The Changing Business of Teleports

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SatMagazine Managing Editor Virgil Labrador examines the changes in the teleport side of the satellite business.

FEATURE

By Chris Forrester
Paris-based but highly international broadcast services company GlobeCast has had some sound successes during the past few years, notably its World TV product.

REGIONAL UPDATE

By Bernardo Schneiderman
A large number of Latin American countries are presently developing public tenders or are already implementing projects to extend Internet access to a wider part of their population outside the major metropolitan cities.

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By Bruce Elbert
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The Changing Business of Teleports

In this issue we focus on the changing business of teleports. Teleports are a backbone of the satellite industry and it has changed both in the variety of services it offers and the major players now involved in this segment of the business.

The business of teleports will be a major subject in this month's ISCe Conference and Expo to be held from May 31-June 2 in Long Beach, California. Our regular columnist, Bruce Elbert will be moderating a half-day workshop organized by the World Teleport Association in the afternoon of May 31.

I will also be chairing a panel on "Evolving Teleport Solutions for the Enterprise" on June 2 from 1:45-3:00 pm. The panel will feature speakers Guy White, of Telenor Satellite Services, Brent Bruun of SES Americom, David Justin of GlobeCast and Doug Triblehorn of ZapMedia. For a complete program of ISCe go to pages 5-15 of this issue.

If you haven't registered yet for ISCe, I highly recommend that you do. The conference and exhibition will cover many of the burning issues of the industry and provides a unique networking opportunity. The organizers have made it a point to include a lot of special networking events around the conference and exhibition. The Satellite Industry Association is sponsoring a three-hour Harbor Cruise Welcome Reception and Inmarsat is sponsoring the ISCe Awards Dinner on board the HMS Queen Mary, anchored in Long Beach Harbor, among others.

Mark your calendars and see you in Long Beach!

Virgil Labrador

CALENDAR OF EVENTS

MAY 2005

May 11-12, Olympia, London, UK
Global VSAT Installation Training
David Hartshorn
Tel: +44 1727 884739
Fax: +44 1727 884839
E-mail: david.hartshorn@gvf.org

Web: mediacast.net/gvf or

www.gvf.org/index.cfm

May 31-June 2, Long Beach, CA, U.S.A.
ISCe Conference and Expo
Gina Lerma
Tel: +1-310-410-9191 / Fax: 1-310-410-9396
E-mail: glerma@hfusa.comWebsite: www.isce.com

May 31-June 3, Almaty, Kazakhstan
KITEL 2005- 12th Kazakhstan and Central Asian
International Telecoms & Computer Technologies Exhibition-
1st Kazakhstan and Central Asian Satellite, Broadband,
Wireless and Broadcasting Conference and Showcase
Elena Peredel'skaia
Tel: + 44 (0)20 7596 5205/ 5000
Fax: + 44 (0)20 7596 5208
Email: Elena.Peredelskaia@ite-exhibitions.com
Websites: www.ite-exhibitions.com/ www.caspianworld.com/

JUNE 2005

June 6-7, Montreal, Canada
AIB Global Media Business Conference
Tel: +44-20-8297-3993
Website: www.aib.org.uk

June 14-17, Singapore
CommunicAsia 2005
Victor Wong
Tel: (65) 6233 8662 / Fax: (65) 6835 3029
Email: vw@sesallworld.com / Web: www.communicasia.com

June 14-17, Singapore
Broadcast Asia 2005
Jackson Yeoh
Tel: (65) 6233 8633 / Fax: (65) 6835 3029
Email: jy@sesallworld.com / Web: www.broadcast-asia.com

June 23-25, Agricenter International Memphis, TN
Satellite Expo 2005
Lee Gilliland1
Tel: -877-SAT-SHOW
E-mail: info@satelliteexpo2005.com

SEPTEMBER 2005

September 5-9, Paris, France
World Satellite Business Week 2005
Linda Zaiche
Tel: +33 1 49 23 75 17 / Fax: +33 1 48 05 54 39
E-mail: zaiche@euroconsult-ec.com
Web: www.euroconsult-ec.com

September 8-12, Amsterdam, The Netherlands
IBC 2005
Tel: +44 (0)20 7831 6909
Fax: +44 (0)20 7242 8907 / Email: registration@ibc.org
Web: http://www.ibc.org/

September 21-22
Sheraton Delfina, Santa Monica, California, USA
2005 PTC Mid-Year Seminar
Tel: +1 808 941 3789
Email: my05@ptc.org
Web: www.my2005.org

September 29 - October 1, Vicenza, Italy
SAT EXPO 2005
Rosalia D'Aprano
Tel: +39 0444 543133 / Email: rdaprano@satexpo.it
Web: http://www.satexpo.it/en

FEATURED EVENT

ISCe Conference and Expo Ready to Launch!

Tuesday, May 31, 2005

Workshops/Training Sessions

9:00 a.m. – 10:00 a.m.
Corporate Growth & Exit Strategy Workshop

This presentation is designed for decision makers in the Aerospace, Space and Defense sectors. The presentation will address the following topics: 1) Understanding the Corporate Life Cycle and analyzing your company's position along the curve, to determine optimal timing for action taking; 2) Exploring the steps & resources needed for an Organic Growth, including new products and markets, strategic alliances with vendors, customers or competitors; and the injection of capital; and 3) Designing an exit Strategy - selling all or part of the Company. This includes the introduction of Strategic or Financial buyers, Management Buyout and ESOP.

Instructor: **Ysrael Kanot,** *President - Mergers & Business Acquisitions*

10:00 a.m. – 5:00 p.m.
GVF "Satellite Business" Workshop *Business Aspects of VSAT-oriented Businesses:*

The workshop will cover business-related topics including regulatory framework, types of VSAT-based business, critical success factors, core competencies, individual countries, supply chain, organizing your business, maintaining it, and growing it as the communications industry technologies rapidly evolve and converge, opening up new opportunities for you and making your business successful. Additionally, we will look at the structure of the communications industry and where VSAT fits in various communications industries including broadcast, Internet/IP including narrow band (dial-up, VHF, radio) and broadband, DSL vs. OC3, cable, VSAT scalability/flexibility, fixed line telephony, cellular, sat phone, and hybrid (e.g. RBGAN).

Instructor: **Rob Longhurst,** *Independent Consultant – GVF*

1:30 p.m. – 5:00 p.m.
World Teleport Association Workshop
Creating Value Through End-to-End SATCOM Solutions

The WTA workshop will examine the continued evolution of the satellite communications business into an array of tightly focused niches, to which competitors seek to provide high value, end-to-end solutions. In this market, the teleport has become the linchpin of the transaction, because it is at teleports that the value is added to the basic, bent-pipe satellite circuit. The past year has offered a strong endorsement of this view, with the world's largest satellite carriers investing in teleport assets in order to maintain their competitive position. Once, teleport operators would have viewed these markets as sources of basic uplinking service. Today, they understand the need to control as many elements of service delivery as possible in order to create the added value of an end-to-end solution. The workshop will focus on presenting specific examples of many such solutions.

1:30 p.m. - 1:45 p.m.	**Moderator's Introduction**

Bruce Elbert, *Regional Chairman, World Teleport Association*

1:45 p.m. - 2:00 p.m.	**"The Teleport Business Model for Today's Markets"**
2:00 p.m. - 3:15 p.m.	**"Making End-to-End Solutions Work for Customers"**
3:15 p.m. - 3:30 p.m.	**Break**
3:30 p.m. - 4:45 p.m.	**"Success in Vertical Markets: Finding, Growing and Defending Market Niches"**
4:45 p.m. - 5:00 p.m.	**Closing Remarks**

FEATURED EVENT

Space/Enterprise Forum

Sponsored by

10:30 a.m. – 12:00 p.m. • Session TU1:
Next Generation Space Communications
Technologies: NASA's Space Communications Project

The SC projects' primary focus is the development of innovative products, which provide end-to-end information delivery solutions to meet NASA Enterprise needs for enhancing the communication infrastructure and to enable next generation communication architectures beyond 2010. To achieve these solutions requires the integration of advanced communications, networks, and other information technologies. The integration of these technologies, along with high data rates, will enable a tele-presence for near Earth and deep space scientific human and robotic exploration missions.

Moderator: **Peter Hadinger**, *Director of Communications Initiatives – Northrop Grumman Space Technology*

Panelists: **John Rush**, *Navigation and Communication Systems Architecture Manager – NASA Office of Space Flight*
Paul Mellon, *Senior Capture Manager, Project Constellation Programs – L-3 Communications Systems East*
Scott Rayder, *Chief of Staff – NOAA*
Phil Liebrecht, *Prog. Mgr., Space Communications Prog. Office – NASA*

Sponsored by:

12:00 p.m. – 1:30 p.m.
ISCe Welcome Luncheon

Welcome: **Honorable Andrea Seastrand,**
Executive Director – California Space Authority

1:30 p.m. – 3:00 p.m. • Session TU3:
NASA Space Exploration Vision: Status and Opportunities

The new NASA Vision for Space Exploration, announced by President George Bush in January of 2004, described a building block strategy of human and robotic missions beginning with the return to flight of the Space Shuttle, completion of the ISS, return to the moon by 2020 and finally, exploration of Mars and beyond. The Office of Exploration Systems was created to set priorities and direct the identification, development and validation of exploration systems and related technologies.

