Network Managment

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By Wally Martland

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There are three rival pay-TV systems in the complex and very challenging Middle East market.
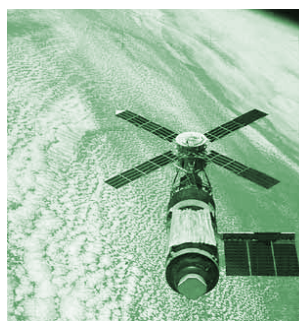
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NOTE FROM THE EDITOR

China Launch Missile Strike on Weather Satellite

On the evening of January 11, China shot down one of its own aging weather satellites in low-earth orbit with a ground-based ballistic missile. The shoot-down, a test conducted by the Chinese military, drew an immediate protest from the US government, followed by Canada and Australia. "The United States believes China's development and testing of such weapons is inconsistent with the spirit of cooperation that both countries aspire to in the civil space area," said Gordon D. Johndroe, a spokesperson for the U.S. National Security Council.

The U.S. and the former Soviet Union have conducted similar tests during the Cold War twenty years ago. But that was during another time and under vastly different circumstances. It certainly seems out of spirit of the times for China to be conducting such military tests at the present time when international cooperation is the norm, especially in the global satellite industry. Not surprisingly, the test not only elicited concerns from the US government but from the industry as well. Over 28 countries have about 316 satellites within the range of the missile that destroyed the Chinese weather satellite last month (about 550 miles above the earth). Although, most commercial satellites operate far above this range (mostly in the geosynchronous orbit 23,000 miles from the earth), any action that purposely seeks to destroy a satellite is cause for concern.

This certainly won't help the cause of those trying to ease export restrictions to China, a nagging problem that has U.S. satellite manufacturers losing out to their European counterparts.

This wasn't the first Chinese test that raised concerns. In September 2006, China used a ground-based laser to illuminate at least one US satellite according to the US National Reconnaissance Office. Let's hope for the sake of international trade and the development of the global commercial satellite industry, that we have seen the last of these "tests."

Virgil Labrador

Article Contributions to SatMagazine

Satmagazine accepts article contributions from the industry. We encourage contributions that deal with issues affecting the industry as opposed to company or product-specific articles. We are specifically interested in case studies, opinion (op-ed) pieces, features or market studies and trends. To submit proposals for possible articles , send a one-paragraph or less abstract of the proposed article or to obtain more information on our editorial calendar, publishing guidelines and deadlines, please send an e-mail to virgil@satnews.com

Calendar of Events 2007

Feb. 5-8, Cairo, Egypt
Cairo ICT
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E-mail: m.mazen@cairotelecomp.com
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Feb. 6-9, Moscow, Russia
CSTB-2006: New TV Era
Anastasia Kasatkinaor Victoria Senukhina
Tel.: +7 (095) 737 74 79 / Fax: +7 (095) 145 51 33
E-mail: cstb@midexpo.ru / Web: www.cstb.ru

Feb. 19-22, Washington, D.C., USA
Satellite 2007
+1-508-743-0512 or +1-800-915-9801
Email: inquiry@satellite2007.com
Web: www.satellite2007.com

Mar. 5-6, London, UK
The Connected Home
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Mar. 5-7, London, UK
IPTV World Forum
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Mar. 5-8, George Washington UniversityWashington, D.C., USA
Planetary Defense Conference
Tel.: 310.336.5000 / Fax: 310.336.7055
Web: http://www.aero.org/

Mar. 6-8, Dubai, UAE
CABSAT 2007
Web: www.cabsat.com

Mar. 7, London, UK
TV over Net
Ingrid Anusic
Tel: +44 1173 116 220 / Fax: +44 1173 116 221
E-mail: ingrida@junction-group.com
Web: www.tvover-net.com

Mar. 7-8, Brussels, Belgium
MilSpace 2007: Planning, Funding & Strategies
Teri Arri
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E-mail: tarri@smi-online.co.uk
Web: http://www.smi-online.co.uk/events/
overview.asp?is=1&ref=2539

Mar. 12-16, Johannesburg, South Africa
SatCom Africa 2007
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Email: brian.shabangu@terrapinn.co.za
Web: www.satcomafrica.com

Mar. 20, Chantilly, VA, USA
Aviation Week Laureate Awards
Lydia Janow, CMP
Tel.: 800-240-7645 or 212-904-3225 / Fax: 212-904-3334 E-mail: janow@aviationweek.com
Web:www.aviationweek.com/conferences/

Mar. 21-23, Nanyang Technological University, Singapore
3rd Asian Space Conference
Timo Rolf Bretschneider
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Web: http://pdcc.ntu.edu.sg/ASC2007

April 10-13, Coex, Seoul, Korea
25th AIAA International Communications Satellite Systems Conference (ICSSC-2007)"Evolution Toward a Ubiquitous Network Society"
Anna Kim, APSCC secretariat
Tel: +82 2 508 4883~5 / Fax: +82 2 568 8593
E-mail: info@apscc.or.kr
Web: http://www.icssc2007.com

April 11-13, Istanbul, Turkey
Caspian Telecoms 2007
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Space Systems/Loral Nabs Contract to Build Satellites for Echostar and Intelsat

Space System/Loral technicians realign a thermal blanket on the tower of a spacecraft that is mated to the shipping container superstructure at the company's spacecraft assembly facility. SS/L announced this week two new contracts to build satellites for EchoStar and Intelsat. (SS/L photo)

PALO ALTO, Calif. — EchoStar Orbital Corporation II, a subsidiary of EchoStar Communications Corporation has awarded Space Systems/Loral a subsidiary of Loral Space & Communications a contract to manufacture a new direct broadcast satellite (DBS).

EchoStar said the new satellite named EchoStar XIV will provide expanded services and flexibility for Dish Network's more than 13 million direct-to-home (DTH) television subscribers.

John Celli, president of Space Systems/Loral, said with an ever-increasing amount of programming options, it is an exciting time for the DTH industry. "Space Systems/Loral is well positioned to help EchoStar meet its growing demand for advanced services," he said.

There are currently three SS/L-built satellites on orbit in the EchoStar fleet.

EchoStar XIV will be based on SS/L's 1300 platform, which features qualified, flight proven subsystems and a long record of reliable operation. Its high efficiency solar arrays and lightweight batteries are designed to provide uninterrupted electrical power. In all, SS/L satellites have amassed more than 1,300 years of reliable on-orbit service.

Earlier during the week, SS/L also announced a contract with Intelsat Corp. to manufacture Intelsat 14, a new, high-power C- and Ku-band fixed satellite service (FSS) satellite.

John Celli, president of Space Systems/Loral, said the new

project provides SS/L the opportunity to demonstrate our success in combining heritage, space-proven satellite technology with new innovation. "We are pleased to be awarded the contract for this important new member of Intelsat's global fleet," he said.

Intelsat 14, to be located at 45 degrees West longitude, will be the 44th Space Systems/Loral satellite built over the past four decades for Intelsat, the world's largest fixed satellite services operator. The satellite will carry 40 C-band and 22 Ku-band transponders across four different beams, covering the Americas, Europe and Africa.

Intelsat 14 will have a design life of 15 years and will replace the PAS-1R satellite when the new satellite is delivered in 2009. SS/L said its high efficiency solar arrays and lightweight batteries are designed to provide uninterrupted electrical power. The satellite will based on SS/L's 1300 platform.

Abertis Completes Purchase of 32% of Eutelsat

BARCELONA — Spain's leading private transport and communications infrastructure management corporation Abertis, through its telecommunications, subsidiary Abertis Telecom, has completed the purchase of 32 percent of European satellite operator, Eutelsat Communications, via a cash payment of •1.07bn ($1.28 billion).

Abretis said the transaction was financed with a bridge loan taken out with la Caixa, BSCH, Citibank, Barclays, RBS and HVB (Unicredito group). It added the purchase went through after all anti-trust requirements were complied with.

The deal makes abertis telecom the leading shareholder of Eutelsat Communications, the third largest satellite operator in the world with a market share of 30 percent in Europe and 13 percent world wide, with a fleet of 23 satellites in geo-stationary orbit.

With the purchase, Abertis telecom has now obtained four directors – out of ten – on the board of Eutelsat, the same number held by the shareholders having sold a total of 32 percent stake of the share capital: Nebozzo (Texas Pacífic Group, Spectrum), Cinven and Goldman Sachs.

The company said the entry of Abertis Telecom in Eutelsat marks a significant qualitative leap in Abertis' telecommunications subsidiary's growth strategy. It is a major step in terms of

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international expansion, marking Abertis Telecom's first foray beyond Spain and underpinning the strategic decision to take all the abertis group's businesses to France.

It added the deal is an equally important quantum leap in terms of technology as it complements Abertis Telecom's strong presence in wireless and terrestrial signal transmission with a satellite transmission network.

In its last fiscal year, ended June 30, 2006, Eutelsat recorded revenues of •791 million ($1.025 billion), EBITDA of •617 million ($799 million) (78 percent margin) and net profit, before extraordinary items, of •102 million ($132 million). In the last four years the company has invested •844 million ($1.093 billion). In relation to key financial indicators, it is important to highlight Eutelsat's long-term customer order backlog, which currently stands at •4,000 million ($5.18 billion).

Ball Aerospace Wins WorldView 2 Satellite Contract

LONGMONT, Colo. — DigitalGlobe has awarded Ball Aerospace & Technologies Corp. a contract to build WorldView 2, the third satellite in DigitalGlobe's constellation of spacecraft.

Digital Globe said WorldView 2 will offer the highest collection capacity of Earth imagery, and is the only next generation system to be built independent of U.S. government financing.

The WorldView 2 satellite is scheduled to launch in late 2008 and it was revealed that work on the satellite sensor is nearing completion at ITT. Work on long lead items on the satellite bus has been underway since early 2006. WorldView 2 is the third remote-sensing satellite built by Ball Aerospace for DigitalGlobe.

"We have seen significant growth in demand for the use of content-rich geographic applications on the Internet and within the enterprise applications that have ignited the demand for digital satellite imagery in the commercial and government markets. WorldView 2 will enable DigitalGlobe to collect almost five times the imagery of any current commercial system, and is a significant step in our strategic plan to meet increased market demand for geospatial data," said Jill Smith, DigitalGlobe president and CEO.

She added the addition of WorldView 2 will provide DigitalGlobe, with higher collection capabilities, more frequent revisit and refresh, more spectral information and greater imaging flexibility.

Ball Aerospace previously partnered with DigitalGlobe to build its existing QuickBird satellite and is currently completing the construction of WorldView 1, scheduled to be on-orbit in mid-2007. WorldView 2 will operate at an altitude in excess of 800 kilometers and offer target selection flexibility and increased spectral capabilities.

DigitalGlobe said WorldView 2's agility, larger on-board storage and greater communication downlink capabilities will provide DigitalGlobe with significantly more imaging capacity, enabling it to collect up to 950,000 square kilometers of world class half-meter imagery daily, and allow direct tasking and downlinking of imagery to customer locations. WorldView 2 will also provide eight bands of multi-spectral for life-like true color imagery and greater spectral applications in the mapping and monitoring markets.

