ka-Band.



Rain Quake

Walton Rain Quake systems reduce rain fade on your Ka-Band antennas, and protect your antenna G/T performance. During heavy rain conditions, Walton Rain Quake systems can reduce data loss — by over 20X compared to Ka-Band antennas without protection.

- Prevents water from sheeting on your antenna surface - and causing Ka or Ku-band rain fade — from VSATs to large antennas.
- Covers your antenna — keeping rain off with GOREX® material that's virtually invisible to RF.
- Rain Quake is also the Ice Quake De-Icing System for year-round protection in areas with snow and ice.



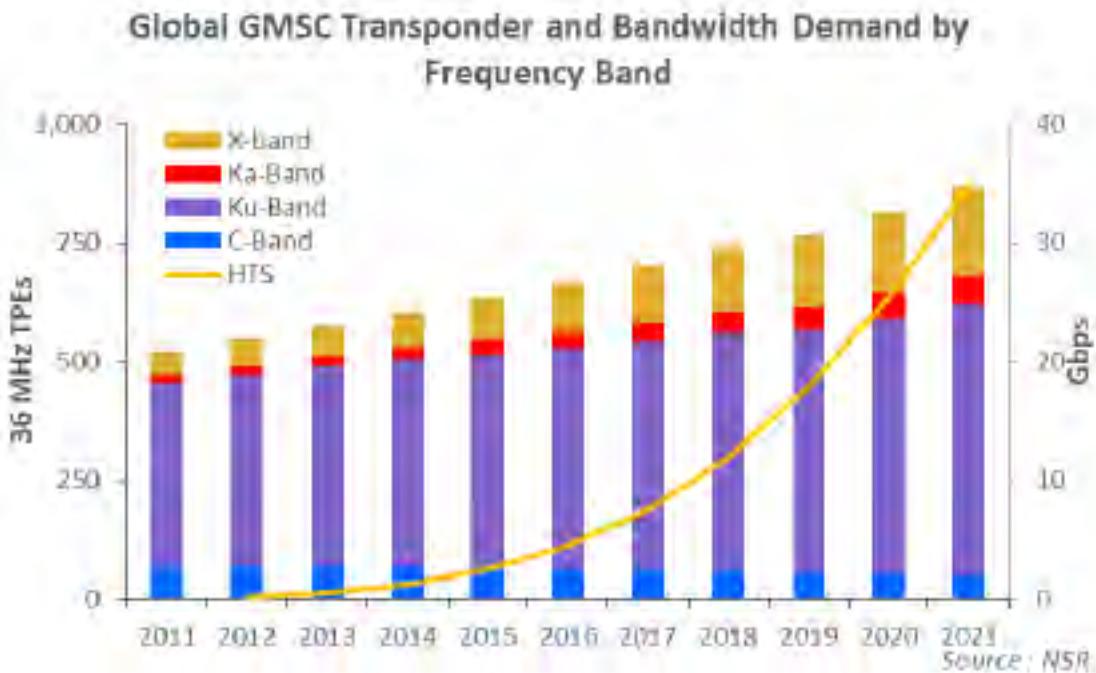
Tests show that the Rain Quake System helps to minimize bit error rates and antenna noise temperature increases, as well as increase your link margins during a rain storm.

**WALTON
RE-ICE**

Rain Quake

Solar Cover

Ice Quake



Global Government/Military Satcoms demand will continue to grow through 2021 according to a new report by NSR (*Government and Military Satellite Communications, 9th Edition*, released September 2012).