Speaker: **Capt. Michael Hecker,** *Deputy Development Programs– NASA*

Dr. Neville Marvwell, *Mgr., Advanced Concepts & Technology Innovation – NASA JPL*

3:30 p.m. – 5:00 p.m. • Session TU5:
Key NASA Technology Opportunities:
Autonomy and IT, Space Communications

A panel of program managers and NASA technology partnership professionals will describe key technology opportunities in the areas of autonomy and information technology, as well as space communications. The panel will highlight technology needs and an overview of how NASA develops and manages its technology partnerships.

Speakers: **Ken Dozier,** *Executive Director – NASA Far West RTTC*
Ben Smith, *Manager, Autonomous Systems Program – NASA JPL*
Stephen Lichten, *Dpty Mgr., Telecommunications Div. – NASA JPL*
Marty Zeller, *Mgr., Knowledge Resources – NASA Far West RTTC*

Special Presentations

10:30 a.m. – 12:00 p.m. • Session TU2:
Broadband Advancements: What's On the Horizon?

Advanced technologies and solutions have created many new opportunities for both consumers and government broadband users. This seminar will address new developments and challenges in broadband via satellite, including enhancements in wireless systems. Additionally, this session will discuss the competitive issues with satellite and terrestrial systems – as well as hybrid network solutions for the "last mile" problem.

Moderator: **Gregg Daffner**, *President – G3 Global Communications*
Panelists: **Max Engle,** *Satellite Industry Analyst – Frost & Sullivan*
Brian Skimmons, *Vice President and GM, Global IP/SkyReach and CIO - Loral Skynet*
David Myers, *Vice President, Marketing – CapRock Communications*

FEATURED EVENT

1:30 p.m. – 3:00 p.m. • Session TU4:
Satellite Investments: A Paradigm Shift!

This unique panel will provide a progress report on the recent acquisitions of several satellite operators by private investment companies. How has the private investment industry affected the satellite industry? Are operators having to modify their strategic business plans to achieve cost efficiencies? Does this new paradigm affect the satellite manufacturers' business strategies and increase their risks? Come hear some of the key financial and industry players discuss this new wave of interest and the affect it has had (and will have) on the industry!

Moderator: **Jimmy Schaeffler**, *Chairman, CSO & Founder – The Carmel Group*
Speakers: **Armand Musey**, *Partner - Near Earth LLC*
Richard Wilson, *IT/Telecom Sector – Apax Partners (invited)*
Satish Tamboli, *Managing Partner – Emerging Markets Telemedia*

3:00 p.m. – 3:30 p.m.
Refreshment Break   *Sponsored by* **CapRock** COMMUNICATIONS

Product Demonstration Program

3:30 p.m. – 5:00 p.m.
Media, press, industry analysts and conference attendees are invited to attend the ISCe Product Demonstration Program. Leading companies will provide live ten minute "snapshot" presentations of their new and innovative product or service. Product demonstrations will provide participants an excellent opportunity to announce and demonstrate their new and unique product or service to a targeted audience of key decision-makers and buyers. Demonstrating companies include:

- Agile Communication Systems   - Inmarsat

- GlobeCast   - Noahtek Engineering Co.

- Globalstar / Essential Viewing   - SES ASTRA TechCom
  Systems, Ltd.

5:00 p.m. – 6:00 p.m.
ISCe Welcome and Raffle
(in exhibit center)

6:15 p.m. – 8:45 p.m.
Harbor Cruise Welcome Reception
(from Port of Long Beach)

Join your colleagues and friends for an evening of food, beverages and fun on the "Endless Dreams" chartered yacht, which will embark on a three-hour sunset cruise from the Long Beach Harbor. Relax with friends, enjoy live music and win prizes (no gambling) at the craps and blackjack tables!

Sponsored by: **SIA** SATELLITE INDUSTRY ASSOCIATION

Wednesday, June 1, 2005

7:00 a.m. – 8:15 a.m.   *Sponsored by:*
VIP and Speakers' Breakfast   *LOCKHEED MARTIN*
(By invitation Only)

8:30 a.m. – 8:35 a.m.
Welcome and Opening Remarks
Speaker: **Joachim Schafer**, *President – Hannover Fairs USA*

8:35 a.m. – 8:45 a.m.
SIA "State of the Industry" Report
Presenter: **David Cavossa,** *Exec. Dir. – Satellite Industry Association*

Plenary Session

8:45 a.m. – 10:00 a.m.
Transforming the DoD Information, Security and Communications Infrastructure

Prior to 9-11, the DoD was well along in transforming its information, security and communications infrastructure to support more expeditionary warfare, precision strike and robust ISR. How has the war in Iraq and Afghanistan and the general war on terrorism (GWOT) altered those trends? How well is the industry postured to respond to this dramatically changing threat and battlespace? Can the elongated DoD budget and acquisition cycles keep pace? Does the combination of defense budget pressures and the rapidly changing threat signal the need for greater reliance on the inherent flexibility of the commercial provider? Come hear this panel of expert senior leaders discuss these and many more issues!

Moderator: **VADM David Frost USN (Ret.)**, *Former Deputy – USCINCSPACE*

FEATURED EVENT

Panelists: **Lt. Gen. Robert Shea**, *Director, C4 Systems, JCS (J-6) – U.S. Marine Corps*
Maj. Gen. Dennis Moran, *Director, Information Ops, Space and Networks – U.S. Army*
Maj. Gen. James Armor, *Director, National Security Space Office*

10:00 a.m. – 10:30 a.m.
Coffee Break

Sponsored by:
★▬ **Stellar** Solutions

Military/Government Track
Track sponsored by:

AMERICOM GOVERNMENT SERVICES   **inmarsat** Total Communications Network   **GlobeCast**

10:30 a.m. – 12:00 p.m. • Session WE1:
The Enabling Factor of Network-Centric Warfare (NCW)

Network-Centric Warfare is characterized by the ability of geographically dispersed forces to attain a high level of shared battle awareness that is exploited to achieve strategic, operational and tactical objectives in accordance with the commander's intent. The DoD is developing a set of programs that will be the technology enabler of NCW. Putting this technology in place requires development, integration and operational deployment of a set of infrastructure programs that will provide satellite and terrestrial communications transport, IP-based networking, information assurance, and enterprise services for the commander and warfighter. This panel will provide an overview of these infrastructure programs, the acquisition and development approaches, and the technical and programmatic challenges that are being tackled.

Moderator: **Sam Porgess**, *Vice President – Booz Allen Hamilton*
Panelists: **Capt. Francis "Luke" Lukenbill**, *Director, Acquisition and Engineering Group, Comm. Systems, Acquisition and Operations – NRO*
Brig. Gen. (S) Ellen Pawlikowski, *Program Director, MILSATCOM JPO-Space & Missile Systems Center (SMC)*
Mike Kern, *Sr. System Engineer, GIG – OSD*
John Landon, *Asst. Secretary of Defense, C3ISR and IT Acquisition Programs (acting) – OASD/NII*

1:30 p.m. – 2:45 p.m. • Session WE2:
Future MILSATCOM Systems: WGS, AEHF, MUOS & TSAT
The ability to transmit protected information rapidly to and from all parts of the globe is critical for the U.S. and its allies to enable faster deployment of highly mobile forces in the battlefield - and provide an interoperable, robust "network-centric"

communications systems for future military operations. Increased capacity, streamlined command and control systems, enhanced narrowband, wideband and protected satellite communications systems are essential to the success of future military conflicts. To meet the increased demand of reliable secure communications in a dramatically changing world, newer and more powerful MILSATCOM systems are being developed to meet the needs of the 21st century warfighter.

Moderator: **Warren Ferster**, *Deputy Editor – Space News*

Panelists: **Dr. Troy Meink,** *Transformational SATCOM Program Mgr.-MILSATCOM JPO – Space & Missile Systems Center (SMC)*
Capt. Dave Porter, *Program Manager, Communications Satellite Program Office PMW-146, SPAWAR – U.S. Navy*
Col. William Harding, *Advanced EHF Program Manager, SMC*
CDR Bob Maskell USN (Ret.), *Space Architect – Cisco Systems*
Len Kwiatkowski, *Vice President & General Manager – Lockheed Martin Space Systems Co.*
Karl Jensen, *Sr. Mgr., Space Systems, Intell. & Info. Sys. - Raytheon*

2:45 p.m. – 4:00 p.m. • Session WE3:
Network-Centric Operations: "The Future Mix of Commercial and Military Satellite Communications"

In recent years, the satellite industry has been working in partnership with the DoD regarding the opportunities and challenges of relying on both government and commercial satellite systems to meet important military communications objectives. This panel will explore those opportunities and challenges as the future SATCOM architecture of the Pentagon is modernized in a new strategic approach blending both commercial and military systems.

Moderator: **David Cavossa**, *Exec. Dir. – Satellite Industry Association*
Panelist: **Robert Demers**, *Vice President, Federal Solutions – Inmarsat*
Kay Sears, *Senior Vice President – G2 Satellite Solutions*
David Helfgott, *President & CEO – AMERICOM GOV'T SERVICES*
Tim Richard, *GM, Government Services – GlobeCast North America*
Rick Skinner, *Vice President, Transformational Communications System – Lockheed Martin Space Systems Co.*
Michael Gianelli, *Vice President, MILSATCOM Systems – The Boeing Company*

4:00 p.m. – 4:30 p.m.
Refreshment Break

Sponsored by:
GlobeCast

FEATURED EVENT

4:30 p.m. – 5:45 p.m. • Session WE4:
Next-Generation Fixed and Mobile Broadband Terminals

What advances are being made in 2005 and beyond in interactive satellite broadband technology and services? How are enterprises, government agencies and NPOs taking advantage of the latest broadband services, network security advances and mobility? How are end-users influencing the direction of technology and service advancements? What are the key trends within the marketplace from a technology/equipment manufacturer and end-users perspective? Don't miss this expert panel of end-users, equipment manufacturers, service providers and industry leaders who will address the next generation terminals and enabled services for fixed and mobile users in the commercial and government sectors!

