Satelite Executive Vol. 2 No. 10 June 16-30, 2009 BRIEFING



Industry Trends, News Analysis, Market Intelligence and Opportunities

Satellite Industry Growth Continues Despite Recession

Industry grew an average of 14.2% in the last five years and is projected to grow by 50% through the next decade

by Virgil Labrador Editor-in-Chief

The Satellite Industry Association (SIA) released its 2009 State of the Satellite Industry Report at the ISCe 2009 conference in San Diego, June 3rd. The results of the report show a 19 percent growth in overall world satellite industry revenues – with revenues totaling \$144.4 billion in 2008. Global revenues for the satellite industry continue to increase, averaging an annual growth rate of 14.2 percent from 2003 – 2008.

"The satellite industry continued to post growth in 2008, led by satellite services and ground equipment sales," said Patricia Cooper, President of SIA. "The results for the past year are encouraging, and frame the need for policy decisions that can affect the industry's future growth such as export controls, broadband stimulus and U.S. government communications requirements."

SIA commissioned the Futron Corporation to conduct the 12th annual (Continued on page 6)

Asia-Pacific Satellite Market Replete with Opportunities

by Tom van der Heyden

In the course of my work as a consultant and executive recruiter based in Asia, I have spoken to over 150 satellite and digital broadcast sales, business development and senior management professionals in the last six months on the prospects of the Asian market. The consensus among key satellite executives is that the business of satellite communications in Asia continues to grow and is better off than other regional markets by "a significant margin."

The worldwide economic downturn notwithstanding, all indicators point to a robust and dynamic Asian market that will not only weather the storm but prevail. As on executive put it: "Asia is not waiting on anyone or anything!"

Most are also quick to describe that second quarter looks much better than first and that many companies have decided to both - shift focus from other regions to Asia and to allocate budget in a targeted, rifle shot manner, as opposed to a shotgun approach. Sales commissions and incentives have

generally increased and at the same time meeting one's sales quota is no longer a sure thing. In a recent conversation with a VP of Sales for a European equipment manufacturer, his focus was clear – "We are going to hire the best and incentivize them well, to expand our business base in the only market that makes sense for us to be investing in – Asia."

There is much evidence supporting the bullishness of investors in the Asian market. On June 2. EchoStar announced it had partnered with AsiaSat to provide DTH services to Taiwan and the region and just two weeks earlier the ProtoStar - Indostar

(Continued on page 4)

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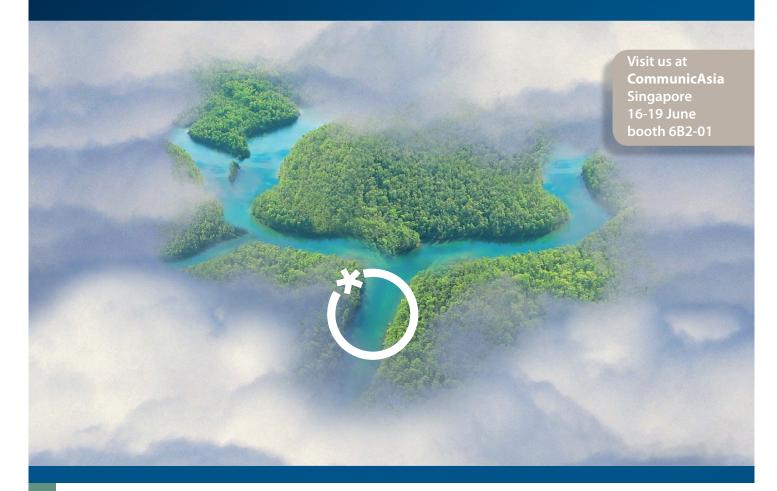
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From the Editor

Initial Reports from the Show Floor at CommunicAsia



The beauty of this electronic medium is that we can provide almost real-time reports in various formats, whether it be this pdf newsletter, or the video and audio podcasts in our website www.satellitemarkets.com That means that you will get current news and information as they unfold and not a few months later as in the case of some print publications. I am writing this now

from the show floor of CommunicAsia in Singapore and in a short few hours our 20-page pdf newsletter will be sent to our over 7,000 subscribers worldwide. But we haven't totally abandoned the print medium. In fact, our printed issue made especially for CommunicAsia is so popular because of its handy format and concise yet comprehensive coverage.

Organizers of CommunicAsia have anounced that attendance is down about 16 percent from last year and the CASBAA Satellite Industry Forum held the day before CommunicAsia also looks like it has lost some attendance from last year. But the overall theme from the conferences so far among the speakers from major satellitecompanies is that Asia is a bit different from the rest of the world and is weathering the global economic crisis quite well. A largely untapped population and growing economies not heavily leverage by the financial markets are working in Asia's favor during this recession. The fact that almost all the major global players are here in Singapore for the show is a testament to the importance and long term viability of this region for satellite services. One of the top executives include Romain Bausch, CEO of SES, the second largest satellite operator in the world today. I have had the chance to interview Mr. Bausch, and do watch out for the full video interview in the MarketCast section of our site and other in-depth coverage of the show shortly.

