

October 2005

Worldwide Satellite Magazine

Vol. 3 No. 6

# Not precisely . . .

# But a great idea .

# **In - Flight Satellite Services**

Your Satellite Connection to the World

# SESAGLOBAL

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#### **NOTE FROM THE EDITOR**

Satellite Companies Pitch in Hurricane Relief Efforts



The satellite industry responded with an outpouring of support in the aftermath of the devastating Hurricanes Katrina and Rita that recently struck the Southestern part of the United States. Companies donated cash, equipment, transponder capacity and services (see story on page 7 "Satellite Companies Pitch In Hurricane Katrina Efforts). Many employees of satellite

companies donated cash and goods as well as their own services in relief efforts.

While the US Federal Emergency Management Administration (FEMA) took a lot of flack for its handling of the disaster, one of the most obvious effects of such an emergency of such magnitude is the vulnerability of terrestial networks. The role of satellite services before and after a natural disaster is evident. Testifying last September 22 before a Senate Commerce Committee investigating the response to the disaster, Federal Communications Commission (FCC) Chairman Kevin Martin affirmed the importance of satellite technology. "If we learned anything from Hurricane Katrina, is that we cannot rely solely on terrestial communications. When radio towers are knocked down, satellite communications are, in some instances, the most effective means of communicating," said Chairman Martin.

After the tsunami struck late last year in Asia, the role of satellite technology also came to the fore in preventing the disaster as well as in relief efforts. Let's hope the lessons learned from these recent experiences will not go unheeded.

We will be covering the role of satellite communications in emergency operations and disaster preparedness more in depth in our forthcoming November issue. Watch out for that.

Meanwhile, this issue focuses on a hot new application, In-Flight Satellite Services. We also look at the recent Intelsat/PanAmSat merger and BruceElbert writes about his observations on what's hot in the recently-concluded IBC 2005 in Amsterdam.

Vingil Lahadon

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# **CALENDAR OF EVENTS 2005**



#### OCTOBER

October 1, Vicenza, Italy SAT EXPO 2005 Rosalia D'Aprano Tel: + 39 0444 543133 / Email: rdaprano@satexpo.it Website: http://www.satexpo.it/en

October 3-6, Salvador da Bahia, Brazil ITU Telecom Americas 2005 John Jacobs Tel: + 41 22 730 5401 / Email: itutelecom@itu.int Website: itu.int/AMERICAS2005/index.html

October 4-6, Omaha, Nebraska USA Strategic Space 2005 Tel: (719) 576-8000 Website: http://www.stratspace.org

October 17-20, Atlantic City, NJ MILCOM 2005 Steve Walley Tel: 408-213-3000 / Fax: 408-213-3001 Website: http://www.milcom.org

October 25-27, Mumbai, India SATELLITE & CABLE TV INDIA TRADE SHOW 2005 Mr. Dinyar Contractor Tel: + 91 - 22 - 24948280 / 2498 4273 Email: scat@vsnl.com / Website: www.scatindia.com

October 25, Park Central Hotel, New York, NY GVF Satellite Summit & Annual General Assembly 2005 David Hartshorn Email: David.Hartshorn@gvf.org



October 26 - 27, New York, NY SATCON - Satellite Applications and Content Delivery Conference & Expo Michael Driscoll Tel: + 203 371 6322 / Email: mdriscoll@jdevents.com Website: www.satconexpo.com

### NOVEMBER

Oct. 31 -Nov. 1, Marriot Grand Hotel, Moscow, Russia 2nd Russia and CIS Broadband Summit and MITEL 2005 Exhibition Elena Peredelskaia

Tel: + 44 (0)20 7596 5205 / 5000 Fax: + 44 (0)20 7596 5208 (direct line) Email: Elena.Peredelskaia@ite-exhibitions.com Website: http://www.broadband-conference.com ; http://www.ite-exhibitions.com



November 1-4, Houston, Texas

Offshore Communications 2005 Inger Peterson Tel: + 772-221-7720 ext. 112 Fax: 772-221-7715 Email: ipeterson@offshoresource.com Website: www.offshorecoms.com

November 2-4, Beijing New Century Hotel Beijing, China China Satellite 2005 Richard Theodor (Wozniak) Kusiolek Tel: + 650-428-1872 / Mobile: 650-504-2978 Email: rtdrozek@yahoo.com Website: www.transglobalnet.com/

November 7-9, London, UK Global MilSatCom 2005 Tel: + 44 (0) 20 7827 Fax: + 44 (0) 20 7827 6001 Email: client\_services@smi-online.co.uk Website: www.globalmilsatcom.com

November 8-11, Melia Hotel Hanoi, Hanoi, Vietnam The 2nd Asian Space Conference David Soo T el: 31-(0)71-527 22 27 Fax: + 31-(0)71-527 41 62 / Email: d.n.soo@let.leidenuniv.nl Website: http://www.iias.nl/space

## Boeing and Lockheed to Resubmit Filing for United Launch Alliance

**CHICAGO and BETHESDA, MD**—Lockheed Martin Corp. and Boeing Co. announced on Sept. 21 that they have withdrawn their filing at the Federal Trade Commission (FTC) regarding the formation of the United Launch Alliance, LLC (ULA).

The companies said in a news release they intend to resubmit their filing, pursuant to the Hart-Scott-Rodino Anti-Trust Improvements Act of 1976, later this week. The said they are resubmitting their filing to provide additional time for review of the proposed transaction. Upon resubmission, the 30-day clock for FTC consideration will restart.

ULA is a contemplated joint venture to be established by Lockheed Martin and Boeing to provide two families of expendable launch vehicles to U.S. Government customers.

Last month in Brussels, the European Commission cleared the creation of ULA. European Union said the approval was made under the EU Merger Regulation, which concluded the proposed transaction will not significantly impede effective competition in the European Union.

Both Boeing and Lockheed provide space launch services to government and commercial customers. Lockheed is active on the market with its Atlas family of launch vehicles as well as with Proton, a launcher produced in a joint venture with Russian partners. Boeing offers the Delta launch vehicles as well as launchers produced by Sea Launch, also a joint venture with Russian partners. Both Boeing and Lockheed also produce and market satellites.

## Northern Sky: IPTV via Satellite to Generate \$1.6-B in Total Revenues From 2005-2010



**CAMBRIDGE, MA** — The IPTV via satellite market accounts for a relatively small percentage share of the market potential that terrestrial-based platforms are likely to generate. Although satellite-based total revenues from 2005 to 2010 are expected to exceed \$1.6 billion, the market estimates expected from terrestrial-

based services, as touted by some forecasters, rest in the area of

over \$7 billion for the year 2010 alone, concludes a new report by Northern Sky Research.

Nevertheless, NSR said, IPTV does provide a unique and growing opportunity for the satellite industry to target. The growing preference for IP that satellite service providers are incorporating in their offerings, and the compelling role of satellite services in the video markets worldwide, make IPTV via satellite services a compelling value proposition for select regions.

"Given the proven broadcast economics of satellites in delivering content cost-effectively to large geographic footprints, particularly in underserved areas, growth of IPTV via satellite services should increase at a steady rate," states Jose del Rosario, senior analyst of NSR and author of the report.

According to NSR's newest market survey and forecast report on IPTV via Satellite, initial demand is expected to be generated largely by entities that are setting up infrastructure to enable IPTV via satellite services. These services mainly require transponder lease contracts from satellite operators for the delivery of content to IPTV gateways. Once the infrastructure is in place, the market is expected to move quickly to retail business models where revenue-sharing arrangements between satellite companies and the owners of content will lead to higher margins as satellite players participate in revenue sharing from the subscribers' monthly service fees.

# Orbimage Buys Space Imaging for \$58.5M

**DULLES, Va.**— Orbimage Holdings Inc. announced on Sept. 16 it had entered into a definitive agreement to acquire the assets of



An artist's rendering of ORBIMAGE's planned OrbView-5 satellite. (Image courtesy of General Dynamics Corporation)

its rival Space Imaging LLC for \$58.5 million.

The combined company will have a key government contract, two satellites and 14 affiliates and ground stations around the world. Subject to government regulatory approvals and other customary closing conditions, Orbimage said it is optimistic that such conditions will be satisfied in time for the closing to occur on or before December 31, 2005.

Denver, Colorado-based Space

Imaging is a leading supplier of visual information products and services derived from space imagery. Space Imaging launched the world's first one-meter resolution, commercial Earth imaging satellite, Ikonos, on Sept. 24, 1999.

Space Imaging's owners, Lockheed Martin Corp. and Raytheon Co., put the company up for sale earlier this year when it failed to win a \$500 million contract from National Geospatial-Intelligence Agency. Instead, the contracts were awarded to Orbimage and DigitalGlobe.

Orbimage currently operators OrbView-3 satellite, which is capable of measuring, mapping and monitoring objects smaller than automobiles and the OrbView-2 ocean and land multispectral imaging satellite and the SeaStar Fisheries Information Service, which provides maps derived from essential oceanographic information to aid in commercial fishing. The company is currently building a next-generation satellite, OrbView-5, to support the National Geospatial-Intelligence Agency's NextView image acquisition program. When OrbView-5 is launched in 2007, this next-generation commercial imaging satellite will acquire up to 700,000 square kilometers of imagery each day at the unprecedented resolution of 0.41-meters.

Space Imaging chief executive officer Robert Dalal said the combination of Space Imaging and Orbimage will expand and grow the business. "This match is a winner for all of our customers and employees," he said.