Alcatel Alenia Space Signs Euro 103-M Contract to Build SICRAL-1B satellite for Italian Ministry of Defense

PARIS — Alcatel Alenia Space has signed a Euro 103 million ($133.63 million) contract with the Italian Ministry of Defense to provide the telecommunication satellite SICRAL-1B.

Alcatel said the satellite, dedicated to the Italian Armed Forces, will ensure strategic and tactical communications on the Italian and foreign territories as well as mobile communications between terrestrial, naval and air platforms. It will also provide UHF and SHF band satellite capacities to NATO forces, in accordance with a memorandum of understanding that was signed in 2004 between the Ministries of Defense of Italy, France, the United Kingdom, and the Atlantic Alliance. This contract will be financed by the Italian Ministry of Economic Development.

As prime contractor, Alcatel Alenia Space will manufacture and deliver the satellite as well as several ground segment's subsystems, including the Telecommunications Control Centre in Vigna di Valle (Italy).

The Italian Ministry of Defense has already previously signed contracts, including one worth 72 million euro ($93.8 million) in 2003, for non-recurring costs related to SICRAL-1B satellite and ground segment. A further contract for the completion of SICRAL-1B ground segment and satellite launch is predicted in the near future, according to Alcatel Alenia.

SICRAL-1B structure manufacturing and satellite integration is

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taking place in Alcatel Alenia Space's facility in Turin (Italy), while the environmental tests will be carried out in its facility in Cannes (France). The payload, which is manufacturing in Rome (Italy), is composed of 3 UHF band, 5 SHF band and 1 EHF/Ka band transmitters.

Carlo Alberto Penazzi, CEO of Alcatel Alenia in Italy, said the SICRAL system is particularly strategic for the Italian Defense Administration as it has already demonstrated its efficiency in past military operations.

SICRAL-1B, which is set for launch end of 2007, will supplement SICRAL-1 in operation since 2001. It will increase the availability and the complete reliability of the SICRAL system and will satisfy the operational requirements that the Italian Armed Forces are facing, mainly coming from "foreign areas". SICRAL-1B will be operational until 2019 and will be followed by SICRAL-2, which should be operational from 2011 until 2026.

Arianespace to Launch ProtoStar I

KOUROU, French Guiana — New satellite operator ProtoStar has chosen Arianespace to launch DTH satellite ProtoStar I.

Arianespace CEO Jean-Yves Le Gall announced during his annual January press conference on Monday that Arianespace will launch the ProtoStar I satellite for ProtoStar Ltd.

Arianespace said this is the 280th launch contract won by Arianespace since its inception in March 1980.

ProtoStar I will be placed into geostationary transfer orbit by an Ariane 5 from the Guiana Space Center, Europe's Spaceport in Kourou, French Guiana, during the first half of 2008.

Weighing in at 4100 kg, ProtoStar I is a Space Systems/Loral

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An Ariane 5 launch for ProtoStar I. *(Arianespace photo)*

(SS/L) 1300 platform, built in Palo Alto, California and will be the 34th platform built by SS/L to be launched by Arianespace. The satellite will be equipped with 22 Ku-band 36 MHz equivalent and 38 C-band 36 MHz equivalent transponders, and will provide digital DTH services, HDTV and Broadband Internet to underserved areas in Asia.

"We are honored to be a part of this new venture. Protostar has exhibited remarkable vision with its plan for bringing DTH satellite coverage to Asia, and Arianespace stands-ready to launch this vision, literally and figuratively," said Jean-Yves Le Gall, Arianespace CEO.

Liberty Media Controls DirecTV

NEW YORK — News Corporation has announced that it had signed a share exchange agreement with Liberty Media Corporation giving former cable titan John Malone control of DirecTV, America's biggest satellite TV provider.

Under the terms of the agreement, Liberty will exchange its entire 16.3 percent stake (324.6 million Class A and 188 million Class B shares) in News Corporation for a 38.4 percent stake (470.4 million shares) in the DirecTV Group, three Regional Sports Networks (FSN Northwest, FSN Pittsburgh and FSN Rocky Mountain) and $550 million of cash, subject to a working capital adjustment.

"We are happy to become the largest shareholder in the world's largest satellite television provider. Chase Carey and the DirecTV team have done a fantastic job, and we look forward to the strategic benefits of them joining the Liberty family," said Liberty president and CEO Greg Maffei.

"During 2006 we converted many passive investments into strategic operating businesses, but this transaction is the largest and most important. DirecTV and the regional sports

networks represent a critical step in our efforts to transform Liberty Media into a well-positioned, focused operating company," he added.

"We are extremely pleased with the successful, tax-efficient conversion of our News holding. Our investment in DirecTV will create financial, operating, and strategic flexibility," said Liberty chairman John Malone. "Liberty's ownership of News has created tremendous value for our shareholders, and we are grateful to Rupert Murdoch and News management."

News Corp. said it believes the transaction will be immediately accretive to the company's earnings per share and will accomplish an approximately $11 billion stock buyback representing approximately 16 percent of the outstanding stock.

The share exchange agreement is subject to various regulatory approvals and an affirmative vote by a majority of holders of News Corporation's Class B common stock, other than the Murdoch family and Liberty. If approved, the transaction is expected to be completed in the second half of calendar 2007, News Corp. said.

XM-Sirius Merger Not Possible Says FCC Chairman

WASHINGTON — The chairman of the Federal Communications Commission, Kevin Martin, said on Jan 17, the two satellite radio companies, Sirius Satellite Radio and XM Satellite Radio Holdings, would not be allowed to merge under current regulatory rules.

According to a *Bloomberg News* report, there is an existing ban on single ownership for both satellite services dashing hopes of investors that the two companies merge to save on costs. This restriction was written into the regulations that authorized the two nationwide licenses, the report said.

Although both companies have been increasing their subscriber base by the thousands, they continue to lose money for incurring huge costs to acquire new subscribers.

XM added more than 1.695 million new subscribers in 2006, ending the year with more than 7.625 million subscribers.

Sirius ended 2006 with approximately 6,024,000 subscribers, an 82 percent increase over the company's 2005 ending subscriber base of 3,316,560. Sirius added a record 2.7 million net subscribers in 2006.

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Based on preliminary financial data, both Sirius and XM achieved their first ever quarter of positive free cash flow in the fourth quarter of 2006.

Telesat Canada Awards Space Systems/Loral Contract to Build Nimiq 5 Satellite

PALO ALTO, Calif. — Telesat Canada has awarded Space Systems/Loral (SS/L), a subsidiary of Loral Space & Communications, a contract to manufacture Nimiq 5, Telesat's new high-power, direct broadcast satellite.

Based on SS/L's heritage 1300 platform, the satellite will be equipped with 32 active high-power Ku-band transponders, providing a strong footprint across Canada. Planned for completion in 2009, Nimiq 5 will have a lifespan of more than 15 years, operating in its geostationary orbit location of 72.7 degrees west.

Loral's 1300 series has a total satellite power capability ranging from 5 to 25 kW continuously throughout the life of the spacecraft, and can support from as few as 12 active transponders to as many as 150 transponders. (SS/L photo)

Nimiq 5 will be the first satellite in Telesat's fleet to be manufactured by Space Systems/Loral.

As previously announced by Telesat, Nimiq 5's entire payload is under contract to Bell ExpressVu, Canada's leading direct-to-home service provider, to be used for a wide range of digital television services.

Daniel S. Goldberg, president and chief executive officer of Telesat Canada, said SS/L is being tapped to expand the company's satellite fleet

and assure a generation of Canadians reliable access to advanced video programming. **SM**

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TerreStar Chairman Steps Down

RESTON, Va. — Jared (Jerry) Abbruzzese has stepped down as chairman of the board of TerreStar Networks Inc. and chairman of the TerreStar Global Ltd. But TerreStar said Abbruzzese will serve on a board of advisors that is being established for TerreStar Global.

"Jerry's vision and leadership has built TerreStar from a bold concept into a company poised to transform the way we communicate," said Robert H. Brumley, president and CEO of Motient Corporation and its subsidiaries TerreStar Networks Inc. and TerreStar Global.

"We are more innovative, agile and aggressive because of Jerry's steady guidance during an important time in our evolution. I look forward to Jerry's continued support as we take TerreStar's next generation network global."

Swedish Space Appoints New CEO

STOCKHOLM — Lars Persson has been appointed as the new president and CEO for Swedish Space Corporation effective February 16. Lars Persson previously served as CEO for Marratech AB and will replace Claes-Göran Borg who is going into retirement.

Lars has been very internationally active and has more than 25 years of experience from the IT and Telecom sectors. He has been CEO for France Telecom and Telenor in Sweden. He is also a member of the board in CyberCom, a consulting firm listed on the stock exchange.

Lars Persson

"It will be most exciting and interesting to be able to contribute to the future development of a company that already is one of the world's leading companies in space technology and services," says Persson.

Swedish Space chairman of the board Olof Rydh said Lars has the capacity and experience required to successfully manage the Swedish Space. He said the conditions for continued positive progress are excellent built upon the previous efforts of retiring president and CEO Claes-Göran Borg.

L-3 Promotes Ralph G. D'Ambrosio to Chief Financial Officer

NEW YORK — L-3 Communications has appointed Ralph G. D'Ambrosio as chief financial officer (CFO) effective Jan. 17. The CFO position was formerly held by Michael T. Strianese, who serves as president and CEO of L-3.

"Ralph has been an integral part of the L-3 team since our founding in 1997," said Strianese. "Over the years, he has played an invaluable role in ensuring that we achieve our financial goals and has worked closely with L-3's senior management team and with our businesses to help set the corporation on the path of future growth. Ralph has the proven skills, experience and knowledge of L-3 necessary to help the company continue to grow and create shareholder value."

D'Ambrosio joined L-3 in August of 1997, and has served in various roles of increasing responsibility within the company's finance department. He most recently served as L-3's vice president of Finance and Principal Accounting Officer. Prior to joining L-3 Communications he was a senior manager in the Accounting and Auditing department at Coopers & Lybrand, LLP.

A summa cum laude graduate of Iona College, D'Ambrosio received a Bachelor of Business Administration in 1989. He received his Master of Business Administration, with honors, from the Stern School of Business at New York University in 1997. D'Ambrosio is also a Certified Public Accountant.

Intelsat Names Michelle Bryan Senior Vice President, Human Resources

WASHINGTON — Intelsat has named Michelle V. Bryan as senior vice president of Human Resources, effective January 16, 2007. Bryan brings over 20 years of senior corporate executive experience, both in human resources and legal affairs. Reporting directly to Intelsat chief executive officer Dave McGlade, Bryan will be responsible for leading all aspects of Intelsat's human resources in support of the company's business objectives. These responsibilities include recruiting, compensation and benefits, diversity, organizational development, training, and employee relations.

Previously, Bryan served as the senior vice president for Human Resources at US Airways, a major U.S. airline with over 40,000 employees worldwide. During her tenure at US Airways, Bryan

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also served as executive vice president for Corporate Affairs and General Counsel. More recently, Bryan served as interim general counsel for Laidlaw International, helping its board of directors with governance matters and establishing board and executive compensation programs.

Bryan is a Magna Cum Laude and Phi Beta Kappa graduate of the University of Rochester, Rochester, New York. She received her law degree from Georgetown University, Washington, D.C.