Meanwhile, the opportunities in the Asian market are discussed in the cover story of this issue written by Tom van der Heyden a 30-year veteran of the Asian satellite industry.

I would like to take this opportunity to invite everyone to our booth at CommunicAsia, which we are sharing with the GVF, at Hall 6 booth # 6D4-08. Drop by to see our various information products or just to chat. We'd love to see you and hear from you.





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Story

Asia-Pacific Market...from page 1

spacecraft was successfully launched. Earlier this year PLDT and Smart Communications launched a DTH service in the Philippines. Equipment manufacturer C-Com reports recent sales in Vietnam, China, New Zealand, India, Malaysia and Iraq and this kind of regional spread is more common than you might think. The Rockwell Collins's purchase of Swe-Dish (part of Data Path) was finalized earlier this week, a company selling their suitcase terminals in large numbers across the region. Thuraya is expanding their regional presence and offerings beyond their satellite based mobile telephony offering, and in the words of a senior product manager for one of the larger carriers, "There are plenty of satellite opportunity begging for our attention."

Recognizing the region's value five new members have been added to the Cable and Satellite Broadcasting Association of Asia (CASBAA) roll call; two from India, and one each from Taiwan, Hong Kong and the US – with the US

entrant being a satellite service provider operating across Asia.

Over the last six months many of the European companies have taken their business plans off hold and are expanding their Asian presence, while their North American counter parts continue to take a more cautious approach. Focus countries remain China and India - with Indonesia, the Philippines and Vietnam continuing to

well worth paying attention to. In addition, Middle East and Eastern European companies are pushing forward with plans to establish their Asian presence, while at the same time Asian companies are opening offices this year across

the Middle East including Afghanistan, UAE, Pakistan and Uzbekistan.

European television broadcast equipment and system manufacturers who have established new or expanded existing presence this year thus far include; set top box, middleware, media asset management, conditional access, compression, and video play-out system companies. Tandberg TV, for example, reported a 43% increase in APAC

telcos look to differentiate their offering with mobile television service—And DTH revenue models are adapting to consumer make-up with advertizing, a trade-off against subscription based ARPU, becoming an ever larger part of the DTH revenue stream.

Asian-Pacific pay television and broadband continues to grow with most industry pundits expecting 2009 growth between 10% and 13%. The five year

projection is to see a doubling in regional revenues from some US\$50 billion to over US\$100 billion. New DTH operations this year in Asia include Indonesia and the Philippines. Mediascape has launched a satellite pay-TV platform, Cignal Digital TV, in the Philippines and Protostar successfully

launched IndoStar II which will replace the IndoStar-I satellite now in its 12 year of service as Asia's first DBS and the world's first S-band commercial DTH service. The spacecraft also carries a Ku-Band payload (Protostar II) which provides Philippines, Taiwan and Indonesian coverage.

India's new subscriber growth has slowed to 1.3 million subscribers being added in the 1st quarter of 2009 with a decline in

"... in the words of a senior product manager for one of the larger carriers, "There are plenty of satellite opportunity begging for our attention."

revenues in 2008 focused on video compression and on-demand services.

DTH

The Asia-Pacific region is seeing growth which, for the most part, is driven by television including DTH, feeder links and content distribution. Service providers are preparing to stream video to cellular carriers and wireless infrastructure operators as

ARPU of up to 50% among the new subs. Indian DTH has added 7.5 million subscribers since January 2008, and by most accounts this represents only 10 – 15% of the market's ten-year potential.

Mobile TV

Driven by consumer demand and technology developments, South Korea is comfortably several years into satellite based television broadcasting direct to the handsets using the Digital MultiMedia Broadcasting – Satellite (DMB-S) standard. China where the Mobile TV market is expected to take off based on homegrown standards (i.e. T-DMB & CMMB) (China Multimedia Mobile Broadcasting).

Speedcast holds Mobile TV as one of their three focus points in a region that is looking toward 50% mobile TV

Moving Data

Demands for access to data and the internet by industries including maritime, off-shore oil facilities, media broadcasters and NGOs operating in rural areas are driving regional service providers to rethink their service offering.

Thuraya recently launched an A5 sheet of paper sized terminal capable of 444 kpbs. Thuraya also has plans to expand its service offering and establish local presence across Asia served from its regional headquarters in Singapore.

Thaicom's IP-Star announced services "open standard network" which is now concentrating on bandwidth sales rather than end-to-end service provision.

Maritime services continue to grow in Asia with Speedcast, ShipEquip, CapRock, and others all increasing their regional activities.

