



Ground Equipment



Your Satellite Connection
to the World

SES GLOBAL

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(presented by the Global VSAT Forum)

NOTES FROM THE EDITOR

The Barbarians are at the Gates

It's been another month of changes in the satellite industry with news of the purchase of the third-largest satellite operator PanAmSat by buyout specialist Kohlberg Kravis Roberts & Co. (KKR). This was followed by the announcement of TVNZ that it is getting out the satellite business and the purchase of UK service provider Kingston

inmedia by the Carlyle Group (one of the failed bidders for PanAmSat).

The renewed interest in the investment community in the satellite business portends of good things to come for the industry. At the very least, it's a clear indication of the long-term viability of the industry.

It will be recalled that KKR was the key figure in the famous hostile take over of RJR Nabisco which was popularized in the bestselling book, *Barbarians at the Gates*. Indeed, KKR has developed a reputation in the industry for breaking up companies and selling it to highest bidders. Despite assurances from PanAmSat's management that KKR intends to build upon PanAmSat's strengths and grow the business, one cannot help but wonder what its ultimate plans are. Especially when many of the other satellite operators such as SES Global, Eutelsat and New Skies made public their interest in all or some of PanAmSat's assets. during the bidding process.

Chris Forrester looks at this issue in depth in the feature "Spot Finds a Home" in this issue (page 19).

It would be interesting to watch developments in the coming months.

Virgil Labrador

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CALENDAR OF EVENTS

May 2004

May 4-8 Cairo, Egypt **ITU Telecom Africa 2004**

Ms Jane Ratcliffe, Exhibition Manager

Tel: +41 22 730 6064

www.itu.int/AFRICA2004/

May 9-12 Monterey, California, **22nd AIAA International Communications Satellite Systems Conference & Exhibit 2004 (ICSSC)**

Ms Karen Sklencar

Tel: +1-703-264-7529

www.aiaa.org

May 12-13 Prague, Czech Republic

AIB Global Business Media Conference

Tel: +44-20 8297 3993 Fax: +44-20-8852-0853

E-mail: register@aib.org.uk

www.aib.org.uk

May 25-27 London, UK **Mediacast 2004**

Helen Amos, Tel: +44-20 8910 7756

www.mediacast.net

Don't Miss ISCe 2004:

June 1-3,2004 Long Beach, CA, USA

ISCe is the premier annual conference and expo highlighting dual-use satellite-based services, applications and innovative technologies for the commercial, civil and military sectors. Key program highlights for ISCe 2004 include: Satellite Users Forum; Defense and Security Forum ; Global Navigation Forum ; Next-Generation Capabilities Forum ; Satellite Entertainment/DBS Forum ; U.S.-Asia Satellite Business Roundtable ; GPS Tutorials; Satellite Career Day Program ; Innovation Gateway Pavilion.

For more information, please visit www.isce.com or contact Gina Lerma of Hannover Fairs USA, Inc. at (310) 410-9191 or glerma@hfusa.com.



FEATURED EVENT

Dynamic Conference Sessions and Networking Opportunities at ISCe 2004



Long Beach, California June 1-3, 2004

Next month's ISCe 2004 conference and exhibition in Long Beach, California marks the third edition of this important event. Despite the recent downturn in the industry, ISCe has managed to grow from strength to strength and has now carved a niche for itself as the premier satellite conference and expo in the West Coast of the U.S.

"ISCe is becoming recognized as one of the "must attend" satellite and communications conference in the world, said Kalpak Gude, chairman of the Satellite Industry Association (SIA), a U.S.-based trade association representing leading U.S. and international satellite-related companies throughout the world and co-organizer of ISCe. "The SIA is pleased to co-host this excellent event, which brings together senior-level decision-makers from the commercial, civil and military sectors under one roof."

Leading the distinguished lineup of speakers, **SES Global CEO Romain Bausch** will be presenting the keynote address.

"SES Global is a leader in meeting the communication needs of today's consumers and businesses," said Joachim Schafer, President of Hannover Fairs USA, the organizer of ISCe. "We are excited to have Romain Bausch share his thoughts on the worldwide broadband communication s market and his vision for tomorrow's opportunities."



SES Global CEO Romain Bausch

The conference will be highlighting key sessions organized around different fora on Defense and Security, Navigation, Next-Generation Capabilities, among others.

"We are extremely pleased with the strength and diversity of speakers in this year's conference program," added Schafer. "We have also added some new business development and educational events, such as the NASA Small Business

Partnership & Opportunities program, the Galileo Opportunities for U.S. Providers presentation, GPS Seminars, SSPI Satellite Career Day and the Corporate Growth & Exit Strategy presentation. This validates our commitment to delivering additional quality business focused programs to our customers," said Schafer.

Defense and Security Forum

A key panel in ISCe's "Defense and Security" forum will discuss "Satellite Technologies for Port Security: Protecting the "Soft Underbelly" in the War on Terrorism." "With homeland security as a top priority on the agenda, the Coast Guard is at a heightened state of alert protecting more than 361 ports and 95,000 miles of coastline," said Art Paredes, ISCe Chairman. "We are honored to have **Captain Peter Neffenger, USCG** Commanding Officer and Captain for the Port of Los Angeles/ Long Beach discuss what processes are being implemented to detect and prevent our Ports from potential acts of terrorism."

Other key speakers on Defense and Security Forum at ISCe include senior officials such as **Brig. Gen. Charles Fletcher, Jr.**, Assistant Deputy Chief of Staff G-4 - U.S. Army; **RADM Rand Fischer**, Director, Transformational Communications Office, NRO Communications Directorate - U.S. Navy; **Major General C.**



RADM Rand Fischer

Robert "Bob" Kehler, Director, National Security Space - Office of the Undersecretary of the Air Force; and **Lt. Gen. Brian Arnold**, Commander - USAF Space & Missile Systems Center (SMC).

Global Navigation Forum

Several sessions will cover the important topic of "Global Navigation" featuring a panel on "GNSS Interoperability; Dual-use Applications, National Security." Speaking at the panel are **Col. Rick Reaser**, Chief Engineer, NAVSTAR GPS Joint Program Office - SMC/USAF; **Chris Wilson**, Vice President - Daimler

FEATURED EVENT

Chrysler Research; **Prof. Guenter Hein**, Director, Institute of Geodesy and Navigation - University FAF Munich; **Keith McDonald**, Chairman - Navtech Seminars and **Dr. Terry McGurn**, Consultant and Former Senior Analyst - CIA.

Next-Generation Capabilities

The forum on “Next-Generation Capabilities” will be covering satellite broadband solutions for worldwide applications, including disaster relief, distance learning, advanced space systems and mobile platforms. Speakers include: **DK Sachdev**, President - SpaceTel Consultancy LLC; **Dr. Janet Poley**, President - American Distance Education Consortium; **Dr. Joseph Guerci**, Deputy Director, Special Projects Office DARPA; **Scott Carson**, President - Connexion by Boeing; and **Dr. Eui Koh**, President - Asia-Pacific Satellite Communications Council.

In addition, ISCe will also feature other forums including:

- **Satellite Users Forum**
- **Satellite Entertainment/DBS Forum**
- **U.S.-Asia Satellite Business Roundtable**
- **GPS Tutorials**
- **Satellite Career Day Program**
- **Innovation Gateway Pavilion**

Finding New Project Opportunities

“ISCe presents a wide array of opportunities for new business development to both satellite providers and end users,” said Schafer. “While the exhibit hall is the obvious place to make new business contacts, several of the conference sessions, for example “Galileo Opportunities for U.S. Providers” and “Military Space R&D: Opportunities and Priorities,” are designed to provide attendees valuable knowledge for competing on future projects,” he added.

The exhibit floor will host a balance mix of operators, manufacturers and suppliers from the commercial and government sectors. Attendees can count on gaining valuable knowledge of breadth and depth of available offerings, while exhibitors benefit from face-to-face interaction with key decision makers from around the world.

With a wealth of information and unique networking opportunities, ISCe 2004 is truly a “must attend” and not-to-be-missed show. We hope to see you all in Long Beach, California, from June 1-3, 2004. **SM**

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Program Schedule—at-a-Glance

Tuesday, June 1st:

Track 1	GPS Seminars (Presented by GPS Navtech Seminars)	Room 203 C
8:30 a.m. – 12:00 p.m.	Session 101A: GPS Basics	
1:30 p.m. – 5:00 p.m.	Session 101B: GPS Applications and Enhancements	
Track 2	Satellite Users Forum (Presented by GVF, SIA and the MSUA)	Room 203 A&B
9:00 a.m. – 9:30 a.m.	Welcome	
9:30 a.m. – 10:45 a.m.	Session TU1: Thin Routes Reaching Small and Mobile Users	
10:45 a.m. – 12:00 p.m.	Session TU2: Commercial VSATs for the Rebuilding of Iraq and Afghanistan	
12:00 p.m. – 1:30 p.m.	Welcome Luncheon: Keynote: Gen. Eugene Tattini (Ret.) – NASA JPL (at Long Beach Hyatt Regency)	Regency Ballroom B
1:45 p.m. – 3:00 p.m.	Session TU3: Fleet Management: Mobile Satellite Communications for the Transportation Industry	
3:00 p.m. – 3:30 p.m.	Refreshment Break (Sponsored by Hughes Network Systems)	Exhibit Hall
3:30 p.m. – 4:45 p.m.	Session TU4: Small Terminals for the Oil & Gas Industry	
3:30 p.m. – 4:45 p.m.	Small Business Innovation Research and NASA Partnerships (Presented by NASA Far West and the CSA)	Room 204
4:45 p.m. – 6:00 p.m.	Session TU5: Networks and Applications for the Retail Market	
6:00 p.m. – 7:30 p.m.	Welcome Reception (at Long Beach Hyatt Regency)	Beacon Ballroom A

Wednesday, June 2nd:

8:30 a.m. – 10:00 a.m.	Welcome and Keynote Address	Grand Ballroom B
10:00 a.m. – 4:00 p.m.	Exhibit Hall Open	Exhibit Hall
10:00 a.m. – 10:20 a.m.	Coffee Break (Sponsored by Lockheed Martin)	Exhibit Hall
11:30 a.m. – 1:00 p.m.	Luncheon (Sponsored by The Boeing Company)	Grand Ballroom B
6:30 p.m. – 10:00 p.m.	ISCe 2004 Awards Dinner and Reception (at Long Beach Hyatt Regency)	Poolside, Regency Ballroom A
Track 1	Defense and Security Forum	Room 203 A&B
10:20 a.m. – 11:30 a.m.	Session WE1: National Security Space: Prospects and Challenges	
1:05 p.m. – 2:15 p.m.	Session WE3: Increased Military Use of Commercial Satellite Services	
2:15 p.m. – 2:35 p.m.	Refreshment Break	Exhibit Hall
2:35 p.m. – 3:45 p.m.	Session WE5: Protecting Commercial Satellites as a Critical Infrastructure	
3:50 p.m. – 5:00 p.m.	Session WE7: Military Space R&D: Opportunities and Priorities	
5:05 p.m. – 6:15 p.m.	Session WE9: Satellite Technologies for Port Security: Protecting the "Soft Underbelly" in the War on Terrorism	
Track 2	Satellite Entertainment and DBS Forum (Presented by The Carmel Group)	Room 202 A&B
10:20 a.m. – 11:30 a.m.	Session WE2: Advanced Technologies and Applications: Do They Work? Do They Make Money?	
1:05 p.m. – 2:15 p.m.	Session WE4: Satellite Radio: The Boom Has Begun!	
2:15 p.m. – 2:35 p.m.	Refreshment Break	Exhibit Hall
2:35 p.m. – 3:45 p.m.	Session WE6: Fixed Satellite Services: Broadband Opportunities and Challenges Today!	
3:50 p.m. – 5:00 p.m.	Session WE8: Wall Street Financial Report: Where's the Money?	
5:05 p.m. – 6:15 p.m.	Session WE10: DBS Visionaries: Evolving the Playing Field	