# Arianespace Wins Contract to Launch Thaicom 5

**EVRY, France** — Private Thai operator Shin Satellite and Arianespace signed on Sept. 6 a launch contract for the Thaicom



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5 satellite.

The contract was signed at World Satellite Business Week 2005 by Dr. Dumrong Kasemset, executive chairman of Shin Satellite Plc, and Jean-Yves Le Gall, chief executive officer of Arianespace. Christine Lagarde, French Minister for Foreign Trade, was present at the signing.

Coming less than four weeks after the successful launch of Thaicom 4 (IPSTAR), Arianespace said the contract reflects both the strategic space partnership between France and Thailand and French government support for the Thai space industry.

Thaicom 5 is slated for an Ariane 5 launch in 2006 from Europe's Spaceport in Kourou, French Guiana.

It will be the fifth satellite launched by Arianespace for the Thai operator, following Thaicom 1 in December 1993, Thaicom 2 in October 1994, Thaicom 3 in April 1997 and Thaicom 4 (IPSTAR) on August 11, 2005

### PanAmSat, JSAT JV Orders Horizons-2 Satellite from Orbital



Artist's concept of Orbital's Star geostationary communications satellite of which the Horizons-2 satellite will be based. (Orbital Sciences Corp. photo

DULLES, Va.— Horizons-2 Satellite, LLC, a 50/50 joint venture between PanAmSat Corp. and JSAT Corp., has ordered one geosynchronous (GEO) communications satellite from Orbital Sciences Corp.

Based on Orbital's STAR small satellite platform, the spacecraft will be called Horizons-2 and will be launched into a PanAmSatlicensed orbital slot at 74 degrees West Longitude

over the United States. The new order calls for a 22-month onground delivery schedule. Financial terms of the contract were not disclosed.

"We are delighted to add JSAT to the list of blue-chip customers who have adopted the 'STAR small satellite solution,' an industry trend of which PanAmSat has been the leading proponent," said Dr. Ali Atia, head of Orbital's commercial GEO satellite business unit. He said the smaller-sized STAR is an ideal choice for satellite operators that seek an optimal balance between satellite capacity and customer demand

The new satellite is the fifth that has been ordered through the company's association with PanAmSat, which originally became a customer in 2001. Prior to the Horizons-2 joint venture order with JSAT, PanAmSat had previously purchased from Orbital three C-band satellites for U.S. domestic communications services, and a hybrid (C and Ku bands) satellite for international services.

Joe Wright, PanAmSat CEO, said the purchase of a new satellite will double the capacity of the Horizons joint venture. "This satellite will provide Ku-band growth capacity in North America for PanAmSat in 2007 through the next decade," he added.

The first C-band satellite, Galaxy 12, was launched in 2003 and the second, Galaxy 14, was launched earlier this month. The last of the original three-satellite order, Galaxy 15, was recently shipped to the launch site in preparation for a launch in September. A fourth satellite was ordered earlier this year, the hybrid PAS-11, which is currently in the design and manufacturing phase.

The Horizons-2 satellite will carry 20 active high-power Ku-band transponders. The satellite will generate approximately 3.5 kilowatts of payload power and will weigh about 2,300 kg at launch.

## Satellite Companies Pitch in Hurricane Katrina Relief Efforts

In response to the unprecedented damage and disruption caused by Hurricane Katrina on Aug. 29, a number of satellite companies have stepped up efforts to provide assistance in the relief efforts in the Gulf area. Aside from donating cash, many of them have also contributed communications infrastructure to aid in a variety of rescue and recovery missions throughout Louisiana and Mississippi.

Here is a rundown of some companies contributing to the relief efforts:

• One of the first companies to extend assistance is Northrop Grumman Corp. which contributed an initial \$2 million for relief assistance as early as two days after the hurricane struck. Northrop has since directed assistance to employees impacted by Hurricane Katrina through the new Northrop Grumman Employee Disaster Relief Fund, established by The Northrop Grumman Foundation. Northrop also pledge to match, dollar for dollar, employee contributions to the fund.

• Boeing Company donated on Sept. 1 \$1 million to the American Red Cross for Hurricane Katrina relief efforts and said it will match employee and retiree contributions to that

organization through the company's Employees Community Fund. Towards the end of the month, Boeing Co. said its projected corporate and employee/retiree total contribution to Katrina victims has reached approximately \$7.3 million.

• News Corp. also pledged \$1 million to the Salvation Army to support its relief efforts. News Corporation added it will match – dollar-for-dollar – contributions made by the company's employees to accredited charities to a total of \$1 million.

SES Americom and Americom Government Services (AGS) who are both providing urgently needed communications links for relief workers and tent cities. SES Americom said AGS is providing free satellite communications through portable antennas, satellite bandwidth, and systems that enable voice and data communications. AGS said its systems and services have linked rescue teams with each other and their command centers, provided Internet connectivity, plus voice and data channels, to field hospitals and streamlined communications to relief and rescue workers on the ground, in the air and on the water.

• PanAmSat said last week it is donating satellite capacity to aid in a variety of rescue and recovery missions. The company has already given the American Red Cross six months of free capacity for communication purposes and is working with the Army Core of Engineers, the South Carolina National Guard and FEMA to provide much needed connectivity.

• GlobeCast donated the use of its vast network of fiber and satellite transmission services to support the worldwide telecast of "Shelter from the Storm: A Concert for the Gulf Coast," last Friday, September 9, with a live first feed at 8:00





Comtech EF Data's new SLM-5650 Satellite Modem was designed to comply with the DSCS requirements defined in MIL-STD-188-165A, modem types A, B, D, E and F. Available in a variety of configurations for maximizing bandwidth and satellite transponder utilization, the SLM-5650 is suitable for virtually any government and military application. Available options include:

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Northrop Grumman employees organize and participate in "Operation Freedom Relief" in Pascagoula, Miss., where those in need received food, water, supplies and other donated relief items. (Northrop Grumman photo)

ET (0000 - 0115 GMT) and a repeat feed 8:00 PM PT (GMT 0300 -0415). In a cooperative and collaborative effort, six US broadcast networks presented the commercial-free simulcast as an appeal to raise funds for those affected by the devastating effects of Hurricane Katrina.

• Eagle Broadband said it has provided its SatMAX nonline-of-sight, satellite communications technology at no cost to the U.S. Army enabling satellite-based voice and data communications to facilitate rescue, relief and recovery efforts for victims of hurricane Katrina. Eagle Broadband said it provided its suitcase-sized, portable SatMAX technology to the U.S. Army enabling their disaster response teams to establish and maintain vital, Iridium satellite-based voice and data communications in any nonline-of-sight environment such as within buildings, command centers or other locations where outdoor use is not possible or practical. The company has also offered to send additional SatMAX units to other federal, state and local civilian government and military agencies as well.

• EMS Technologies Inc. also supplied communications hardware to support restoring communications. Three of the company's divisions, EMS Satcom, EMS Satellite Networks and EMS Wireless, have responded with either mobile satellite communications equipment or with wireless infra-structure equipment to restore cell phone coverage in the stricken areas.

• On Sept. 7, XM Satellite Radio launched "Red Cross Radio," a station developed in cooperation with the American Red Cross designed to provide help and information for Hurricane Katrina victims, Red Cross staff and volunteers along the Gulf Coast and other Red Cross workers across the country. Red Cross Radio (XM Channel 248) is now airing regular updates on relief efforts in the Gulf Coast, as well as sites where victims have been relocated to receive Red Cross assistance. Listeners can find out how to receive help and how to contribute to the relief efforts. XM is said it is donating radios to the Red Cross for relief workers, shelters and aid stations. XM Satellite said it will also air a series of live concerts and benefits organized by various organizations to raise money for Hurricane Katrina relief efforts.

• Stratos Global Corp. is also teaming with its partner, Inmarsat, to provide free-of-charge satellite-based communications services to allow victims of Hurricane Katrina and relief workers providing assistance in the area to contact family and loved ones. Stratos said it will deploy a mobile communications headquarters equipped with Inmarsat GAN (Global Areas Network) and mini-M mobile satellite terminals to areas impacted by the storm, and to the staging areas where relief workers are concentrated. The GAN and mini-M terminals will allow victims and workers in the area to call family and loved ones at no cost and regardless of the status of the local telephone infrastructure. The GAN system will also provide Internet, data, video and fax services to support relief efforts.

• SBC Communications Inc. announced on Sept. 9 it is deploying technicians and equipment to assist in rebuilding the telecommunications infrastructure in Louisiana, Mississippi and Alabama that was shattered by Hurricane Katrina. In response to requests from BellSouth, SBC companies will initially deploy up to 140 technicians from across the nation to assist in the recovery effort. Additional technicians will be provided on an as-needed basis. The team is working through logistical issues, such as transportation, housing and medical immunizations, and is expected to begin work next week and continue to be available through mid-December.

• Tachyon Networks has also joined in the Hurricane Katrina relief effort and is donating satellite broadband equipment and services to the Naval Postgraduate School. The donation is seen as critical because of the need to enhance ground communications between shore-based relief personnel and field agents throughout the Gulf Coast. The joint effort, Tachyon said, clearly demonstrates how non-government organizations can help the military provide humanitarian relief.

• Global Relief Technologies (GRT) and Telenor Satellite Services have also joined forces to provide rapid data management collection capabilities and mobile satellite communications to elements of the 2nd United States Marine Expeditionary Force (II MEF) and the Federal Emergency Management Agency (FEMA) that are currently assisting victims of Hurricane Katrina.