Moderator: **John Puetz**, *President - Masterworks Communications*

Panelists: **Ed Laase**, *Vice President, Gov't & Executive Programs – Connexion by Boeing*
J.J. Shaw, *Director, Naval Programs – Inmarsat, Inc.*
Mark Dankberg, *Chairman & CEO – ViaSat, Inc.*
John Kealey, *President & CEO – iDirect Technologies*
Tim Hale, *Asst. Program Manager, Navy Satellite Communications Systems PEO, C4I and Space – SPAWAR*

10th Annual "Satellite Entertainment/ DBS: The 5 Burning Questions" Forum

Sponsored by: *Presented by:*

SES AMERICOM
An SES GLOBAL Company

THE CARMEL GROUP

8:30 a.m. – 10:00 a.m. • Session DBS1:
DBS Applications in FSS and Other Emerging Global Markets

The core DBS business and its technology has steadily expanded during the past ten years in the U.S. and Canada. For example, today EchoStar and Voom are setting up to utilize a large sum of SES Americom's emerging Fixed Satellite Service (FSS) spectrum. On another level, X-Band is being talked about as another opportunity for U.S.-based DBS. Plus, there is interest in terrestrial Ku-Band being used in conjunction with the space-based Ku-Band spectrum. What about elsewhere around the world? And Ka-Band? What are the roles Asian, South American, African, and European play (if any)? How soon will they roll out (if ever)?

Moderator: **Harry Thibedeau,** *Mgr., Satellite Industry Relations – NRTC*

Panelists: **Arnold Friedman**, *SVP, Sales & Marketing – Space Systems Loral*
Jim Simpson, *Vice President, Business Development – Boeing*
Rick Masoni, *Executive Vice President – Lockheed Martin CSS*
Anders Johnson, *SVP, Enterprise Risk Management – SES Americom*

4:00 p.m. – 4:30 p.m.   *Sponsored by:*   ★ **Stellar Solutions**
Coffee Break

10:30 a.m. – 12:00 p.m. • Session DBS2:
Financial, Legal & Regulatory: Issues, Challenges and Opportunities

Behind every good multi-channel satellite service provider is a good legal and regulatory team, joined by an equally good financial team. Some companies consider both key profit centers. Listen in as these pivotal insiders connect the dots of marketing, technology, and distribution, as well as every other major part of running their companies. How important is Wall Street, on the investment and the banker sides? What does Wall Street look for to validate the companies, industry sectors and industries as a whole? What are the courts, Congress and agencies up to? Even on the state level, some decisions – like local taxation of satellite hardware – can substantially impact these national concerns.

Moderator: **Sean Badding,** *President – The Carmel Group*
Panelists: **Phillip Spector**, *Esq., Sr. VP & General Counsel – Intelsat*
Bob Peck, *Managing Director, Principle – Bear Stearns*
Steve Mather, *Research Analyst – Sanders, Morse and Harris*
Armand Musey, *Partner - Near Earth LLC*
Steve Coran, *Esq., Partner – Rini Coran & Associates*

12:00 p.m. – 1:30 p.m.
Leadership Luncheon   *Sponsored by:*
Welcome Speaker: **Tom Eaton**
EVP – PanAmSat;
President – G2 Satellite Solutions

G2 SATELLITE SOLUTIONS

Keynote Speaker: **Honorable Jonathan S. Adelstein,** *Commissioner – Federal Communications Commission*

1:30 p.m. – 2:45 p.m. • Session DBS3:
Satellite Radio: Millions More!

It doesn't take Shock Jock Howard Stern to convince satellite radio aficionados about the value of this one-of-a-kind service to the car, home, business, and everywhere in between. Quality and choice are two words that come to the fore whenever addressing the 100s of channel choices and digital quality that will reach close to 5 million U.S.-based subscribers by June 2005. And international roll-outs seem the logical next step. But all is not

FEATURED EVENT

sunshine in satellite radio skies: The Number One concern the satellite radio industry faces is competition, and how much of that reaches the audiences. What form will that competition take? How much is there? When is it coming?

Moderator: **Jimmy Schaeffler,** *Chairman, CSO & Founder – The Carmel Group*

Panelists: **Stan Kozlowski**, *Sr. Vice President, National Retailing – Sirius Satellite Radio*
Rick Lee, *VP, Satellite Radio Services, OnStar – General Motors*
Dr. S. Rangarajan, *Senior Vice President – WorldSpace*
Scott Allen, *General Manager – Crestview Cadillac Dealership*
Doug Scott, *District Manager - Radio Shack (invited)*

2:45 p.m. – 4:00 p.m. • Session DBS4:
HDTV, DVRs, Broadband, VOD, iTV and Everything New!

Way beyond delivering basic video signals, innovative satellite-delivered advanced services are leading today's multi-channel industry, with cable, telephony and broadcasting in hot pursuit. What do these new services mean to the consumer? Do they bring and retain subscribers? Do they reduce churn? Is there a true battle between Video-On-Demand in cable and DVRs in satellite? Will satellites ever deliver value-laden broadband services? How much of the future is HDTV? Does satellite have the bandwidth to deliver it all? How soon will Rupert and Charlie press the bounds of new Interactive TV (iTV) services? What's ahead?

Moderator: **Sean Badding,** *President – The Carmel Group*

Panelists: **Bob Green**, *SVP, Advanced Services – Starz Entertainment*
Ed Litchty, *Vice President, Business Development – TiVO*

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Andrew Steele, *Vice President, Business Development & Marketing – Terayon Communications Systems*
Vincent Dureau, *Chief Technology Officer - OpenTV Corporation*
Sarah Cotsen, *SVP, Business Development and New Media – HBO*
Scott Goodyear, *Chief Officer, EchoStar Strategic Business Unit – CSG Systems, Inc.*

4:00 p.m. – 4:30 p.m.
Refreshment Break   *Sponsored by:* **GlobeCast**

4:30 p.m. – 5:45 p.m. • Session DBS5:
Satellite Ideology: A CEO Perspective
This panel of top-flight CEO-types will address the major concerns and opportunities, dissect the true risk factors, strengths and weaknesses of all the key issues. What's ahead in fighting cable in the carriage of local TV HDTV signals? What are the key determinants in the courts and the regulatory centers? Are Brave New Worlds being developed in the technology realm? What are the Holy Grails when it comes to subscriber retention and acquisition? What excites Wall Street and the bankers? What has the competition done lately that causes lost sleep? In this fast-paced and lively round table, you will have a unique opportunity to hear what strategies and approaches these industry leaders have chosen to increase revenues and sustain long-term growth and profitability.

Moderator: **Jimmy Schaeffler**, *Chairman, CSO & Founder – The Carmel Group*

Panelists: **David Sprechman**, *President & CEO – GlobeCast America*
Dean Olmstead, *Managing Partner–Satellite Development Advisors LLC*
Gary Hatch, *CEO – ATCi*

6:30 p.m. – 10:00 p.m.
ISCe Reception *(at The HMS Queen Mary)*

ISCe Awards Dinner *(at The HMS Queen Mary)*

Welcome: **Joachim Schafer**, *President – Hannover Fairs USA*

Scholarship Presentation: **Dan Freyer**, *President – SSPI Southern California Chapter*

Speaker: **Susan Miller**, *President – Intelsat General Corp.*

Awards Presentation: **Jimmy Schaeffler,** *Chairman, CSO & Founder –*

The Carmel Group; ISCe 2005 Advisory Board Member

Keynote Speaker: **Michael Butler**, *COO – Inmarsat Ltd.*

Reception Sponsored by: **Intelsat** General Corporation   *Dinner Sponsored by:* **inmarsat** Total Communications Network

Thursday, June 2, 2005

7:00 a.m. – 8:15 a.m.
VIP and Speakers' Breakfast   *Sponsored by:* **BOEING**
(By invitation Only)

8:30 a.m. – 8:40 a.m.
Welcome and Opening Remarks
Speaker: **Joachim Schafer**, *President – Hannover Fairs USA*

Plenary Session

8:45 a.m. – 10:15 a.m.
"Direct-to-Users" Satellite Systems: Strategies for Commercial and Government Applications
Direct-to-User Satellite Systems today dominate the overall industry revenues. In addition to the already established DBS and Mobile applications, Digital Radio is demonstrating phenomenal momentum. Broadband should also see growth with the new Ka-band systems. Military systems, long time leaders in direct access systems, have recently embarked upon major upgrades and new system architectures for the changing world which provides tremendous opportunities for the satellite communications industry. This keynote session, with senior leaders from all major sectors, will discuss and debate strategies for the future with emphasis on the needs of the users in the 21st century.