Thursday, June 3rd:

9:00 a.m. – 10:30 a.m.	Welcome: Industry Leaders Roundtable Discussion	Grand Ballroom B
10:00 a.m. – 4:00 p.m.	Exhibit Hall Open	Exhibit Hall
10:30 a.m. – 11:00 a.m.	Coffee Break (Sponsored by Space Systems Loral)	Exhibit Hall
12:30 p.m. – 2:00 p.m.	Luncheon: Asia-Pacific Market Outlook: Rising Opportunities in the Direct-to-Home Marketplace	Grand Ballroom B
Track 1	Next-Generation Capabilities Forum	Room 203 A&B
11:00 a.m. – 12:30 p.m.	Session TH1: Mobile Broadband: What's Around the Bend?	
2:00 p.m. – 3:15 p.m.	Session TH3: Broadband Asia-Pacific 2004: The Year of Living Dangerously	
3:15 p.m. – 3:35 p.m.	Refreshment Break (Sponsored by G2 Satellite Solutions)	Exhibit Hall
3:35 p.m. – 4:50 p.m.	Session TH5: Earthquakes, Fires and Floods: Satellites to the Rescue!	
4:55 p.m. – 6:10 p.m.	Session TH7: Advanced Space Technologies and Applications	
Track 2	Global Navigation Forum	Room 202 A&B
11:00 a.m. – 12:30 p.m.	Session TH2: Galileo Opportunities for U.S. Providers	
2:00 p.m. – 3:15 p.m.	Session TH4: GNSS: Its Composition, Schedule, Benefits and Issues	
3:15 p.m. – 3:35 p.m.	Refreshment Break (Sponsored by G2 Satellite Solutions)	Exhibit Hall
3:35 p.m. – 4:50 p.m.	Session TH6: GPS and Galileo Interoperability: Prospects for the GNSS Market	
4:55 p.m. – 6:10 p.m.	Session TH8: Geospatial Technologies: Aggregating and Analyzing Intelligence for National Security	
Special Event	SSPI Satellite Career Day Program (Hosted by the SSPI)	Room 204
1:30 p.m. – 3:00 p.m.	Welcome and Refreshments; Session 1: Launch Your Career Into Space	
3:00 p.m. – 3:30 p.m.	Tour Exhibit Hall – Resume Exchange	
3:30 p.m. – 5:00 p.m.	Session 2: Deep Space Network presentation	
5:00 p.m. – 5:30 p.m.	Closing Remarks	

FEATURED EVENT

Organizations involved with ISCe 2004:

Organizer

Hannover Fairs USA, Inc.



Hannover Fairs USA, Inc.
Princeton • New York • Los Angeles

Hannover Fairs USA, Inc. (HFUSA) is the U.S.

subsidiary of Hannover, Germany's Deutsche Messe AG. Established in 1985 in Princeton, New Jersey, Hannover Fairs USA organizes tradeshows, conferences, group exhibits and marketing programs at events throughout the world. For more information, please visit www.hf-usa.com.

Co-Host

Satellite Industry Association

The Satellite Industry Association (SIA) is a U.S.-based trade association representing the leading U.S. and international satellite service providers, manufacturers, launch services companies and ground equipment suppliers throughout the world. The SIA is the unified voice of the commercial satellite industry on policy, regulatory, and legislative issues affecting the satellite community. The SIA represents the common interests of its members to domestic and international government officials, the press, the public, and other industries.



Supporting Organizations

Asia-Pacific Satellite Communications Council (APSCC)

APSCC is a non-profit international regional organization which aims to
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promote satellite communications and broadcasting in the Asia-Pacific region through regional cooperation among members of APSCC for the social, cultural and economic prosperity of the region. To achieve these objectives, ongoing efforts are being made to exchange views and ideas on policies, technologies, systems, and services, which have the potential to

benefit the region, to accelerate the introduction of services via satellite and to develop and broaden the national and regional satellite communication and broadcasting services of Asia-Pacific countries. APSCC is also active in the formulation of recommendations on technical standards within the region and the world.

ISCe 2004
Conference & Expo
June 1-3, 2004 • Long Beach, California
"Strong Signals on the Horizon"

Mark Your Calendar!
Join the global satellite community at ISCe 2004, the premier U.S. West Coast annual conference and expo for the commercial, government and military sectors!

ISCe 2004 Highlights:

- Dynamic three-day conference program:
 - ◆ Satellite Users Forum
 - ◆ Satellite Communications Forum
 - ◆ Global Satellite Navigation Forum
 - ◆ Defense and Security Forum
 - ◆ Satellite Entertainment/ DBS Forum
- GPS Training Seminars
- Special "Galileo Opportunities for U.S. Providers" presentation
- One-on-One Interviews with industry leaders
- U.S. - Asia Satellite Business Roundtable
- Matchmaking Program
- ISCe 2004 Awards Dinner
- Exhibition Center with product demonstrations
- Satellite Career Day

For complete program details, registration, exhibit sales and sponsorship opportunities, please visit www.isce.com or call +1 (310) 410-9191

Organized by:



Co host



Supporting Organizations:



FEATURED EVENT

The Carmel Group



The Carmel Group is a world-renowned consulting and market research firm, offering clients around the world the best intelligence and strategic guidance, allowing each to enhance its position and profitability within its industry segment (or within new industry segments). Our expertise includes cable, satellite, telephony, set-top boxes, programming, digital video recorders, video-on-demand, broadband, videogames and other advanced media, telecommunications and computer services. Located in Carmel-by-the-Sea, CA, The Carmel Group also organizes and hosts premiere annual telecommunications events and publishes in-depth databooks, white papers and monthly newsletters.

Global VSAT Forum



The Global VSAT Forum is an association of key companies involved in the business of delivering advanced digital fixed satellite systems and services to consumers, and commercial and government enterprises worldwide. The Forum is independent and non-profit and has a global remit. It is also non-partisan - any companies or organizations with an interest in the VSAT industry are encouraged to join.

The Mobile Satellite Users Association (MSUA)



The Mobile Satellite Users Association (MSUA) was established in 1992 as a non-profit association to promote the interests of users of mobile satellite communications worldwide. It fosters effective

communication among Mobile Satellite Services (MSS) users, suppliers of equipment and services, operators of the satellite systems, and the various governmental entities that may affect the future of the industry. Membership is not limited to USA entities, and is open to organizations worldwide engaged in any of these activities.

Navtech Seminars & GPS Supply



Navtech Seminars & GPS Supply

Navtech Seminars has been providing technical courses and advanced GPS training since 1984. We offer more than 20 courses on professional GPS, DGPS and related topics. Navtech GPS Supply offers an extensive selection of books, software, and equipment for GPS users of all types. We have GPS/GIS systems for professional users, DGPS systems, board-level receivers, and the industry's most popular hand held GPS receivers.

Society of Satellite Professionals International



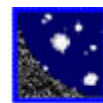
The Society of Satellite Professionals is a nonprofit member-benefit society that serves satellite professionals throughout their careers. Specifically, this means:

- Promoting the development of and access to — high-quality, satellite-related education on the post-secondary and continuing (adult) levels.
- Helping satellite professionals to advance their careers by creating opportunities for them to do business with each other and learn from each other.

- Honoring extraordinary achievement by satellite professionals and the companies they work for.
- Stimulating the growth of the industry by communicating its accomplishments to the financial markets, policy makers and both business customers and consumers.

World Teleport Association

World Teleport Association (WTA) is a nonprofit trade association representing the key commercial players in broadband. WTA's members in 20 nations includes teleports, satellite and terrestrial carriers, technology providers, engineering firms, investment houses and consultants. Through our special interest project, the Intelligent Community Forum, WTA also attracts property developers and governments as members. Developers of intelligent buildings turn to WTA for expertise in using broadband to build property value. Governments on the local, regional and national level seek to use broadband for economic development.



WORLD TELEPORT ASSOCIATION

Sponsors

SESAMERICOM



The largest supplier of satellite services in the U.S., SES AMERICOM, Inc. is recognized as a pioneer of global satellite communications services. Established in 1973 with its first satellite circuit for the U.S. Armed Forces, the company currently operates a fleet of 16 spacecraft in orbital positions providing service throughout the Americas, across Europe, over the Atlantic and

FEATURED EVENT

and Pacific oceans, and throughout Asia. As a member of the SES GLOBAL family, AMERICOM is able to provide end-to-end telecommunications solutions to any region in the world. SES AMERICOM's key customers include ABC Radio Networks, AT&T Alascom, AOL Time Warner, Deutsche Welle, Discovery, EchoStar, Fox, TV Guide/Gemstar, Gannett, HBO, Hughes Network Systems, NBC, The New York Times, NHK, PaxNet, PBS, TELE Greenland, TV Europa, Verestar, Viacom and, through AMERICOM Government Services, various agencies of the U.S. government support services.

SES GLOBAL

 **SES GLOBAL** is the world's leader in global satellite communications. Our satellites provide first-class, worldwide broadband communications: audio-visual broadcasting, feeds for cable networks, Internet trunking and IP multicast, corporate networks, network facilities and telecommunications services.

SES GLOBAL is a group management company that operates through its 100 percent-owned companies [SES ASTRA](#) and [SES AMERICOM](#), and through the network of partners, in which SES GLOBAL holds interests: [AsiaSat](#), [Nordic Satellite AB](#) (NSAB), [Nahuelsat](#), [Star One](#), [SATLYNX](#) and [WORLD SAT](#). This network of established operators, who enjoy strong leadership positions in their respective markets, enables SES GLOBAL to provide the highest quality global broadband connectivity at the service of customers.

California Space Authority

Governed by a statewide board of directors, the California Space Authority



is a nonprofit corporation representing the diverse sectors of the space stakeholder community: commercial, civil, and military.

As the California Space Authority, CSA serves as the policy advisor to the Secretary of the California Technology, Trade and Commerce Agency on all space-related matters and represents the State of California on space issues to the international community, to the federal government, other states, and to local and regional government entities.

The Boeing Company

The Boeing Company, with headquarters in Chicago, is the leading aerospace company in the world and the United States' leading exporter. The company has an extensive global reach, including customers in 145 countries, employees in more than 70 countries and operations in 38 U.S. states as well as Canada and Australia.

INMARSAT



Inmarsat was the world's first global mobile satellite communications operator and is

still the only one to offer a mature range of modern communications services to maritime, land-mobile, aeronautical and other users.

Formed as a maritime-focused intergovernmental organization over 20 years ago, Inmarsat has been a limited company since 1999, serving a broad range of markets. Starting with a user base of 900 ships in the early 1980s, it now supports links for phone, fax and data communications at up to 64kbit/s to more than 250,000 ship, vehicle, aircraft and portable terminals.

Stellar Solutions, Inc.



Stellar Solutions, Inc. is an engineering

services business providing technical expertise and problem-solving skills to significant national and international aerospace programs. The Company has distinguished itself by satisfying customers' critical needs on diverse projects, including defense-related intelligence projects, international telecommunications satellites, commercial imagery satellites and NASA's earth science and planetary missions.