In sum, the Asia-Pacific region is buzzing with activity and there is no shortage of opportunities.



Tom van der Heyden is a Hong Kong based satellite communications industry pioneer and Recruiting Consultant with MRI China. He can be reached at phone +852 3656-5694 or e-mail: thomas.vanderheyden@mrihk.com

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Satellite Industry...from page 1

State of the Satellite Industry Report. Futron polled over 70 satellite companies, both SIA members and nonmembers, to determine aggregate revenues in each of the satellite industry's sectors: satellite services, satellite manufacturing, launch industry and ground equipment.

In 2008 the ground equipment sector was the fastest-growing satellite industry segment, followed by the satellite services sector which continues to demonstrate increased growth. Key findings of the report include:

- Satellite Services revenues maintained a steady growth of 16 percent, with satellite television leading this sector, amounting to a total of \$67.3 billion in 2008.
- Satellite Manufacturing revenues decreased slightly from \$11.6 billion in 2007 to \$10.5 billion in 2008, as fewer new satellites were launched.
- Launch Industry revenues increased by 20 percent in 2008, with United States launch industry revenues remaining relatively constant at \$1.1 billion.

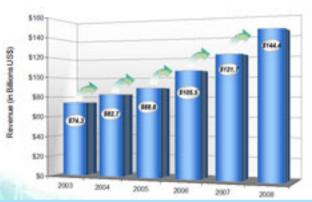
• Ground Equipment

revenues grew fastest at 34 percent, increasing to \$46 billion, second only to satellite services. Consumer-oriented products, including satellite TV and broadband, mobile satellite and GPS devices, led the growth in this sector.

Meanwhile, Euroconsult estimated 1,185 satellites will be built and launched for the period 2009-2018, an increase of about 50% compared to the previous

decade (1999-2008). Market revenues generated from the manufacturing and launch of these satellites are forecast to grow by the same rate, reaching \$178 billion for the period 2009-2018 according to Euroconsult's "Satellites to be Built & Launched by 2018, World Market Survey" released June 8th.

Both the government and commercial sectors will contribute to this market growth, albeit unequally, according to



Global revenues for the satellite industry continue to increase, averaging an annual growth rate of 14.2 percent from 2003 – 2008. The industry has consistently posted positive growth since SIA started doing the annual Industry Report in 1997. (source: SIA)

Rachel Villain, the editor of the Survey and the Director for Space & Communications at Euroconsult. "The ongoing global economic crisis will have a limited impact on the industry. Governments around the world remain committed to space technology development and only a small number of commercial satellite operators with business or financing issues will be

affected by the downturn." Governments drive future satellite demand — particularly for civilian applications Civilian and military government agencies will launch a combined 770 satellites in the next decade, a 55% unit increase over the past ten years. Two-thirds of these satellites will be for civilian or dual use. Civil satellites represent a higher proportion of government satellites than the previous decade. While ongoing defense

and security concerns create opportunities for dedicated satellites or hosted payloads on commercial satellites, demand for proprietary military satellite systems remains concentrated in a limited number of countries.

Market growth will come from US, Russia, Europe, Canada, China, Japan and India, among others. Together they will procure satellites for operational missions in Earth observation, meteorology, navigation, and communications, and will develop space science & exploration missions, and technology

demonstration satellites. Earth observation is emerging as the largest application with a total of 230 satellites over the next decade as more governments order and launch satellites through national space agencies, multilateral agencies and public-private partnerships for both civilian and military uses of satellite imagery.

At \$116 billion over the decade, the government market is almost double the commercial market but it is largely closed to non-domestic suppliers. Most of that market is for satellites whose final destinations are low Earth orbits (41%) with higher altitude orbits (GTO, MEO, HEO and deep space) making up the difference

The commercial satellite market is forecast to grow by over one third in both number of satellites and market value. This growth reflects two distinct trends:

The maturity of the commercial geostationary communications satellite industry (GEO comsat) - This dominant segment of the commercial market is now driven by replacement of in-orbit satellites with fewer new

entrants, resulting in **cyclical investments** for such systems (ex. nearly three quarters of the 88 satellites ordered in the past four years are for the replacement or expansion of existing orbital slots). Euroconsult forecasts 235 satellites to be launched over 2009-2018 with a market value of \$52 billion. The peak of the cycle will occur early in the decade with over 30 units to be launched per year, declining to fewer than 20 units per year at the end of the period.

Growth in commercial satellite services outside the geostationary orbit, with a total of 180 satellites to be built and launched during the period, up from 104 the previous decade. These are communications satellites being launched into low Earth orbit for the

second generation of Orbcomm, Globalstar and Iridium and into medium Earth orbit (O3b) in addition to optical and radar Earth observation satellites launched into low Earth orbit (e.g. Infoterra, GeoEye, RapidEye).