Moderator: **DK Sachdev,** *President – SpaceTel Consultancy, LLC*

Panelists: **Mark Dankberg**, *Chairman & CEO – ViaSat, Inc.*
Carmen Lloyd, *Chairman & CEO – Iridium Satellite LLC*
Dave Ryan, *President, Boeing Satellite Development Center – Boeing Space and Intelligence Systems*
Mary Ann Elliot, *President & CEO – Arrowhead Global Services*
Pascale Sourisse, *Chairman & CEO – Alcatel Space*
Dr. Gerhard Bommas, *CTO – ND Satcom AG*
Noah Samara, *Chairman & CEO – WorldSpace*
Edward Horowitz, *President & CEO – SES AMERICOM (invited)*

FEATURED EVENT

10:15 p.m. – 10:45 p.m.
Refreshment Break   *Sponsored by:*   ND SatCom

Government Satellite Requirements Summit

Summit Sponsored by: AMERICOM GOVERNMENT SERVICES   inmarsat Total Communications Network   &GlobeCast

10:45 a.m. – 12:15 p.m. • Session TH1:
Future Combatant Commanders' Requirements Summit

With the U.S. and her allied militaries all moving irreversibly to a more expeditionary form of warfare, the imperative of providing global communications connectivity to the mobile warfighter is ever more essential. Much of that mobile communications will come from space. Placing further demand on space assets is the quest for transformation wherein more and more elements (man and machine) of the battlespace are interconnected in ways that enhance their effectiveness. This panel will debate the requirements for global connectivity, reliance on the space medium, and clear trends in these domains that will persist over the next several years.

Moderator: **VADM Lyle Bien USN (Ret.),** *Former Deputy Commander-in-Chief –U.S. Space Command*

Panelists: **Brig. Gen. Charles Fletcher, Jr.,** *Commander, Military Surface Deployment and Distribution Command – U.S. Army*
Brig. Gen. Larry James, *Vice Commander, Space & Missile Systems Command – U.S. Air Force Space Command*
RADM Tom Zelibor USN, *Director, Global Operations (J3) – U.S. STRATCOM*

12:15 p.m. – 1:45 p.m.
Roundtable Box Luncheon - "Legislative and Regulatory Issues Affecting the Satellite Industry"

Moderator: **David Cavossa,** *Executive Director – Satellite Industry Association*

Panelists: **Kalpak Gude**, *VP & Assoc. General Counsel - PanAmSat*
Jennifer Warren, *Sr. Dir., Trade & Regulatory Affairs – Lockheed Martin*
Joslyn Read, *Asst. VP, Regulatory Affairs – Hughes Network Systems*
Jennifer Manner, *VP, Regulatory Affairs – Mobile Satellite Ventures*
Wendy Tsien, *legislative Liaison, Launch and Corp. Affairs - NRO*

1:45 a.m. – 3:00 p.m. • Session TH3:
Future Trends and the Replacement Market: What's Around the Bend?

As the result of several recent trends in the satellite industry, the replacement market has emerged as the primary driver for commercial space infrastructure sales. These trends include: the lower than expected demand for new satellite applications, the heightened awareness of the satellite operators on profitability, and recent satellite failures. This panel will explore these and other trends in the satellite industry and discuss their implication for satellite and launch vehicle manufacturers.

Moderator: **Andrea Maléter,** *Technical Director – Space & Telecommunications – The Futron Corporation*

Panelists: **Clayton Mowry**, *President – Arianespace USA*
Elon Musk, *President & CEO – SpaceX*
Mark Albrect, *President – International Launch Services*
Jim Maser, *President – Sea Launch Company LLC*
Patrick DeWitt, *President – Space Systems Loral*

3:00 p.m. – 4:15 p.m. • Session TH5:
DoD Joint Members' Operations, Intelligence and Logistics Integration

The nature of the general war on terrorism and accompanying small(er) unit expeditionary warfare means that Operations, Intel and Logistics are inherently woven into these smaller units. Uncommon are the days of big operations supported by stand alone Log and Intel tails. If the warfighter must rely on abundant and timely intel and just-in-time logistics over a vast and fast-moving battlespace, how do we get all this information integrated into a small unit...while on the move...and be able to provide it globally with a terminal infrastructure that does not detract from his mobility? Is this a proper analysis of DoD's Comms on the Move (COTM), and how is the industry (...or for that matter, DoD) postured to supply it? Our panel of experts experienced this change "on the fly" and will be able to relate their actual innovations into tangible ideas on how to address the ever growing need in this highly mobile environment where timely intell and flexible logistics are an integrated necessity.

Moderator: **Susan Miller,** *President – Intelsat General Corporation*

Panelists: **Brig. Gen. Charles Fletcher**, *Jr., Commander, Military Surface Deployment and Distribution Command – U.S. Army*
Col. Elizabeth Durham-Ruiz, *Chief, Space and Global Strike Mission*
Capability Team/J88(S) – USSTRATCOM
TBD, *U.S. Central Command*

FEATURED EVENT

Andy Mullins, *CEO - DataPath, Inc. (invited)*

4:15 p.m. – 5:30 p.m. • Session TH7:
SATCOM and Homeland Security: A Work in Progress
Over the past two years, studies conducted by the U.S. Departments of Homeland Security and Defense developed new strategies for the acquisition, employment and protection of commercial SATCOM capabilities. This panel will review the progress that DHS and DoD are making in implementing these strategies. It also will discuss issues associated with government-industry cooperation from the perspectives of international partners and global satellite operators.

Moderator: **Richard Buenneke,** *Senior Policy Analyst, National Security SystemsEngineering – The Aerospace Corporation*

Panelists: **Col. Thomas Shearer**, *Chief, Planning Integration National Security Space Office – U.S. DoD*
Jeffrey Glick, *Chief, Critical Infrastructure Protection Division, National Communications System - U.S. Department of Homeland Security (invited)*
Line Perron, *Manager, Emergency Telecommunications Spectrum, Information Technology and Telecommunications Sector – Government of Canada (invited)*
Dr. Steven Stott, *Chief Technology Officer - New Skies Satellites*

Commercial Enterprise Track

Sponsored by: SES⊿AMERICOM
An SES GLOBAL Company

10:45 p.m. – 12:15 p.m. • Session TH2:
The IP Revolution: New Services, New Business Models?
IP-based satellite services are changing the way large corporations, small and medium enterprises and individuals operate and work, allowing remote locations from all over the world to be connected to the heart of the information society regardless of distance and existing terrestrial infrastructure. But IP is also altering the very nature of the satellite industry, as many of the newly-developed programs aiming to deliver broadband services seem to challenge the traditional distinction between satellite operators, VSAT manufacturers, service providers and system integrators. In this session, the protagonists of the IP revolution will debate the future of satellite telecom applications, and what effects this will have on the industry's structure.

Moderator: **Giovanni Verlini,** *Managing Editor – Satellite Evolution Asia and EMEA*

Panelists: **Christina Clifton**, *EVP, Sales & Marketing – Spacenet*
John Kealey, *President & CEO –iDirect Technologies*
Patompob Suwansiri, *Assistant VP of Marketing – Shin Satellite*
Keven Cahoon, *Vice President, Enterprise Group – GlobeCast*
Arunas Slekys, *VP, Global Marketing – Hughes Network Systems*
Elias Zaccack, *Vice President, AMC-23 Initiatives, Asia-Pacific Region – SES AMERICOM*

12:15 p.m. – 1:45 p.m.
Roundtable Box Luncheon - "Legislative and Regulatory Issues Affecting the Satellite Industry"

Moderator: **David Cavossa,** *Exec. Dir. – Satellite Industry Association*

1:45 p.m. – 3:00 p.m. • Session TH4:
Evolving Teleport Solutions for the Enterprise Market
The teleport business has undergone major transformation in the last few years. As an important backbone in the ground segment of the satellite industry, the teleport business has had to contend with changing markets and competition from other technologies such as fiber. Recent developments have shown that the enterprise market emerging as a key new market segment for teleports. This session will explore the evolution of the teleport business and how it is coping with the changing market forces in the industry.

Moderator: **Virgil Labrador,** *Managing Editor – SatNews Publishers*

Panelists: **Guy White** – *Station Director, Southbury Earth Station – Telenor Satellite Services*
David Justin, *Sr. Vice President, Marketing and Product Development, Europe – GlobeCast*
Brent Bruun, *Sr. Vice President and GM, Enterprise Solutions – SES AMERICOM*
Doug Triblehorn, *President – ZapMedia*

3:00 p.m. – 4:15 p.m. • Session TH6
Mobile Satellite Services: Critical Capabilities for Commercial and Government Users

A "new age" of critical mobile satellite services and applications is fueling operator innovation and customer requirements across a spectrum of needs and events. Global connectivity and "anywhere, anytime, on-demand communications" have become essential to businesses, governments, first responders, and armed forces across the globe. Costs have come in line with

FEATURED EVENT

capabilities, and the future of MSS has moved from the technologists and into the mainstream end-user.

Moderator: **Armand Musey,** *Partner – Near Earth, LLC*
Panelists: **Bo Norton**, *Director, Sales – Telenor Satellite Services*
Brian Hester, *President – Satamatics USA*
Robert Ames, *President & CEO – SUIRG*
Bob Roe, *Sr. Vice President, Mobile Satellite Services – Stratos Global*

Note: ISCe Conference Program Subject to Change

ISCe to Present Unique Live Product Demonstrations!

ISCe 2005 will offer an exclusive opportunity for media and analysts to view select new products and services during the fourth annual ISCe Conference and Expo. May 31 to June 2, 2005 at the Hyatt Regency Hotel in Long Beach, California. The Product Demonstrations will be held on Tuesday, May 31st from 3:30 pm to 5:00 pm.

Participating companies will present innovative and groundbreaking products and services for homeland security, wireless communication systems, broadband, military and government solutions, fixed and mobile platforms, space systems, and consumer applications. These companies' products were selected by the ISCe Advisory Board because they are unique or innovative.