Space Station Photos Show Katrina's Impact. NASA's Michoud Test Facility in New Orleans is located at right center of this image taken from the International Space Station on September 8. While the facility itself is largely dry, the adjacent neighborhoods are extensively flooded. (NASA photo)

Hispasat satellites are also contributing to the disaster recovery in New Orleans, providing emergency communications. Hispasat said using the Amazonas Satellite high power North America beam, emergency communications links have been established from the affected area, using a small transportable antenna. A bidirectional link has been in operation since last week, reconnecting the New Orleans with the outside world.

• GeoWireless, a wireless-anywhere provider, has also teamed with Vivato, Inc., a provider of extended-range Wi-Fi solutions, to dispatch mobile communications systems to the Mississippi Gulf coast and surrounding areas to provide Hurricane Katrina relief assistance.

## **Telesat's Anik F1R Satellite Launched**

**BAIKONUR COSMODROME, Kazakhstan** — A Russian-built Proton Breeze M launch vehicle successfully placed Anik F1R satellite into orbit on Sept. 9 for Telesat, Canada's leading satellite operator.

The Proton vehicle lifted off from the Baikonur Cosmodrome at 3:53 a.m. local time (5:53 p.m. Thursday EDT, 21:53 GMT). The three-stage Proton booster flew for approximately 10 minutes before separating from the Breeze M upper stage. The Breeze M then fired its on-board engine five times over the next nine hours to place the satellite into a geosynchronous transfer orbit. Anik F1R, an EADS Astrium-built E3000 model, will be maneuvered over the next few weeks into its final orbit 36,000 km above the equator.

From its operating position of 107.3 degrees West longitude, Anik F1R will deliver broadcasting, communications and air navigation services in Canada and the United States, on behalf of Telesat. "Anik" is an Inuit word meaning "little brother."

"Anik F1R is the latest in a long line of Telesat satellites to

pioneer critical services that benefit millions of people across North America every day," said Larry Boisvert, Telesat's president and CEO.

The launch of the new Anik F1R satellite was the sixth mission of the year for International Launch Services (ILS), a joint venture of Proton builder Khrunichev State Research and Production Space Center, and Lockheed Martin (NYSE: LMT), builder of the Atlas launcher.

EADS Astrium designed and built the spacecraft and supplied both the payloads and the platform. Canadian companies EMS Technologies and



An early morning liftoff for Telesat's Anik F1R satellite from Baikonur Cosmodrome in Kazakhstan.

COM DEV also supplied a significant part of the spacecraft equipment and technology.

### Canada's Federal Cabinet Affirms Satellite Radio in Canada

**WASHINGTON** — Canada's Federal Cabinet upheld on Sept. 9 a decision by the federal broadcast regulator to grant two licenses for the launch of satellite radio services in Canada.

Sirius Canada and the Canadian Satellite Radio said they are delighted with government's confirmation of Canadian Radio-Television and Telecommunications Commission (CRTC) satellite radio decision in June adding they will bring subscription satellite radio service to market in Canada shortly

Kevin Shea, president and CEO of Sirius Canada said Sirius Canada is delighted that cabinet has confirmed the CRTC's decision and we look forward to bringing satellite radio service to Canadians as quickly as possible. "Having listened and responded to the concerns expressed over the recent weeks, we are confident that will be bringing a stronger product to market, a product that meets the unique needs of Canadian listeners, and artists," he added.

CRTC had approved applications on June 16 from the two companies. The two groups have partnered with the two biggest U.S. satellite-radio companies to launch subscription-based digital radio services in Canada.

# **EXECUTIVE MOVES**

## **Howard Chambers Named Vice** President/GM of Boeing Space & **Intelligence Systems**

ST. LOUIS — Boeing has named Howard E. Chambers vice president and general manager of Space & Intelligence Systems (S&IS), an operating division of Integrated Defense Systems (IDS). Chambers reports to Jim Albaugh, president and chief executive officer of Boeing's Integrated Defense Systems.

Chambers is responsible for leading the people, programs and assets of the company's intelligence and space programs. These include Boeing's Satellite Development Center, Information Systems, Mission Systems and critical elements of the Future Imagery Architecture program. He also is Chief Executive Officer of Boeing Satellite Systems International, Inc.

Chambers has served since August as an interim leader of S&IS. Previously, he was vice president of Program Management and Independent Review for IDS, where he was responsible for the development and deployment of program management best practices, providing training and development for program managers and performing independent assessments of critical IDS programs. Before that, he served as VP/GM of the Airlift and Tanker Programs business unit and the C-17 Globemaster III Transport Program.

Chambers joined Rockwell International in 1969 after service in the U.S. Air Force. At Rockwell he served in senior management positions in test, logistics, business development and program management.



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# **EXECUTIVE MOVES**

## Intelsat General Names Richard Dalbello Vice President of Government Relations



Richard DalBello

**BETHESDA, Md.** — Intelsat General Corp. (IGC) has chosen Richard DalBello as vice president of government relations. DalBello will be responsible for informing and educating policy and decision makers in federal, state, local and other government-related organizations.

With more than 20 years of experience, DalBello is well known in satellite communications and government circles. He served previously as

president of the Satellite Broadcasting and Communications Association, and for more than three years as the president of the Satellite Industry Association, the voice of the U.S. commercial satellite industry on policy, regulatory and legislative matters.

Earlier, DalBello was general counsel for Spotcast Communications Inc., and vice president of government affairs, North America, for ICO Global Communications, a provider of mobile satellite communications services. He also served as assistant director for aeronautics and space in the White House Office of Science and Technology Policy (OSTP), and drove increasing competition in the international satellite industry and commercial use of the satellite Global Positioning System (GPS).

DalBello started his career in Washington in the Office of Technology Assessment for the U.S. Congress. Later he was director of commercial communications at NASA where he was responsible for private sector experiments on the ACTS (Advanced Communications Technology Satellite) program, which paved the way for the expanded use of Ka-band satellite frequencies. He was also director of the office of space commercialization for the Department of Commerce.

## Mobile Satellite Ventures Appoints Faris as Chief Operating Officer; Ali Asghar as VP of Corporate Development

**RESTON, Va.** — Mobile Satellite Ventures (MSV) has hired Mark Faris, a thirty-year veteran network operator, as chief operating

officer responsible for the design, development, procurement, deployment and operation of MSV's nationwide integrated satellite and terrestrial network.

Faris has extensive experience in wireless operations and management at SBC and its wireless holdings. Faris is experienced in both wireless and Internet protocol technology, driving system architecture and deployment from the start-up phase through system maturation.

Faris holds a Bachelor of Science in Business Administration from Texas Tech University and attended Yale University's Executive Management Program.

MSV has also appointed Ali Asghar as vice president of Corporate Development.

Asghar joins MSV from America Online where he led their alternative broadband development. Previously, Asghar was with Morgan Stanley, McKinsey & Company, and E.M. Warburg Pincus in their technology venture capital group.

## International Datacasting Appoints New CFO



**OTTAWA** — International Datacasting Corp. has appointed Susan Robbins Parsons as its new chief financial officer and corporate secretary.

Susan Robbins Parsons

Robbins Parsons has many years of experience in corporate senior management—most recently serving as vice president of finance and corporate services with Kinaxis Corp. headquartered in Kanata, Ontario. She is proficient with

both US and Canadian GAAP and holds an MBA from Dalhousie University. Robbins Parsons was also named one of the Ottawa Business Journal's prestigious "Top Forty under Forty" in 2004.

Robbins Parsons will replace Marc Santerre who has decided to leave IDC to join a startup company in Quebec

## FoxcomAppoints Miles G. Thomas, Western Regional Sales Director, USA

Foxcom announced the appointment of Miles G. Thomas to the position of US Western Regional Sales Director for Sat Light

# **EXECUTIVE MOVES**

products. Miles began his satellite career at Globecast when they were known as IDB Communications.

Miles served as the Director of Audio Services and then Director of New Business and Sales for Globecast. He later joined Verestar, Inc. (now SES-Americom) as International Accounts Manager where he sold international services utilizing satellite transmission and fiber optic networks for corporate private networks, VOIP, and U.S. government services.

### Vista Names Jason Land VP of Global Services

HOLLYWOOD, Fla. — Vista Satellite Communications Inc. has chosen Jason Land as vice president of global services. Land has more than 10 years' experience in global satellite communications, technical coordination and broadcast television production.

He comes to Vista from Strategic Television Inc. in Thousand



Jason Land

Oaks. California. where he served for five years, most recently as vice president of operations. He was in charge of television transmission of live sports, entertainment and corporate events worldwide. These included the Academy Awards, Golden Globe Awards, championship boxing events, and for companies such as Symantec, Allergan and the Mayo Clinic.

Earlier, Land spent more than five years with PanAmSat Corp. in Greenwich, Connecticut. As senior manager of special events, he facilitated broadcasts of the Olympic Games, Millennium Eve, and World Cup Soccer.

Land earned a bachelor of science degree in broadcast communications from Florida International University in Miami and was awarded a National Academy of Television Arts and Sciences (NATAS) Scholarship. SM



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efficient, and easy to service.

# **NEW PRODUCTS**

## Swe-Dish Launches New Suitcase



**STOCKHOLM** — Swe-Dish Satellite Systems has announced its Suitcase has been upgraded with a 35W amplifier from previous 25W giving the satellite terminal increased performance and efficiency during transmission.

The company said with the new amplifier, the user will benefit from 30% increased bandwidth enabling the Suitcase to close links to exceed 5 Mbps.