Virgil Labrador is the Editor-in-Chief of Satellite Markets and Research based in Los Angeles, California. He

is the author of two books on the satellite industry and has been covering the industry for various publications since 1998. Before that he worked in various capacities in the industry, including a stint as marketing director for the Asia Broadcast Center, a full-service teleport based in Singapore. He can be reached at

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Military, Civil Response Officials Share Insights at ISCEe 2009

diverse mix of military leaders, state disaster recovery officials and industry executives shared a range of insights on making the best use of the global satellite communications grid during the three-day ISCe conference organized by Hannover Fairs USA from June 2-4 in San Diego, California.

With its program focused on "SATCOM for Security, Recovery, Victory," ISCe 2009 provided a broad forum for satellite users, planners and providers to discuss both how existing satellite communications networks can meet warfighter

and emergency response needs. and how today's systems and equipment can be improved for even better service in the years ahead.

ISCe ISCe

From left, Art Paredes, President, Hannover Fairs USA introducing one of the many distinguised panels at ISCe which featured VADM Lyle Bien, USN (ret.), RDML Janice Hamby, Brig. Gen. Jeffery Horne, Marvin Langston, Steve Nixon and Stuart Linsky.

One of the highlightsof the conference was a presentation by Lt. Gen. Russel Honoré, U.S. Army (Ret.), who commanded Joint Task Force Katrina during the 2005 disaster. Honoré, a Louisiana native, described the hard lessons learned by disaster planners when the New Orleans communications grid failed during the aftermath of the hurricane that swept through the Gulf coast. Liberally using colorful metaphors to stress his point, Gen. Honoré emphasized that more attention should be focused on

preparedness rather than the response to emergencies. Honoré said that being good at responding during disasters is "like being good at closing the door after the pigs have been let out."

At the conference, ISCe again teamed with the Satellite Industry Association (SIA) and the Program Executive Office for C4I to provide the third annual Navy SATCOM Users Workshop on the closing day of the event. The workshop brought together the Navy's SATCOM leadership, Pentagon planners and satellite industry officials to discuss

ways to improve satellite communications to ships at sea and Marines stationed in remote locations around the world

Several themes dominated ISCe 2009: the emergence of hosted government payloads aboard commercial satellites as a means of getting military

assets into space; the importance of satellite communications as a mandatory backup for civil communications networks; and the challenges created by the growing military demand for commercial satellite capacity over Iraq and Afghanistan.

During ISCe's annual awards luncheon hosted by Intelsat General Corp. and Paradigm Secure Communications, ISCe honored VADM Lyle Bien, United States Navy (Ret.), with

its Lifetime Achievement Award. Previous recipients have included David Hershberg (Globecomm Systems) Dr. Harold Rosen (formerly of Hughes), ADM James Ellis Jr. (US STRATCOM), and Dr. Denis Curtin (XTAR). In addition, the ISCe Innovation & Technology Award was presented to the Missouri Department of Transportation for developing its Satellite Emergency Network, while the

ISCe Industry Leadership Award went to CapRock Government Solutions for launching the industry's first managed network services based on commercial X-band.

"ISCe is an ideal forum for government and commercial satellite communications leaders to share not just experiences with how they use today's systems, but to gain insight into the challenges faced by both sides in planning tomorrow's satellite networks," said Art Paredes, President of Hannover Fairs USA. "During these tough economic times, it is even more critical that the commercial satellite industry and government and military planners communicate directly with one another on system requirements and funding issues. ISCe provides an opportunity for them to work together as partners and to understand one another's challenges."

On the final day of the conference, ISCe and Futron Corp. jointly issued the results of their annual survey of conference attendees. The survey found that more than half of the government respondents believe the greatest challenges they faced in using commercial satellite capacity was either integrating it into their existing network infrastructure or maintaining their own staff proficiency in using the capacity. More than two thirds of government respondents said in the survey that the commercial industry

understands their needs and procurement requirements. In response to another question, over half of commercial attendees anticipate that future government business will be higher than at present. And three quarters of government respondents anticipate little or no impact from government satellite launches on their commercial satellite use.

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No matter when, no matter where, when your application requires "must have" connectivity, the iNetVu can deliver.

At CommunicAsia2009, visit C-Com at Hall 6 booth # 6J2-10

GlobeCast to Showcase Media Sharing Top HD Platforms and WebTV

GlobeCast, a major content management and delivery specialist, will be demonstrating its Media Sharing Platforms and highlighting its



top HD platforms as well as upcoming coverage of sporting events at stand **6F2-01**, **Hall 6**. The France Telecom company leverages the strength of its local expertise in Asia to provide broadcasters and content providers with global solutions that vary from Media Management and playout to full-fledged delivery via its global satellite and fibre network.