"These unique product demonstrations will provide a glimpse of some of the new innovative satellite-based services and technologies that have just been, or will soon be, available to the general consumer, broadcasting industry and the government and military end-users," said Art Paredes, chairman of ISCe. "We are excited to present this new program at ISCe this year and look forward to expanding the Product Demonstration program next year," said Paredes.

During the following two days, Wednesday and Thursday, June 1 and 2, 2005, participating companies will also demonstrate their products or services in individual

demonstration booths in an exclusive showcase area that will be located right outside the ISCe conference meeting rooms.

Agile Communication Systems
Agile Communication Systems will demonstrate its new motorized Rapid Deploy Satellite Access System. The system contains a fully integrated controller system for auto-locate of any specific satellite or individual selection of various satellites. www.agilecoms.com

GlobeCast
WING Content Exchange for Contribution – GlobeCast's WING Platform is a global IP-based content management tool for professional video sharing and laptop newsgathering from any wired or wireless connection.. The Platform is the backbone of a global content management network to support delivery of the emerging array of non-linear media. www.globecast.com

Globalstar / Essential Viewing Systems, Ltd.
Globalstar has partnered with Essential Viewing Systems, Ltd., producer of the world's leading low latency, narrow band digital video encoder, the e200. Together, these two technologies enable analyst-quality remote surveillance, video-on-demand throughout the world on the Globalstar network. This is an unprecedented use of MSS and the applications range from law enforcement, remote site monitoring, border surveillance, to supporting existing networks with alternative network solutions. www.globalstar.com

Inmarsat
BGAN (Broadband Global Area Network) – The fourth-generation I-4 fleet of satellites will power the new BGAN that is planned to launch early 2006. Based on an IP-network, this will enhance the company's ability to provide advanced digital mobile communications to existing and new users. In early 2006, Inmarsat launches the next generation of mobile satellite service – broadband data (up to 492 kbps), video and voice service available worldwide. Accessible via a lightweight, note-sized terminal, it will extend the boundaries of the "broadband mobile office" that 3G services have just started to deliver. www.inmarsat.com

FEATURED EVENT

Noahtek Engineering Company

NOAHTEK ENG

Flat Satellite Antenna - Noahtek Engineering Company is introducing its new Flat Satellite Antenna for stationery or mobile use. The antenna's light-weight and compact size makes it easy to mount and install just about anywhere. Its design makes for a low profile with a maximum of 3 cm thickness, greatly reducing the vertical footprint in a vehicle application. www.noahtek.co.kr
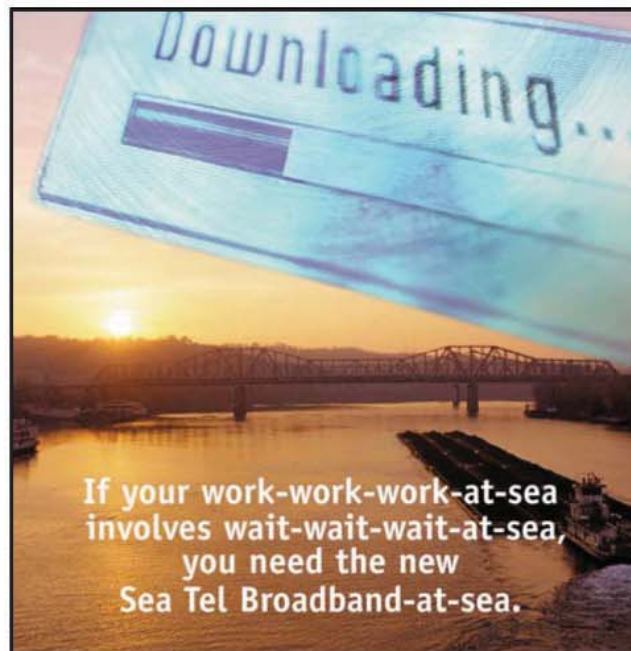
SES ASTRA TechCom

SES ASTRA TechCom
An SES GLOBAL Company

DARTS (Digital Advanced Ranging with Transport-stream Signals) - DARTS is an implementation of a new and innovative ranging method, using the DVB-S standard transport stream for precise ranging from one earth station to the satellite. In order to maintain the advantages of payload ranging on DVB-S operated satellites, SES ASTRA developed and patented DARTS in cooperation with the Fraunhofer Institute for Integrated Circuits. www.ses-astra.com

For additional information on the Product Demonstration Program, please contact Gina Lerma at (310) 410-9191 or glerma@hfusa.com

INDUSTRY NEWS

AMC-18 Satellite to be Launched by Arianespace

WASHINGTON, D.C. — Arianespace has been tapped by SES Global to launch the AMC-18 telecommunications satellite.

The launch of AMC-18 is planned for the second half of 2006 on an Ariane 5 vehicle from Europe's Spaceport at the Guiana Space Center in French Guiana.

Built by Lockheed Martin Commercial Space Systems, AMC-18 will have a liftoff mass of approximately 2,300 kg. The satellite is based on the A2100 satellite bus, and will provide high-power satellite services with its payload of 24 active C-band transponders.

The AMC-18 satellite, which will be operated by SES Americom, is designed for a minimum operational lifetime of 15 years, and will offer cable television distribution services across the United States from the orbital position of 105 degrees West.

Robert Kisilywicz, SES Americom's senior vice president of finance and chief financial officer, said the Ariane family of launch vehicles has already delivered 23 SES spacecraft into orbit.

AOL, XM Unite to Create New Online Radio Service

NEW YORK, NY and WASHINGTON, D.C., — America Online (NYSE:TWX) and XM Satellite Radio (NASDAQ: XMSR) said on Monday they will join forces to create a new online radio service. The companies said the new co-branded service will include a free, web radio offering and an enhanced premier radio offering that will be available to AOL members at no additional charge and as a premium service to consumers on the web.

INDUSTRY NEWS

The new offerings, which are expected to roll out beginning this summer with the launch of AOL's next generation AOL.com web portal, will be promoted to an audience of upwards of 100 million consumers online.

AOL and XM said they will co-promote their unique, original programs across their networks including to XM's nearly 3.8 million subscribers – the number one satellite radio audience – and to AOL's more than 100 million unique monthly visitors across the AOL network of properties.

In addition to establishing the new online radio service, XM will integrate select AOL original programs such as Radio KOL, AOL Music Sessions and AOL Music LIVE! into its satellite radio service, which is available to listeners in cars as well as on home entertainment and portable devices. The companies will also work together to develop new programs and services for the online and satellite space.

"The combination of our leadership in online programming and XM's leadership in satellite programming represents a giant step in digital media," said Jon Miller, chairman and CEO of America Online, Inc. "This relationship creates important and valuable opportunities across our core businesses enabling us to provide unique value for our large web audience, enhanced programming for our existing and new AOL members, and the ability to introduce new premium services," he added.

Arianespace, Roscosmos Sign Soyuz CSG Infrastructure Contract

EVRY, France, — Jean-Yves Le Gall, CEO of Arianespace, and Anatoli Perminov, director general of the Russian space agency Roscosmos, signed on Monday in Moscow a partnership contract for the production and supply of Russian equipment and systems for the construction of facilities needed to launch Soyuz from the Guiana Space Center (CSG) in French Guiana.

It provides for the manufacture, assembly and validation by Russian companies of Soyuz launcher interface systems and equipment, adaptation of this launcher to conditions at CSG (range safety, telemetry, environment), and completion of final development of the latest version of the launcher, Soyuz 2-1b.

This contract marks the first step in application of the intergovernmental agreements between France, the Russian Federation and the European Space Agency, to allow Soyuz launches from French Guiana. It follows four agreements on program financing, signed on March 21 in a ceremony attended by the French prime minister.

Jean-Yves Le Gall, CEO of Arianespace, and Anatoli Perminov, Director General of the Russian space agency Roscosmos at the signing of the partnership contract concerning the production and supply of Russian equipment and systems for the construction of facilities needed to launch Soyuz from the Guiana Space Center (CSG) in French Guiana.
(Arianespace photo)

Roscosmos said it is working with several major Russian space companies: the Samara Space Center TsSKB Progress (prime contractor for the Soyuz launch system), NPO-Lavotchkine (prime contractor for the Fregat upper stage), the KBOM design office (prime contractor for ground infrastructures) and TsENKI, the government center in charge of supervising the Russian industrial partners involved in the ground infrastructure, to be able to comply with the provisions of the contract.

Arianespace has already signed its first contracts for Soyuz launches from French Guiana with both commercial and government customers, for launches starting in 2008. Operations with this new launch system confirms both the complementary fit of Ariane 5 and Soyuz as well as Arianespace's policy of offering a complete family of launchers. Soyuz launches from the Baikonur cosmodrome in Kazakhstan are currently marketed by Starsem, a joint subsidiary of Arianespace, EADS, Roscosmos and the Samara Space Center.

Beyond-Earth Enterprises, XCOR Aerospace Partner to Produce Small Payload Launch Vehicles for Sub-Orbital Travel

COLORADO SPRINGS, Colorado, — In answer to studies that show more and more Americans want to buy a flight into space if they had the chance and the cost was reasonable, a cooperative agreement between Beyond-Earth Enterprises and XCOR Aerospace was forged earlier this week to develop greater accessibility to space for everyone in a safe, reliable, and affordable manner.

INDUSTRY NEWS

The agreement will allow Beyond-Earth to purchase manufactured components from XCOR for standardized production of small payload launch vehicles. Beyond-Earth Enterprises is a commercial firm dedicated to providing small payload launch capabilities at affordable rates. XCOR Aerospace, Inc., is a small, private company with proven expertise in the production of high quality rocket engines and rocket powered vehicles.