According to Swe-Dish, the upgrade will mean an increase in the number of possible applications that demand higher bandwidth, such as live broadcast. It will also give the user better link margins and, therefore, higher reliability in case of harsh environmental conditions.

Lars Jehrlander, CEO of Swe-Dish, said the increased power has been achieved without increasing the Suitcase weight, size or prime power consumption.

## MCL Offers 750W DBS-Band TWTA



MCL introduces another industry first – the MT4400 weather-resistant, antenna mount TWT amplifier is now available for DBS-Band applications at 750 and 500 watts. In addition, the MT4400 is available for C, X or Ku-Band applications at 750 watts. Tri-Band is available upon request.

Some of the MT4400's features include advanced thermal design, rugged construction for extreme environments, optional handheld controller for complete local monitoring and control, prime power interfaces to a wide variety of voltages and frequencies, field replaceable modules for unsurpassed serviceability, and much more. There are also a number of amplifier options, including a block upconverter, linearizer and fiber optic L-Band interface, as well as a number of redundant system configurations available.

## Comtech EF Data Awarded Patent for Selectively Accelerating Network Communications

**TEMPE, Arizona** — Comtech EF Data Corp., a subsidiary of Comtech Telecommunications Corp., announced on Sept. 16 the award of a U.S. patent number for its "Method and apparatus for selectively accelerating network communications."

Integral to Comtech EF Data's turboIP and turboVR line of TCP/ IP performance enhancement proxies, Comtech said this technology provides improved operation of network communications through distressed communication channels with long latency and high bit error rate, such as satellite communications links. Comtech said the "Selective Acceleration" feature in the turboIP and turboVR enables a mechanism of selectively accelerating or bypassing TCP/IP sessions based on user-specified parameters.

In addition, it provides a method of Quality of Service (QoS) for Internet Protocol datagrams that are received on the local area network (LAN) interface and forwarded to the wide area network (WAN) interface, Comtech claims.

Policies can be established to filter and process traffic based on specific characteristics, including particular addresses or classes of devices. Thus, prioritization can be assigned that establishes traffic precedence, Comtech said.

## Loral Skynet Completes Worldwide Deployment of SkyReach

**BEDMINSTER, N.J.** — Loral Skynet announced on Sept. 12 that it has reached an agreement with Telekom Austria that would complete the full initial infrastructure rollout of SkyReach IPenabled communications services.

Under the agreement, Loral Skynet will install an iDirect IP hub at Telekom Austria's state-of-the-art Aflenz teleport, expanding SkyReach's coverage area across Europe, the Middle East and Africa.

SkyReach customers across the region will have access to regional and global private networking and public Internet services, including broadband WAN extension for terrestrial providers, Internet access for ISPs, voice over IP (VoIP) and managed data services.

## **NEW PRODUCTS**

Loral Skynet's new European-based SkyReach hub will also allow for multiple points of connectivity through satellites spanning from Europe to Asia and through terrestrial facilities. Skynet will combine satellite capacity on its own Telstar 12 and Telstar 10 satellites, with other regional satellites to establish a robust, farreaching IP-based network. SkyReach's service in Europe is available today using other teleport facility partnerships.

Full service on Skynet's hub at Telekom Austria's Aflenz teleport will be available by December 2005, Loral said

### Glowlink Rolls-Out WebAccess for Model 1000 Spectrum Monitoring System

BANGALORE — Glowlink has announced the product roll-out

of its WebAccess at the Satellite User Interference Reduction Group (SUIRG) annual meeting held in Bangalore, India from September 20 to 22, 2005.

The WebAccess uses the latest Internet browser technology to provide a web-based access overlay to the Glowlink Model 1000 satellite spectrum monitoring system user interface. With WebAccess, users can access the Model 1000 and all its key features from anywhere where a web browser is available, in a highly secure and managed way. This access is deviceneutral and geography-independent.

Model 1000 is a state-of-the-art, Digital Signal Processing (DSP) based spectrum monitoring system. Using powerful, proven digital signal processing technologies, Model 1000 provides better performance, functions, and reliability than the traditional swept-frequency spectrum analyzers, according to



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# **NEW PRODUCTS**

Glowlink.

Jeffrey C. Chu, president and CEO of Glowlink, said that with WebAccess, satellite operators and their customers can now look at the same spectral displays while trouble-shooting problems.

# MMT Unveils the World's Smallest GPS Receiver

**LONG BEACH, Calif.** <sup>-</sup> MMT announced on Sept. 14 the availability of its MN1010 Module, which it claims to be the world's smallest complete global positioning system (GPS) receiver.

The ultra small design is packaged into a 10x10x1.8mm, RF shielded 36 pin package. This module is a low power, high performance GPS Receiver solution designed for portable consumer electronic applications. It draws less than 75mW making it an ideal solution for battery operated, PDA and wireless applications devices. It is a complete 12 channel GPS receiver

that only requires power and an antenna to operate. The 12 channel receiver allows all satellites in view to be tracked, providing a solution to minimize position jumps caused by individual satellite blockage.

The GPS chipset integrated into the MN1010 is from u-Nav microelectronics and features the uN1008 CMOS RF Front-End and the highly integrated uN8130 Base-band Processor. This chipset provides a low power, high performance cost competitive solution.

The MN1010 is supported by an evaluation kit which includes software and references designs to reduce time and cost for the OEM development. Samples are currently available with full production quantities scheduled for October 2005.

# ECC Introduces



# The World's First DVB-S2 Two-Way System

At last, a DVB-S2 standards based, two-way system is now available. It's iSatLite and it's only from ECC. ECC is the first company to develop DVB-S2 technology supporting the interactive services/adaptive coding & modulation (ACM) features in the standard. iSatLite gives you the highest bandwidth efficiency solution available in the industry today.

Check these exclusive features...

- DVB-S2 Forward Link / RCS Based Turbo Code Return Link
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- Many modulation options (QPSK, 8PSK, 16 APSK)
- VoIP header compression (doubles network voice capacity)
- Adaptive lossless data compression (increases network data capacity by >50%)
- Lowest Cost Hub (less than half the cost of competing solutions)

Efficient Channel Coding, Inc.

October 2005

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# **COVER STORY** In-Flight Satellite Services Take Off!

### by Virgil Labrador

n May 17, 2004 passengers on Lufthansa flight 452 from Munich to Los Angeles were in for a unique treat—they were on the first commercial flight to provide broadband internet services through the wonders of satellite technology. After more than three years of initial star-up, development and testing, Connexion by Boeing was finally launching its airborne, wi-fi-based, high-speed internet service on a commercial airline-the first company to do so. Despite the usual anxieties for such an important launch-everything went very smoothly. U.S. television journalist Kurt Knutsson, known for his news features as "Kurt the Cyber Guy," became the first journalist to conduct a live webcast from flight. As flight 452 soared 36,000 feet over Greenland, Knutsson interacted with a TV anchor team in Los Angeles during the live broadcast of KTLA's morning news show. He also did live, in-flight reports for stations in Chicago and Seattle.

There were other journalists on board, and journalists being a rather demanding audience, generally were ecstatic about the new service. Although one or two wrote in their subsequent reports that the connection sometimes became erratic and did not really match up to the promised DSL-like speeds.

Here we are almost 18 months later and Connexion by Boeing is still the only company providing broadband internet access on commercial airlines. Connexion by Boeing has signed up so far 11 airlines namely: Lufthansa, Japan Airlines, Singapore Airlines, Korean Air, All Nipon Airways (ANA), Asiana, China Airlines, Austrian Airlines, SAS, El Al and Etihad. According to Boeing, they are currently



on 84 aircraft (both Boeing and Airbus) and 130 flight routes a day. Connexion by Boeing said that actual usage figures are still not available given that their customers normally report after a year of service and most of them have not bee in service for more than year yet. However, Tim Vinopal, Director of Service Delivery for Connexion by Boeing, said that "it's definitely growing, the more people hear about it, the more new users we're getting. We get a lot of repeat users—once someone uses it, they keep coming back."

I tried the Connexion by Boeing service myself incognito on a flight from Los Angeles to Frankfurt. They were having a special promotional price on that flight of \$14.95 for the whole 11 hour flight due to "network maintenance" work they had to perform (the normal price for a long-haul flight is \$29.95). However, I must say, despite the maintenance work, my connection didn't skip a beat. I uploaded several large files as I manage two websites and it went smoothly. The only problem I had was that I used up two batteries of my laptop in 3 ½ hours and didn't get my full money's worth for the whole 11 hour flight that I paid for.

Since the launch last year, Connexion by Boeing has added live satellite TV to its bouquet of services and is looking to go into in-flight mobile telephony as well. Boeing recently introduced on Singapore Airlines flights live satellite TV from the BBC, CNBC,

## **COVER STORY**



Eurosports News and MSNBC (viewed from the passengers' laptop). Connexion by Boeing teamed up with wireless technology company Qualcomm and successfully tested and demonstrated an in-flight wireless telephony solution last month on their specially equipped Boeing 737-400 aircraft, Connexion One.

The only thing holding up the introduction of mobile phones into aircraft in the U.S. is the Federal Communications Commission (FCC) which has postponed decision on the matter pending more hearings to get the public's view on the matter (which seems to be mostly negative). However, the argument against mobile phone use on airlines might be moot, since anyone with wireless internet connection can make internet calls on their laptops through such providers as

#### SKYPE.

#### **Market Size**

It doesn't take much insight to see that there is great potential for broadband satellite services in the sky, especially when demand on the ground has been rather flat due to the downturn that the satellite industry has been experiencing for the past few years. According to the International Air Transport Association (IATA), airline passenger traffic has been growing an average of 7 per cent yearly in the last decade and will continue to grow an average of 6.6 per cent annually to the end of this decade. To give you an idea of the size of the airline market, over 1.5 billion passengers flew commercial flights last year.