Stellar Solutions areas of expertise include systems engineering, systems integration, mission operations and engineering, program management and strategic planning. Customers and projects include NRO, CIA, NSA, NIMA, DoD, NASA, Commercial Systems (communications, direct broadcast, satellite radio and remote sensing) and Launch Systems. The Company is listed as one of the fastest-growing and largest women-owned businesses in Northern California. Fortune Small Business magazine recently recognized Company founder Celeste Ford as one of six "Best Bosses" in the country. And Company spin-off QuakeFinder, LLC recently built and launched a scientific research satellite designed to identify and monitor earthquake-related signals from space.

Scitor



Scitor provides a diverse range of systems engineering,

information technology, and program management expertise to satisfy the needs of our commercial and government customers.

FEATURED EVENT

G2 Satellite Solutions



G2 Satellite Solutions provides end-to-end satellite communications (SATCOM) services to government entities, both domestically and internationally, as well as to certain private sector customers. G2 responds to user requirements (technical, financial and contractual) by tailoring unique solutions from commercially available satellite products and services. As a value-added reseller representing an extensive array of satellite bandwidth and terminal providers, G2 is able to offer “one stop shopping” for integrated, worldwide satellite communications. The G2 Operations Center provides a point of contact for ongoing customer support needs and satellite network monitoring services.

Space Systems Loral



Building on more than 45 years of pioneering spacecraft development, Space Systems/Loral (SSL) has become a premier producer of reliable communications and weather satellites. Headquartered in Palo Alto, California, the company operates around the world, working within many cross-national alliances, and in leading-edge facilities.

The company, a subsidiary of Loral Space and Communications, designs, builds, and tests satellites, subsystems, and payloads; provides orbital testing; procures insurance and launch services; and manages mission operations from Mission Control Center in Palo Alto.

Futron



Futron is a premier provider of decision-support solutions enhancing its clients’ abilities to make complex decisions. We collaborate with clients to remove the

guesswork from their decisions by defining their options and quantifying their future outcomes.

Futron’s Space and Telecommunications Division specializes in researching, analyzing, and forecasting space and telecommunications markets and programs.

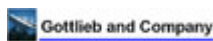
Hughes Network Systems



Hughes Network Systems, Inc. (HNS), a wholly owned subsidiary of The DIRECTV Group, Inc., is the world’s leading provider of broadband satellite network solutions for businesses and consumers, with more than 600,000 systems ordered or shipped to customers in 85 countries. HNS pioneered the development of high-speed satellite Internet access services, which it markets globally under the DIRECWAY brand. In addition, HNS is a leading manufacturer of DIRECTV® satellite television receivers, having shipped more than 14 million systems to date.

Headquartered outside Washington, D.C., in Germantown, Maryland, USA, HNS maintains sales and support offices worldwide. The DIRECTV Group, Inc. (NYSE:DTV), formerly Hughes Electronics Corporation (NYSE:HS), is 34 percent owned by Fox Entertainment Group, which is approximately 82 percent owned by News Corporation.

Gottlieb and Company



The next great battleground for satellite service providers lies in the vast, largely untapped Enterprise market. By all accounts, this market is huge consisting of numerous vertical segments, many of which are totally unaware of modern

satellite technology and its potential benefits.

Through our work with Verestar, Inmarsat and other major clients, we know the opportunities are there. We are pleased to have developed an understanding of the specific needs of many of many vertical markets through extensive research. For the most part, we have found that IT Mangers are surprised and interested in the variety of new satellite solutions available. They want to know more and are looking to the satellite providers to provide the solutions they need. For those satellite-related firms truly committed to growth, the key to these markets lies in understanding the specific needs of each vertical and educating the customer.

Lockheed Martin Commercial Space Systems



Lockheed Martin Commercial Space Systems markets, designs and builds geostationary and non-geostationary telecommunications and remote sensing satellites for customers worldwide. LMCSS is an operating unit of Lockheed Martin Space Systems Company, one of the core business areas of the Lockheed Martin Corporation (NYSE: LMT). Lockheed Martin has a 41-year heritage of building reliable spacecraft for commercial and military customers, having launched more than 875 spacecraft and clocking nearly 1,500 years of on-orbit performance experience.



SPONSORSHIP/REGISTRATION

To get more information on sponsorship opportunities or to register, visit www.isce.com or contact Gina Lerma of Hannover Fairs USA, Inc. at (310) 410-9191 or glerma@hfusa.com.

INDUSTRY NEWS

PanAmSat Corp. Acquired By KKR In \$4.3 Bil. Transaction

PanAmSat Corp. (NASDAQ: SPOT), and its 80.5 percent stakeholder, The DirecTV Group, Inc. (NYSE: DTV), announced today that they have signed a definitive transaction agreement with affiliates of the investment firm of Kohlberg Kravis Roberts & Co. (KKR) for the sale of PanAmSat Corp. at \$23.50 in cash per share. The aggregate transaction value, including the assumption of approximately \$750 million of net debt, is approximately \$4.3 billion.

As part of the transaction, The DirecTV Group agreed to extend and enhance certain agreements between itself and PanAmSat, at market rates, in order to assure future revenue flows to PanAmSat and continuity of services for its Hughes Network Systems and DirecTV Latin America subsidiaries, according to a company statement.

Subject to applicable regulatory approvals, including the Federal Communications Commission, and also subject to approval by the stockholders of PanAmSat, the transaction is expected to be completed in the second half of 2004. The boards of directors of both PanAmSat Corp. and The DirecTV Group voted unanimously in favor of the transaction.

Credit Suisse First Boston served as financial advisor to The DirecTV Group, and Evercore Partners to the Special Committee of the Board of Directors of PanAmSat Corporation. Weil, Gotshal & Manges LLP served as the legal advisor to The DirecTV Group; Gibson Dunn & Crutcher LLP represented PanAmSat; and Simpson Thacher & Bartlett LLP served as legal advisor to KKR.

PanAmSat is the third largest satellite operator in the world with global coverage. It is celebrating this year its 20th anniversary as the first privately-owned satellite operator.

The Carlyle Group Acquires Kingston inmedia

Private equity firm The Carlyle Group acquired Kingston inmedia, the satellite service provider owned by Kingston Communications (Hull) plc, the UK alternative carrier, in an all-cash deal of £34 million (US \$ 60.3 mil). Carlyle Europe Venture Partners fund (CEVP) conducted the transaction and Barclays Leveraged Finance provided the debt financing. Kingston inmedia has 2003 revenues were £33.4 million with EBITDA of £5.7 million. Kingston inmedia has 165 employees. The company will continue to trade under the name of Kingston inmedia in the immediate future, according to a company



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INDUSTRY NEWS

statement. This investment is the second in 2004 for Carlyle Europe Venture Partners (CEVP). An investment in Fennel Technologies AG based in Germany was announced in January. CEVP is a 553 million fund that focuses on investing in later-stage companies in the technology sector, from expansion capital to small buyouts.

The Carlyle Group was also reported to one of the bidders for satellite operator PanAmSat, which was sold by parent News Corp. to US investment firm KKR, which won the bid.

TVNZ Closing Down its Satellite Business

New Zealand's public broadcaster, TVNZ announced that it will be closing down its satellite business, TVNZ Satellite Services. The announcement came after a much publicized alliance with Intelsat Global Sales and Marketing last September 2003, which was expected to generate multimillion dollar revenues.

TVNZ Satellite Services also just completed a major rebranding of its image early this year. TVNZ' Satellite Services provides full-time and occasional use uplink services for other broadcasters involved with major sporting and other international events. It was a leading provider in the Asia-Pacific region in the 90s until the global satellite market shrank considerably due to the downturn in the demand for satellite services. TVNZ has long-term transponder space leases with several satellite operators including INTELSAT. The cost of leasing these transponders coupled with shrinking demand may have proved to be a burden that the company can no longer bear, according to analysts.

TVNZ Satellite Services would remain in business until the end of the year in order to meet existing contractual obligations, including a major commitment to provide services during the Athens Olympic Games in August. TVNZ has a staff 28 and according to a company statement, they will endeavor to absorb the existing staff in other TVNZ units and business.

SES Global Companies Sign Three Launch Contracts with ILS

SES ASTRA and SES AMERICOM, both operating companies of SES GLOBAL signed a new contract for the launch of three satellites onboard American Atlas and Russian Proton boosters with International Launch Services (ILS). Under the terms of the contract, AMC-16 is slated for launch onboard Proton/Breeze M from Baikonur in Q1 2005, AMC-14 is to lift off on Atlas 5 from Cape Canaveral in Q1 2006, and ASTRA 1L will be placed into orbit also on Proton/Breeze M in Q4 2006. Financial terms of the contract were not disclosed.

AMERICOM-16 (AMC-16) is a hybrid Ku/Ka-band satellite being built by Lockheed Martin on the reliable A2100 platform. The first mission of AMC-16 is as a ground spare for AMC-15, a satellite scheduled for launch in Q3 2004, so it is being constructed identically in terms of the payload configuration. The spacecraft features 24 (36 MHz) Ku-band transponders, 12 (125 MHz) Ka-band spot beams and the highest levels of redundancy on core components such as amplifiers, receivers, commanding beam and computer control systems.

AMERICOM-14 (AMC-14) is a BSS satellite also built by Lockheed Martin with 32 (24 MHz) Ku-band transponders each supported by a 150 watt TWTA; like AMC-16, the spacecraft features the highest levels of redundancy on core components such as amplifiers, receivers, commanding beam and computer control systems. The satellite will provide Direct to Home services in the United States from a slot to be determined. AMC-14 will be the first BSS satellite operated in SES AMERICOM's domestic fleet.

ASTRA 1L is also being built by Lockheed Martin on the A2100 platform and features 29 active Ku band transponders (FSS and BSS) as well as two Ka-band transponders, with a TWTA output power of 140 watts and a pan-European footprint. With an expected launch weight of approximately 4300 kilograms and a design life of 15 years, the spacecraft's primary mission will be to replace ASTRA 1E and to reinforce SES ASTRA's renowned intersatellite back-up concept at the company's prime Continental European DTH position of 19.2 degrees East. The Ka-band payload will support interactive services like ASTRA BBI (Broadband Interactive) and Satmode, a low-cost satellite return channel for digital set top boxes.

Comtech Telecommunications Corp. Signs Agreement to Acquire Memotec, Inc.

Comtech Telecommunications Corp. announced today that it has agreed to acquire certain assets and assume certain liabilities of Memotec, Inc. from Kontron AG for approximately \$2.6 million. At the same time, Comtech will also purchase inventory owned by Kontron Canada Inc., which is currently manufacturing Memotec's products, for approximately \$2.5 million. Memotec's annual revenues approximate \$6.0 million.

These transactions are expected to be neutral to fiscal 2004 diluted earnings per share and slightly accretive in fiscal 2005. Memotec, based in St. Laurent, Quebec, Canada, is a provider of next generation solutions for telecommunications service providers, mobile network operators and corporate customers. Memotec develops a comprehensive range of multi-service

INDUSTRY NEWS

platforms capable of optimizing communication networks and will become part of the Comtech EF Data family of products in the telecommunications transmission segment. Manufacturing of Memotec's products will be transitioned to Comtech EF Data's facility in Tempe, Arizona. Memotec's product line of access devices and voice gateways provides consolidation of multi-service traffic, including data, voice and video, over a common packet-based network infrastructure such as Asynchronous Transfer Mode (ATM), Internet Protocol (IP) and Frame Relay. These products feature high quality voice, bandwidth optimization, adaptability and reliability.