Joe Latrell, CEO of Beyond-Earth said the deal is the first step toward making space accessible for commercial ventures. "We want to be instrumental in creating standardized production components. When an airline company or package delivery service needs a new vehicle, they don't build it, they buy it from a company who specializes in airplane or truck production." Latrell said.

Jeff Greason, CEO of XCOR agreed saying the commercial applications from scientific research to space tourism are within reach. "Cooperation such as this is essential to making that happen. Beyond-Earth and XCOR will each focus on their areas of expertise while expanding the overall market for space related products."

The agreement lets XCOR focus on rocket engine development, one of its core strengths, while allowing Beyond-Earth to concentrate on developing inexpensive alternatives to existing space launch systems and help revitalize the American public's interest in space. Beyond-Earth and XCOR said they expect this unique alliance to prove the reliability, safety, and affordability of complete rocket systems. The goal is profitable, low-cost transportation vehicles to Earth orbit, they said.

Boeing Completes SBSS Pathfinder Preliminary Design Review

ST LOUIS, — Boeing in partnership with Northrop Grumman Mission Systems, has successfully completed the Preliminary Design Review (PDR) for the Space Based Space Surveillance (SBSS) Pathfinder system. Boeing said this is another significant program milestone demonstrating the "best-of-industry" approach the Boeing team has developed to meet program requirements.

The PDR, which was held in Huntington Beach, Calif., and included over 100 participants from the

government and its contractors, conducted a thorough review of the SBSS Pathfinder system architecture and design. According to Boeing, the review was the culmination of a detailed Ground Segment Preliminary Design Audit (PDA) conducted by Boeing in early January, and a detailed Space Vehicle Preliminary Design Audit (PDA) conducted by Ball Aerospace.

EXECUTIVE MOVES

Edward D. Horowitz Appointed President and CEO of SES Americom and to the Executive Committee of SES Global

PRINCETON, N.J.— SES Gobal appointed Edward D. Horowitz as President and CEO of SES Americom. Horowitz was also appointed to the Executive Committee of SES Global. He will report to

Romain Bausch, president and CEO of SES Global.

Horowitz has an extensive and accomplished career in media, telecommunications, and financial services. Most recently he founded EdsLink, LLC a venture fund providing strategic financial, operations, and technology consulting services. Among other activities, Horowitz served as Strategic Advisor to the CEO of Cablevision's satellite service division, Rainbow DBS.

"I am extremely excited about his leadership, vision, and commitment to excellence. With his broad background in cable, satellite and media, he will add tremendous value to the SES Group in general and to SES Americom in particular," commented Bausch.

Prior to forming EdsLink LLC, Horowitz was executive vice president for Advanced Development of Citigroup and Founder and Chairman of e-Citi. In addition he served as a member of the Management and Investment Committees of Citigroup and senior advisor on the Internet to the office of the chairman.

Before joining Citigroup, Horowitz served as senior vice president, Viacom Inc.,

Executives Moves

chairman and CEO of Viacom Interactive Media and a member of the Viacom Executive Committee and, prior to Viacom, Horowitz held various senior management positions at Home Box Office (HBO), a subsidiary of Time Warner and was a founder of Suburban Cable.

Michael Griffin Takes the Helm as NASA Administrator

WASHINGTON D.C., Michael D. Griffin reported to work on Thursday as NASA's 11th Administrator becoming the leader of the agency on the day the Expedition 11 crew is set to launch to the International Space Station. The Administrator was confirmed late Wednesday night by the U.S. Senate and an official swearing-in ceremony will be scheduled later.

"I have great confidence in the team that will carry out our nation's exciting, outward-focused, destination-oriented program," said Griffin. "In the coming days, I'll be spending a good deal of my time reviewing our progress toward returning the Space Shuttle safely to flight. I will also be reviewing the activities of our mission directorates and our various supporting functions. I share with the agency a great sense of privilege that we have been given the wonderful opportunity to extend humanity's reach throughout the solar system."

During his confirmation hearing Tuesday before the U.S. Senate, the Administrator stated his priorities, consistent with the President's Vision for Space Exploration will be:

* Fly the Space Shuttle as safely as possible until its retirement, not later than 2010
* Bring a new Crew Exploration Vehicle into service as soon as possible after the Space Shuttle is retired
* Develop a balanced overall program of science, exploration and aeronautics at NASA, consistent with the redirection of the human spaceflight program to focus on exploration
* Complete the International Space Station in a manner consistent with our international partner commitments and the needs of human exploration
* Encourage the pursuit of appropriate partnerships with the emerging commercial space sector
* Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations

President George W. Bush nominated Griffin as NASA Administrator in March, while he was serving as the Space Department Head at Johns Hopkins University's Applied Physics Laboratory in Baltimore.
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Peter Liguori Named President, Entertainment Fox

LOS ANGELES, — Peter Liguori has been named president of Entertainment for the Fox Broadcasting Co. Peter Chernin, president and COO of News Corp. said Liguori will be responsible for all Fox program development and scheduling, as well as marketing, business affairs and promotions.

Liguori served as president and CEO of News Corp.'s FX Networks since 1998, where he oversaw business and programming operations for FX and the Fox Movie Channel. Under his leadership, FX rose from a nascent network to one of the top five basic cable networks with critically acclaimed programs like "Nip/Tuck," "The Shield" and "Rescue Me" and the award-winning FX Original Movies franchise, home to highly-regarded films including "Redemption," "The Pentagon Papers" and "44 Minutes."

"Peter has done an extraordinary job with FX," Chernin said. "He took what was largely a blank slate and turned it into arguably the hottest network in cable. He's produced more quality cable programming in the past three years than in the business and has raised the bar for distinctive television," Chernin said.

The critically acclaimed original programming that has been the heart of Liguori's strategy for FX has helped boost its subscriber base from 39 to more than 84 million homes in five years. This growth, coupled with historically high ratings, has led FX to all-time highs in advertising and affiliate revenues.

Ricardo Calderon to Head GlobeCast Latin America Sales Office in São Paulo

MIAMI, FL, GlobeCast America has named Ricardo Calderon as its regional representative for Latin America, based at the company's new sales office in São Paulo, Brazil. Brazil serves as GlobeCast's regional gateway for broadcasters and corporate users in Brazil and throughout Latin America to access the company's global resources.
Ricardo Calderon was previously the director of sales, Latin America & Caribbean for News Skies Satellites. He

Executives Moves

possesses over fifteen years experience in satellite engineering, business development and sales with positions at Comsat Brazil and LinkSat Sistemas de Communicação.

GlobeCast currently supports numerous leading broadcasters across Latin America and Brazil, including TV GLOBO and Grupo Bandeirantes, with multiple satellite delivery services in diverse world regions. Ricardo Calderon will report to Miami-based GlobeCast America, GlobeCast's regional business unit supporting North and Latin America.

Fred Doyle Selected by Ball Aerospace as Vice President, Special Programs

BROOMFIELD, Colo., April 6, 2005/— Ball Aerospace & Technologies Corp. has named Frederick J. Doyle, Jr. as vice president of special programs. The position oversees critical programs and technologies for restricted customers, a key market area for the company. Doug Neam, who served in this role since early 2004, will return to his prior position of vice president, program operations.

Prior to joining Ball Aerospace, Doyle was executive vice president of solutions at
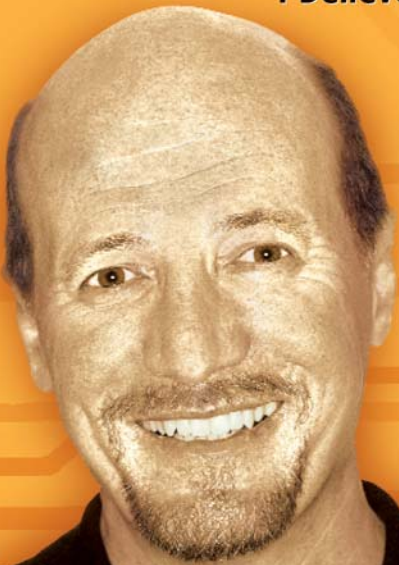
Space Imaging. Other positions with that company included vice president of defense / intelligence solutions, vice president of advanced systems, vice president of development and director of systems engineering.

Fred was responsible for the integration and initialization of the IKONOS satellite. Before joining Space Imaging, Doyle spent 20 years in government service, working for the Defense Mapping Agency (the precursor to the National Geospatial-Intelligence Agency - NGA), the Central Intelligence Agency (CIA) and the National Reconnaissance Office (NRO).

He holds a master's degree in photogrammetry from Purdue University.

New Products

Samsung Unveils New Satellite DMB phone

Samsung SCH-B200 Satellite DMB Phone (Photo: Business Wire)

SEOUL, Korea, — Samsung Electronics will showcase its third satellite Digital Multimedia Broadcasting (DMB) phone (SCH-B200) at MIPTV/MILIA in Cannes, France beginning today following the release of the SCH-B100 and SCH-B130.

Samsung's new B200 boasts a horizontal screen that allows users to not only benefit from easier viewing of DMB services, but also to comfortably enjoy multimedia functions, such as photography and games. In addition, it is the first model to adopt Samsung's innovative "slide and rotation" form factor, where the screen slides up and rotates horizontally, further enhancing user convenience.

According to Samsung, the phone's large capacity battery (1300mAh) allows users to continuously view the screen for more than three hours, resolving the battery-depletion problem that has plagued DMB phones. The B200 has a 2-megapixel camera, allowing users to enjoy photo quality that is as good as digital cameras. The versatile phone offers a variety of multimedia functions, including an MP3 player and video viewer. Users can also enjoy clear video reception through the phone's 260,000-color, 2.2-inch wide LCD screen.