For its Media Sharing Platform demo, GlobeCast will partner with recently acquired subsidiary NETIA to show an example of a digital channel workflow. Using systems such as GlobeCast's Content Exchange and Netia's Hypercast Warehouse which provide a secure network for file sharing and exchange as well as intelligent indexing and archiving of content. Customers will experience some of these services firsthand from the unique perspective of both the producer and broadcaster, from selection, sharing and indexing content, all the way through to simulated playout and delivery.

GlobeCast will also showcase international content for distribution to IPTV platforms and hotel networks worldwide as well as WebTV solutions.

2010 will be a blockbuster year for sport for GlobeCast who is the broadcast partner and service provider for major events such as the IPL Twenty20 and the Olympics. GlobeCast's sports contribution team will be on hand to discuss upcoming sporting events such as the FIFA World Cup in South Africa, XXI Winter Olympics in Vancouver, Asian Games and Commonwealth Games. Services are planned for

both rightsholders and non-rightsholders to bring these special events, some in HD, from the stadiums to the rest of the world. GlobeCast's services are also available for broadcasters covering the 2010 Youth Olympics Games in Singapore.

At CommunicAsia2009, visit
GlobeCast at Hall 6 booth # 6F2-01

SkyWAN® IDU 7000 series— The new standard for MF-TDMA performance

ND SatCom SkyWAN® is an advanced MF-TDMA VSAT system for establishing wide area corporate networks. The SkyWAN® IDU 7000 series introduces new members of the ND SatCom SkyWAN® product family, providing a highly efficient and robust modem technology platform for the next generation of satellite networks.

In comparison with other satellite modems, the *SkyWAN®* IDU 7000 terminal series prevails due to distinct features such as:

- The most advanced and powerful modem in the TDMA market
- Enabling mobile and transportable applications with the smallest antennas and highest performance
- Advanced security features:

o Separation of network management data and user traffic



- o Risk mitigation of unauthorized access
- Protection against frequency interference
- Seamless integration with terrestrial networks using the latest IP capabilities and load balancing features

The new key capability is the introduction of patented Turbo-o Coding, which enables reduction of antenna size and RF equipment up to 50% or almost doubles the available data rate with existing RF equipment, and data rates up to 10 Mbit/s.

This new series suits various kind of market segments with the need for reliable, secure and mesh communication such as the government & defence arena, Air Traffic Control, energy, all kinds of enterprises with remote sites and last but not least the broadcast & media world. Due to its inherent flexibility and scalability the new SkyWAN® IDU 7000 series will enable users to establish the best possible communication solution in their environment.

At CommunicAsia 2009, visit ND SatCom at Hall 6 booth #6D1-01



SAN FRANCISCO INTERNATIONAL GATEWAY (SFIG) is a commercial teleport located in Northern California.

SFIG's 24x7 technical facility consists of 19 satellite earth station antennas, of various sizes from 13.0 meters to 2.4 meters to serve uplink and downlink

requirements for C and KU band satellites. SFIG can access any US domestic satellite as well as Canadian and Mexican satellites plus most Pacific Ocean satellites up to 169 degrees E longitude.

The Master Control room is equipped with Miranda iControl for monitoring and quality control of incoming and outgoing feeds.

SFIG provides teleport services such as:

San Francisco International Gateway

- •Third party antenna and equipment colocation;
- Adhoc or occasional use services for uplink and downlink of video/ audio programs:
- Full-time DTH platform lease on Galaxy 19, the premier broadcast satellite for North America as well as on PAS 8 Ku-Band for Australian DTH platform;
- Full-time transmission of video, telephony, IP and data circuits to satellites operated by Intelsat, New Skies, SES Americom, SatMex, Telesat and other satellite operators.
- Bundled telecommunications services leveraging ABS-CBN's telecom capability

using its NACT switch located in One Wilshire, Los Angeles;

- Standard teleport services including uplink and downlink as well as turn around services to fiber or other satellites;
- Asian teleport located in Manila, Philippines for additional turnaround and broadcast services:
- · IPTV distribution; and
- Asset sales.

At CommunicAsia 2009, visit SFIG at Hall 6 booth # 6F1-10

Newtec-

Newtec's FlexACM Solution

SHAPING THE FUTURE OF SATELLITE COMMUNICATIONS

Newtec's FlexACM is a unique end-to-end solution for implementing ACM (Adaptive Coding and Modulation) technology, IP shaping, compression and acceleration in a very efficient way for IP trunking and IP backbone satellite links. The implementation of FlexACM can result in a doubling of the data throughput in a given satellite segment while also guaranteeing a 100% link availability.

By using FlexACM, teleport operators do not have to take rain margin into account at all. When the conditions of the link become worse because of rain fade or other reasons, the system will automatically change the parameters to avoid loss of signal reception. In fact, in almost every form of interference or in less optimal transmit or receive conditions, like ground noise, tracking losses, cross poll and inter-satellite

interference, FlexACM proves to be beneficial.