"The addition of Memotec further enhances our ability to deliver network optimization and bandwidth efficiency solutions to our service provider and enterprise customers," said Fred Kornberg, President and Chief Executive Officer of Comtech Telecommunications Corp.

Russian Satellite Express AM11 Successfully Launched

The Russian Express AM11 satellite was successfully launched during the night of April 26-27 on a Proton launch vehicle from the

Baikonur space center in Kazakhstan. Alcatel Space, a subsidiary of Alcatel supplied the Express AM 11 satellite as well as the previously launched Express AM 22 to prime contractor NPO-PM. These satellites are operated by the Russian Satellite Communications Company (RSCC).



photo: RSCC

Fitted with 32 C-band transponders (including 6 onboard spares) and 6 Ku-band transponders (2 spares), along with a fixed antenna and two mobile spotbeam antennas, AM11 will provide television, telephone and data transmission services to Europe, Russia, the Middle East and Asia. The next Express AM satellites to be launched, AM2 and AM3, will also be fitted with Alcatel Space payloads. Payload integration has already started at the company's plant in Toulouse. Its Cannes facility will then carry out environment tests, leading up to the usual timely delivery.

Collaboration between France and Russia started a dozen years ago through industrial agreements between Alcatel and NPO-PM. Eutelsat and RSCC signed a contract last month for the lease of 12 Ku-band transponders on the AM22 satellite, in service at 53 degrees East. Alcatel Space and NPO-PM have already teamed up to work for Eutelsat, most notably in the construction of the Sesat satellite.

GlobalStar Emerges from Bankruptcy

Satellite phone operator Globalstar, completed its financial restructuring following the formal acquisition of its main business operations and assets by Thermo Capital Partners LLC. With this acquisition, Globalstar's main business has now effectively exited from the bankruptcy process.

Following its preliminary acquisition agreement in December 2003, Thermo now owns 81.25% of a newly-formed Globalstar company in exchange for an investment of \$43 million, with the remainder of the equity to be distributed to the creditors of the original Globalstar company — Globalstar, L.P. (GLP).



"Today is unquestionably a major turning point for Globalstar," said Jim Lynch, managing director of Thermo. "Despite its slow start, Globalstar — now in its fifth year of uninterrupted service— is by far the best positioned, with the best technology, to take advantage of the opportunities in the mobile satellite market, by increasing our attention on Globalstar's customers and their communication needs."

Thermo also announced several new business initiatives and strategies. These include: launching of eight spare satellites in late 2005, early 2006 and various new services and offerings.

In December 2003, Thermo entered into a preliminary agreement to acquire Globalstar, subject to a number of conditions, including regulatory approval and the successful completion of several settlement and technical agreements. Regulatory approval was granted in early March, and the U.S. Bankruptcy Court approved the last of the required agreements on March 31, allowing Thermo to formally conclude the acquisition.

The acquisition process centered around the establishment of a new Globalstar company which subsequently assumed ownership of essentially all of the assets and business operations formerly owned by GLP. Employees of GLP and its worldwide subsidiaries have also been transferred to the new company.

As a result, GLP no longer has any significant operations and is expected to be wound up in the weeks ahead. Globalstar service will continue to be marketed and sold under the Globalstar name, according to the company.

INDUSTRY NEWS

U.S. Broadband Market Reaches Critical Mass According to Report

With close to 27 million U.S. business and residential subscribers at the end of 2003, broadband is now clearly a mainstream service, reports In-Stat/MDR (<http://www.instat.com>). The high-tech market research firm projects that the mainstreaming of broadband will be huge, as the existence of a significant subscriber base opens up markets for other services that are looking to take advantage of the broadband connection, such as home entertainment/networking, Voice over IP (VoIP) and online gaming.

“This starts a cycle where growth in both broadband and applications feed the growth of each other,” said Daryl Schoolar, a senior analyst with In-Stat/MDR. “This applies equally to the business subscriber. Broadband growth should also improve service provider operations as well.” However, the one major challenge that faces the future provisioning of broadband will come from a less tech-savvy subscriber.

According to Schoolar, “As broadband moves into mass adoption, newer subscribers will be less experienced with computers and the Internet. They will expect all of the benefits of the Internet, but will have less patience for dealing with its technical issues. When their service goes down they are going to be less likely than early adopters to perform self-diagnosis, and more likely to just pick up the phone and call customer service. Also, their lower level of technical knowledge will make communicating with them more difficult. However, the opportunities will outweigh the challenges.”

In-Stat/MDR also found that:

- At the end of 2003, one in every five U.S. households subscribed to a broadband service.
- In the United States, cable modem continues to be the most common broadband access technology, with DSL remaining in second.
- Broadband over Power Line, after years of discussion, is finally moving out of the lab and into actual homes.
- Fiber-to-the-Home (FTTH) continues to be hindered by cost and regulatory concerns.
- Fixed Wireless Broadband (FWB) is now the third most common broadband access technology in the United States.

• While cable modem may be the broadband technology of choice in the United States, worldwide, DSL dominates due to lack of cable data service, and greater housing density outside of the United States.

• At the end of 2003, Comcast and Time Warner accounted for the majority of all cable modem subscribers. Overall, six cable operators had 91 percent of the U.S. cable modem market at end-of-year 2003.

• SBC and Verizon accounted for the majority of U.S. DSL subscribers at the end of 2003. Overall, five providers accounted for 94 percent of the U.S. DSL market.

For more information on the report, “Reaching Critical Mass: The US Broadband Market” go to <http://www.instat.com/catalog/pcatalogue.asp?id=37> or contact Rick Vogeley at +1-480-609-4533 or e-mail : rvogeley@reedbusiness.com **SM**

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NEW PRODUCTS

Integrasys Introduces Rugged Military Version of PDA for Mission Critical VSAT Communications

IntegraSys has introduced a new military version for its Satellite Terminal Line-up Tool based on Itronix rugged PDA model Q100, specifically built to operate under demanding environmental conditions in the battle field.

Military VSAT communications deployment and installation will benefit from this new rugged platform addition to the SatMotion Pocket System supported hardware, ensuring MIL-STD 810 F environmental specifications accomplishment.



The system simplifies and speeds up VSAT installation and commissioning providing a pocket tool to perform the line-up and cross polarization isolation adjustment on the uplinked carrier transmitted by the VSAT. The rugged PDA acts as a remote graphics terminal to display in real-time polar and cross-polar information obtained from a spectrum analyzer located at the Operations Control Center.

“ SatMotion Pocket uses either a wired or Wi-Fi connection to the VSAT to provide high speed remote access to the remote monitoring spectrum analyzer preventing the need to use extensive instrumentation equipment “, said Pilar Viedma, IntegraSys VP Business Development. Users are connected to the Operations Control Center via IP and access the monitoring spectrum analyzer’s trace information on the PDAscreen in real time. Several commercial spectrum analyzer models from the main instrument manufacturers are supported by the system.

In addition to SatMotion Pocket, the company provides a complete product line of distributed carrier monitoring software systems for the satellite market. Additional information can be obtained from <http://www.integrasys-sa.com>

Tachyon Delivers “IPTransport”

Tachyon Networks Incorporated announced the immediate availability of IPTransport, its next-generation indoor unit. IPTransport is a compact, portable, streamlined component of Tachyon’s customer premise equipment (CPE) designed for permanent remote and temporary work locations and terrestrial-independent disaster recovery back up.

Starting at prices 45 percent lower than those of Tachyon’s previous indoor unit, IPTransport continues to provide terrestrial-like performance backed by Tachyon’s T-Force, the Satellite Broadband Performance Optimizer. T-Force ensures fast, reliable packet delivery, maintains complete TCP/IP standards compliance, and provides accelerated IPVPN secure data transport and guaranteed Quality of Service (QoS).



IPTransport functions as an open-standards-compliant static router to the customer LAN, integrating easily with existing network infrastructures. And, it is delivered in a durable, streamlined 1RU (rack unit) case.

KVH Brings Low-profile TracVision A5 Satellite TV to RVs and Motor Coaches

Satellite TV for RVs and motor coaches no longer requires an antenna the height of an air conditioning unit thanks to the KVH TracVision A5, the world’s first and only low-profile satellite TV system for vehicles. Created by KVH Industries , the award-winning TracVision A5 uses KVH’s hybrid phased array antenna technology to create a 5-inch high in-motion satellite TV system that offers in-motion reception of DirecTV satellite TV programming.



NEW PRODUCTS

TracVision A5 offers outstanding in-motion tracking as well as a single cable installation, a rotary joint design that eliminates the need for interruptions while the cable unwraps, and a choice of either the standard roof rack mounting system or an optional rooftop mounting design.



“Thanks to our new mounting design, we are now beginning to offer the TracVision A5 to the RV and bus market and building on our already successful introduction

of the antenna to the automotive marketplace,” said Martin Kits van Heyningen, KVH’s president and chief executive officer. “This is a natural evolution for our satellite TV antenna technology and allows us to take a step toward our goal of applying our hybrid phased-array antenna across all of our satellite markets. While we remain focused on the automotive market for TracVision A5, we expect to see incremental TracVision A5 sales through the RV channel going forward.”

In conjunction with the introduction of the TracVision A5 to the RV marketplace, KVH announced that STAGPARKWAY, the nation’s leading distributor of parts and accessories to the recreational vehicle aftermarket, has started to market and sell the TracVision A5 through its national network of dealerships.

TracVision A5 uses KVH’s hybrid phased-array technology to create an antenna with a rugged, 5-inch high design and the ability to receive more than 300 channels of satellite TV and commercial-free music while the vehicle is in motion. TracVision A5 is also available with a roof rack mounting design to address the growing demand for passenger entertainment in SUVs, minivans, and other passenger vehicles. The TracVision A5 was named a Design and Engineering Honoree by the Consumer Electronics Association during the 2004 International Consumer Electronics Show as well as a finalist in Product Design and Development Magazine’s 2003 Engineering Awards. Approximately 800 12-volt retail and automotive audio specialty locations nationwide are currently selling, installing, and supporting the TracVision A5.

“The TracVision A5, with its low-profile design and

our new roof mount system, is ideal for motor coaches and RVs that are unable to use traditional domed antennas due to height restrictions as well as for consumers who prefer a sleek, streamlined look for their vehicle,” explained Ian Palmer, KVH’s vice president of satellite sales. “We are also now able to support an even broader array of vehicles and customer requirements, including conversion vehicle manufacturers and limousine fleets.”

Complete details on the TracVision A5 and KVH’s complete line of mobile satellite TV systems can be found at <http://www.tracvision.com>. **SM**

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EXECUTIVE MOVES

Ellen Hoff Appointed President of SSPI

Ellen Hoff has been appointed as the new President of the New York-based Society of Satellite Professionals International (SSPI).



Ellen Hoff Hoff, the President of W.L. Pritchard & Company, succeeds Brent Stranathan, CBS Vice President of Broadcast Distribution, to the position. At the same time, the Board announced that Mr. Stranathan will serve as Chairman of the non-profit group.

Since its founding 21 years ago, SSPI has been governed by a volunteer Board of Directors that is elected by its members. Board elections take place at the end of every calendar year. The recent election was the first time that SSPI members throughout the world were able to cast their vote through the Internet. A new slate of officers was approved by the Board at its March meeting, which was held during PBS Media's Satellite 2004 conference.