Former TSA Chief David Stone Joins SkyPort International Board

HOUSTON — David Stone, former assistant secretary of Homeland Security for the Transportation Security Administration (TSA), has been named to the board of directors of SkyPort International Inc.

Stone, a retired Rear Admiral in the U.S. Navy, will assist SkyPort in playing an even larger role in providing disaster communications capability to first-responders and to the military.

"I want to help the United States at the federal, state and local levels, improve its disaster response communications capabilities" Admiral Stone said. "SkyPort's performance in support of Katrina related operations were excellent. I am eager to assist my fellow board members in building on that success so that our nation has the kind of communications capability we need to respond quickly and effectively during future disaster response events.

Stone, a 1974 graduate of the U.S. Naval Academy, retired from the Navy in 2002 and shortly thereafter became the first Federal Security Director at Los Angeles International Airport for the Department of Homeland Security. President Bush nominated

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him as assistant secretary for the Department of Homeland Security in charge of the entire TSA in 2004. He held the top leadership position at TSA for 18 months before leaving to form and serve as president of The Alacrity Homeland Group , a Washington, D.C., based firm that provides strategic planning and consulting services in the homeland security and critical infrastructure arena.

Spacehab Names Royston as Executive Vice President

HOUSTON — Spacehab, Incorporated has appointed James D. Royston as executive vice president.

"Over the past five years Jim has repeatedly demonstrated his ability to grow our spacecraft processing operations," stated Thomas B. Pickens, III, Spacehab president and CEO. "I will be relying on him as we enhance our ambitious vision to advance global space commerce initiatives."

Royston, 43, joined Spacehab in 2000 and most recently served as senior vice president and general manager of the company's Astrotech Space Operations subsidiary, a commercial provider of satellite launch processing services in the U.S.

"Jim's ability to effectively serve existing commercial customers while tapping into the government market has resulted in many long-term contracts with NASA, the United States Air Force and, most recently, the Office of Space Launch which opens a new sector for future growth within all of our business sectors," added Pickens.

DirecTV Appoints John O'Neill VP of Sports Sales and Marketing and Heather Curatolo VP of Direct Response

EL SEGUNDO, Calif. — DirecTV has announced two additions to the advertising sales department with the appointments of John O'Neill as the Vice President of Sports Sales and Marketing and Heather Curatolo as Vice President of Direct Response.

O'Neill joins DirecTV from Fox Sports Net where he served as manager of Media and Marketing Partnerships, as well as senior account executive specializing in the sale of network unwired MLB, NHL and NBA networks. While at Fox Sports Net, O'Neill consistently posted top sales and under his leadership, sales quadrupled over a nine year period. O'Neill's extensive background in sports will energize a new DirecTV initiative to take a more focused approach to sports marketing.

Prior to Fox, O'Neill worked at Jack Nicklaus' Golden Bear International as corporate marketing manager and for the ABC Television Network as manager of Daytime Sales in Chicago. He holds a bachelor's degree from Boston College.

Curatolo comes to DirecTV from Court TV where she served as the vice president of Direct Response and Paid Programming Advertising Sales. While at Court TV, Curatolo set the standard in the sales industry consistently exceeding aggressive sales goals. Curatolo is also known for developing new and innovative ways to generate additional revenue at Court TV. Curatolo holds a bachelor's degree from Marist College.

ScheduALL Appoints Maureen H. Bryan as Professional Services Manager

HOLLYWOOD, Fla. — ScheduALL has appointed Maureen H. Bryan as professional services manager responsible for establishing formal operating procedures and expansion of service offerings for ScheduALL's professional services division. Bryan joins the company with more than 17 years of experience in developing, coordinating, and managing technology projects.

Prior to joining ScheduALL, Bryan was project manager at NTT Communications, where she initiated and managed multiple projects — with matrixed development teams working in the United States, Europe, and Asia — to create software products for the company's signature product line.

As senior project manager at Momentum Consulting, she led software development teams in the creation of products for clients including Burger King, Alamo Rent-a-Car, Ryder, and Cigna Dental. Earlier, she served as service delivery manager for Keane and as systems development manager for Assurant Solutions, where she led her department in the development of custom PC-based software for clients including SunTrust, Great Western, GMAC, and Caterpillar.

Bryan earned a bachelor's degree in mathematics at Loyola University and a master's of business administration from Barry University. Her certifications include that of a project management professional (PMP) from the Project Management Institute.

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Bryan will be based in Hollywood, Fla., and report to Ralph Quintero, CTO.

Roger Rusch Resigns as Com Dev Director

CAMBRIDGE, ON. — Com Dev International Ltd. (TSX: CDV) has announced that Roger Rusch has resigned from the company's board of directors to devote more time to his family and his consulting business. Keith Ainsworth, chairman of Com Dev's board, expressed his sincere appreciation for the time, effort and diligence shown by Rusch during his seven-year tenure as a director.

"Roger's depth of knowledge of the global space market has been a valuable resource over these past few years as we refocused our operations on Com Dev's core space business. Both the company and his fellow directors thank Roger for his commitment and wish him well in the future," he said.

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Scopus Video Appoints Yaron Simler as CEO; David Mahlab as Board Chairman

TEL AVIV, Israel — Scopus Video Networks a provider of digital video networking products, has appointed Dr. Yaron Simler as chief executive officer.

Scopus said the appointment is a part of a succession plan that was announced in the company's filings for its December 2005 IPO, and has been effective commencing January 1, 2007. Dr. Simler will continue to serve as a member of Scopus' board of directors.

Dr. Simler succeeds David Mahlab, who co-founded and led Scopus through its first decade. David Mahlab has been appointed as an active chairman of the board. Former chairman, Yoel Gat, will remain a member of Scopus' board of directors.

David Mahlab said Yaron's immense knowledge and expertise in all aspects of the industry coupled with his acute business sense have enhanced Scopus America's growth.

Since August 2005, Dr. Simler has served as Scopus' president. Previously he was president of Harmonic's Convergent Systems Division (CSD). Dr. Simler received his Ph.D. in Electrical Engineering from the University of California, Berkeley.

Boeing Names Tom Downey Senior Vice President of Communications

CHICAGO — The Boeing Company has named Thomas J. Downey as senior vice president of Communications, last Jan. 1, 2007.

Downey will report to Boeing chairman, president, and CEO Jim McNerney and serve on Boeing's executive council. He will be responsible for the company's global communications activities, including business unit and corporate communications, branding and advertising, employee and executive communications, and public relations.

Downey has led Boeing's corporate communications since April 2006, reporting to senior vice president for Public Policy and Communications Tod R. Hullin. Hullin will continue to lead all U.S. federal, state and local government liaison operations for Boeing and serve on the company's executive council.

Downey, 42, is a 20-year Boeing veteran who has held a variety of senior assignments across the company's commercial airplanes and defense and space businesses. His prior positions include leading communications for Boeing Commercial Airplanes, Boeing Military Aircraft and Missile Systems, Boeing corporate internal and executive communications, McDonnell Douglas Aerospace and Douglas Aircraft. He holds a bachelor's degree in English from Saint Louis University.

Barrett, Faga, and Musk join Space Foundation's Board of Directors

COLORADO SPRINGS, Colo. — The board of directors of Space Foundation has announced the election of new officers and directors of the corporation, last Jan. 17, 2007.
Barbara M. Barrett (Paradise Valley, Az.), Martin C. Faga (McLean, Va.), and Elon Musk (El Segundo, Calif.) were elected new members of the board. Lon Levin (Washington, D.C.), chief strategic officer, Transformational Space Corp., and co-founder of XM Satellite Radio, was elected to a two-year term as treasurer of the board.

Robert S. Walker, chairman of Wexler & Walker Public Policy Associates, continues to serve as chairman. Gen Thomas S. Moorman, Jr., USAF (Retired), vice president, Booz Allen Hamilton, is vice chairman, and Dr. William F. Ballhaus, Jr., president and chief executive officer, The Aerospace Corporation, is secretary.

Barrett is president and chief executive officer, Triple Creek Ranch. She has been involved in international business and aviation for more than 25 years and applies her legal and business experience serving on many boards and committees. Barrett is chair of the U.S. Advisory Commission on Public Diplomacy and served as the first woman deputy administrator of the Federal Aviation Administration. Before she was 30, she was an officer and executive of two Fortune 500 companies.

Faga is a former president and chief executive officer of The MITRE Corporation. He served from 1989 until 1993 as Assistant Secretary of the Air Force for Space and as Director of the National Reconnaissance Office (NRO). President Bush appointed him to the President's Foreign Intelligence Advisory Board and to the Public Interest Declassification Board.

Musk is chairman and chief executive officer of the Space Exploration Technologies Corporation (SpaceX), which he founded. Musk also is the co-founder of PayPal and Zip2 Corporation. **SM**

NEW PRODUCTS

ESA Demos Satellite Multimedia Car Radio

Together with a number of partners, ESA has developed a multimedia car radio of the future. A flat antenna in the roof of the car receives data from the Ku-band of communications satellites. A computer converts the data into sound, images and even complete software packages. (BMW/ESA photo)

PARIS — The European Space Agency (ESA) and its partners are developing the multimedia car radio of the future with the prototype being unveiled on January 25, at the Noordwijk Space Expo, in the Netherlands.

ESA said the car radio of the future works in a similar manner to a satellite receiver for television channels. However, the car has no large dish antenna on the roof, but a specially designed mobile antenna, flattened so that it can be built almost invisibly into the bodywork. The antenna receives signals in the Ku frequency band used by communications satellites.

According to ESA, in two important areas, the new European multimedia system advances beyond existing solutions. Instead of new satellites and a network of ground-based transmitters – which might easily requites an investment of more than a billion Euro – the ESA system uses only existing communication satellites.

In addition, the mobile multimedia system employs a cache memory – a hard disk or its solid-state equivalent. Received signals can be stored – in a similar way to personal video recorders – and played back after a short time shift or much later. This clever intermediate step prevents loss of signal in tunnels or behind obstructions from disturbing the program. The listener can also select a part of the broadcast to listen to, or pause the show as they stop to buy fuel.

ESA developed the system with nine partners in the industry and service sectors. The main challenge was that the satellites used by the system were designed to broadcast television signals to large, fixed dish antennas. For use in cars, an entirely new approach was needed to achieve an antenna that can be easily built in by the car manufacturers. ESA and its partners said they have worked on the mobile multimedia system for over three years. The technology has been demonstrated and has great potential for the car industry and information providers.

Canada-Wide TV Service to Deliver 30-Plus Channels of Christian and Family Programming

NAPLES, Fla. — Sky Angel, a U.S. direct broadcast satellite (DBS) provider of Christian TV and radio channels plus family programming, and ShifTV Inc. of Toronto, Canada, a pioneer in providing Broadband TV (or IPTV, Internet Protocol Television), have launched the Sky Angel multi-channel television service throughout Canada.

Sky Angel has agreed to provide more than 30 TV and radio channels of Christian and family programming to ShifTV for delivery via a high-speed Internet connection to Canadians' televisions using a set-top box provided by ShifTV. Sky Angel said viewers can watch programming through the TV and surf the Internet on the computer simultaneously using the same high-speed connection.