In addition, Samsung said the B200 provides a TV-out function, while supporting external memory and offering a file-viewing function that allows fingertip access to a variety of files, such as Microsoft Word and Excel.
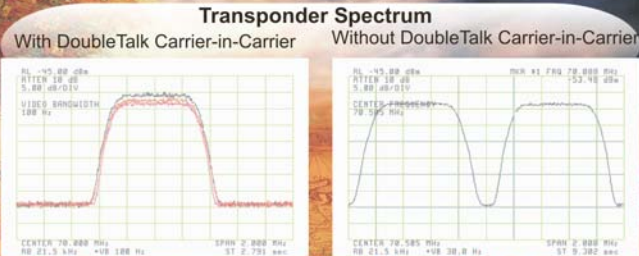
NEW PRODUCTS

TomTom Selects Sarantel's Antenna for its New Bluetooth High Sensitivity GPS Receiver

WELLINGBOROUGH, England, — Sarantel, a manufacture of miniature antennas for portable and mobile wireless devices, said on Tuesday TomTom will be using its GeoHelix GPS antenna in the new TomTom Bluetooth GPS receiver.

Sarantel said its GeoHelix GPS antenna ensures TomTom's newest navigation solutions TomTom Mobile 5 for mobile phones and TomTom Navigator 5 for PDA's have the best possible GPS reception across all locations and environments.

TomTom Mobile 5 and TomTom Navigator 5 include the latest personal navigation software and maps with the smallest and lightest wireless Bluetooth GPS receiver on the market. TomTom has embedded Sarantel's high performance GPS antenna into its own high sensitivity Bluetooth GPS receiver, which is so sensitive it can be placed in a pocket or bag, without line of sight required, to ensure that users have reliable reception in urban environments, on the road, on foot - or wherever they go.

As the Bluetooth GPS receiver needs to work in close proximity to the user, TomTom required an embedded GPS antenna capable of working next to the body. The GPS antenna also needed to be lightweight and small enough to meet the challenging design criteria set for the product for ultimate customer usability.

The Sarantel antenna was selected for its small size, exceptional beamwidth and extremely low near field, which allows it to work within millimetres of signal absorbing bodies - such as human tissue - without affecting performance or impacting the customer.

COVER STORY

The Changing Business of Teleports

by Virgil Labrador

Teleports are the backbone of the satellite industry. Providing the ground segment of satellite services, teleports, are a vital and indispensable link in the satellite value chain. The World Teleport Association (WTA) defines teleports very broadly:

"Teleports are the "intermodal hubs" of the broadband world — gateways that connect satellite circuits with terrestrial fiber optic and microwave circuits. Bridging the gap between land and sky, they allow broadcasters, cable-casters, and public and private network operators to outsource a non-core function that is critical to their businesses. Teleports deliver time-sensitive television and radio programming to audiences around the globe. They provide remote and underdeveloped regions with high-quality Internet and enterprise network connections. For nearly three decades, they have pioneered in the export and import of the weightless cargo: information."

The teleport business has been undergoing major changes in the last few years. Once limited by regulatory and technology constraints to provide only certain services, teleports now are providing a wide variety of services. New players have also entered the teleport business. Once the domain of entrepreneurial small operators, teleports are now big, vertically integrated businesses.

To get an idea of the size and extent of the teleport business, the WTA just released its a survey of the global teleport industry called *Sizing the Teleport Market*. The survey is the first study to look at the size benchmark surveys of the teleport business.

The survey identified 830 commercial teleports in 150 countries which operate 11,800 antennas. An astounding 63 percent of teleports are in North America and Europe. The total global revenues of the teleport sector are over $12.8 Billion, of which nearly $ 8.6 Billion come from teleport and value-added services and the remainder from the resale of satellite and fiber capacity.

The survey also notes that the commercial teleport sector spends nearly $2.7 Billion annually on capital equipment including a wide variety of transmission, control, computing systems as well as cabling and connection products. The teleport industryemploys approximately 27,000 people worldwide.

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Ascent Media's Antena Farm in Northvale, NJ. (photo courtesy of Ascent Media)

COVER STORY

The WTA's "Teleport Benchmark" last year concluded that the big companies in the teleport business are getting bigger and growing at a faster rate than medium and small companies.

The WTA Benchmark study also provides an annual list of "Top Teleport Operators" and curiously, five of the top ten are satellite operators, namely, Intelsat, PanAmSat, Telesat Canada, Space Communications Corp. and Telenor Satellite Services. Over the years, satellite operators have been heavily investing in teleport facilities. Recently, US-based satellite operator, SES Americom, purchased service provider Verestar, which owns substantial teleport facilities worldwide and Intelsat purchased COMSAT General.

The "Teleport Benchmark" reports that three major trends driving the industry are: financial recovery, consolidation and service diversification. Other key findings include:

Scale is Important: The larger the company the more it gets in terms of revenue from its facilities. For example, large operators (those with revenues of $70m or more annually) generate an average of $34.5m in revenues from every teleport and $1.5m per antenna, compared to $3m per teleport and $598k per antenna for small operators.

End-to-End Solutions will Dominate: 100 per cent of respondents to the WTA survey in 2004 agreed that end-to-end solutions will dominate the future of the industry,.

Teleports Are High-Value Sales Channels. For companies that sell products and services through teleports, the 2004 study confirmed

the importance of the teleport channel. The large operators in the 2004 sample sold or resold $82m in transponder capacity and $24m in fiber capacity per year. The average midsize company in the survey sold $12.4m worth of transponder capacity, while small operators resold

$1.8m per year in satellite usage. presents a $24m annual sales opportunity.

Top Five Markets: , the top five markets for the teleport industry will be (1) enterprise networking, (2) video backhaul for TV contribution and distribution, (3)

COVER STORY

enterprise video & audio (BTV), (4) government and military, and (5) Internet content hosting and distribution.

Both the WTA survey and the Benchmark report may not bode well for smaller operators--a fear that Robert Bell, Executive Director of the WTA allays. "The entire industry is increasing being driven by niche application players and there is still a continual influx of new entrepreneurial service providers," he said, citing a niche operator, CapRock Communications, which specialized in the oil and gas industry as an example.

"What we are seeing now is an evolution of a more complex marketplace where there is room for lots of many players. I think the market has become more healthy and dynamic as it has ever been because we have more layers in it and more companies with different strategies," Bell added.

Bell explained that it would not be sufficient to provide plain vanilla uplinks anymore to compete in the new market place. "Everybody's business will even be more complicated to manage--and managing this sector forward would require people with very strong business skills," he said.

Stephen Tom, a teleport industry veteran who was former WTA Chairman and now is the executive director of the Pacific Telecommunications Council, agrees with Bell that it would be more difficult for a new entrant into the teleport business. He advises those thinking of entering the teleport business to "validate a unique market strategy in a unique applications niche or geographic setting. They must also have exceptional relationship with their customers and provide excellent service."

So, while the teleport business has undergone some consolidation and seen greater participation by satellite

New "Sizing the Teleport Market" Research Study from WTA

WTA has published the world's first research study that sizes the teleport sector of the global satellite communications industry. The study provides global, regional and country data on revenues, geographic distribution, purchasing power, labor requirements and other key statistics. *Sizing the Teleport Market* is available free to members of World Teleport Association and is for sale to non-members. The study depicts a sector operating in 150 countries, generating US$12.8 billion in annual revenue, operating nearly 12,000 antennas and investing nearly $2.7 billion per year in capital equipment. It includes breakdowns by region, country and metropolitan area.

For more information go to www.worldteleport.org

operators, the consensus seems to be that there is enough room for everyone. Especially with the variety of services that teleports can provide today.

David Sprechman, CEO of GlobaCast North America said that the industry has changed just in the last two years since he came on board. "To me, it is clear where this industry is going—it going from content distribution, which we have been doing for many years, to content management."

No matter what technologies are driving the teleport business, "at the end of the day, the customer doesn't care how we get it there, as long as it gets there in an

efficient and cost-effective manner," said Bell.

One thing is certain--that the teleport business has changed, but from all accounts it will continue to grow and flourish. **SM**

Virgil Labrador is the Managing Editor of SatMagazine. He was formetly marketing director of the Asia Broacast Centre, a full-service teleport in Singapore then owned by the US broadcasting company, CBS. He can be reached at virgil@satnews.com

FEATURE

GlobeCast World TV to go MPEG4 "Still very close to France Telecom"

by Chris Forrester

Over the past months there have been rumours that Paris-based but highly international broadcast services company GlobeCast might be bought. Thomson is the latest company to be spoken about as a possible buyer. Christian Pinon, GlobeCast's president & CEO, says he can see why France Telecom-owned GlobeCast has some interest for another French domiciled company like Thomson. "We are to some extent supplying related services, and we might also be interested in some of their work. But to complete the panorama we also need to look at IP-based convergence, and I have to tell you we have never been as close to France Telecom (FT) as we are today. This might be surprising to some people who have in the past seen us as a somewhat self-contained subsidiary of FT."