In addition to the appointments of Stranathan and Hoff, SSPI elected three new directors to their first terms. Blair Marshall, joins the Board from SES Americom in Princeton New Jersey where he is Manager, Enterprise Solutions. Don Flournoy, Director of the School of Telecommunications at Ohio University, also joins the Board for the first time. The third new director is Richard Wolf, Vice President, Telecom & Distribution, Broadcast Operations & Engineering for the ABC network.

Continuing their terms on the Board are David J. Bross, Associate Publisher, Editorial, PBI Media Ltd.); Robert

Patterson, President & CEO, The SPACECONNECTION, Inc.; Jon Romm, Vice President, Broadcast Services, Intelsat; Michael Schlesier, President, Media & Technology Consultants; Bruce D. Jacobs, Partner, ShawPittman (Treasurer); Tom Fabian (Vice President, Communications); Jack Morse, Partner, North Star Telecommunications (Vice President, Sponsorship); Carson Agnew, Managing Director, Satellite Ventures, Motient Corporation; Paul Bush, Vice President, Corporate Development, Telesat Canada; Susan Gordon, Director, Corporate Communications, Intelsat; David Hartshorn, Secretary General, Global VSAT Forum; and Marc C. Johansen, WDC Director, BSS, The Boeing Company.

Collins Joins Orbital Sciences Corporation as Senior Vice President

Brent Collins has joined Orbital Sciences Corporation as Senior Vice President and Deputy General Manager for Operations in the Launch Systems Group. In this position, Collins will help lead Orbital's efforts in missile defense-related target programs and space launch systems for the national security, civil and commercial markets.

Collins has 35 years of experience in space and missile systems during which he served as an active duty officer and in civil service positions for the U.S. Air Force and in increasingly responsible positions in the private sector.

Prior to joining Orbital, Mr. Collins worked for The Boeing Company as Chief Engineer for the Ground-Based Midcourse Defense (GMD) system interceptor program and as Chief Technologist for Boeing's Missile Defense Systems unit. Before joining Boeing, Mr. Collins spent 32 years in

service with the U.S. Air Force, attaining the active duty rank of Colonel and subsequently serving as a civilian member of the Senior Executive Service.

Collins received a B.S. degree in Engineering Mechanics from the U.S. Air Force Academy and a M.S. degree in Aeronautics and Astronautics from the Massachusetts Institute of Technology. He is also a graduate of the Defense Systems Management College.

New Skies Appoints New Director of Sales for South Asia

New Skies Satellites N.V. named Raju Pulugurtha as director of sales for South Asia. Pulugurtha manages the company's sales and marketing activities throughout India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, Maldives and Afghanistan.



Prior to joining New Skies, Pulugurtha worked at Intelsat in Washington D.C. for 10 years as regional director of sales, South Asia. During his tenure at Intelsat, he worked in India heading up the regional support center in Chennai.

Pulugurtha also worked at India's Department of Telecommunications for 10 years, where he was involved in setting up satellite earth stations in Mumbai and Chennai. He was also involved in the development of VSAT technology at the Center for Development of Telematics (C-DOT) in Bangalore. **SM**

FEATURES

SPOT Finds a Home

What this means for DirecTV

By Chris Forrester
SatMagazine Editor for
Europe, Middle East and Africa

The planned sale of PanAmSat (trading symbol SPOT) announced barely two months ago, will see private equity firm Kohlberg Kravis Roberts pay \$4.3bn (\$3.55bn + debt) to acquire the 80.5% stake owned by DirecTV Group. The purchase is expected to close later this year. The sale price (\$23.50 in cash per share) includes the assumption of approximately \$750m of debt. According to Joe Wright, PanAmSat president/CEO, having KKR as its new owner will give the satellite operator the opportunity to enhance its competitive position and significantly expand its capabilities. Wright didn't talk about the hit to PanAmSat of about \$450m-\$500m, net of taxes, that the sale will cost (and disclosed in PanAmSat's Form 8-K released to the SEC at the time of the agreed sale). Indeed, the sale prices represented a 5% discount to PanAmSat's earlier trading prices, which seems extraordinary good value to us for KKR, and especially since some analysts were talking of Murdoch seeking \$4bn clear in the bank for PanAmSat. PanAmSat earned \$100m last year.

Also left unsaid was Rupert Murdoch's enthusiasm to get his hands on real cash as quickly as possible, which no doubt helped given KKR's uncomplicated US-based bid. What now will be interesting is to see whether Eutelsat, New Skies or SES Global, the three 'foreign' satellite operators interested – at least - in some of PanAmSat's assets, will stay at the KKR

negotiating table once the deal closes. An alternative scenario is that PanAmSat's new owners will expand the business (see ABN-Amro's Patrick Fuhrmann comments below). Fuhrmann also states that SES Global and New Skies Satellite could now directly benefit with PanAmSat now owned by a "non-operator". However, although Paris strongly denies it, Eutelsat were reportedly pretty cosy with KKR ahead of the bid.

Rupert Murdoch has made no secret that he wants to strip out non-core activity from DirecTV, and by and large the sale was welcomed by analysts. The PanAmSat sale gives DirecTV "remarkable financial flexibility," said Doug Mitchelson, a senior analyst at Deutsche Bank. In a note, Mitchelson told clients that with this deal, DirecTV boosts its cash position to at least \$5.3 billion from \$2.3 billion, and reduces its debt to \$3.2 billion from \$4.7 billion. Mitchelson added that with its new infusion of cash, DirecTV could now add to its satellite fleet; expand interactive



services; "and, most disturbing to its [cable and satellite] competitors, more aggressively [acquire] new subscribers."

But I am far from certain that Mr Murdoch will invest in new satellites, quite the opposite in fact. I tend to support the view (already embraced by Charlie Ergen at Echostar) that DirecTV is not looking to become further encumbered with expensive satellites at \$250m a pop, but would prefer to use the cash to secure new subscribers, as well as tie existing subscribers into the sort of equipment deals that would trim subscriber churn to nearer UK levels (barely 10% per annum).

The acquisition by KKR could almost be described as the final irony for the Anselmo family. Rene Anselmo founded PanAmSat twenty years ago in 1984 at the ripe age of 58, and had the toughest of jobs raising finance. This month's 'Spot' newsletter from PAS tells the story: "Frustrated with his unsuccessful efforts to raise funds for his infant company and determined to go it alone, Anselmo told a reporter in 1987 that he'd rather not speak to another investor again, 'because they don't care about the purpose of what you are doing or the pleasure in it.'" Anselmo passed away in 1995 at age 69. His widow Mary holds about 7% of the stock, making her Number 306 on Forbes' Rich List for 2003.

FEATURES

DirecTV also sold its 9m shares in XM Satellite Radio for a reported \$230m in April. DirecTV group president and CEO Chase Carey spoke of the PanAmSat sale as “a significant step toward the completion of our plan to transform the former Hughes corporate structure to a single business, with a single focus on DirecTV. The KKR offer, with its all-cash structure, provided the best value to the PAS shareholders.” DirecTV is 34% owned by Fox Entertainment Group, in turn 82% owned by News Corp.

Carey has said that his prime target is to lift DirecTV’s current 12m subs base to 15m by the end of 2006 and to help tempt subscribers into the fold DirecTV intends adding more local-into-local stations, and extra HD choice. Wall Street rightly sees a great deal of upside in DirecTV’s future.

Besides the longer-term aim of 15m subs, Carey has his eye on raising Average Revenue Per User (ARPU) by at least 3.5% this year (to about \$61.15 a month). But there’s more. Having a war-chest of cash (from the sale of PanAmSat and then HNS) allows Carey to promote aggressively the merits of PVR ownership, and therefore second box-ownership, and boosting ARPU even higher. Indeed, Merrill Lynch, in a report on April 23, said they could see 5% extra ARPU this year. PVR ownership as well as boosting ARPU, as BSkyB has shown in the UK, also dramatically reduces churn.

Merrill Lynch suggest that DirecTV’s next moves will be:

- Adding extra ethnic programming (currently an EchoStar speciality)

- Consolidating DirecTV Latin America and Sky Latin America

- Putting more emphasis on winning PVR subscribers

As part of the KKR transaction, which is subject to regulatory approval and to approval by the PanAmSat shareholders, DirecTV has agreed to extend and enhance certain agreements between itself and PAS, at market rates, in order to assure future revenue flows to PanAmSat and continuity of services for its Hughes Network Systems and DirecTV Latin America subsidiaries. Hughes Network Systems is also up for sale with a reported \$1.5bn price tag.

William Kidd, senior analyst at Vintage Research, in a note issued April 20, said it was far from clear whether KKR would



Comtech EF Data, an industry-leading developer of SATCOM equipment, is now shipping the newest member of its bandwidth efficient satellite modem product line, the CDM-570L. The CDM-570L offers cost effective performance. Ideal for optimizing L-Band satellite communications, this modem features:

- ◆ Data Rates of 2.4 kbps to 5 Mbps
- ◆ Fast Acquisition Demodulation
- ◆ 2nd Generation Turbo Product Coding
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FEATURES

now tender for the remaining 19% of PAS stock, split between the founding Anselmo family (9%) and public holdings (10%). Kidd speculates that the KKR offering will be extended to these minority shareholders. Marc Nabi at Merrill Lynch took the more positive view, saying that the 19% would be mopped up by the offer. Patrick Fuhrmann, senior FSS analyst at ABN Amro, says he expects “KKR to take PanAmSat private, lever up the balance sheet for a special dividend in the near term, pay down that debt to investment grade level over the next several years with free cash flow, then do an IPO to exit the investment in the next three to five years.” In Fuhrmann’s opinion KKR will hold onto all of PanAmSat’s assets. “Further piecemeal sales may not take place in the future. Given the multiple paid, we are re-thinking our earlier position that other FSS operators may be able to buy individual PanAmSat satellites, in particular the North American satellites, post a private equity deal.”

His reasoning is straightforward: “To do an IPO in a couple of years, PanAmSat/ KKR would need the valuable North American satellites to attract the highest valuation multiple possible (at least the multiple they bought it for) and maximise its returns on the investment. This does not mean KKR will not entertain bids or that operators will not make them, in our view. However, if individual satellite sales are made to publicly traded operators, we will closely examine the deal terms given that KKR is buying PanAmSat near our fair value estimate and a likely IRR hurdle rate of at least 15%, implying that a buyer would be overpaying for individual satellites.”

Fuhrmann also reminds investors that this is fresh cash coming into the FSS sector,

and that it isn’t a consolidation. “Obviously, a sale to a private equity



PanAmSat President and CEO Joe Wright

investor does not help the sector rationalize capacity, which could help with overcapacity and weak pricing in some key markets. While it is a positive that smart investors see the value in the FSS sector and are willing to pay a fair multiple for assets, the sector would benefit more from consolidation among existing operators,” says Fuhrmann.

He also says that a KKR ownership has some benefits for its rivals, not least SES and New Skies. “Ownership by a non-operator jeopardizes PanAmSat’s growth and competitive position, which could benefit SES Global and New Skies. The obvious objective for a private equity investor is to maximize returns on its investment. Given that private equity investors typically plan on an exit within three to five years, we believe there is a risk that investments in growth initiatives at PanAmSat will be pared down or eliminated completely in favor of increased free cash flow, putting PanAmSat at a competitive disadvantage in the long run as its shareholder extracts as much cash as possible.”

But while there’s a potential upside for SES Global and New Skies (and Eutelsat) in this ABN-Amro scenario, there’s also a downside charge to pay: “Privatization of PanAmSat would eliminate the most highly traded operator, magnifying the need for SES Global and New Skies to address trading liquidity issues. While we believe near-term sector valuations will be negatively impacted by the finalization of this deal, the void a private PanAmSat will create could benefit future equity issues by SES Global, New Skies, or Eutelsat as investors seek more highly liquid pure plays,” says Fuhrmann.