The size of the actual market for inflight satellite services varies depending on the source. But the average estimate hovers around \$ 1.5 to 2 Billion per year. OnAir estimates the total market for inflight satellite services to reach \$1.6 Billion in 2010, of which \$1.2 Billion will come from mobile telephony and \$400 million from wireless internet access. Of the total estimated market globally for in-flight satellite services, almost half will come from the U.S. domestic market.

One notable fact is that Lufthansa did a survey of the users of the Connexion by Boeing service after a year and found that 85 percent of the respondents indicated the availability of high speed internet access would have an impact on their future choice of airlines.

## **COVER STORY**

The market is certainly there for inflight broadband access. As Jimmy Schaeffler, Chairman and Senior Research Analys of the think tank The Carmel Group says: "We've become an anything to anybody, anytime society . Right now they are finding ways to get audio and video and internet into the car, they're finding ways to bring it to people in mobile environments on the street or even riding a bike, so it's a logical transition to get it to millions of people who fly annually, especially frequent flyers."

#### **Increasing Competition**

Before Connexion by Boeing's successful foray into the in-flight broadband arena, U.S. budget carrier JetBlue has been providing for free 36 channels of live satellite TV from DirecTV on all it's domestic flights in the U.S. since 2000. Jet Blue has since expanded their channel line-up to include a premium tier of channels for an added fee. It has also bought the company in 2002 that designed it's in-flight entertainment system, LiveTV, which like Connexion by Boeing is entering into service agreements with other airlines to use it's system.

LiveTV has so far agreements with U.S. carriers Frontier Airlines and AirTran Airways, Canada's West Jet and Australia's Virgin Blue. Apart from DirecTV programming, LiveTV's system can provide up to 100 channels of XM Satellite Radio, wireless aircraft data link services, digital servers for stored content, and cabin surveillance systems for commercial aircraft. However, it still doesn't not offer broadband wireless internet access, at least not yet.

Echostar Communications has also entered the fray with the launch in 2003 of it's DISH network service on Song airlines, the budget carrier subsidiary of Delta airlines. It has since expanded it's channel line-up to include Sirius Satellite



Radio channels.

United Airlines Corp. (UAL) and Verizon Communications received FCC approval in June for an in-flight wireless internet service suing ground-based cellular technology. Service is expected to start on UAL by the end of 2006.

Another star-up company called AirTv announced last year a deal with Arianespace to launch a satellite dedicated to providing in-flight broadband and entertainment services. AiTV's website said that they are looking for other funding for their venture with a 50/ 50 debt to equity ratio, contingent on their raising the 50 percent of the equity portion. However, nothing has been heard since this venture and calls to the New York office posted on the website were not immediately returned.

Perhaps the most direct challenge to Connexion by Boeing will come from a company of whom one of the major investors is its parent company Boeing's main competitor in the aircraft manufacturing business—Airbus. OnAir is a jointventure between Airbus and one of the leading air transport applications and IT providers, SITA Inc. OnAir also merged with Connexion by Boeing's erstwhile competitor, Seattle-based Tenzing Communications, which previously introduced inflight e-mail services on some airlines.

Switzerland-based OnAir was incorporated in February 2005 and hopes to introduce GSM-based mobile telephony systems on commercial aircraft in the second half of 2006 and broadband



internet by 2007. Like in the US, however, mobile telephony on commercial flights is facing regulatory scrutiny, but OnAir CEO George Cooper says that they are happy with progress with the they are making with the European body regulating in-flight communications, the Center for Post and Telecommunication Administrations which goes by their French initials CEPT and they are very confident that mobile telephony will be allowed by the CEPT before their projected launch date of mid-2006.

Although Boeing said that it is not their policy to

comment about their competition, it apparent that they have had a big headstart in the market and are slowly gaining critical mass among major international airlines. Meanwhile, their success with their in-flight service has led them to foray into other markets such as business jets and also the maritime industry with the signing of a contract lat June with Teekay Shipping to put its service on 50 of its vessels.

#### Conclusion

In-flight satellite services is certainly showing tremendous potential and not just a flash in the pan "killer app." It's good for both the consumer as well as the satellite industry as well as service providers such as Connexion by Boeing and the others are using badly need transponder capacity on various satellites as well as ground services from third-



## **COVER STORY**



The historic launch of Connexion by Boeing Service on board a Lufthansa flight from Munich to Los Angeles, May 17, 2004. (Photo courtesy of Connexion by Boeing)

party providers.

"I think it's a good strategy that they are pursuing, it's just a matter of doing it until you can line up all of the key elements which you need for success, which include a good technology; a good content and good marketing and priced right to the consumer," said Schaeffer of The Carmel Group. He expects that all flights should have broadband access in less than 10 years.

Indeed, if there are any criticisms out there for broadband internet service on airlines, it's the price. Connexion by Boeing cost \$29.95 for long-haul flights of over six hours and 14.95 for flights of 3 hours (they also have a minimum \$7.95 charge for flights of 3 hours and \$9.95 for flights more than 3 hours for the first 30 minutes and 25 cents per minute thereafter. LiveTV's service on Frontier Airlines cost \$5.00 per flight as opposed to it being free on JetBlue. "I think the ultimate model is that it should be built-in with the price of the ticket, a la Jet Blue. Even it means using it as a loss leader to get more passengers traffic," says Schaeffer.

I'm certain airline passengers will be happy if that happens. **SM** 

**Virgil Labrador** is managing editor of SatMagazine and the industry web portal, Satnews (<u>www.satnews.com</u>). He is coauthor of the first book on the history of the satellite industry, *Heavens Fill With Commerce*. He has over 15 years experience in the satellite industry, most recently as marketing director of the full service teleport, Asia Broadcast Center in Singapore. He holds master's degree in communications management from the University of Southern California's Annenberg School for Communication. He can be reached at virgil@satnews.com

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# Europe 2006: The Year of High-Def....

### **By Chris Forrester**

European operators are using the MPEG4 standard, combined with DVB-S2 satellite transmission, and many of them are planning to build their systems with Statistical Multiplexing of the signals, of which more in a moment.

Sky Italia's CEO Tom Mockridge is the latest to throw his hat into the HDring, confirming his News Corp-owned Italian pay-TV platform will launch a range of high-def services next year. This means that HDTV services are now guaranteed for Germany, Austria, all of the Scandinavian and Nordic markets, France, UK and Ireland, and now Italy. "From the middle of next year, Sky Italia will use Eutelsat's Hot Bird capacity to launch High Definition TV, a further revolution in the digital TV landscape," said Mockridge. As at June 30 Sky Italy had 3.3m subscribing homes. The "middle of next year" date gives Sky Italia plenty of time to ready its coverage of the 2006-7 soccer season in high-def.

Incidentally, Sky Italia's announcement also helps explain Eutelsat's spectacular transponder order, mentioned by Giuliano Berretta at the recent EuroConsult conference in Paris. Berretta talked of a •1bn increase in Eutelsat's backlog, Sky Italia has contracted, says Eutelsat, to new leases for 10 transponders, plus an "ongoing renewal" to its 16 exiting leases. Berretta, in Paris, specifically referred to a 26-year deal, although a September 15 press statement trimmed this back to just 20 years. Assuming around



2m a year of transponder rental (at discounted Hot Bird rates), and a fresh contract for 20-years of rental spread over a total of 26 transponders, the end result is
1.04bn. That's not such a bad return on investment of (more or less) one satellite, and certainly justifies Berretta's claim in boosting Eutelsat's backlog.

Italy's HD news is also good for Eutelsat, and takes the platform one step onward to a wider high-def offering. It still leaves Eutelsat well behind arch-rival SES Astra in this wholly artificial 'HD Race', but Astra's tally now includes both pay and commercial channels for Germany, France, Scandinavia and the UK all committed. Eutelsat also has expectations of a service from TPS in France.

Eutelsat's only remaining HD contract of any note can be expected to come from Italian state broadcaster RAI, while SES Astra can win considerable further HD business from most of Europe's public broadcasters, not least the BBC and other UK network channels, France Televisions as well as other pay-TV channels coming out of France, and the biggest potential prize of all being Germany, and its cluster of publicly-funded and commercial channels. RTL, for example, is known to be considering a HD response to those already announced by commercial rival Pro7/ SAT1.

#### **Freesat vs Freesat**

However, the UK's satellite picture is getting more confused by the day. Indeed, would-be satellite viewers in Britain are about to be faced with a second 'Freesat' offering. The current position is that BSkyB has a freesat offering, whereby viewers can buy a fullyfunctioning Sky digital set-top box, plus installation, and yet without any obligation to subscribe, for about £150 (some \$270). The precise figure can vary from home to home dependent on the complexity of dish rigging and installation. Sky has been marketing this as 'Freesat from

Sky' since October 2004.

Then, on September 7 public broadcaster BBC and UK commercial network ITV confirmed their own muchrumoured plans for a freesat-branded service "in 2006". Charles Allen, CEO of ITV expanded on the plans last week at a Broadcasting Press Guild lunch, when he said that ITV would shortly cease encryption of its services and start transmitting in-the-clear on satellite. The BBC is already unencrypted (since 2003), and makes considerable use of Astra 2D and its tightly focussed beam to the British Isles.