ACM is part of the DVB-S2 standard, allows modification of the modulation and coding parameters (modcods) of a satellite signal on the fly, without interrupting the transmission and without losing data.

Newtec's FlexACM solution is more than DVB-S2 ACM: it is the first commercially available system on the market, which integrates DVB-S2 ACM with advanced IP optimization technologies such as

traffic accelerating, compression and shaping. The FlexACM solution can be used in point-to-point and point-to-multipoint systems, in one way (with terrestrial return channel) as well as in two way configurations (with the return channel also over satellite). It is also possible to implement the FlexACM solution in existing satellite links without changing the rest of the transmission chain, such as the antenna and HPA.

The FlexACM solution combines ACM technology with an automatic measurement of the instantaneous link conditions (signal to noise ratio) every few seconds and a system that automatically adjusts the modcods parameters when needed. Under these circumstances, the satellite link always uses the highest possible modulation scheme and the lowest possible level of error correction, while still keeping the signal to noise ratio above the minimum threshold to guarantee an error free transmission at all times.

FlexACM, Point-to-Multipoint, Two way

ACM signaling via satellite IP lick

FlexACM controller or EL170 IP modulator or EL170 IP demodulators or E

The FlexACM system must then decide how the remaining capacity is distributed among the different services and receiving points. This requires a dynamic shaping of the IP services and a QoS management in line with the bandwidth variations caused by the ACM behavior. In addition to this. the built-in traffic

shaper also needs to ensure priority for services with predefined SLA, VoIP, audio and video services. By using FlexACM, technology teleport operators can turn the additional rain margin that was wasted before, into increased data throughput, resulting in extra revenue for the teleport operator. To further optimize the efficiency of the system, FlexACM includes *cross layer optimization* using advanced features such as traffic acceleration and dynamic compression of the IP traffic, which bring a considerable reduction of the data traffic that needs to be sent over the satellite link.

FlexACM® is part of Newtec's *Elevation* product line that allows simple, yet very efficient implementation of ACM in

IP trunking and IP backbone systems.

At CommunicAsia 2009, visit Newtec at Hall 6 booth # 6B2-01

MarketPlace

A guide to new products and services

AT&T Launches CruiseCastSM

AT&T Services Inc. and RaySat Broadcasting Corporation (RBC) launched its **AT&T CruiseCast**(SM) service June 3rd and is now available across the continental United States.



Whether driving around town or on vacation, consumers can now enjoy 42 channels of satellite TV and radio on their existing rear-seat entertainment systems.

The

programming lineup also includes five additional video channels that are favorites among young children, "tweens" and teen-agers.

The AT&T CruiseCast service is made consumer-friendly by the unique scaling down of satellite technology into the small pod-like antenna that affixes to the roof of vehicles. The antenna is paired with a receiver that is mounted in the vehicle and provides all video and audio connections to the appropriate vehicle systems, such as rear seat entertainment, vehicle audio system, etc.

AT&T CruiseCast service is available through a nationwide network of authorized installers and aftermarket-car retail outlets. The manufacturer's adjusted price (MAP) of the equipment (antenna and receiver) is US \$1,299 and the monthly subscription fee is US \$28.

Starling Introduces StarRailTM

Starling Advanced Communications is unveiling StarRail, the newest entry in its portfolio of flat-panel satellite antennas for "Broadband on the Move" at CommunicAsia 2009, June 16-19 in Singapore at booth #6E1-01. StarRail provides broadband communications aboard high-speed trains.

Measuring only 38 in/96 cm in diameter, weighing a mere 60 lbs/27 kg, and with a low profile of 7.5 in/19 cm, the unit's aerodynamic design ensures virtually no interference with surrounding power lines and complete tunnel clearance. StarRail complies with all railway standards, and

its features make it an ideal solution for cross-continent and international high-speed rail travel across any type of terrain.

Comtech EF Data's New CDM-740 Modem

Comtech EF Data Corporation introduce the new CDM-740 Satellite Modem. The system's innovative, high performance architecture features an integrated DVB-S/S2 Receiver and a Turbo Product Coding (TPC) Single Carrier Per Channel (SCPC) Modulator. The combination of a shared, high speed outbound DVB-S/S2 carrier and TPC for the low latency data return channel facilitates efficient IP networking and transport over satellite.

Packaged in a carrier-grade 1RU platform, the CDM-740 Satellite Modem saves rack space and simplifies remote



management compared to two box solutions. Optimized for high-speed packet processing and reliability, it uses an embedded central processing unit, real time operating system and flash data storage. The CDM-740 offers dual Gigabit Ethernet interfaces and is available in modem and demodulator only configurations. The system transmits industry-standard TPC up to 9.98 Mbps. The receive side supports DVB-S and DVB-S2 operation at L-Band up to 62 Msps.