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

Encryption Technology and Satellite Broadcasting

By Bo Ferm

Conditional access is a central component to satellite broadcasting, particularly as providers look to protect their own broadcast and data assets, as well as those of a broad variety of clients. The ability to ensure the integrity of program delivery is a key part of both making and maintaining strong business relationships with clients wishing to distribute valuable or sensitive content. Through a study of SES AMERICOM and its selection of Irdeto MCrypt, developed by Irdeto Access, as the solution for its content protection needs, it is possible to examine how encryption technologies can impact real-world satellite broadcasting business models.

Challenge

SES AMERICOM is recognized as one of the pioneers of global satellite communications services and currently is the largest supplier of satellite services in the United States. Established in 1973 with its first satellite circuit for the U.S. Department of Defense, the company now operates a fleet of 11 orbiting spacecraft that provide service throughout the Americas.

Among SES AMERICOM's customers are broadcasters, cable programmers, aeronautical and maritime communications integrators, Internet service providers, mobile communications networks, government agencies, educational institutions, carriers, and secure global data networks. To secure its own assets and the programming of its customers, SES AMERICOM

required encryption technologies that could be deployed easily at its Woodbine, Md.-based customer transmission center to protect programming and enterprise services aboard the company's AMC-4 satellite.

The company was looking to add value for a number of different broadcast-based business models, all of which require content protection to ensure that programming is delivered securely to

paying customers or locations. These operators include ethnic operators who bring in niche ethnic programs from overseas, sports and other broadcast programmers who require that their content is protected during transmission, and business TV users who want to ensure that their broadcasts are not viewed by unauthorized users.

Technical Demands

Key factors in SES AMERICOM's selection of a conditional access (CA) solution included the level of security provided by the system, its ease of use and reliance on standard software, its interoperability as a DVB system, and the number of integrated set-top boxes (STBs) supplied. Naturally, the company was also interested in cost-effective pricing with a guarantee of exceptional support from the CA provider.

An additional technical requirement of the CA product was that it be capable of operating in conjunction with the facility's existing networked infrastructure, including a direct interface with SES AMERICOM's Harmonic multiplexers. Harmonic's MPEG-2 encoding and advanced statistical multiplexing systems compress and combine content from different feeds into multiple



CASE STUDY

standard-definition and high-definition channels, which then may be encrypted and distributed by SES AMERICOM via satellite for transmission to the appropriate users.

Solution

After careful consideration of many systems on the market, SES AMERICOM selected Irdeto Access as its CA provider for the AMC-4 satellite. Irdeto Access specializes in designing, developing, and marketing end-to-end solutions to manage and protect content from unauthorized access in the television broadcast, mobile, and Internet environments. The company has provided encryption technology for almost 40 years and was first to launch an MPEG-2/DVB-compliant digital CA system.

Irdeto MCrypt CA is easy-to-use, has a high degree of stability, and is interoperable with standard DVB multiplexers/encoders. Engineered specifically for small- to medium-sized pay-media operators requiring digital encryption of content for cable, satellite, or terrestrial transmission, Irdeto MCrypt serves as a user-friendly CA system that will allow SES AMERICOM to grow according to its business needs.

“SES AMERICOM is the largest U.S. provider of satellite services today because our satellites, distribution platforms, and support have long offered the most reliability and quality in the business,” said Carl Capista, vice president of media and entertainment services for SES AMERICOM. “Irdeto Access’ encryption and conditional access solution Irdeto M-Crypt complements our commitment to customer security and our fleet-wide line-up of protection services, as it enables us to deliver secure transmission support to domestic and global customers served by AMC-4.”

Irdeto MCrypt offers the same high level of security as Irdeto Access’ large-scale CA solution, Irdeto πsys (PIsys), but operates on a Windows® 2000 platform for simplified, PC-based control and maintenance. A simple upgrade path will enable SES AMERICOM to transition to Irdeto PIsys, should continued growth require it. Because Irdeto Access uses open standards in its API interfaces, it is very easy for SES AMERICOM customers to integrate their third-party subscriber management systems with the CA system.

Result

With Irdeto MCrypt, SES AMERICOM’s Woodbine center is equipped with a state-of-the-art CA solution not only for DVB but also for IP video and data transmission. Since the Woodbine

uplink and communications facility is relied upon by broadcast and cable industry leaders, as well as providers and users of VSAT, business television, and broadband Internet services, the dual functionality is a crucial element in the company’s content protection model. Consequently, SES AMERICOM personnel can use one central console to manage convergent transmission networks for both MPEG/DVB and IP/DVB customers.

“The CA system is extremely important to any satellite service provider targeting customers who require security to generate revenue or to protect the important transmission of sensitive content/data,” added Capista.

“Many times the CA system is the key in those decision-making processes, and by working with Irdeto Access, we have implemented the very best system for our prospects and current customers, which in turn makes our offering aboard AMC-4 even more compelling,” concluded Capista. “Furthermore, in working with Irdeto Access, we have a partner that is aware of the ever-changing landscape in the satellite space and has dedicated the necessary resources to continue to address its customers’ needs.” **SM**

Bo Ferm is General Manager —The Americas of Irdeto Access. He joined Irdeto Access in August 2003. Previously, Bo was with Philips Electronics for 25 years, most recently with Digital Networks in the U.S. where he held management positions for the MPEG-2 compression systems activity, set-top box group, and content protection unit. Bo holds a B.Sc. in Mathematics and Computer Science. He can be reached at bferm@irdetoaccessusa.com



COUNTRY PROFILE

The Brazilian Satellite Market

By Bernardo Schneiderman

As part of the series of the Latin America region, we are going to cover during the next few months the major markets in the region. We are going to start with Brazil as the largest economy in Latin America, with the largest land area and population in the region as we can see from the map. In term of demographics, Brazil's land area is 8,511,965 sq. km (fifth largest country in the world after Russia, Canada, China and the USA) and a population of 182 million (sixth largest in the world). Brazil's GDP in 2003 was US\$ 455 Billion and GDP per capita is US\$ 2,574.00.

Brazil historically has been using satellite communication since Intelsat was organized in the 60's. The Brazilian government at that time had the main intention to cover the Amazon Region (in the northern part of the country) that covers almost 35% of the country and has been always very difficult to provide communication with any other means of terrestrial communications. The main reason is the large distance between cities and the lack of infrastructure of roads (the thick forests and jungles and low density population was the main hindrances). Embratel at the time the monopoly government-owned telcom provider handled satellite communications business in Brazil.

During early 80's Embratel created a Satellite Domestic Department when the Government decided to move ahead with the Brazilian Satellite Domestic Communication System. This resulted in the Star One satellite venture.

Star One is currently 80% owned by Embratel (MCI is the main shareholder but in transition to be controlled by Telmex pending approval of Brazilian Government as May 2, 2004) and the other 20% owned by SES Global. Star One is the main player of Satellite Communications in Brazil with 4 satellites in operation in C-Band and two more to be launched in Ku and Ka (See Table). After the Brazilian government liberalized the telecom market in 1999 two additional licenses was issued. One license went to Loral Skynet do Brasil for the Estrela do Sul Satellite in Ku-Band and another one for Hispasat's Hispamar with C & Ku-Band. This will give six domestic satellites to be operational in Brazil during 2004 increasing to eight in the near future.

With the open skies policy in Brazil any international operator can offer services in Brazil since 1999. Currently 10 International satellite operators have licenses to provide and lease capacity in Brazil with their local companies. The Brazilian market now has with more 25 satellites actively serving the country. The capacity



range from coverage of 100% of the Brazilian Territory for others that cover part of the Brazilian Territory in C and Ku-band. See detailed table with the satellite license to provide services in Brazil.

The market in Brazil since the first satellite was launched in 1983 is growing more than 20 % per year in average. But with all the satellite capacity made available since 2002 the satellite market in Brazil has currently an oversupply of capacity. The downturn in the Brazilian economy and in the demand for satellite capacity has severely impacted the Brazilian market for satellite services. But the market for the next 5 years is expected to experience the same rate of growth that has been characteristic of the last 20 years. The Brazilian government is planning during 2004 to launch a new program called SCD (Data Communication Services license in 10 region of Brazil) This project is going to reactivate

COUNTRY PROFILE

the satellite market. The main target of the Government is to provide with the SCD services for 2 millions access points in any city or village in Brazil (to provide broadband services for schools, libraries, border control and other government services in isolated areas). Additionally the government estimated that small and medium organizations in Brazil, which don't have Internet access reach the number of 7 million. The funding for these projects is coming in part from FUST (Universal services fund that has almost US\$ 0.5 billion to allocate to this project). Beside the government-funded projects, data services in Brazil has been growing fast during the last ten years.

Currently the main players that are providing satellite solutions in the market are Embratel, Star One, Telespazio, Impsat, Comsat International and Vicom. During the last year Hughes Network Services (HNS) implemented the first Hub to provide direct services and Gilat during 2003 with a government project became the second services provider for more than 3000 locations in Brazil. Because of the geography of Brazil the more isolated cities outside the urban areas and the north part of Brazil are the areas where satellites are most used and continues to growth.

Video is another market that satellite has a major penetration in Brazil. Currently six major TV networks and other regional broadcasters are using C-band for distribution of their video signals all over Brazil to almost 5000 sites. Another market that is growing in Brazil is the DTH with Direct TV and Sky as the main two players and another domestic

Satellite Carriers Authorized to Provide Services in Brazil

Satellite Carriers	Satellites	Band	Orbital Position	Status
Brazilian Carriers				
Hispamar	Amazonas	C & Ku	61.0 W	Planned Jun-2004
Loral Skynet do Brasil	Estrela do Sul	Ku	63.0 W	Operational
Star One	Brasilsat B1	C & X	63.0 W	Operational
	Brasilsat B2	C & X	70.0 W	Operational
	Brasilsat B3	C	84.0 W	Operational
	Brasilsat B4	C	92.0 W	Operational
	Star One C1	Ku & Ka	65.0 W	Planned 2005
	to be defined	Ku	70.0 W	NA
International Carriers				
Eutelsat	W1	Ku	10.0 E	Operational
	Atlantic Bird 1	Ku	12.5 W	Operational
	Atlantic Bird 2	Ku	8.0 W	Operational
	Atlantic Bird 3	C & Ku	5.0 W	Operational
Hispasat	Hispasat - 1C	Ku	30.0 W	Operational
	Hispasat - 1D	Ku	30.0 W	Operational
Intelsat	706	C & Ku	53.0 W	Operational
	805	C	55.5 W	Operational
	901	C	18.0 W	Operational
	801	C	31.5 W	Operational
	IS 903	C	34.5 W	Operational
	IS 903	C	24.5 W	Operational
	IS 907	C	27.5 W	Operational
Loral Skynet	Telstar 12	Ku	15.0 W	Operational
Nahuelsat	Nahuel 1	Ku	72.0 W	Operational
New Skies	NSS-806	C & Ku	40.5 W	Operational
	NSS-7	C & Ku	21.5 W	Operational
Panamsat	PAS 1- R	C & Ku	45.0 W	Operational
	PAS - 9	Ku	58.0 W	Operational
	Galaxy VIII	Ku	95.0 W	Operational
	PAS - 6 B	Ku	43.0 W	Operational
Satmex	Solidaridad 2	Ku	113.0 W	Operational
	Satmex V	C & Ku	116.8 W	Operational
SES Americom	AMC - 4	Ku	101.0 w	Operational
Telesat	Anik F1	Ku	107.3 W	Operational

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player Teccat. DTH market in Brazil is reaching almost 1.5 million subscribers.