Among the TV channels currently available in Canada via Sky Angel IPTV are Sky Angel's kids and teens channel KTV; Christian music video channel TVU; Trinity Broadcasting Network's full suite of channels TBN, JCTV, Smile of a Child, The Church Channel and TBN Enlace; plus Safe TV, Familyland, Faith TV, Angel One and more. Additional TV and radio channels are expected to be announced next month.

Google Earth Delivers Higher Resolution Photos after Deal with French Spot Image

TOULOUSE, France — Spot Image has entered into an agreement with Google in order to improve the available resolution of Google Earth products over wide areas of the world. Under a multi-year agreement, Spot Image will provide Google Earth with 2.5 meter resolution imagery taken from the SPOT 5 satellite.

Spot Image said as of January 22, users have been able to see new high resolution satellite images on Google Earth for various European areas including France, Belgium, Luxemburg, Spain and Portugal.

NEW PRODUCTS

"We always look to work with the best satellite imagery providers and are very pleased to be working with a French company. Giving our users access to the highest quality images is very important for us. We hope this will help them explore more of our planet from above," says Mats Carduner, head of France and Southern Europe for Google.

"This cooperation with Google is a great opportunity to enlarge the community of people who enjoy the images taken by the SPOT satellites, and to show all the benefits of earth observation from space. I am convinced it will contribute to growing public interest for this technology," said Hervé Buchwalter, president & CEO of Spot Image

Spot Image's wide range of products and services makes it one of the leading suppliers of geo-spatial information. Over two decades, the company has perfected the ability to harness space- and ground-based systems to meet customers' needs.

DigitalGlobe Partners With Lowrance to Power GPS Tools

LONGMONT, Colo.— DigitalGlobe announced on January 16, that it is partnering with Lowrance, a leading brand in marine electronics since 1957 and GPS navigational systems since 1992.

Under terms of the partnership DigitalGlobe will provide the satellite imagery for the

Lowrance iWAY 600C portable navigation device (PND). The iWAY 600c with DigitalGlobe imagery is the first portable navigation device to give drivers unparalleled access to the world's highest resolution commercial imaging system.

NEW PRODUCTS

"As portable navigation devices grow in popularity there is a need for more accurate, comprehensive and up-to-date digital imagery to maximize the utility of these advanced capabilities," said Marc Tremblay, vice president and general manager of DigitalGlobe's commercial business unit.

The iWAY 600C offers detailed satellite imagery of select metropolitan cities and marine mapping/navigation, in addition to precision NAVTEQ(R) road mapping with voice and visual navigation, audio player with built-in FM modulator, picture viewer, and 5" high-res display. DigitalGlobe's "birds-eye view" satellite imagery will be the sole provider of digital imagery for the product.

Efficient and Cost Effective GSM Satellite Backhaul Proven in Tests, Says ViaSat

DULUTH, GA— ViaSat Inc. and Verso Technologies have successfully tested a satellite backhaul system for GSM mobile communications that can cut the cost of GSM backhaul through more efficient use of satellite bandwidth.

ViaSat said the system combines ViaSat LinkStar satellite communications networking and Verso NetPerformer technology. The satellite GSM backhaul system was tested in a GSM

NEW PRODUCTS

network in Papua New Guinea for Telikom PNG Ltd. Following the successful trial, Telikom PNG is planning to roll out 50 GSM over satellite remote sites throughout Papua New Guinea, according to ViaSat.

The system packetizes network traffic and dynamically assigns bandwidth based on voice and signaling volumes. Satellite backhaul links have traditionally used a fixed amount of bandwidth in an always-on mode whether traffic is flowing or not. ViaSat said the GSM operators using the ViaSat/Verso system can now cost-effectively expand their coverage to broader service areas where terrestrial or satellite backhaul was not economical before.

The new backhaul system uses ViaSat LinkStar MF-TDMA satellite communications technology that includes advanced bandwidth allocation techniques to assign satellite bandwidth on-demand and Quality of Service features that prioritize calls and data traffic. Bandwidth allocation reduces bandwidth requirements by enabling several backhaul circuits to share a smaller pool of bandwidth. Verso NetPerformer converts the GSM traffic to an efficient IP packet-based format, reducing bandwidth requirements by as much as 50 percent without affecting call voice quality.

Thompson Environmental Releases Satellite-based Telemetry System

MELBOURNE, FL — Thomson Environmental Monitoring and Control, LLC, has unveiled its Simple Wireless Information Management Solution (SWIMS), which it claims is the first completely automated in-situ continuous monitoring system, coupled with a powerful wireless Internet application to perform remote data collection and on-line analysis, alerting, and reporting.

Thomson said the SWIMS is a low cost and fully programmable data collection and satellite telemetry platform designed for remote and offsite monitoring. SWIMS removes the need to make site visits to download data, and there's no software to install.

The unit features multiple analog, digital, RS232 serial, pulse, and frequency inputs. The system is housed in a IP67 sealed enclosure and is designed for long term deployment in harsh environments. The field controller transmits data to the SWIMS internet application via satellite telemetry on pre-programmed or event driven intervals.

u-blox Extends its AssistNow A-GPS Service to Support Offline Instant Positioning

THALWIL, Switzerland — u-blox AG, the Swiss provider of innovative GPS receiver technology, has extended its AssistNow A-GPS service. u-blox said the new AssistNow Offline service provides A-GPS assistance data that enables instant positioning over extended time periods without the need for mobile connectivity.

u-blox' AssistNow technology cuts a GPS receiver's Time To First Fix to seconds by providing assistance data that enables the receiver to compute a position instantly. While AssistNow Online, introduced in June 2006, uses mobile networks to provide the assistance data at each start-up. **SM**

COVER STORY

Network Management – Beyond the Network Operations Center

by Wally Martland

As satellite is playing an ever more important role in delivering voice, data and video into remote and isolated regions throughout the globe, the challenge for Network Operations is no longer limited to controlling the equipment and Element Management (EM) systems located at the Network Operations Center (NOC), but also focused on reducing the costs of managing larger more complex geographically diverse networks from a single Network Management System.

Often times, these sites are geographically isolated in such remote regions as Africa, Asia, or Alaska. Other times, they are physically difficult and expensive to travel to such as on mountain tops, oil rigs, or out in the jungle. In the past, some of these remote sites were manned but mostly they were ignored until a problem arose and they were notified by their customer.

In today's environment, with the renewed emphasis on QoS, cost reduction, and increasing competition, network operators need to manage the remote site equipment, bring up new services, and restore failed services from the NOC without the delays and costly expenses of dispatching technicians to the site. More importantly, customers are no longer willing to endure, long periods in which they have unreliable, degraded or even worse, no service. In order to achieve these goals, more and more of the burden of managing the network is being placed on a new breed of "Intelligent Element Management"

"The burden of managing the network is being placed on a new breed of "Intelligent Element Management" products like the Newpoint Mercury EM™"

products like the Newpoint Mercury EM™.

To truly manage a remote site, todays EM products must be capable of managing all aspects of the equipment located at the remote sites. This includes a variety of physical and software interfaces which include proprietary serial protocols to the RF, microwave or transmission Equipment, contact closures for your facilities, fire, HVAC, and power system alarms, and SNMP to manage the IP equipment such as the routers, hubs and firewalls located at the site. In some cases, Mercury EM™ has even interfaced with the video surveillance cameras to allow

operators to view the inside and outside of the remote facility.

Once the equipment is under control of the EM, it must relay status and alarm information back to the NOC and allow the operators to control the equipment. In many cases this is done using a small portion of the bandwidth on the very communications link it is managing, for example the satellite overhead, ESC, or on the microwave transmission. Often times, these have limited bandwidth capabilities and inherent delays that must be accounted for. Mercury™ takes advantage of the TCP/IP protocol to ensure that the data sent from the EM is actually received at the NOC. Other protocols, such as

COVER STORY

SNMP Traps are based upon the UDP layer, and not all data is guaranteed to be delivered. The EM must also accommodate for rapid changes in the data at the remote site, and buffer the changes during these periods so data is not lost when you exceed the transmission capacity of the communications bandwidth that is available.

The EM should also buffer data when the communications are lost between the NOC and the remote facility so critical data required to determine what caused the outage is not lost forever. Once an operator has determined they have lost communications to a remote site, they must be able to use a back up means to communicate to the remote site. Often times, this can be accomplished using a dial up line or via the internet. In many instances, the remote site itself is the only means of communications to the township, oil rig, or transportable/mobile terminal. In these cases, Newpoint has incorporated support for the Iridium, Inmarsat and Globalsat modems into the Mercury™ EM so when the primary communications are lost, the operators can use the satellite modem to connect to the site no matter where in the world it is physically located.

Once a connection is established, Mercury EM™ will then upload the buffered data and in most cases opera-tors can then recover the service without leaving the NOC. At worst case, they can identify the failure and dispatch a technician to the site with the right equipment to restore the services without requiring a second or third trip.

By taking advantage of today's technologies for managing remote sites, your Network Management System can truly manage your entire network. Network operators can significantly reduce the costs of managing large geographically diverse networks and recover services more quickly no matter how isolated or difficult to get to a site may seem - all from the comfort of the operators console at the NOC. More importantly, customers will see their services experience better performance and less system down time then they have in the past. To truly manage today's networks, you can no longer simply manage your NOC, you must gain control of your entire network, even that equipment beyond the network operations center. **SM**

Wally Martland is the President of Newpoint Technologies, Inc. based in Salem, NH which is a wholly owned subsidiary of Integral Systems. Mr. Martland has over 15 years of international experience in providing Network and Remote Site Management Solutions to the satellite, Microwave, and AM/FM/TV Transmission marketplaces. He can be at wam@newpointtech.com

FEATURE

The Mid-East: The World's Most Challenging Pay-TV Market

By Chris Forrester

The Middle East's problems manage to confound the world's politicians, military men and experts. Its political and religious influences are not just impenetrable to outsiders, they are near-impossible even to locals. And while not wishing to minimise all the hundred and one very real stories that manage to make headline news almost every day, the world of television in the Middle East is every bit as challenging.

The trouble is there's too much of it! Imagine, if you will, a world where almost every home has a satellite dish, and sometimes two or three. And that your target audience extends from Morocco in the North West of Africa to The Arabian Gulf states as well as Iraq and Iran. Iran has its own Farsi language, but the other countries all have a main common language in Arabic. It is, therefore, no great surprise that NileSat, for example, beaming up its signals from Cairo manages to carry 370 channels, the bulk of them unencrypted and free-to-air. There are 45 music channels, 20 news channels all competing for eyeballs. There are, not surprisingly, also free-to-view movie channels, kids services and documentary offerings.

Into this phenomenally competitive mix for viewer loyalty there are three rival pay-TV systems, and the recent antics in this area would make for a good soap-opera script that follows the ebb and flow of the three competitors as they try and make progress against one another and push forward through this barrage of alternate temptations.