Inmarsat Launches BGAN X-Stream Service

Inmarsat has introduced BGAN X-Stream on-demand streaming that guarantees data rates from a minimum of 384kb/s to about 450kb/s.

The new premium IP streaming service is accessible through existing hardware — single, compact, lightweight BGAN terminals from Hughes and Thrane & Thrane — without the need for external antenna or additional hardware. The enhancement represents an increase in BGAN's streaming rate of at least 50 percent. Inmarsat initially made BGAN X-Stream commercially available April 20 on the Inmarsat-4 EMEA satellite. It is scheduled to be available worldwide at the end of June.

Interview with XTAR COO Dennis Curtin

t the ISCe 2009 show in San Diego, Calfiormnia, XTAR LLC's COO Dennis Curtin spoke with Satellite Markets and Research Editor-in-Chief Virgil Labrador on the market for X-Band satellite services. XTAR LLC is a joint-venture between Loral Space and Communications and a Spanish company, Hisdesa, aimed at providing X-band services to military and government users in the US and allied nations. Excerpts of the interview:

You started operation in 2001 providing X-Band services to government and military users in 2001 and you have two satellites. How's that going for you and what's the utilization rate of your satellites?

It's been going extremely well because in the last couple of years, there has been a lack of Ku- and C-Band capacity in the areas tht we cover, primarily in Africa, the Middle East and South West Asia. The demand for our services picked up dramatically and in fact, it was announced today at the show that Caprock won an ISCe award for a service that was facilitated by 200 MHz of capacity that they bought from XTAR.

How is the joint-venture working out with Hisdesat?

It's working out very well. Loral owns 56% of XTAR while Hisdesat owns the remaning 44%. XTAR is a US-managed company, with Loral being the general partner. Eachpartner has gotten to know each otehr very well since the venture started in 2001 and have been working together smoothly.

What does each partner bring into the table?

In the case of Loral, they had the Space Systems Loral division that manufactured our two satellites at a very good cost. In the case of Hisdesat, which is composed of various Spanish aerospace companies and the Spanish Ministry of Defense, they have a tremedous understanding of what's going on in Europe and this has enabled us to sell a lot of capacity to various European Ministries of Defense.

Are you bullish about the prospects in the market for X-band satellite services?

Yes, we are very bullish about the prospects for X-Band. Since we basically service all the legacy and new X-Band equipment--all the X-Band equipment being built for the US WGS satellites and the European NATO or Paradigm satellites--can work just as well with XTAR. We've picked up a lot of business just from the situation that the military satellites have not been able to provide the service.



What applications are X-band used for?

It's primarily a military band not only in the US but all over the world. It's an ideal band because you don't have the weather limitations of Ku- or Ka-Band. It's well coordinated all over the world and the orbital slots are relatively far apart, so you don't have any of the interference issues with small terminals. It's ideal for comms-on-themove applications.

What's your take on the prospects of the military market in the current economic environment?

I think with the cancellation of the TSAT program and the pressures on the budget, there will be fewer military systems developed in the long-term. Since military and government demands for communications will only continue to grow, there is an opportunity here for commerical services such as ours to meet those demands.

executives

To view a video of the complete interview with Dennis Curtin and other interviews with key at ISCe 2009 and other shows, go to

www.satellitemarkets.com/media/videolist.php

Calendar of Events

June 2-4, 2009 **ISCe 2009** San Diego Marriot Hotel and Marina, San Diego, California, USA Tel: +1 (562) 901-9191 Fax: +1 (562) 901-9192 e-mail: info@isce.com web: www.isce.com

June 15, 2009 **CASBAA Satellite Industry Forum,** Four Seasons Hotel, Singapore Tel: +852- 2854-9913 e-mail: events@casbaa.com web: www.casbaa.com/satellite industry forum.aspx

June 16-19, 2009 **CommunicAsia 2009** Singapore Expo Convention Center, Singapore, Tel: +65- 6233-6638 web: www.communicasia.com

September 7-10, 2009 World Satellite Business Week 2009 Paris, France Tel: +33-(1) 49 23 75 24 e-mail: mandeng@euroconsult-ec.com

web: www.satellite-business.com

September 10-15, 2009 **IBC Conference and Expo 2009** RAI EXhibtion Center, Amsterdam, The Netherlands Tel: +44-(0) 20-783-24100 e-mail: show@ibc.org web: www.ibc.org/

September 29-October 1, 2009 **APSCC 2009 Satellite Conference and Exhibition**, Kuala Lumpur, Malaysia. Tel: +82 31 783 6246 e-mail: info@apsc.or.kr

web: www.apscc.or.kr

October 5-9, 2009, **ITU Telecom World 2009**, Geneva, Switzerland, Tel. +41 22 730 6161 Fax: +41 22 730 6444

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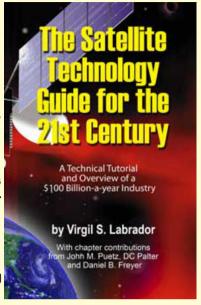
The Satellite Technology Guide for the 21st Century

by Virgil S. Labrador with chapter contributions from John M. Puetz, DC Palter and Daniel B. Freyer.