The trends in Brazil with digital services (MPEG2 and MPEG4) in the video segment is another main area where the satellite market is looking for growth and the other is the regional programming that is part of the new government project.

Overall the market in Brazil for the next 3 years is in the growth mode in space segment use, Satellite equipment and services with major players positioning for the next cycle of projects during 2004-2006. **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 Publication Brazil Telematics Newsletter during 1995 – 2003. He has a MBA from University of San Francisco with Major in Telecom and International Marketing and BSEE from UFRJ in Brazil. He can be contacted at tbc-telematics@cox.net



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FEATURES

CNN: “Comfortable in our skin” CNNI Headline news “probable”



June 1 is CNN’s 24th Birthday. We look at how well the channel is standing up to competition

By Chris Forrester

CNN has its critics these days. Some point to the ratings battle with Fox News and suggest CNN has lost its way. Others look to the efforts of CNN internationally, where it once absolutely ruled the roost. Now there’s a hundred-and-one local competitors each taking a few ratings points away from the ‘inventor’ of 24 hour rolling news. Two major rivals stand out: BBC World and Al-Jazeera, where BBC World has taken the popular high ground in some of CNNI’s former core markets like India and Pakistan, and Al-Jazeera which increasingly dominates the Middle East’s news agenda.

In April we spoke at length to Chris Cramer, managing director of CNN International (CNNI), who gave us some robust answers to our questions. CNN itself is about to celebrate its 24th birthday (launched on June 1 1980) and the International version launched in September 1985.

We asked Cramer about CNNI being sidelined by ever-stronger competition. Some critics have suggested that CNN is being increasingly sidelined: “That’s absolute nonsense, and risible,” says Cramer. “Let’s tackle these suggestions factually, and unemotionally. We know there’s formidable competition out there, but in terms of CNNI we know we are still the foremost news provider, some 19 years after we were launched. We can look at any number of demonstrators of that.” Cramer then reeled off a list of

Our Key Questions to CNN:

- *Why CNN has given away their once impregnable position as the world’s Number One channel for breaking news?*
- *Why now supply globally the US domestic service or an international version of Headline News?*
- *What’s happened to the expected Arabic, French, Italian and other local versions of CNN?*

credible achievements (some listed alongside) and statistics. He argues that CNNI, as a pan-regional broadcaster does

CNN in its US market has made numerous changes to its broadcast line-up, mainly to respond to the competition. We asked Cramer whether there were any lessons that might spread to the International service: “The restructuring has come because of changes made at the very top of our organisation, with the entire international newsgathering effort now reporting to me. We judge success in a variety of ways. One is in the way we are looked at by our peers, and we have won more journalism awards, 31 last year, 13 this year to date, than any of our rivals. We are very profitable, have a very clear strategy and are comfortable in our own clothes. At 24 years-old we might be considered something of a mature business, but we are still changing to reflect new challenges and the times we live in.”

Cramer took issue with the suggestion that the US changes were in response to



not get rated in the conventional way, hence the importance of these surveys. “We have invested heavily in regional programming, and were the first to do so. It is tough out there, but still we remain Number One and it is no accident.”

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competition from one rival (Fox News). “They’re not.” he stressed. “People know exactly what CNN stands for, and now it finds itself in trench warfare in a number of parts of the world. But our decisions about journalism, and investments in the US networks or the international networks have nothing to do with Fox News.



CNN Managing Director Chris Cramer

Last year CNN [in the USA] delivered its highest-ever audience level in a decade, and reaches significantly more viewers than any other news network and that includes Fox, and we maintain a 20% lead over our two network competitors and what I am saying is that this does not paint a picture of an organisation which is in a dilemma. CNNI is a fully mature, independent network, which produces 95% of its own programming and other than specific shows like Larry King is running to a totally different agenda than Atlanta.”

One highly-vocal critic is CNN’s co-founder Reese Schonfeld, who has been highly critical of ‘modern’ CNN (his comments can be viewed at his www.meandted.com/bits.htm web-site) and in particular the battering CNN has suffered in the US ratings as measured by Nielsen. Cramer says: “Schonfeld was last here 22 years ago, and that’s a long time in broadcasting, and also a period when CNN had no competition. He is entitled to his views, as I am equally entitled to my views on the BBC, but the notion that my opinions should guide the BBC’s next moves, or that his [views] will determine our strategy is out of the ballpark.”

Nevertheless CNN, at least in the US, is changing at least some of its schedule.

Princell Hair was appointed (from Viacom) back in September 2003 to look freshly at its domestic programming. Hair is widely quoted as being determined to put his stamp on the network. In a memo sent last autumn to employees, he announced both structural and personnel alterations at CNN. His goal, he said, is “to increase the degree to which newsgathering and programming are fully integrated.”

Hair reportedly divided the then existing domestic bureaus into four regional bureaus with further alterations in CNN’s features department, which includes sports, health and entertainment programming.

Even Ted Turner, CNN’s other founder, and no longer connected with the channel, was quoted by the Hollywood Reporter last November 22 saying he was “completely appalled” at the recent revamp at CNN. In truth, these changes are, of course, by no means the first. Every network undergoes change on a near-perpetual basis, but - to date – CNN’s ratings have not responded positively (but see our panel on CNN’s ‘Ratings Mirage’).

Even Cramer seemed to share Turner’s anxiety about the state of the US model. Cramer rhetorically asked whether CNN’s US domestic formula would be exported overseas, and his answer was “Absolutely not. The audience is completely different in what they want

from television. It is a different world out there, and internationally we know our audience very well.”

This year, on top of the Iraq crisis, the world has another upcoming major news event: the US presidential elections this November, and the Democratic and Republican national conventions this summer. “We have already started extensive coverage of the event and its build-up,” said Cramer. “Our audience will get the most extensive coverage of the US elections to be available overseas. CNNI will dip into its Washington coverage, and will also add its own global analysis of developments as they happen.”

One major change of recent years has been CNN’s use of feature material, especially on Saturday and Sundays. The current crop includes shows like ‘Living Golf’, satire and comedy from celebrity host Jon Stewart late at night on Saturday and Sunday, lifestyle show ‘Design 360’ and ‘The Music Room’. Cramer says these shows are very popular, and what CNN has done is to cluster these



Ted Turner

entertainment shows at weekends. “We wouldn’t want them in prime-time during the week,” he adds. “I do not accept that we’ve elbowed news out of the schedule at weekends. Breaking news always takes precedent.”

Over the past few years CNNI has launched localised versions in Turkey (CNN:Turk), Spain (CNN+) and last year in Japan (CNNj). It also owns a majority share in Germany’s ‘ntv’ all-news channel. CNN has also developed web-sites serving Arabic, Japanese, German, Italian and Spanish audiences. Indeed, many observers expected that these web-services would transition into fully-

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The CNN (US) ratings mirage?

We have made much of CNN's pounding by Fox News in the US. But is this fair? For the year 2003, Nielsen's average daily ratings show Fox beating CNN 1.02m viewers to 665,000. However, a more recent report spoke of the "Cumulative" ratings measure, where CNN does much better. Nielsen measures this as the number of viewers who watch a channel for at least 6 minutes during a day. Unlike the average ratings number the media usually report, this number gives the same weight to the light viewer, who tunes in for a brief time, as it does to the heavy viewer.

The report asked how could CNN have more total viewers when Fox has such a commanding lead in average viewers? Conventional industry wisdom, it was reported, suggested that CNN viewers tune in briefly to catch up on news and headlines, while Fox viewers watch longer for the opinion and personality-driven programming. Because the smaller total number of Fox viewers are watching more hours, they show up in the ratings as a higher average number of viewers. CNN regularly claims a cumulative about 20% higher than Fox. For instance, a year ago in April 2003, during the height of the fighting in Iraq, CNN's cume was significantly higher than Fox's: 105m viewers tuned into CNN compared to 86m for Fox (according to Cablefax, 4/30/03). But in the same period, the ratings reported by most media outlets had Fox in the lead, with an average of 3.5m viewers to CNN's 2.2m.

fledged localised channels by now. Cramer says the Turkish service, especially, has been an editorial proposition that has found acceptance very quickly. "My enthusiasm for these localised versions is unabated. But there's an economic situation out there which has slowed down and perhaps dented that enthusiasm. We have quite

definite aspirations to do something in Arabic. Nothing immediate, but we have aspirations. And we look frequently at opportunities in France, Italy and India. The issues are simple: we have to have the right local partner, and there has to be an economic return in due course. But over all this there has to a serious editorial proposition in place just as have

in Turkey and Spain. We will do more, but circumstances have to be right."

Challenged that by not launching different linguistic versions CNN is not securing shelf space in a rapidly expanding multichannel universe, and rising numbers of competing channels, Cramer says CNN does not rule out doing something itself in certain regions, and he mentioned India and the Middle East as two examples. "The Arabic web-site is wholly CNN owned," he said. "But the reasons have to be operationally sound. My view is that in most markets you really do need a local partner who brings that certain extra dimension to the overall service." Cramer said they also have aspirations to create CNN-branded television news and business news in all of the above markets, plus China. "But there's not a lot on the horizon just yet. There are plenty of once-sound business plans out there that have been economically dented. But this doesn't mean they are not discussed. The overall strategy remains: that is getting into a country, in its local language, and not instead of CNNI but as well as CNNI."

Cramer said there was a temptation a few years ago for most news channels to

The CNNI ratings mirage?

CNNI does not submit itself for country-specific ratings comparison. It says as a pan-regional broadcaster, local ratings are pretty meaningless and prefers to be measured by international surveys. These are a few of the most recent studies:

Global capital Markets Survey 2003 (May-Sept 2003). On a monthly basis, in Europe CNN reaches 72% of financial managers and senior executives in banks and financial institutions (Bloomberg 49%, BBC World 50%, CNBC 45%).

European Opinion Leader Survey 2003 (March-July 2003). CNN records a daily reach of 30.1% (BBC World 20.3%, Euronews 18%, CNBC 4.2%, Bloomberg 3.9%).

Europe 2003 Survey (October 2002-March 2003). CNN records the top daily (10.3%), weekly (29.9%) and monthly (45.1%) reach, comparing favourably with next strongest performer Eurosport (9.5%, 27.4%, and 39.3%).

EMS 2003 (Jan-Dec 2002) CNN records a weekly reach of 17% (Euronews 15%, BBC World 7.8%, CNBC 5.6%) and a daily reach of 4.3% (Euronews 3.9%, BBC World 1.6%, CNBC 1.2%).

Pan Asian Cross Media Survey – PAX 2003 (July 2002-June 2003). CNN is "lead channel for the top management group and business decision makers, attracting 39% more top management in Asia than the next most targeted channel".

Data: CNN Int.

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launch business news spin-offs. “We resisted that at CNNI. It was better to run business news within our existing channel. This formula works very well financially for us. However, I wouldn’t rule out running a CNNI/Headline News channel in addition to CNNI. To be specific, is there an option that would see us launch a Headline News channel on some International platforms? I wouldn’t rule it out. Five or six years from now you’ll still see CNNI as the mother-ship, but you’ll also see underneath that the

extension of regionalisation that we now have, but more of them. Five or six years from now, I’d say a dozen versions made up of more localised services, plus business and probably a Headline News service in some markets. You’ll also see English and vernacular web-sites, and broadband figuring some where.”