> **"Whatever Pay TV paradigm exists elsewhere in the world it does not apply to this region."**
>
> *Marc-Antoine d'Halluin, president/CEO Showtime Arabia*

A recent interview with Marc-Antoine d'Halluin, the recently appointed president and CEO of Showtime Arabia, highlighted the ever-shifting foundations of his pay-TV business. First up Showtime has secured the next three year's matches of the English premier soccer league. This might not mean much to American readers, but the English league is the Crème de la Crème of world soccer. Even better for our imagined soap opera, Showtime stole the event from arch-rival Arab Radio & Television, another pay-TV operator which to date has concentrated on all Arabic content. The plan is to air all the Premier League matches live, while also trying to developing suitable programmes around the games along with interviews and studio discussions. This is bound to lead to more space segment and channels from Showtime. Showtime currently has a pair of dedicated sports channels - Sportsnet World and Sportsnet. The season kicks off this August.

Up until now Showtime's output has been the usual pay-TV mix of a basic

Viacom Chairman Sumner Redstone during Showtime's Launch in Kuwait.

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tier and Premium channels, much like anywhere else in the world. D'Halluin: "This market is totally atypical and unique in the world. Anywhere else you would have seen some organisation and rationalisation come to the free to air market. But we are not even at the start of that process yet. It will have to take place, of course, so we concentrate on our premium offerings and this is all that people are prepared to pay for. They are not prepared to pay for free material which more or less they can see already. Whatever Pay TV paradigm exists else-where in the world it does not apply to this region."

D'Halluin's comments are fairly made. However, in January this year there was a bit of shuffling of the basic tier pack, with Showtime losing Discovery Channel, arguably the best factual channel on the market to its other arch-rival Orbit. In return, Orbit lost Sky News to Showtime!

> **"In this business you have to pick your battles and fight for what makes a real difference to sub-scribers."**
>
> *Marc-Antoine d'Halluin*

This never-ending game of musical chairs also might end up including MTV, the oldest and most high-profile music channel in the business. Showtime Arabia has as a 20% partner Viacom Inc, owner of MTV Networks. Showtime is about to be faced with a wholly localised

MTV Arabia, in the Arabic language, and available as a free to air channel. A soap opera character might say, 'with friends

like this who needs enemies', but not Marc-Antoine d'Halluin. "With 45 competing music channels out there I

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Can Showtime Arabia find a DTH 'brand extension' in South Africa?

South Africa's long-established DTH satellite business is dominated by Multichoice/M-Net and its digital satellite spin off DStv, backed by giant local publishing conglomerate Naspers/MIH (founded as *De Nasionale Pers,* The National Press, in 1915). Oddly enough Showtime uses MIH-developed DTH set-top boxes and MIH-owned Irdeto conditional access. But Showtime's new interest is in E-Sat, which is but one of the emerging rivals to M-Net/DStv.

MaxTV, for example, is another one of the new entrants applying for commercial satellite and cable subscription broadcasting licences in South Africa in which cellphone company MTN and Absa are both potential shareholders. MaxTV is proposing 10 channels for Rand59.95 a month, which compares with DStv's basic offering of 16 channels for R199 a month (or its Premium offering of 55 channels for R419 a month). MaxTV's top layer bundle offers 30 channels for R300. MaxTV has applied for 80 video, 50 audio and five data channels. Its application says that the company would be ready to broadcast 30 video, 30 audio and three data channels within 12 months of being granted the licence. Offerings will include a history channel, entertainment channels, music channels, movie channels, a channel targeting the Afrikaans community, a religious channel and so on.

E-Sat says that a lot of its channels will be locally compiled. And that it is for this reason that the costs of its service will be higher than the costs of its close rival service which is dominated by foreign pass-through channels. Another player that hopes to enter the PayTV market is Sentech, a state-owned broadband network business. Although Sentech is making the application, South Africa's public broadcaster, SABC, will hold 50% in Holdco, the provisional company that the two will form. Holdco in turn will have at least a 51% shareholding in a subsidiary company, Newco. Should the licence be granted it will be transferred from Sentech to Newco, which will operate the service to be known as Viewsat.

Telecom Media is another potential pay-TV player. The basic package will consist of a sports channel, a movie channel, 24 hour South African news channel, general entertainment, education channels, music channels, home shopping channels, e.tv and SABC 1, 2 and 3. Telkom Media has been created by four players – Telkom (66%), Videovision Home Entertainment (15%), WDB Investment Holdings (5%) and MSG Afrika Media (5%). Videovision's credentials are impressive and has as its majority shareholder filmmaker Anant Singh and has produced over 60 motion pictures since its founding 15 years ago.

Currently there are 7.8m television households in South Africa, according to Sentech. This represents a penetration of 72% of the 10.9m total households. DStv claims 1.3m subscribers mostly serving the upper end of the market. In January DStv, no doubt in preparation for this fresh competition, established a new low-cost mini-tier featuring 25 satellite television channels and more than 50 music and radio channels. DStv Compact is a lower-cost alternative to the Premium Bouquet, which features the complete range of over 50 channels plus music and radio options. The monthly fee for the new service reflect the growing potential competition in South Africa and beyond for DTH viewers is discounted and makes available DStv viewing to people who cannot afford to pay for the full bouquet.

wish them the very best. Undoubtedly the launch of this new channel will affect some of our existing programming. Once there are two MTV channels in a market, compared to the one exclusive channel that we are carrying, then it is a different value that we apply to a relatively non-core channel that we carry as part of our basic tier. I am not saying that we will stop carrying MTV, far from it. We may well be able to carry a specific MTV, because there are many different versions of MTV in the world but when there are two available and one is free to air locally then the free to air version inevitably will be seen as THE local MTV. We have to then provide an MTV that is seen as having extra value and this is part of our overall platform evolution. It's very nice to have MTV

FEATURES

as part of the mix but can I say it was much more important ten years ago than when we have 45 competitors. In this business you have to pick your battles and fight for what makes a real difference to subscribers."

D'Halluin is also new to the job, replacing Peter Einstein a long-term CEO at Showtime (and prior to that one of MTV Network's most senior staffers). The rumours are that Einstein left because the long-awaited Initial Public Offering that has been talked about for Showtime Arabia, which now seems to have been scrubbed. D'Halluin admits it is no longer a priority. Showtime Arabia on January 10 confirmed it had negotiated $100m of revolving credit, largely, says D'Halluin, to replace existing finances and borrowings. One of the bankers involved in the deal said it would enable Showtime to implement its long term plan to dominate MENA's pay-TV market. D'Halluin confirms the IPO is "on the back burner and is no longer a priority and our strategy has very much shifted to focus back on our business offering and balancing our programming so that we only present the most attractive material."

But it could also be that Showtime Arabia, while not ignoring local opportunities is also casting an eye to other markets where its skills might reap a greater reward. It seems that Showtime is looking to take a 10% stake in a new South African-based DTH start-up 'E-Sat'. E-Sat's market prospectus states that Showtime Arabia (which formally trades as Gulf DTH) has expressed "serious interest" in taking 10% of the issued share capital. E-Sat's other shareholders include Sabido Investments (which owns popular South African
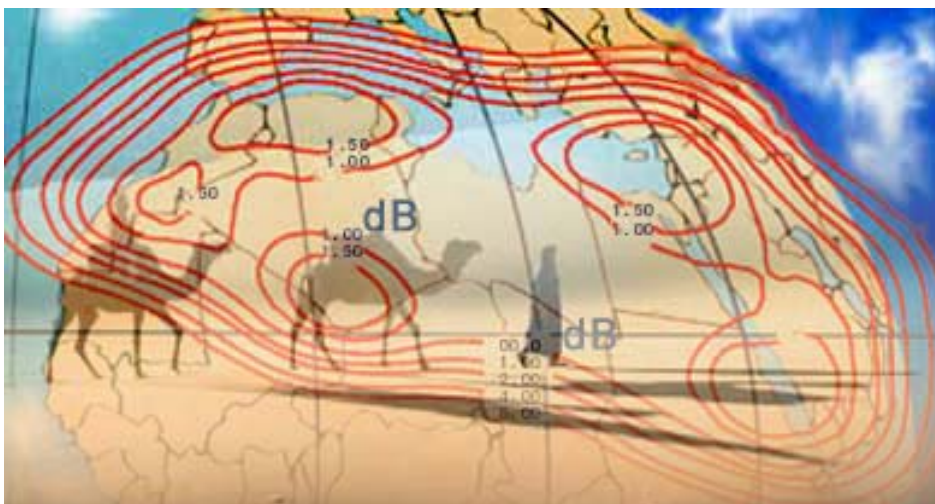
channel e-tv). Sabado's shareholders include Hosken Consolidated Investments (64%), Venfin Media (31%) and Sabado Share Trust (5%).

D'Halluin declines to add to the market speculation, other than to say "because very frankly it is simply an internal development project, nothing more, nothing less, and there has been no further progress on this at this point."

However, it also seems that Showtime is about to raise the competition bar by producing more Arabic-language content, something that to

Nilesat's Middle East footprint

FEATURES

Dubai's Skyline

date it has steered away from. All of its programming has been made viewer friendly by way of sub-titles. But now it seems direct investment in original Arabic content is on the cards. D'Halluin admits it's a tough proposition, especially when both his pay-TV rivals are already awash with original Arabic output, and the best part of 300 free to view channels in the marketplace. "This is something we are looking at very closely and, if you will, is in our research and development lab. It will take some time as any creative process does in order to identify and rationalise what we should be doing as to what type of local content is right for us on a pay TV platform especially when in the free to air environment there is such a huge amount of Arabic language entertainment. So, it is a clearly stated ambition of ours and as a local platform owned by a local company there is a

logic in attempting to cater and customise our material for our local audience. If we were to invest in this area, it might be said that we would be increasing direct competition with our pay TV rivals but we could also imagine all sorts of local production, building on the very specific content that we already have on our channels. Perhaps [our new content] will be more 'edgy' than what you could find on the existing networks. It might also build on our existing know-how and the talent of our team here at Showtime."

Logic suggests that in the same way that pay-TV operators around the globe have merged and consolidated,

the same would happen in the Middle East. Not so. Each of the three rivals has well-heeled finance. Showtime Arabia is seen as being key to any local consolidation, and d'Halluin does not rule it out. Of course, the market has been talking about merger for years and it hasn't happened yet. But d'Halluin gives, perhaps, the tiniest of a hint: "Merging with our competitors is not a topic or priority or my focus. Our story is already a success and I want to build on that success, and then when the Premier League launch has happened and settled in and is successful then perhaps we will reflect on where the market is, its structure, and where it can go in terms of potential consolidation."

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

CASE STUDY

Satellite Network Management Services for the Energy Industry

by James Dell

Schlumberger is one the world's leading supplier of technology, project management and information solutions to the oil and gas industry. Schlumberger Connectivity Services' high-performance communication networks allows oil companies, rig owners, and service companies to (literally) extend the capabilities of their headquarter offices to any remote location while maintaining full access to their internal company resources and networks (or the Internet).

SatManage is a modular product that is designed to provide integration between disparate NOC applications. It also automates many of the NOC processes and provides a customisable portal that allows several layers of access and authentication. This case study shows how Schlumberger have used this portal to full effect to create a customer portal called MyVSAT. They have carefully selected the relevant SatManage modules and, working with Parallel, have automated many NOC functions like reporting.