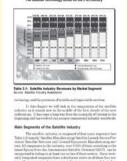
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The Satellite Technology Guide for the 21st Century clearly explains in non-technical terms the basics of satellite communications technology and how it works. This book also provides a historical background of the industry, its current status, market prospects, trends and the future of satellite communications.



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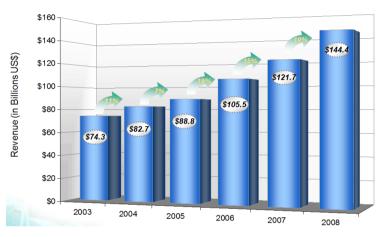
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Satellite Industry Revenues Top \$144 Billion in 2008

The Satellite Industry Association (SIA) released its annual survey of the satellite industry at the ISCe Conference last June 2nd. For the 12th year in a row, the global satellite industry posted positive growth. In 2008, the industry grew by 19 percent and topped US \$144 Billion in revenues. SIA President Patricia Cooper told Satellite Markets and Research that indicators are good that the industry growth will continue this year. To view a video of the interview with SIA's Cooper on the highlights of the report go to www.satellitemarkets.com/media/videolist.php



Source: Satellite Industry Association (www.sia.org)





The Satellite Markets 25 Index™

Company Name	Symbol	Price (June 16)	% Change from 2-Weeks Ago		% Change from 52-wk High
Satellite Operators					
AsiaSat Eutelsat Communications Hughes Communications Inc. Inmarsat SES	1135.HK ETL.PA HUGH ISAT.L SES.F	8.60 17.40 24.23 514.00 13.17	-4.12% -4.45% +8.36% -1.63% -6.33%	4.61-15.00 14.40-20.50 8.25-55.99 300.00-585.00 11.36-16.81	38.98% 8.95% 55.27% 14.90% 16.36%
Satellite and Component Manufa	cturers				
Boeing COM DEV International Ltd. Lockheed Martin Corp. Loral Space and Communications Orbital Sciences Corp.	BA CDV.TO LMT LORL ORB	49.57 3.28 82.13 26.78 16.54	+3.92% -3.24% -2.41% -13.95% +12.29%	31.40-88.29 2.21-3.95 63.10 -120.30 6.02- 31.12 13.60 -27.89	42.26% 14.82% 30.04% 8.13% 43.99%
Ground Equipment Manufacture	's				
C-COM Satellite Systems Inc. Comtech Telecommunications Cor CPI International, Inc. EMS Technologies, Inc. Viasat	CMI.V p. CMTL CPII ELMG VSAT	0.27 29.91 11.39 19.04 26.58	-15.63% +6.56% -6.64% -5.27% +2.59%	0.15-0.50 36.51-51.21 5.07-16.02 16.20-31.78 15.10-28.07	20.00% 41.93% 23.85% 29.55% 7.70%
Satellite Service Providers					
Gilat Satellite Networks Ltd. Globecomm Systems Inc. Internatinal Datacasting Corp. ORBCOMM Inc. Skyterra Communications	GILT GCOM IDC.TO ORBC SKYT.OB	3.79 6.82 0.26 1.66 2.86	+4.12% 0% -10.34% 0% +2.51%	2.17-11.20 3.96-10.94 0.15-0.69 1.22-6.87 3.55-8.85	67.50% 37.66% 39.80% 75.80% 68.47%
Consumer Satellite Services					
British Sky Broadcasting Group The DIRECTV Group ECHOSTAR Communications Globalstar, Inc. Sirius XM Radio Inc.	BSY DTV DISH GSAT SIRI	28.15 22.19 14.58 1.65 0.33	-4.58% -3.56% -13.88% +57.14% -5.40%	19.90-46.30 17.70-29.10 8.34-36.11 0.15-7.98 0.05-3.89	31.00% -20.93% -52.62% -69.30% -87.27%

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

Comparison of Indices	Index value	Percentage Change	
	(June 16'09)	2-Weeks Ago Jan. 2 '08	
Satellite Markets 25 Index™	883.47	→ -1.52% → 16.53%	
S & P 500	942.87	4 -2.22% 4 31.73%	

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// Global Presence //

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// Reputation //

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For more information go to www.ndsatcom.com or e-mail: info@ndsatcom.com

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