ITV's showing 'in the clear' of LA' movie output over much of Europe is not yet known. Freesat (from the BBC), which the BBC admits is a "working title name for the proposed service", will operate without Britain's two other main network broadcasters, Channels 4 and Five, because both are currently locked into transmission - and encryption - contracts with BSkyB.

According to Charles Allen, the BBC/ITV version of Freesat fills in the terrestrial gaps that 'Freeview', the UK's digital terrestrial service, will never be able to reach. These might number some 25% of the viewing population. It is hoped that Freesat will be up and running in the first

Quite how Hollywood will react to

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half of next year, said the BBC. He said: "We want our channels to be available to as many people as possible, regardless of technological and geographical constraints. As we move from analogue to a digital environment, Freesat - and Freeview - will enable every family in the UK to enjoy a wide range of quality channels for free." BBC Director-general Mark Thompson said: "We welcome ITV as partners in the project to develop a consumer-friendly, subscription-free satellite proposition. "This is great news for viewers. It paves the way to provide subscription-free digital television across the whole country."

According to regulator Ofcom, BSkyB has a market share of 47.2% of digital homes (as at the end of August), with a further 3.1% watching some form of 'freesat', that is they have either bought a free-to-air system, or have churned out of Sky's pay-TV offering and are still using their Sky digi-box for free viewing of certain unencrypted channels. DTT (Freeview) has a 32.9% share and digital cable 16.6% of digital homes. Freeview continues to dominate UK box sales, selling 700,000 in Q2/05, compared with 496,000 in the same quarter last year. However, Ofcom states that just under 30% (or 2.25m) of all Freeview boxes sold are being used in second rooms. Another 360,000 boxes have been sold – and are inactive because of reception difficulties. Freeview's April-June sales of 700,000 more than dominates Sky's net sales of just 75,000, boosting its subs base to 7.4m. Cable companies Telewest and NTL added 57,000 net new subscribers during the quarter.

Charles Allen summed up the dilemma facing UK broadcasters last week, saying the challenge was to convert the UK's digital 'refusniks'. "Our research, and it matches that of the BBC, shows that some 35% of the population absolutely refuse to pay any more for their TV.

- On October 26 2005 German commercial broadcasters will start simulcasting in MPEG4 high-definition its Pro7/SAT1 pair of channels. A few days later (November 19) Munich-based Premiere will start transmissions of its three HDTV pay-TV channels (sport, movies and documentaries).
- On September 1 C:More Entertainment (formerly Canal Plus Scandinavia) launched their 1<sup>st</sup> HD channel over the Nordic region. C:More will add more channels in 2006.
- In September the BBC started long-term test transmissions on satellite of an MPEG4 high-def signal from London.
- In September 2005 Sky Italia signed a massive transponder contract with Eutelsat to secure satellite capacity for their cluster of HD channels, promised for the middle of 2006.
- On September 13 Dolby Laboratories confirmed that Canal Plus, Premiere and BSkyB would all be using Dolby Digital 5.1 Surround Sound on their HD transmissions.
- In December BSkyB will launch their 'barker' HD channel, with Europe's most comprehensive HD package expected to launch in February 2006.
- France's Canal Plus is promising it will start HDTV transmissions "early" in 2006 using the Astra satellite platform.
- France's TPS pay-TV platform will launch its TPS Star channel in HD this winter.



They don't want pay-TV." Allen admitted that his first thrust was to promote Freeview. "Eight out of 10 people who can receive Freeview do buy Freeview. Freesat just fills in the gaps in reception. Our research shows that youngsters aged 16 and under are the true digital inhabitants. Over 16 years of age and you're likely to be a digital immigrant. We need to learn how to manage this radical





change."

The pressure is now on ITV (and the BBC) to prepare for the day when the UK switches off its analogue signals, starting in some regions in barely 36 months time (2008), and for a complete shut down by 2012.

But where does this leave the rival freesats? In September, speaking at the Cambridge (UK) Royal Television Society broadcasting convention, Sky's COO Richard Freudenstein declared that the satellite broadcaster had "no intention, no need" to give away free digital Sky+ boxes. Freudenstein instead promised Ethernet connections in every future Sky+ box, allowing video-on-demand, live streaming of sports events and movies via devices other than television and the ability to set Sky+ recordings from mobile phones. He stressed that despite the rival offerings he had no intention of giving boxes away for free. This unequivocal

statement douses comments from the financial community that Sky would, during 2006, liberally sprinkle the still reluctant market with free equipment.

Charles Allen said that ITV and the BBC were considering a "minimum" specification for 'Freesat' endorsed boxes. But he also conceded that the consortium could not ban low-cost 'zap-boxes' coming into the market. The risk is that these boxes, available in other markets for as little as \$60, come without a Conditional Access slot, or the hardware being it, and

frequently with only minimum middleware to support over-theair interactivity. UK box makers Pace Micro say it would find it difficult to enter the UK market with a BBC-

version freesat box. Graham North, Humax UK's commercial director said he would prefer to concentrate on higher-value PVR units.

There's another problem in the air for BSkyB. Sky's rationale behind their 'freesat' offer is that once installed the box offers daily temptations to viewers to trade up, either to Sky's 'big basic' or premium services. Dawn Airey, Sky's programming head, described it as pay-TV's equivalent of "crack cocaine".



While ITV's Charles Allen says Freeview will never adequately reach some 25% of the population, regulator Ofcom's numbers are more modest. They say that once analogue is switched off they can crank up the digital signal to such an extent that only a mere 370,000 UK homes will be deprived of a terrestrial signal. Time will tell, but it's all terribly confusing for UK viewers and consumers, and a problem for any other large nation about to walk the same road. SM

London-based Chris Forrester, a well-known broadcasting journalist is the Editor for Europe, Middle East and Africa for SATMAGAZINE. He reports on all aspects of the industry with special emphasis on content, the business of television and emerging technologies. He has a unique knowledge of the Middle East broadcasting scene, having interviewed at length the operational heads of each of the main channels and pay-TV platforms. He can be reached at chrisforrester@compuserve.com



# Intelsat Acquisition of PanAmSat: Global and Regional Impacts

By Bernardo Schneiderman

The announcement at the end of August of Intelsat's plan to acquire PanAmSat for \$3.2 billion will create the world's largest commercialsatellite fleet with unparalleled influence over the global and regional satellite markets.

For some years now, among satellite operators consolidation has been always a question among analysts of who will buy who next in the market. But this lates move by Intelsat caught many satellite analysts unawares. The move was more related with asset consolidation by the major investors that owned these two key corporations. The satellite market overall is struggling with weak demand coupled with the increasing costs of launching and operating spacecraft designed to provide data, internet, video, voice for corporate and government agencies.

Futron Corp issued a white paper "What's up with Satellite Consolidation?" that I have incorporated in this article showing the level of consolidation that the market will have in the C and Ku-Band capacity now currently on- orbit around the globe by the major players in the market. (*See sidebar*)

Following the news of Intelsat's acquisition of PanAmSat, there has been a lot of speculation about the size and impact of this new combined entity, in particular in relation to the rest of the satellite industry. In order to put this into some perspective, Futron has compiled a review of the C-Band and Ku-Band capacity now on orbit around the globe

Key Fa	acts of the Intelsat Acqu	uisition of PanAmSat
	Intelsat	PanAmSat
Headquarters:	Bermuda	Wilton, Conn
Satellites:	28	25
2004 Revenue:	\$1.04 billion	\$827 million
<b>Employees:</b>	800	600
Investors:	Apax Partners, Apollo	Kohlberg Kravis
	Management, MDP	Roberts, Carlyle Group,
		Permira Advisors
		Partners
	•	·



operated by the following:

- · Intelsat/PanAmSat combined
- SESGlobal (including Americom, Astra and other operators in which SES has a significant investment, i.e., AsiaSat, Nahuelsat, StarOne, Sirius)
- Eutelsat
- New Skies Satellites
- $\cdot \ \ Loral Skynet$
- $\cdot$  Other (all other national/regional

#### **Major Regional Providers in Latin America**

Satellite Carriers	Country/Region	Number of Satellite in
	Coverage)	Operations
Star One	Brazil	4
Loral Skynet do Brasil	Brazil	1
Hispamar	Brazil	1
Nahuelsat	Argentina	1
Satmex	Mexico	2



monopoly or even a duopoly.

The acquisition will create the world's largest satellite company, with 53 satellites that serve customers in about 220 countries.

Intelsat, which is nominally based in Bermuda with headquarters in Washington, D.C. could issue as much as \$4.2 billion in junk bonds to back its purchase of PanAmSat, the SEC filings showed. Details about the bond offering are not finalized. But Intelsat has received debt financing commitments from six lenders: Deutsche Bank AG, Citigroup Global Markets, Lehman Commercial Paper Inc.,

FSS and BSS operators)

This data has been taken from Futron's database of commercial GEO satellite supply and reflects a current snapshot, recognizing that some of the capacity is on moveable spot beams or on broader beams which can transfer service between regions as demand requires.

While it is clear that in some regions, and for some types of capacity the new Intelsat/PanAmSat will be a dominant player, in other areas the large number of "independent" operators maintains a competitive environment. This latter issue also demonstrates that there is still room for further consolidation on either a regional or global basis, without the satellite industry being reduced to a SATELLITE CAPACITY ON ORBIT BY REGION, FREQUENCY BAND, AND OPERATOR



Deutsche Bank Securities Inc., Credit Suisse First Boston and Lehman Brothers Inc., regulatory filings showed.