ADVERTISERS' INDEX

Advantech Wireless..... www.advantechwireless.com	2	Intersputnik..... www.intersputnik.com	5
Agile Communications..... www.agilecoms.com	29	MILCOM 2012..... www.milcom.org	22
Amos Spacecom..... www.amos-spacecom.com	6	Narda Test Solutions..... www.agfranz.com	11
Cobham Tracstar..... www.cobham.com/tracstar	23	Satservice GmbH..... www.satservicegmbh.de	20
Comtech Xicom Technology..... www.xicomtech.com	28	SATCON 2012..... www.satconexpo.com/smr	15
Globecomm Systems..... www.globecomm.com	13	O3b Networks..... www.o3bnetworks.com	27
Hispasat/ Hispamar..... www.hispasat.com	7	Walton Enterprises..... www.de-ice.com	31

The Satellite Markets 25 Index™

Company Name	Symbol	Price (Sep 28)	% Change from Last Month	52-wk Range		% change from 52-wk High
Satellite Operators						
Asia Satellite Telecommunications	1135.HK	23.00	-2.54%	14.00	24.75	7.07%
Eutelsat Communications S.A.	ETL.PA	25.01	1.63%	20.16	31.10	19.55%
APT Satellite Holdings Ltd.	1045.HK	2.15	5.91%	1.16	2.64	18.56%
Inmarsat Plc	ISAT.L	590.00	3.60%	361.68	613.14	3.77%
SES GLOBAL FDR	SES.F	21.115	0.40%	17.00	21.45	1.56%
Satellite and Component Manufacturers						
The Boeing Company	BA	69.595	-2.77%	56.90	77.83	10.58%
COM DEV International Ltd.	CDV.TO	3.01	-1.31%	1.55	3.28	8.23%
Lockheed Martin Corporation	LMT	93.38	1.00%	70.37	93.99	0.65%
Loral Space & Communications, Inc.	LORL	71.10	-2.56%	47.19	82.48	13.80%
Orbital Sciences Corp.	ORB	14.56	8.25%	10.59	15.96	8.77%
Ground Equipment Manufacturers						
C-Corn Satellite Systems Inc.	CMLV	0.63	-8.70%	0.45	0.90	30.00%
Comtech Telecommunications Corp.	CMTL	27.64	-3.36%	26.27	35.65	22.47%
Harris Corp.	HRS	51.22	8.40%	32.68	51.68	0.89%
Honeywell International Inc.	HON	59.75	2.03%	41.22	62.00	3.63%
Viasat Inc.	VSAT	37.38	-3.41%	31.57	49.80	24.94%
Satellite Service Providers						
Gilat Satellite Networks Ltd.	GILT	3.98	24.38%	2.31	4.35	8.51%
GlobeComm Systems Inc.	GCOM	11.15	-2.19%	9.44	16.00	30.31%
International Datacasting Corporation	IDC.TO	0.205	2.50%	0.19	0.35	41.43%
ORBCOMM, Inc.	ORBC	3.74	6.86%	2.16	3.95	5.32%
RRSat Global Communications Network Lt	RRST	5.59	9.18%	3.50	6.00	6.83%
Consumer Satellite Services						
British Sky Broadcasting Group plc	BSYBY	47.80	-1.18%	38.92	49.74	3.90%
DIRECTV	DTV	52.44	0.13%	39.82	55.17	4.95%
Dish Network Corp.	DISH	30.61	-3.95%	22.61	35.64	14.11%
Globalstar Inc.	GSAT	0.46	55.99%	0.22	0.91	49.45%
SIRIUS XM Radio Inc.	SIRI	2.59	2.37%	1.27	2.64	1.89%

INDEX	Index Value (Sep 28)	% Change from Last Month	% Change Jan. 03, 2012
Satellite Markets 25 Index™	1,248.11	1.73%	19.77%
S & P 500	1,440.67	2.17%	12.48%

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 Markets Index™ is January 2, 2008—the first day of operation for Satellite Market and Research. The Index equals 1,000. The Satellite Markets Index™ provides a benchmark to gauge the overall health of the satellite industry.

© 2012 Satellite Markets and Research, Satellite Executive Briefing and the Satellite Markets Index™ are trademarks of Synthesis Publications LLC. Synthesis Publications LLC is the owner of the trademark, service marks and copyrights related to the Index. This newsletter does not constitute an offer of an investment product. Satellite Executive Briefing makes no representation regarding the advisability of investing based on the information provided in the Satellite Markets Index™. All information is provided 'as is' for information purposes only and is not intended for trading purpose or advice. Neither Satellite Executive Briefing nor any related party is liable for any informational error, incompleteness or for any actions taken based on information contained herein.