“There’s no alchemy or special science needed to gather news. Anyone can do it,” admits Cramer. “Grass roots news-gathering is happening everywhere.

Indeed, the first time we usually hear of an earthquake is usually an e-mail from someone locally. It isn’t Reuters or AP.

CNN is investing in local newsgathering, using internet-based FTP to transfer good-quality images from around the globe.” **SM**



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VIEWPOINT

Updating the Ground Communications Market

By Bruce Elbert
President, Application Strategy Inc.

As the facilitator of broadband and mobile applications, modern ground equipment has moved to center stage in the satellite industry. Innovations like broadband Ka band VSATs, highly-transportable Ku band terminals, improved error-correcting modems and compression systems, and advanced multiple-access processors are tools for development of networks that compete with their terrestrial counterparts. As we discussed in our last article in this publication, satellites are moving toward greater sophistication as well. Technology developers recognize the value of the Internet, which has become the central theme in many segments of our industry. Looking the other way, Microsoft, Cisco and other leaders in the Internet domain now consider satellite transmission a valued part.

Looking commercially, market segments for ground equipment fall into the following broad categories: (a) Service providers, (b) Consumers, (c) Government agencies, and (d) Businesses. These represent unique marketing and sales challenges. The Consumer equipment segment is very crowded at this juncture because of large volumes of production from sales in the DTH market. Products for Satellite Digital Audio Radio Service are likewise in excess of millions. Getting into this market requires a thorough understanding of consumer tastes and the ability to sell the product for next to nothing.

On the other hand, consumer VSAT sales have not been impressive. Perhaps when

WildBlue and Telesat Anik F2 hit the market late this year or early next, we will see more high-performance but low cost transmit/receive terminals. That leaves the Business and Government sectors to be exploited by new kinds of ground equipment and solutions.

Greater adoption of satellite ground equipment and network technology in these potentially lucrative sectors will result from solutions that deliver value for money and meet total cost of ownership targets. Government and business buyers, typically telecommunications and IT managers, understand full well the

“I take equipment suppliers to task to provide government and business buyers with more complete solutions...”

economics of conventional optical fiber and Internet-based services. The good news is that satellite ground solutions can excel in areas that exploit the point-to-multipoint feature and broad coverage possibilities. Selling these demands understanding of the who equation of cost/benefit for government and business.

I take equipment suppliers to task to provide government and business buyers with more complete solutions. Ground equipment hardware and, along with it, software, cannot be viewed simply in terms of components and piece parts. Rather, sellers of equipment need to



Photo: Andrew Corp.

address the following aspects of their offerings:

1. Architecture. Ground equipment is the business end of the application, which in turn is depends on an appropriate network architecture. Starting with the fundamentals of either a star or mesh topology, the solution set needs to consider the full range of application needs. These include providing the necessary data rate or bandwidth to user locations spread across a region of variable dimension. Whether in reach of a single GEO satellite or requiring multiple satellites, the architecture must provide connectivity on an effective and consistent basis. One key issue is what standard or standards will be followed. Currently, the Internet Protocol (IP) is dominant, but close behind is Asynchronous Transfer Mode and MPEG. While important, good architecture is necessary but not sufficient for success in business or government sectors. Other factors include support for the business (e.g., operations support systems and business support systems), integration with land-based networks, and concurrence with user ability and expectations.

VIEWPOINT

2. Radio Frequency Performance. The era of the Big Ugly Dish (BUD) is behind us and users don't want big antennas hanging on their buildings, vehicles and other platforms. Small antenna dimensions bring with them a demand for adequate satellite power – the network developer must under the basic principle of accurate link budgets. Another factor that comes into play is the required uplink transmit-power from the SSPA.

3. Reliability Enhancement. Ground equipment used in satellite communications is usually of high quality and reliability. This is demanded by the fact that service people are often few and far between, making the end user a bit more self sufficient. Often overlooked is the quality of commercial power that the equipment depends on to close the link and interface with the application. Inexpensive commercial UPS often don't meet the grade for survivability with difficult climatic and power transient conditions. Ground equipment at remote sites is often single-string, meaning there is not backup. Of course, we drive cars thousands of kilometers without failures – why shouldn't we expect the same reliability of our user terminals? Often the solution is to provide some kind of simple user diagnostic coupled with qualified technical assistance from a human being at the help desk.

4. Mobility. The War on Terror has changed the world with regard to telecommunications in general and the use of satellites in particular. Results so far point to the need to deploy wideband links to many locations spread across a wide footprint. Once landing on the ground, operators of satellite links must be up and running in less than one hour – this is a whole new ballgame in our industry. American and European equipment suppliers have designed transportable and mobile terminal systems

that address some of this need. But, the bar keeps moving higher as the War changes form. Government and likely business users of satellite links what speed and simplicity. No longer can we depend on having a qualified engineer or technician to set up and maintain ground equipment. By making the equipment light and easy to use, sellers of ground equipment give government and business users more of what they need in this ever-changing post-9/11 environment.

We have covered the new age of satellite ground equipment in terms of four markets and four aspects. Suppliers of equipment that find commonality across these will move ahead of their competition as they offer better solutions to government and business customers.

SM



Photo: Gilat

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MARKET INTELLIGENCE



Connecting Africa...Via Satellite

By Helen Jameson
Program Coordinator, GVF

Access to bandwidth for satellite-based Internet access in Africa has never been more affordable or widespread. So why is full advantage not being taken of satellite communications in the African region? The debate continues to gain momentum, and nowhere is it more evident than in Kenya where TESPOK, an association representing local Internet interests, is lobbying for immediate liberalisation of the country's VSAT sector.

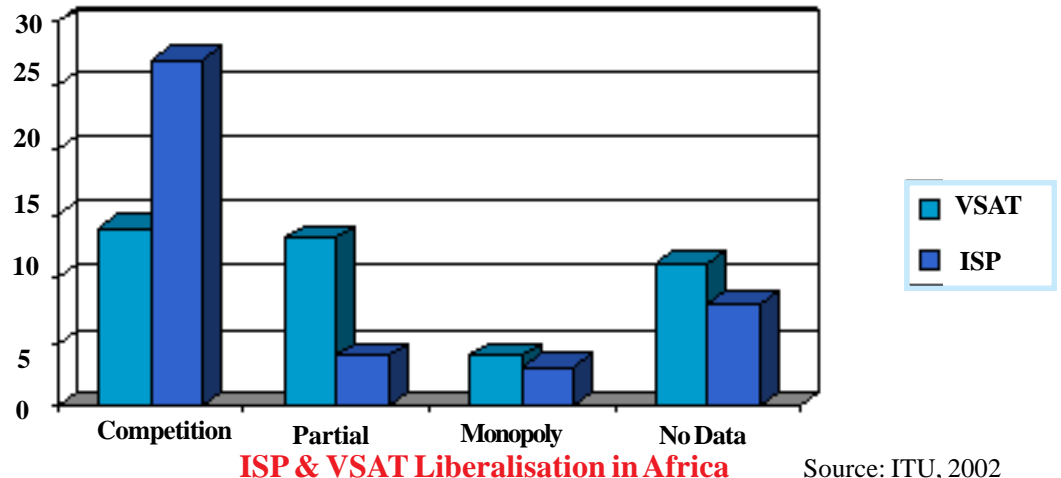
In Kenya, TEPOK drew public attention to the Administration's intention to begin issuing a limited number of licenses on a competitive-tendering basis for two "protected segments": International Internet/data gateways and VSAT hubs.

Among the arguments made by TESPOK for full liberalisation of Kenya's VSAT sector are the following:

Cost: Competitive tendering inevitably leads to high prices, which are passed on to the consumer in the form of higher prices. This is not just a cost to the consumer, but also a cost to the economy. TESPOK has calculated that the direct cost to Kenya's economy over the next five years, if this policy is implemented, will be in excess of KSh 16 billion.

Precedent: In Tanzania, anyone can apply to install a VSAT and be granted a license after paying a fee of US\$5,000 per annum. The same applies in Uganda except that the fee there is only \$4,000 per annum. In its open letter, TESPOK asked: "Why does the government claim with one hand that they wish to stimulate economic recovery and with the other introduce policies that will make Kenya regionally uncompetitive?"

Technical: It is wrong to have a "middle man between the Kenyan ISP and the rest of the world." Tespok argues that Internet exchange points are the building blocks of the global Internet. There are many exchanges in the world, but ISPs' analysis of Kenyan traffic patterns confirms that the most important ones for Kenya are the Internet exchanges in London and New York. Asks TESPOK: "Why should a Kenyan ISP be forced by regulation to use a third party



ISP & VSAT Liberalisation in Africa

Source: ITU, 2002

intermediary – these so-called 'Internet Backbone Licensees' – between their Kenyan ISP network and these Exchanges around the world? It goes without saying that the route is longer and the costs will be higher."

The Kenyan Internet industry isn't alone. A growing number of interests – both in the public and private sectors – have begun advocating regulatory and policy reforms that facilitate expanded access to satellite communications throughout the Continent. This was a key finding of a newly-released report entitled "Catalysing Access to ICTs in Africa...Via Satellite". The report, which was written by a drafting group led by the GVF, summarises the findings of a recent survey of the regulatory conditions applied to satellite services in Africa.

Funded by the International Development Research Centre (IDRC), the report complements work being carried out by "CATIA" (Catalysing Access to ICTs in Africa), a three-year project being supported by the Department for International Development (DFID) and managed by Atos KPMG Consulting from a programme office in Johannesburg. One of its primary objectives is to facilitate expanded access to low-cost satellite Internet across Africa.

The report demonstrates that new satellite-based Internet delivery systems now make it possible to obtain bandwidth ten times more affordably than was formerly available to almost anywhere in Africa. The "missing link" is the implementation of more effective

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regulatory and policy approaches to encourage service provision. In this regard, the report demonstrates what is (and what isn't) effective in African satellite regulation, with a particular focus on successful approaches.

Included among the progressive satellite-regulatory reforms identified in the Report are:

- Liberalising the satellite sector;
- Implementing blanket-licensing for low-cost VSAT terminals;
- Minimising satellite regulatory fees;
- Recognising type approvals issued by other Administrations and certification bodies;
- Confirming plans to enhance transparency of satellite regulatory requirements and processes.

To help promote these practises, local inter-governmental groups have begun to support the CATIA Project. Regional organisations such as the East African Regulatory Postal and Telecommunications Organisation (EARPTO), the Telecommunications Regulators Association of Southern Africa (TRASA) and the West Africa Telecommunications Regulators Association (WATRA) have begun playing an instrumental role in promoting regulatory harmonisation.

For example, TRASA was the first inter-governmental regulatory group to confirm that it will drive the programme forward in its region. A wide range of activities are being co-ordinated such as holding workshops, developing a regional satellite policy and regulatory guideline, providing an online forum, and establishing a One Stop Shop for online submission of VSAT license applications.

African Administrations' ability to transform the regulatory landscape has already been proven in the Internet sector. This is reflected in the chart below, which shows that, as of 2002, liberalisation of ISPs was already in an advanced state. However, the extent to which the ISP sector had been fully liberalised was significantly greater than for VSAT-based services, suggesting considerable opportunities for further progress in African liberalisation.

Defining the next steps to be taken in this regard will be on the agenda at ITU Africa, where the report is to be officially unveiled and where a multi-stakeholder workshop is scheduled to be held on 7 May to continue developing the programme. Parties interested in participating are invited to contact: helen.jameson@gvf.org



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