In Latin America the impact of this consolidation shown in the Futron graphic (Satellite capacity on orbit per region, frequency band and operator) is that the Intelsat/PanAmSat consolidation will maintain control of almost 50% of the transponder capacity in the region.

The key impact is in the video segment where PanAmSat already dominating the video market for both DTH channels in Latin America with Sky Latin America and Direct TV Latin America. Intelsat in the region still a major player for the incumbent regional long distance carriers and other major satellite services providers (Comsat International, Impsat and Tiba) for voice and data traffic.

But Latin American major regional satellite carriers such as Star One, Satmex and Nahuelsat have their niche market and will not be affected in the short term with this consolidation.

Beside regional operators we have the following international operators with capacity available in the Latin America market beside Intelsat and PanAmSat, namely: SES Global, Loral Skynet, New Skies, Eutelsat, Hispasat and Telesat.

Latin America market still has a heavy C-Band focus and the trends is that the Brazilian, Venezuelan, Argentinian and Mexican governments will launch their own satellites in the next 5 years as they are in the planning stage. But the video market (DTH) will continue to be dominated by consolidated operations of Intelsat and PanAmSat because of their existing assets and clients.



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and Eng. Consulting, Sat and Telecom Carriers, VSAT and Telecom Manufacturers. Mr Schneiderman has been writing for the industry during the last 12 years and can be contacted at bschneiderman@futron.com

# VIEWPOINT

# Viewing IBC 2005 from a Satellite Perspective

#### By Bruce R. Elbert

President, Application Technology Strategy, Inc.



he International Broadcasting Conference (IBC) was held in Amsterdam, the Netherlands, during September 8 - 12, 2005 and had as its theme. The World of Content -Creation, Management, Delivery. I expected it would complement NAB by giving a European perspective on television broadcasting. What I found is an event that broadly addresses electronic media in all of the current and evolving forms. This view was reflected in the wide range of exhibits by companies and organizations from around the world, including some very interesting new offerings tied to the use of communications satellites. These include highlytransportable Ku band terminals suitable for almost any type of content transfer; innovative means to add two-way data to conventional DBS; expansion of the

HDTV format; realization of an improved and enhanced DVB-S2 standard; and introduction of broadband VSAT technology that goes beyond DSL and cable modem capabilities.

Amsterdam is a fun city to visit and was particularly enjoyable because of some of the nicest weather imaginable. It is an excellent host to IBC, which is held in the RAI Center to the south of the Central district of this city of international trade and commerce. Once you're inside the exhibit hall, which is where I spent the majority of my time, you could have been at a similar venue in Las Vegas or Tokyo. My particular tour through the exhibits focused on satellite-enabled solutions and related technologies that could invigorate our industry.

# Touring the exhibits – with a focus on satellite communications technologies in the broad media field

As with NAB, there were several halls and many exhibits, both large and small. There was also an excellent outdoor exhibit area with lots of SNG and transportable terminals to gawk at. GlobeCast displayed an interesting van with two working dishes, while Norsat presented an innovative design of a 1+ meter Ku-band transportable that can be compressed into two 50-pound backpacks. SweDish, the company to beat in terms of engineering design and compactness, showed how they could transmit 35 watts from their acclaimed .9 meter IPT, a terminal that stows into something an able-body can carry onto a commercial jetliner.

# **VIEWPOINT**



Looking ahead in the DTH field, a startup company from Israel called WiNetworks showed how to use a common mast to support a standard DBS antenna and a two-way broadband data terminal. Using the terrestrial WiMAX standard, this system allows the DTH operator to offer what WiNetworks calls a "Triple Pay", consisting of standard multichannel digital television, high-speed Internet access, and interactive TV. Ariel Zur, Director of Sales, said their system also supports VoIP telephony.

HDTV, now moving toward the main stream in the US market through DBS and



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# VIEWPOINT

over-the-air broadcasting, can potentially offer even better definition on larger screens. NTT of Japan demonstrated this with their 6K by 1K format, providing the experience of actually being at the sports stadium. Through a

partnership with Hitachi of America, NTT is making available the appropriate codecs that transfer this format; also available through Hitachi is a standard HDTV codec of extremely small size. Transmission of both HDTV and standard definition signals for the contribution and distribution of video content was just made easier through the advanced properties of DVB-S2, a new standard that can combine MPEG-4 with advanced forward error correction and bandwidthefficient modulation. I spoke with Raymond Pieck, President and CEO of Newtech America Inc. about their new lines of modems that support DVB-S2.

Broadband VSATs were well represented in the exhibit area. iDirect had a strong presence at IBC, building on the popularity of their versatile TDMA implementation. Just introduced in this "space" is another star VSAT network from ND SatCom, already recognized for solid transmission equipment for European and US broadcasters and other highend users. Dr. Gerhard Bommas, CTO of ND SatCom, presented their SkyVIP broadband VSAT network consisting of a new, compact hub configuration along with updated VSAT remote equipment. This should provide an interesting dimension for users needing expanded bandwidths and flexible solutions to

communications problems.

#### Driving Electronic Innovation to Reach New Markets.

It's tempting to conclude that our industry already has sufficient technology "tools" to get the job done. But, this sample of what I saw in the RAI exhibit halls provides modest innovations to give a needed boost for a particular user group. In the right hands, the new techniques could drive an application from a small niche into the main stream. Time will tell if this is true or not, but attending events like IBC can only expand one's thinking about what is possible using satellites and modern electronic systems.



Broadband VSAT Hub and SkyVIP remote from ND SatCom.



**Bruce Elbert** has over 30 years of experience in satellite communications and is the President of Application Technology Strategy, Inc., which assists satellite operators, network providers and users in the public and private sectors. He is an

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# **EXECUTIVE SPOTLIGHT** Interview with Mainstream Data CEO Scott Calder



#### Q. This is your second term at Mainstream Data, give us a little background on the history of your company?

A. I started the company back in 1985 and built the company to about \$20 million in revenue and then left in 1996 and returned in 2000 and upon my return the company had declined in size and revenue. Since then we have turned it around and grew it back to where we are now about \$10 million in sales and 40 employees with facilites in Salt Lake City, New York and London.

Mainstream was acquired in 2000 by Cidera from the people I had sold it. So we were part of Cidera (now defunct-ed.) at that time and were known as Cidera Mainstream and then it become apparent that the direction that Cidera was going was quit different from the direction that Mainstream was going, so we spun out Mainstream from Cidera by dividending the stock from the shareholders of Cidera, For over twenty years, Salt Lake City-based Mainstream Data has been providing communications solutions to companies like Bloomberg, Reuters and ESPN Sports Ticker to find new sources of revenue and reduce operating costs. It's CEO and co-founder, **Scott Calder** grew Mainstream Data from scratch and later sold the company in 1996 to "pursue other interests." In late 2000, he was invited back to the company and has since turned the company around. In a candid interview with SatMagazine Managing Editor **Virgil Labrador**, Calder spoke on how he turned around the company and the new business opportunities that they are pursuing. Excerpts of the interview:

so they then had shares in both Cidera and Mainstream. That was started in 2001 and was finalized in 2002. At that point the owners of Mainstream were effectively the same owners of Cidera because they all owned stock. Since that time, we've raised significant additional funding and now management owns a significant portion of the company. I myself currently control about a quarter of the shares in Mainstream.

# *Q. What are your main product lines?*

Mainstream is both a service provider and an application provider in the satellite business. We view the recent changes in communications as largely a commoditization in the resale of satellite capacity. In order to add value to bandwidth, Mainstream has developed a set of applications that differentiate us from those companies which just buy capacity from satellite operators and cut it into smaller pieces and resell it. We have very specific applications that are recognized as one of the best industry like in the financial news business—for example companies such as Reuters, Bloomberg, PR Newswire and other use us not just for transmission but also for applications to capture, manipulate and display their content. If you go any major newspaper in the world, chances are pretty good that its content (from Reuters or Bloomberg for instance) are being delivered by Mainstream. The same goes for web content, if they get financial information from Reuters or Bloomberg, they get it from Mainstream.

We recently were successful in providing a turnkey satellite solution for Technicolor Digital Cinema which is subsidiary of Technicolor which is owned by Thompson, to provide satellite distribution initially of their ads and trailers to thousands of theaters in North America. It is expected that by sometime in 2006 they will also begin distributing movies by satellite. This is a new busi-

# **EXECUTIVE SPOTLIGHT**



"...We expect to grow twice as much as we have been. Which is not bad for a relatively small company..."

ness for us.

We also own and operate a Linkstar VSAT network with more than 2,000 attached sites for both asymmetric distribution of digital signage content as well point-of-sales. We have a new contract for 4,400-site network for restaurants all over the country which will be a two-way connection for their accounting systems, credit verification and transactions and all of their broadband IP connections. It's a good piece of new business.

So if you look at our business, we have the traditional legacy broadcast content distribution which remains healthy and growing and we have a new major foothold in the digital signage and cinema business.

#### Q. Mainstream Data is known for its work with clients in the information and media distribution business, such as Reuters and Bloomberg. What percentage of your business is this segment?

A. Probably around 70 percent and it's growing modestly and the new businesses such as digital signage and digital cinema are about 30 percent and growing very rapidly.

# Q. Do you see this percentage changing in the short-term?

Absolutely-digital signage and

digital cinema are the two most rapidly growing segments of our business and I suspect that we will have a majority of our business coming from those segments within a couple of years.