Network Audit

In February 2005 Parallel conducted a Network Audit of Schlumberger's diverse satellite network which monitored not only its own sites but also many customer sites. The Audit found that in general the entire events gathering, collating and displaying is done very well. The team at the Global connectivity Centre had some very talented people which should allow them to operate more efficiently than they were currently doing. However, enor-

mous time was wasted on manual report generation, as there was no integration between many systems. At the time of the Audit it was found that 44 screens were being used to display information from the various systems and events could be tracked only if they were "noticed". There was no mechanism for centralised data storage of network metrics and some critical procedures and processing were limited or missing. There was virtually no information in the customer information portal. In Parallel's experience all these issues were endemic to an Operator in the industry.

Network Audit Conclusions

It was concluded from the Audit that, among other things, the most important immediate requirements were:

- To bring most if not all the systems under a single interface, so essentially any authorised person at any PC can have access to a full range of information
- To provide a single interoperability platform that allows all of the discrete systems to communicate
- Provide a concentration of all non-event information including Ticket, Statistical, and Configuration information onto a single platform which in turn provides outbound integration.

MyVSAT

Parallel's SatManage NMS software would be highly customised and deployed to achieve the above, including a new fully functional iDirect SNMP Agent. All the network performance metrics are now accessible through a single web interface called the MyVSAT portal. The portal provides a single consolidated window onto multiple networks and multiple technologies, thus enabling users to view all their circuit information from one place. This brings enormous advantages both to the customer, who can focus on the quality of service (and therefore the value for money) they are receiving from their network, rather than on the technology that underpins it; and the network engineers who can monitor all their circuits at a single glance.

Multivendor Systems Integration

The MyVSAT portal complements any existing monitoring and control software. While it is designed to manage all the usual factors that determine network performance (response times, traffic levels, signal quality, even sun outages), SatManage is unique in that it also permits visual correlation of multiple circuits. The SatManage Visual Correlation and data centralization

CASE STUDY

Challenges
- Enormous time wasted on manual report generation
- Reacting to outages after the event. Current information confirms a problem rather than resolve it.
- Multiple vendor hardware with individual M&C systems with no integration
- No accessible statistical data storage
- No accessible configuration data storage
- Some critical procedures and processing limited or missing (e.g. Commissioning)
- Customers have no visibility of their network metrics/SLAs

Solutions
- Automation of reports on a daily/weekly and monthly basis. Live reporting available
- Data completely centralised (historic and live)
- Reports are now Operator and Customer facing – users are able to select the kind of information they want to report on
- Network availability graphs provided across all platforms (SCPC, iDirect and SkyWan)
- Commissioning/decommissioning automated amongst many other processes
- All information available from a web portal – literally on fingertips!

Benefits
- Man hours spent in generating reports reduced to a quarter
- Ability to predict outages reduce site engineer visits and make the few very effective
- Accurate SLAs: Customers have direct access to their individual network stats and have a real tool to reconcile SLAs
- Customer accesses same information – complete transparency increases customer confidence
- All technology and application platforms integrated in to one interface
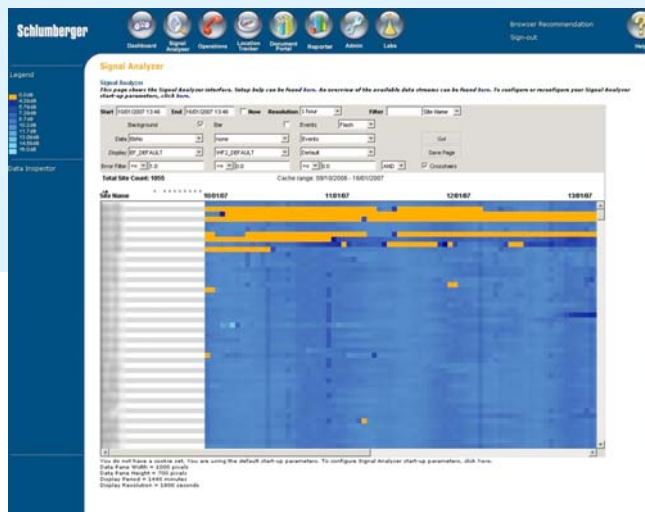
technology has been used to great effect in integrating Schlumberger's existing diverse M&C systems. By storing all M&C data in a *central database*, extracting the relevant information and displaying it through the SatManage visual correlation engine means that *outages can be predicted* in advance and those that are not are more easily resolved due to the analysis of information that was stored leading up to the event. The technology uses a *color-coded display* ranging from light blue for a good signal, to dark blue for a poor signal, and yellow for an outage or offline. The signal quality from *all sites can be seen at once* and the resulting timeline can be used to measure any improvement or degradation in performance.

Customers (and engineers) can simultaneously see every single site in their networks and so quickly identify patterns that associate with certain kinds of *problems such as geographic, topological, isolated, terrestrial, site specific, Hub related, weather attenuation etc*. No other network management tool offers such advanced level of troubleshooting.

Transparency

MyVSAT is totally transparent. The customer sees everything Schlumberger can see, and vice versa. This helps the customer to make better informed and more timely operational decisions. It also helps them to have greater confidence in their choice of Schlumberger as their network service provider.

By consolidating data sources, MyVSAT enables Schlumberger personnel to retrieve information efficiently and accurately each and every time, thereby giving their customers a new level of excellence in reporting.

CASE STUDY

SatManage Network Correlator/Signal Analyzer Drill Down Report
This reports shows all the information that the Circuit DB contains about a site.

Field	Value
Site Name	
Customer	
Transponder/Protocol Processor	
Satellite	
Teleport	
Is Mobile	NO
Is OnLine	YES
Comment	

EbNo Graph (dB)

Remote EbNo Graph (dB)

Availability Graph (%)
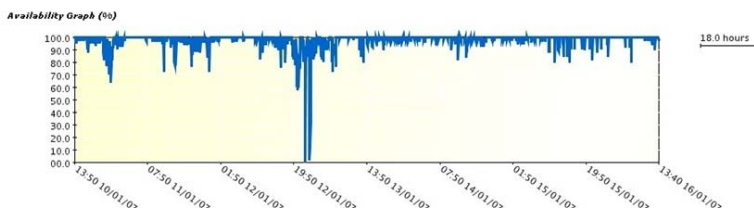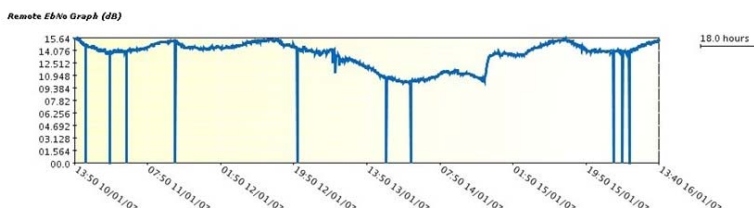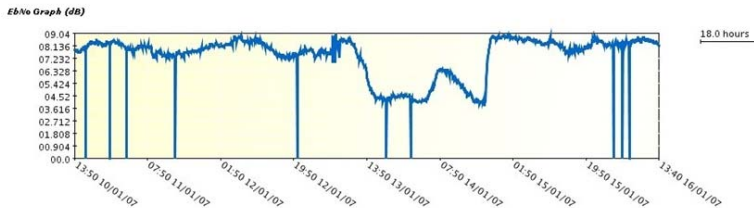
Innovative Technology

The MyVSAT portal integrates a wide variety of proprietary and publicly available tools and applications (such as Google Earth and the Weather Channel) in a unique way. Customers can view the status of their VSAT links in close-to-real-time. They can see, in one place, information from a multiplicity of different sources. They can, for example, zoom in on the actual weather conditions at a remote site, or even on board a moving vessel, where there has been a loss of signal quality. And where incidents occur, they can receive close-to-real-time updates from engineers.

"Only a service provider who is confident that they are providing service at or above the level the customer expects is comfortable in opening themselves up to this level of scrutiny. In doing so, Schlumberger have shown sustained commitment to make MyVSAT work both technically and procedurally throughout their global operations," said Guy Adams, Head of Satellite Management, Parallel.

The Future

Features still under development or currently being piloted include:

- Integration of NMS control within MyVSAT Portal
- Integration of out-of-band access to sites
- Integration of Schlumberger stabilized unit Spacetrack management system
- 3D location tracking with weather overlay

CASE STUDY
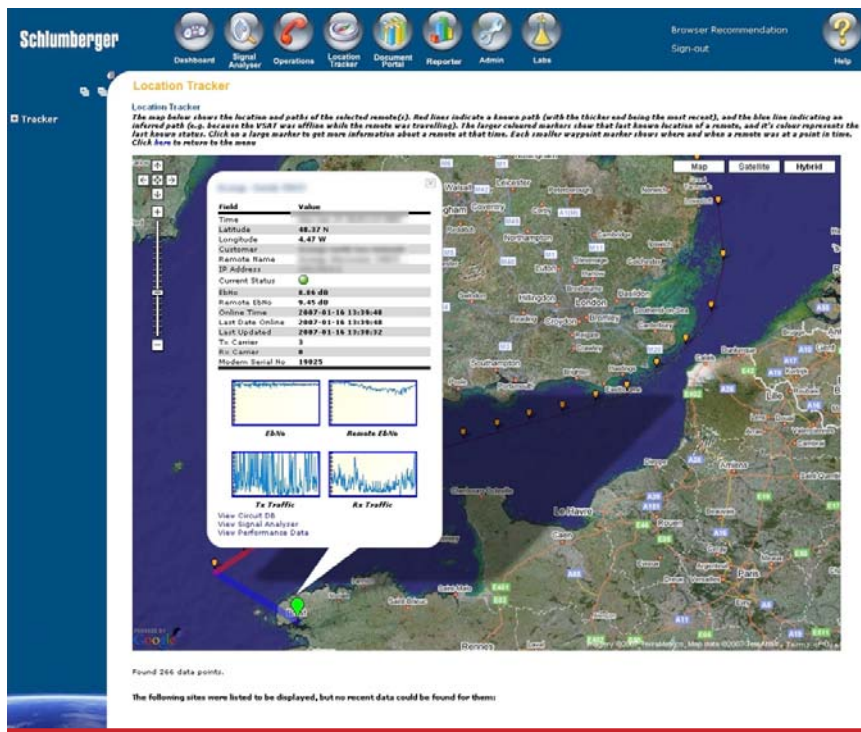
- Integration of digital spectrum analyser
- Online change (upgrade, new order)
- Digital spectrum analyser
- Online/offline documentation portal
- Integration of third party network into Schlumberger MyVSAT portal

By combining in-depth network management with visual correlation and an unprecedented degree of automation, SatManage and MyVSAT sets the benchmark for the next generation in satellite network management.

Schlumberger have a uniquely customer focussed attitude to their provision of Network Management. Parallel have forged a strong technical partnership with Schlumberger and together they aim to add new dimensions to Network Management. **SM**

James Dell founded Parallel with partner Tim Moore in 1997. Growing from its network management roots, Parallel is today a specialist in NOC automation and integration for hybrid networks which have satellite components and diverse system platforms. James is a father of three girls and has varied interests including Paragliding, Weight training, Squash, wining and dining, cinema and local youth work. He can be reached at james.dell@parallelglobal.com

REGIONAL UPDATE

Opportunities in the Latin American Satellite Market

by Bernardo Schneiderman

The Latin America satellite market growth in 2006 challenged prevailing industry analysts and forecasts in terms of satellite capacity and the extent of VSAT projects in the region. This bodes well for 2007. The major players in the region are satellite operators Star One, Loral Skynet do Brasil, Hispamar and Satmex which showed growth in client bookings for broadcast, internet and government projects applications.

Despite some changes brewing politically in terms of and regulatory issues in some countries like Venezuela, Colombia, Bolivia and Ecuador, the major Latin American markets of Brazil and Mexico are developing a steady stream of new business for satellite services and applications.

In terms of satellite transponder capacity in the region both domestic, regional and international satellite operators are decreasing their long-held inventory of transponders. In some cases like the Amazonas satellite owned by Hispamar (Hispasat and Telemar ownership) reached in a record three years time frame 75% of their satellite capacity. The same results are expected from Loral Skynet do Brasil's Estrela do Sul satellite where capacityfor 2007 is projected at almost full capacity. Another change in the market is the price per MHz for transponders. With low inventory available the trend in transponder pricing is to reach the standard of the international market during the next few years.

Among the new players that are coming to the satellite space is Venezuelan government which is in the process of launching their own satellite in the next 2 years (assuming that the Chinese manufacturer and launch will be on schedule). Argentina is another country where the government is planning to incorporate in the same slot of Nahuelsat 1 another satellite that will provide a mix of government and private services. The Argentinean government up to the end of last year did not announce the final details of the awarding of its planned ARSAT satellite.

In Mexico, Satmex finally launched in 2006 Satmex VI after a few years of delay due to financial problems and now is moving ahead with a new organization controlled by Mexican Government and other Mexican private equity firms.

Brazil is another country that intends to build its own satellite and finalize the procurement in 2007. The main scope of the project is to implement via satellite the Brazilian Air Space Traffic, Control Defense and Government Communications and some strategic applications for remote areas where the government is planning to bring Internet in remote areas and village outside of the main cities.

Among the satellite operators in the region there is going to be potentially two new satellite launches by Star One (Brazilian operator owned by Embratel which is controlled by Telmex the main shareholder). The first satellite is in the process to be launch during the first semester of 2007 is Star One C1. The satellite will replace the Brasilsat B2 and will bring C and Ku-band for the market
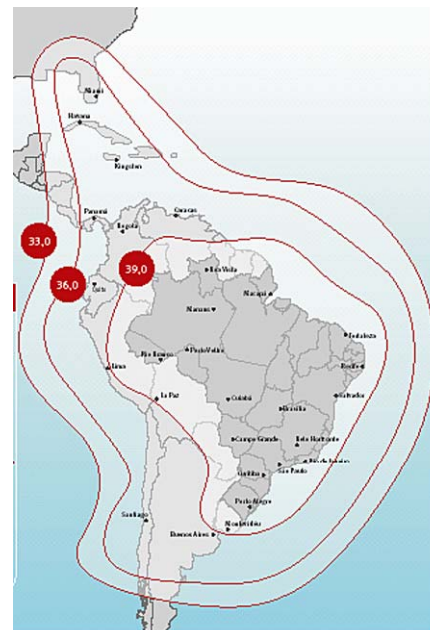
Star One C1 satellite footprint

in Brazil and some other countries in Latin America and a link with Miami, Florida in the USA (see footprint above).

Star One is planning to launch a another satellite Star One C2 to be incorporate to the fleet that will cover Brazil and Latin America both in C and Ku-Band and will replace the Brasilsat B1 (C-Band only).The launch is schedule for the second semester and has a similar coverage of the C1.

In Latin America, more specifically in Brazil the growth and expansion do not stop in this two launches for Star One this year. Anatel (the Brazilian regulatory agency) called for a bid last November 2006 for 3 new orbital slots. The first one was awarded to Star One that won the bid by price with R$ 6 Million (Equivalent of US$ 2.7 Million). The orbital slot is 75 degree West and could operate in C, Ku, L and S Band. The other two slots will be allocated during first semester of 2007 after Anatel

REGIONAL UPDATE

finalize the contract of the Star One with the first Satellite orbital position.

In the VSAT market the Latin America region showed a big advance in the major markets with thousand of VSAT's being implemented in Brazil, Colombia and Mexico with projects related with E-Government, Lottery and Enterprise segments.

In Brazil Comsat International provided VSAT services for the two main projects. GESAC that is the E-Government Project to provide internet access for the population reached 3,200 sites with a Viasat Linkstar VSAT Hub and the Brazilian Lottery implemented 9,000 sites where 6,000 access points use satellite with Gilat Skyedge VSAT hub. Additionally, Embratel/StarOne finish the implemention of Boticario (2,000 VSAT retail store). Among the other players in Brazil providing VSAT services are HNS, Telespazio, Impsat, Embratel, Star One and Hispamar.

In Colombia Compartel E-GOV reached 10,000 sites during 2006. Comsat International implemented an expansion of 700 sites in the phase 1 and 300 sites both running with Viasat Hub Surfbeam. In Colombia Comsat International beyond their own network provides colocation for another service provider that run 2,000 VSAT sites. Comsat International during 2006 implemented in Colombia an IDIRECT Hub for high traffic services profile and for the Colombian Caribbean islands.

Comsat have been very active in the VSAT business in Latin America and beside Brazil and Colombia Comsat implemented a new Viasat Hub in Argentina and in Mexico expanded IDIRECT Hub. Comsat International reach at the end of 2006 a total number of 20,000 VSAT terminals in all Latin America operations.

In the VSAT Market Ecuador was another country with expansion of the investiment in this area The Ecuadorian government awarded a multi-million dollar project for which ViaSat provided both voice and IP broadband connectiv-

ity over satellite to the Ecuadorian government. ViaSat will deploy its LinkStar IP broadband satellite communications platform and Verso's Softswitch and media gateway solution to provide voice, fax, and voicemail

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services to more than 1,500 locations throughout Ecuador.

In Mexico the E-Mexico Program is already in place with more than 10,000 work sites using VSATs from several vendors and providers at the end of 2006 among them Gilat, Viasat, STM. The Mexican government intend to expand their program during 2007 to break the digital divide.

Overall Latin America is demonstrating during the 2006 a growth in all application both in IP, backhaul and broadcast applications. The expectation for 2007 is similar of 2006 where all the operators and satellite VSAT vendors are very optimistic about

the overall market. In Brazil, Mexico and Colombia alone are several projects planning to double the number of VSAT sites for the existing E-Gov programs. Some other projects in the region to break the digital divide with

local government and international funding are expecting to bring another year of growth both to Internet access, broadband, broadcast and government applications. **SM**

Bernardo Schneiderman has over 20 years of experience in Satellite communications and is the President of Telematics Business consultants based in Irvine, CA. He has been working in Business Development, Sales and Marketing for Satellite Carriers, VSAT Equipment Manufacturer and Consulting Companies in the USA, Latin America, Brazil and Africa developing business for the Telecom, Broadcast and the Enterprise Market Segment. He was the editor of the Brazil Telematics Newsletter from1995-2003. He has an MBA from University of San Francisco majoring in Telecom and International Marketing and a BSEE from UFRJ in Brazil. He can be reached at bernardo@tbc-telematics.com
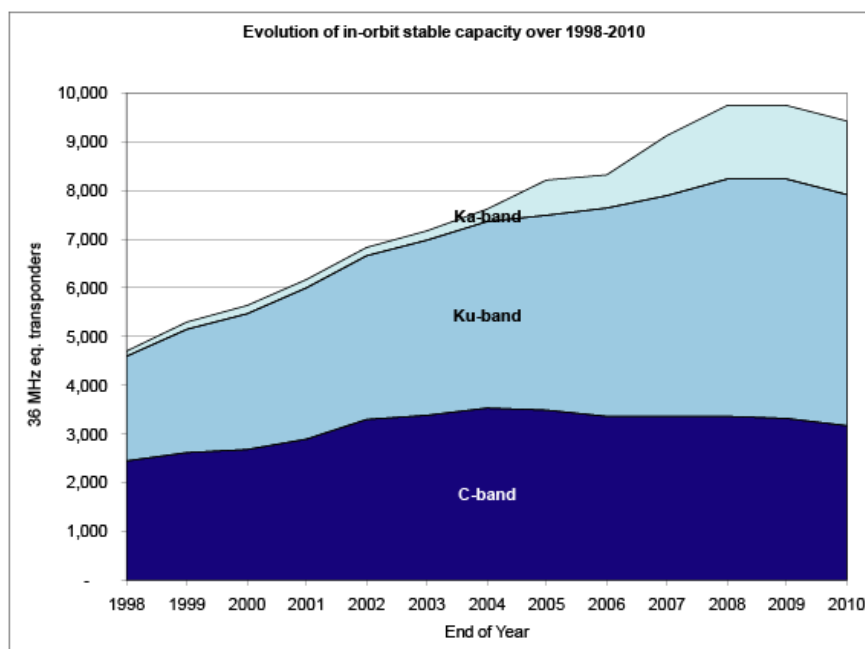
VITAL STATISTICS

Global In-orbit Satellite Capacity

© Aon Explorer

Evolution of worldwide in-orbit stable capacity over 1998-2010
based on announced contracts and planned retirements as of YE 2006

Evolution of in-orbit stable capacity over 1998-2010

- The total in-orbit satellite capacity is expected to increase from 8,329 trx. to 9,749 trx. over YE2006-YE2009, based on announced contracts and planned retirements. Nearly 60% of this growth is expected to be generated by the deployment of Ka-band capacity:
    - C-band capacity is expected to remain stable on the foreseeable future. This rationalization should have positive impact on utilization ratios, hence on market prices.
    - Ku-band capacity is still increasing especially in regions historically dominated by C-band. This growth is justified by the development of direct television services and broadband services from high power Ku-band satellites.
    - Ka-band is rapidly expanding with the introduction of large Ka band satellites over the USA.
- Major contributors to growth/decrease in capacity are:
    - Echostar and DirecTV with the launch of large Ka-band satellites
    - Eutelsat with the creation of new video positions and expansion outside Europe
    - Intelsat and SES NewSkies with a likely rationalization of their fleet following consolidation. It is however still possible that these operators announce a satellite contract with a planned launch in 2009

About Aon Explorer
Aon Explorer is the strategy consulting arm of Aon France in the aerospace and telecoms markets. Resulting from the acquisition of Vista Advisers in January 2005, Aon Explorer Strategy & Finance has developed a thorough expertise in business plans, feasibility studies, companies due-diligence both for the satellite industry and the finance community. Please contact Laurence Journez, Vice President, tel: +33 1 5875 6064, email: laurence_journez@aon.fr

MARKET INTELLIGENCE

Satellites in the 'IP Space' and the 'MilSpace'

By Martin Jarrold

Chielf, International Program Dvelopment, Global VSAT Forum

In Tehran, just a few years ago, I experienced at first-hand clear, multiple, and profound signs of the intention of educated young Iranians, and their older countrymen holding positions of power in government, to see their nation significantly more powerful on the international stage, with most immediate reference to its mid-East and West Asian neighbors. Power, in the modern Iranian psychology, means missiles topped with warheads… conventional warheads certainly, more powerful ones, possibly; but, it also means rockets topped with satellites, including communications satellites.