#### Q. Talk about your recent formation of MDI Technologies?

MDI is a result of the resources which we already had and because of our 20 years experience in the satellite business, an increasing number of companies have come to us for help with the IT side of their business. MDI Technologies will provide customers with services including project management, phone and field support and installation and maintenance of satellite equipment. We've already had one contract with a major company which we will be announcing shortly.



In terms of current profitability, the content distribution and applications business clearly in the lead. In terms of predictable growth, I would say, digital signage and in terms of potentially explosive growth, it would be digital cinema.

#### Q. Since you are now a private company, have you returned to profitability under the new set-up?

There was time after we broke off from Cidera that we .. had to trunaround the company and therefore we weren't profitable. However, we are back to profitability.

#### Q. Do you see that continuing?

Yes, we certainly do and we expect to grow twice as much as we have been. Which is not bad for a relatively small

SM



October 2005

# VITAL STATISTICS

**Starting this month**, we are introducing a new section called "Vital Statistics" which will be presented by Futron Corporation. This section will provide snapshots of vital indicators on the satellite industry



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# **MARKET INTELLIGENCE**

# "Open and Closed Skies: Satellite Access in Africa" ... One Year On Toward NewCom WAFSAT By Martin Jarrold Chief. International Programme Development

T is now widely recognised that access to information and knowledge through affordable communications represents a significant opportunity for social and economic development, for regional cooperation and integration, and for increasing the participation of people in the emerging global information society. Addressing deficiencies in access to lowcost communication services is therefore now regarded as an urgent imperative for improving the quality of life in African communities, especially in remote and rural areas where the bulk of the population still resides.

Over the two days 23-24 November 2005, in Abuja, the GVF will host the second of the NewCom - "New Communication Technologies and Strategies to Bridge the Digital Divide in Africa" conferences, creating a forum within which this imperative can be further addressed with, on this occasion, a focus on West African Satellite Communications. The West African Telecommunications Regulators Assembly (WATRA) and Nigerian Communication Commission (NCC) are endorsing the NewCom WAFSAT event just as West Africa is taking centre stage in the telecoms arena with advanced plans for a regional satellite to service unprecedented levels of private sector demand for satellitebased voice, data and video solutions.

Africa is fragmented into many small national markets, and limited economies of scale have combined with low-income levels to reduce the ability of telecommunication operators to provide services.



Traditionally compounded by lack of competition in the sector, this has resulted in low levels of investment in infrastructure. As a result, even where access is available, costs often remain extremely high, especially outside urban areas. Although there are a growing number of initiatives to expand *terrestrial* infrastructure, these are usually confined to the major cities and along trunk routes. As a result, the cost of bandwidth for Internet and other services has generally been 10-100 times higher than in North America or Europe.

Fortunately, as indicated above, satellite technology presents an immediate solution to this bottleneck, even in the vast terrain of Africa's regions. The *IDRC Pan-Africa Satellite Survey* that provided the basis for the **Open and Closed Skies: Satellite Access in Africa** report – now widely circulated throughout Africa and globally since its September 2004 publication – confirmed that systems using the new high-power satellites over Africa make it possible to obtain bandwidth anywhere in the region about 10 times more inexpensively than in the past.

As will be further explored at NewCom WAFSAT in Abuja, a growing number of African Administrations have begun to implement policies and regulations that seek to open telecommunication markets to varying degrees of competition. These policies are being applied to telecommunication structures that, on one level, have traditionally been remarkably uniform. Without exception, the sector of each African country has been organised on the principle of national operating entities having responsibility for providing telephone service. In some cases, international links were - and in some countries still are - the responsibility of a separate entity. Government ownership of operating entities has been the norm.

In some African countries that have adopted a liberalised regulatory framework, private VSAT networks are allowed to function under the authority of the incumbent operator, while the latter still retain a formal monopoly. There is also usually a limitation on the provision of voice services

Another common restriction in

### MARKET INTELLIGENCE

Africa involves limiting private VSAT networks only to domestic use. VSAT network operators may be required to route their private network transmissions through the national hub of the incumbent operator, regardless of the financial or even the technical disadvantages this may have for private VSAT network operators. In some cases, obtaining a VSAT licence may require a bilateral arrangement with the incumbent operator with a "landingrights fee" or tariff to be paid to the operator, even if the incumbent does not participate in the service chain. In other monopoly jurisdictions, the incumbent is the only entity that may install and service VSATs or the only entity that may own, operate and maintain satellite earth stations

A commercial/legal presence is typically required in Africa as a precondition for licence issuance. This can be an obstacle to the effective roll-out of VSAT services in the countries concerned, because it increases overhead costs to the private VSAT operators and inflates prices to the end-users.

And finally, in a number of African countries, rules are often not transparent and are inaccessible to the general public. The licence-application process can be extremely complicated, including processing periods that require up to two years, payment of a wide variety of fees including additional taxes, annual operator fees, landing rights, etc. Added to licensing fees are customs duties, which are often so high as to prevent costeffective access to VSAT equipment.

# Climbing the ICT Development Curve

Three in-depth case studies were conducted for **Open and Closed Skies: Satellite Access in Africa**. Algeria, Nigeria and Tanzania, were selected because they serve as representative examples of African Administrations where satellite market liberalisation has been – and continues to be – applied in order to promote universal access. In addition, the countries were drawn from the western, eastern and northern subregions of the Continent. This not only demonstrates that the liberalisation trend is not confined to a single sub-region, but also provides an opportunity to compare and contrast the satellite regulatory approaches being implemented across the Continent.

[Note: For full details of the three national case studies, please consult the full report which can be downloaded from www.gvf.org].

The case studies found that the three countries are on different points of the ICT-development curve and that the varying levels of progress – particularly with regard to access to satellite-based telecommunication services – are largely attributable to the effectiveness of each country's policies and regulations.

In trying to compare the license fee burden on VSAT networks in the three countries a hypothetical 100-terminal network was costed according to each country's license fee structure, assuming an arbitrary monthly revenue or turnover of US\$200 per terminal over five years.

Tanzania's license fees place almost 2.5 times as much burden on the network than does Nigeria. In Tanzania the fees over the five-year license period amount to over US\$260,000, or about 22% of the five-year operating cost vs. US\$106,000, or about 9% in Nigeria. Algeria's cost is considerably lower, at about US\$33,000, but this is likely to increase when licensed VSAT operators are introduced.

In a ranking of telecommunications development in the three countries surveyed, Nigeria would be at the top of



the curve, followed by Tanzania and Algeria. Nigeria's success is largely attributable to how much further it has progressed in liberalising and deregulating its market. But the underlying explanation for Nigeria's progress is the effectiveness of the regulato.

Algeria has begun restructuring its telecommunications sector, but growth of the Algerian ICT market in general has been stalled by an inconsistent regulatory framework.

By contrast, Nigeria has seen dramatic growth in ICT investment since 2001, coinciding with liberalisation and deregulation of the sector. The regulatory framework is already open, relatively consultative and enabling and commercial users consider the Nigerian Communications Commission (NCC) to have transformed from a highly bureaucratic organisation to one run efficiently along business lines.

Tanzania also has a progressive approach to liberalisation and deregulation, but the extent to which the regulator has used licensing to generate revenues has limited local investment, and consequently, development of the sector. The current approach to licensing in Tanzania incentivises operators to focus on highmargin corporate-enterprise business to pay their licence fees. Operators do not perceive Tanzania to have an environment

## MARKET INTELLIGENCE

that will provide them with a return on their investment and this also explains their reluctance to invest in a local hub. Added to licensing fees are customs duties, which are often so high as to prevent cost-effective access to VSAT equipment.

The case studies also revealed that access to satellite-based services is generally being hindered by lack of knowledge. Broadly, the information requirements suggested by each of the country case studies can be summarised as follows:

> • Algeria: Support is needed relating to technical considerations (e.g. local VSAT hubs), economic factors (e.g. satellite bandwidth costs), and effective regulatory approaches (case studies of countries that have liberalised the VSAT sector);

> • **Nigeria:** Dissemination of VSAT technical literature and marketing of Ku-band VSAT services are needed to promote the technology's ability to serve as a cost-effective alternative to C-band systems for some applications; and

• **Tanzania:** Dialogue amongst the regulator, ministries and other government offices needs to be strengthened with the aim of developing the local ICT sector.

Finally, these three Administrations stand in stark contrast to African countries where duopolies and monopolies are still in place. As was revealed by the *IDRC* 

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Pan-Africa Satellite Survey, when an Administration is focused on protecting state investments in a monopoly or duopoly, the inherent potential of market forces to more rapidly increase access and decrease cost of service is greatly inhibited... or prevented outright.

One year on from publication of **Open and Closed Skies: Satellite Access in Africa**, the West African telecommunications community, and with representatives of the satellite industry, have a fresh, new and key platform within which to extend a dialogue to address the creation of the necessary mechanisms to advance the opportunity for regional satellitebased communications to bridge the digital divide. That platform is **NewCom WAFSAT**.

NewCom WAFSAT will take place on 23-24 November, 2005 at the Meridien Hotel, Abuja, Nigeria. On 25 November GVF will present a Training Workshop.

Further information may be obtained from Martin Jarrold at GVF, telephone + 44 1727 884 513 or martin.jarrold@gvf.org SM



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CALAMP CORP	<u>CAMP</u>	8.11	5.23 - 10.18
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COMTECH TELECOM	<u>CMTL</u>	40.09	16.8733 - 41.43
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NORSAT INTL INC	NSATF.OB	0.78	0.43 - 1.51
NILINC	NILI	65.00	60.35 - 73.79
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	<u>SFA</u>	36.58	24.61 - 39.89
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