Why? Because information and communications equals power!

The Tehran government has a distinctly clear vision for the information and communications technology (ICT) development of Iran, a plan not exclusively reliant on a satellite-based infrastructure – fiber and terrestrial wireless broadband being part of the national plan – but not fully realizable without access to significant space-borne communications capacity. In October 2003 the then President's chief ICT advisor said in all earnest and directly to my face that Iran will become "*the* Internet hub, *the* broadband communications hub for the entire region".

In fulfillment of this aim recent press reports of Iran's conversion of its most powerful ballistic missile into a satellite launch vehicle comes as no surprise, particularly as it will in the longer-term help to facilitate Iran's occupation of the regional 'IP space'. En route to such a potential communications satellite capability, the Chairman of the Majlis (Iran's parliament) National Security and Foreign Policy Commission has said – according to *Aviation Week & Space Technology* – that the launcher "will lift-off soon" with an Iranian satellite, albeit, as has been widely tipped elsewhere, most likely with a relatively small reconnaissance craft in the first instance. This is as well as elevating the region-wide perception of an imminently enhanced Iranian missile threat and of a future potential military threat that may extend even to the eastern-most parts of Europe.

Such intelligence from Western Asia follows quickly on even-more destabilizing news for Western political, diplomatic, military, and even commercial, circles from the other extremity of Asia, China. The Chinese government has effectively – though without patently overt hostility and with plentiful denials about any escalation of the militarization of space – signaled its capability to further occupy and influence the 'milspace'.

Launched from the Xichang Space Center, Sichuan Province, on 11th January, atop what has variously been described in the western press as a "small ballistic missile" and by Chinese sources as a "civilian launch vehicle", an anti-satellite 'kinetic kill vehicle' targeted and destroyed an ageing Chinese weather satellite at an altitude of 537 miles. This means, according to *Aviation Week & Space Technology* which first broke the news, that China has "mastered key space sensor, tracking and other technologies important for advanced military space operations. China can now also use 'space control' as a policy weapon to help project its growing power regionally and globally."

A Chinese capability at such altitudes certainly poses a potential threat to imaging reconnaissance and other satellites operated by governments around the world, which is serious enough even if only as an enabler of wider policy leverage, but may even be taken to pose a longer-term threat to communications satellites, either as they transit through this region of space en route to geostationary orbit, or even whilst in GEO orbit if the future threat included use of more powerful launch systems by the Chinese. Such a threat may be just as problematic when secure and reliable satellite communications are part of the foundation of a sound global economy.

The subject of 'space control' and associated space policy will feature as part of the program at the **MilSpace 2007 GVF Workshop** in Brussels, 6th March; and at the **GVF Satellite Symposium @ CABSAT** in Dubai, 7th March, GVF will be facilitating a Middle East regional IP-satellite dialog that will include analysis of the true significance of the development in Iran.

The details of the Brussels **Workshop** and the Dubai **Symposium**

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are as follows. For further information on both events, including speaking opportunities still available, please contact **martin.jarrold@gvf.org**.

MilSpace 2007 GVF Workshop – *"Planning Future Strategic MilSpace Communications Capability: Maximizing the Application of Space-based Resources for the Military Requirement via Future Generation Communications Networking."*

This workshop begins with the perspective that 21st Century military space-based capabilities are an increasingly critical asset, whether linked to the role of war fighter or peacekeeper (or even emergency first responder). The ability of a military force to leverage communications networks to obtain and maximize its exploitation of information on everything from enemy strategic planning to tactical deployments, from geospatial intelligence to meteorological systems analysis, from navigational asset tracking to combat unit communications, and from terrorist-threat assessment/ elimination to infrastructure protection and 'cybersecurity' is dependent on reliable satcoms systems which provide for constant flexibility, mobility and scalability.

Such a high-level of dependency necessitates that not only the various arms of the military – and the governments which direct and

fund them – engage in the long-range, strategic planning which will guarantee that future military needs are success-

fully met. The private sector satellite systems vendor must play a role in this strategic planning too, necessitating

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effective link decision-making in all aspects of resource allocation, performance measurement and accountability processes.

Programs that comprise the future of 'milspace' communications require the development of investment strategies that give priority to questions of funding and the establishment of a sound business case prior to the first phases of an acquisition program. The leaders of this half-day GVF Workshop will provide detailed analyses of precisely how the private sector vendor community – the developers and providers of state-of-the-art satellite networking technologies – contribute to the strategic planning agenda and system capability delivery in the following topic areas:

- **Future Developments in MilSpace Communications Infrastructures**
- **C4 Technologies Evolution & the MilSpace Requirement**
- **Inter-Satellite Links & Enhancement of Speed & Security**
- **SatComs Networking & the Defence of Key Space-Borne Military Assets**
- **Safeguarding the MilSpace: From Space Command to Space Control**
- **The 'Business' of MilSpace: The Dynamics of Planning, Acquisition & Deployment**
- **Effective National Space Policies for the War Fighter/First Responder Interface**

GVF Satellite Symposium @ CABSAT 2007 – *"Applications Innovation for Mission Critical Solutions: Vertical Markets & the Growth of Middle Eastern IP Satellite'"* on 7th March poses the overarching question… **Just exactly**

how are satellite-based IP broadband solutions competing in this dynamic environment? The program is structured to answer this key question in detail, and importantly it will also cover the major current spectrum allocation debate arising from the emergence of new terrestrial broadband wireless access technologies and their potential to encroach upon the C-band frequency ranges used by satellite services, asking if this issue is critical in the region.

The details of the four principal **Symposium** sessions are as follows:

Identifying Key Regional Verticals & the Mission Critical Solution: Unprecedented demand for IP-based services continues to drive millions of potential end-users towards various technology platforms that can deliver broadband communications solutions and, indeed, much of the population of this information and communications technology (ICT) solution purchasing community tends to technology agnosticism. Whilst satellite product and service vendors focus on market offerings of high-value, high-quality, seamless, end-to-end, solutions, the question demanding a very clear answer remains… *just exactly how are satellite-based IP broadband solutions competing in this dynamic environment?* The contributors to this opening session of the GVF main program will take as their focus the progressively increasing demand for broadband-delivered applications solutions within the framework of evolving communications requirements in three of the region's key verticals.

Current State-of-the-Art Satellite & Satellite-Hybrid IP in the Middle East:
Spectrum is a finite and precious resource. In order to achieve the most efficient usage of this limited resource

and to enhance investment returns for broadband satellite solution vendors, together with facilitating increased cost-effectiveness for broadband solutions buyers, IP satellite "must make the most of the bandwidth". In this session leading satellite industry insiders will explain not only how the supply of today's satellite solutions necessarily implies a continuing evolution of technologies to "make the most of the bandwidth", but also how appropriate bandwidth availability, provision, and supply is carefully planned for, and tailored to, regional demand dynamics. In addition, this session will cover the major current spectrum allocation debate arising from the emergence of new terrestrial broadband wireless access technologies and their potential to encroach upon the frequency ranges used by satellite service providers.

The *Innovation Challenge*: Evolving, Developing & Adapting the Satellite Application:
In this session, three satellite industry experts will each take an example Case Study to illustrate how applications and communications solution innovation actually works in three different real-world Middle East environments: in the 'oil & gas patch', in the business continuity/disaster recovery/emergency management environment, and in the deployment of terrestrially-based mobile – and satellite-based mobile (MSS) – networks which support voice and extended broadband data applications. Each study of the *innovation challenge* will provide an evolutionary analysis of the development processes and applications deployment mechanisms relevant to each sector/vertical market dynamic.

"Future Evolution": Advancing the Dynamics of the IP Satellite Solution:

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The emphasis of the contributors to this final session is on the analysis and understanding of current trends as a foundation for the planning of growth in, and directing the evolution of, the provision of broadband, IP-based, applications and services in the future marketplace. However, this is not an exercise in *ad hoc* crystal ball-gazing, but a clear and detailed overview of just how today's satellite technologies and the associated business models which facilitate their current effective deployment are most likely to evolve into yet further improved technologies and a range of increasingly innovative business models of revenue-stream expansion. If the IP satellite argument has been won in the minds of the corporate/SME/SOHO end-user, just exactly how must the satellite sector continue to position itself to secure long-term sales of its solutions, and to successfully guarantee the customer-base competitive advantage that arises from

the satellite choice? What next for the satellite-based networking environment? What next in the Middle East satellite –

and non-satellite – communications marketplace?

SM

Martin Jarrold is the Director, International Programs of the Global VSAT Forum. He can be reached at martin.jarrold@gvf.org For more information on the GVF go towww.gvf.org

STOCK MONITOR

Company Name	Symbol	Price Feb. 1	52-wk Range
APT SATELLITE	ATS	1.53	1.20 - 2.00
ANDREW CORP	ANDW	10.62	7.08 - 14.25
ASIASAT	SAT	17.75	15.91 - 19.60
BALL CP	BLL	46.32	34.16 - 47.55
BOEING CO	BA	89.56	70.00 - 92.05
BRITISH SKY ADS	BSY	43.61	35.15 - 44.58
CALIFORNIA AMPLIFIER CORP	CAMP	7.96	5.44 - 13.90
C-COM SATELLITE SYSTEMS INC.	CMI.V	0.40	0.27 - 0.56
COM DEV INTL LTD	CDV.TO	5.75	2.10 - 6.88
COMTECH TELECOM	CMTL	36.00	25.67 - 39.86
THE DIRECTV GROUP	DTV	24.39	13.28 - 25.57
ECHOSTAR COMMUNICATIONS	DISH	40.34	27.08 - 41.53
GLOBECOMM SYS INC	GCOM	10.93	6.26 - 11.17
HARRIS CORP	HRS	50.82	37.69 - 51.50
HONEYWELL INTL INC	HON	45.69	35.53 - 45.99
INTL DATACASTING CORPORATION	IDC.TO	0.23	0.15 - 0.31
INTEGRAL SYSTEMS	ISYS	23.87	18.79 - 33.55
KVH INDS INC	KVHI	10.05	9.69 - 14.48
L-3 COMM HLDGS INC	LLL	82.34	66.50 - 88.50
LOCKHEED MARTIN CORP	LMT	97.19	67.61 - 98.75
NEWS CORP	NWS	24.45	16.44 - 24.50
NORSAT INTL INC	NSATF.OB	0.53	0.30 - 0.89
NTL INCORPORATED	NTLI	27.25	19.99 - 31.00
ORBITAL SCIENCES CORP	ORB	17.06	12.70 - 20.36
PT PASIFIK SATELIT	PSNRY.PK	0.0001	-
QUALCOMM INC	QCOM	37.66	32.76 - 53.01
RADYNE CORPORATION	RADN	10.46	9.52 - 17.85
SES GLOBAL FDR	SDSFA.F	12.45	-
TRIMBLE NAVIGATION	TRMB	56.58	38.13 - 57.30
WORLDSPACE INC	WRSP	3.73	1.90 - 13.34
VIASAT INC	VSAT	32.97	22.32 - 33.40
XM SATELLITE RADIO	XMSR	14.21	9.63 - 27.01

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