Pinon's logic is that as the broadcasting world moves ever-closer to an Internet Protocol-based technology, then the closeness is – he says – natural. "These technology trends will penetrate everything, and with the telcos wanting to fill their pipes with IP-based TV, we are closer than ever to France Telecom. I believe FT sees us as a means of creating further value, and for that reason I think we will stay as a subsidiary. We may be a close comparison to someone like Thomson because we also deliver B2B services and solutions, but my feeling is that we are closer to FT. However, the one to decide the future is obviously FT. Being part of the FT family is not an ordeal, but a great opportunity, giving us access to their technology, and this makes me relaxed. Should Thomson or someone else be interested in us, then this is good news, because it means we have a good value."

Pinon said he has not ruled out GlobeCast's own expansion through acquisition. "Thomson is committed to the broadcasting sector, and is buying increased market share. As for us we do not play in the same league as Thomson, so we have to be a little more cautious, and despite our relationship with FT, we are not – shall I say – core to France Telecom. This does not give us quite so much room, but I am sure that if some suitable acquisition came our way we could make a strong case to FT. They will help us to grow the company. But over the past 4 or 5 years we have concentrated on organic growth, and this has proved to be a sound decision because companies have been expensive to buy. Today it might be different, so if it makes sense, and there is a clear payback, I feel free to make proposals to my shareholders."

GlobeCast has had some sound successes during the past few years, notably its World TV product. "We should be humble, but international programming is a growing business. Unless we are inefficient it would be hard not to grow during this period. But we have been very efficient, and we now have 130 TV and radio channels on World TV, worth 9 transponders in total on Intelsat 5, so it is a great success. But we are still a minor player having to face the major problems of encryption and subscription management. We like the business, but we still have plenty of milestones still to reach."

Questioned on the prospects of HDTV for this bouquet, Pinon said it too soon for most of them and need not be a priority just yet. "They bring content and information, and entertainment, from the home country to the expatriate viewer. Viewers like having the news, and variety, and a flavour of their home country. Eventually, as everything turns to HD then they will no doubt look at the technology. But for the moment we prefer to bring more local content into the mix, and this means also selling localised advertising from the US, as well as store and forward of material. Bringing local advertising in is a key step for us, and just at the moment HD is not a high priority." Pinon said GlobeCast is a pleasantly surprised at the success of World TV, "and we had targets, but we have exceeded them," he added. "When we consider the countries we are bringing over, we are still missing a lot. I am quite sure we could double that

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number over time. Whether we reach the target is another issue, but we are working hard."

Next challenge up is MPEG4, says Pinon. "We are not to be compared with DirecTV or Echostar in North America. We don't have to swap out millions and millions of boxes. For us, with a successful ethnic min-bouquet, we might have just 5,000 boxes viewing perhaps 3 channels. They're important to that viewer, but when we move to MPEG4 we will save space segment yet only have to swap over 5,000 boxes. This makes it a very different business model, and it makes absolute sense not just to move to MPEG4 but to start with the smallest channels, because they are the easiest to replace. Then we will be in a situation to provide services that are more viable for

GlobeCast offers WING

GlobeCast has just offered customers its 'WING' service. Wing is an IP-based management tool for professional video sharing and laptop newsgathering. Wing Content Exchange for Contribution provides "communities" of nomadic, freelance and field staff producers with

access to a range of collaboration tools and value added services – all under what GlobeCast describes as one secure platform while providing independence for "in the field" staff and allows a team member to contribute video footage from any connection as easily as sending an email - in a format that is just as user friendly. Wing is being Beta-tested by Francetelevisions.

* WING **Files** - a point-to-multipoint content exchange service using file transfer and partly based on email protocols
* WING **Live** - a real-time video streaming service
* WING **Chat** - text based chatting service
* WING **Vision** - a videoconference "comms channel" service used to facilitate field-to-studio coordination during
* WING Live broadcasts

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our customers. We have to add momentum, and we will do this by hopefully adding channels to the target ethnic mix. An existing base of perhaps 2000 subscribers watching a single channel, or two channels, will probably more than double if we could add another relevant channel. Then there will be more appeal and value to the consumer."

Pinon says he wants to start the transition to MPEG4 to begin as early as this coming autumn and winter, as chip-sets and suitable boxes become available. In Asia the World TV concept is more of a technical provision for the channels themselves, with no subscriber responsibility for GlobeCast, so the shift to MEG4 will be left to local providers.

GlobeCast plays a major role around the world via its Contribution and Occasional Use traffic. "With IP our task becomes more that of content management. IP-based Contribution traffic is a key priority, and our WING announcement at NAB is an exciting development for us." Pinon says the shift towards IP-based traffic is widespread, "and it's not only traditional broadcasters. News and sport agencies, advertising companies swapping files…. This means new customers. Some of our largest clients are step-by-step introducing IP-based Contribution, people like France Televisions for example, and we expect this shift to start later this year. This will impact our revenues negatively, but we hope there will be an upside in terms of value-added earnings which will help compensate." **SM**

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

REGIONAL UPDATE

Bridging the Digital Divide is the New Killer Application for Satellite Projects in Latin America

by Bernardo Schneiderman

A large number of Latin American countries are presently develop ing public tenders or are already implementing projects to extend Internet access to a wider part of their population outside the major metropolitan cities. This is a direct result of Latin American governments' objective of bridging the digital gap that divide between urban and rural areas where the terrestrial infrastructure is not available. The intention of these government projects is to promote the connectivity both for Internet access and voice services in remote and nonserved areas anywhere in these countries. Satellite communications infrastructure is the technology that has the effective solution to support the majority of the digital inclusion projects in Latin America.

As part of these efforts some major players as domestic and international satellite operators and satellite equipment vendors and some industry associations are promoting their solution for these special large size projects. Among the major players are ETSI (European Telecom Standard Institute) that is promoting the DVB-RCS standard VSAT solution and GVF (Global VSAT Forum) a satellite industry association that is promoting the opening of the market for new players in the satellite services bringing new economic solution in the market place.

In this article we are reviewing the main projects in the region during the last two years and the forecast for 2005 and beyond.

REGIONAL UPDATE

Mexico – The e-Mexico national system has as its main target to offer access to a series of contents and applications in the matter of education, health, commerce, tourism, government services and other community services.

The e-Mexico national system is providing telecommunications bandwidth to small communities to allow simultaneous Internet access for a minimum number of computer terminals in each community, as well as additional telephone lines so as to provide higher quality telecommunication services at lower prices. In the first phase of this project Viasat was the selected technology. The services was provided by Internet Directo a Mexican Company that won the bid issued by the Mexican Government to provide during the first phase access for 3200 communities that was concluded in 2003. During 2004 a new expansion for more 4,000 sites was planned as part of 10,000 points of presence to be concluded until the end of 2005.

Venezuela – Started the program during 2003 with the target to implement Telecenters (Telecentros) focus in providing voice, fax and data. Venezuela government has set up 343 "Telecentros" offering free access to the worldwide web, in libraries, museums, city halls and the offices of non-governmental organizations in the country's 23 states. Now Venezuela is now moving few hundred sites with Internet for education, training and government relation to support small business around the concept to use the telecenters to promote education for the small business and opportunity to develop new supporting center and development for the communities. With the intention to support more expansion of this program the Venezuelan Government just announced during March 2005 that a committee from Venezuela science and technology ministry visited China to finalize details of the Purchase a Communications Satellite. The Satellite will support projects in the Andean Region and to address the needs of the rural areas of Venezuela.

Colombia - The Compartel Program is a six-year initiative to provide telecommunications access to public institutions in Colombia. The Project was divided into three phases to support Rural Telephony, Telecenters and Broadband Internet access. In particular, the third phase of Compartel was designed to support Broadband Internet access for more than 3700 sites throughout Colombia. The project involves providing a high-speed Internet service together with access LAN support and PCs for local municipalities, schools, hospitals, and military sites in the five regions. Comsat International and American Inalambrica was selected during the mid of 2004 to provide the access through state-of-the-art Broadband VSAT technology in combination with fixed wireless equipment to enhance the local coverage zones. The program intend to expand the services during 2005 for few more thousand sites distributed between the projects named Compartel Rural Telephony Program, The Compartel Social

REGIONAL UPDATE

Internet Program and the Compartel Broadband Connectivity Program for Public Institutions

Peru – Peru was one of the first countries in Latin America implementing Rural Telephony via Satellite during the 90's and satellite was already the solution. With the support of the World Bank developing agency a new program to expand Internet Access and VOIP to the remote areas is going to be issued during 2005. The new program target to provide not only distance education but also Internet for the community in remote and isolated areas. The project will be implemented in thousand of cities and villages in Peru. The intention is to use the best technology available together with WiFi technology to expand broadband access to 2,900 rural towns for Telephony and Internet access services for more than 2 million rural inhabitants during 2005. The amount of investment estimated for each SME is US\$ 3,500 in addition to the US\$ 15 million of subsidy provided by FITEL.

Chile – Chile was another country where Rural Telephony via satellite was implemented during the 90's. During the end of 2004 Subtel issue a bid for a special project for schools in isolated areas. The project was awarded for a group of companies to provide Internet access to school in more than 600 cities in the remote areas of Chile. The project didn't specify satellite as access technology but the majority of sites were located in locations that satellite will be the only solution. During 2005 another project focus in the health area is planned for more than one thousand cities around Chile.

Argentina- Argentina has been using satellite for rural telephony during the 90's. During 2002 Argentina developed a project for the Internet to the Schools. The project was on hold for the last two years because of the economic situation in the country. But since the

Government had starting finalizing the negotiation with the World Financial Community last March the potential for this project become a new phase for Argentina become positive for 2005.

Brazil – Brazil started a program called GESAC to break the digital divide during the end of 2003 and Gilat was the operator selected to implement the services for 3,100 sites. Last December 2004 the Government awarded an expansion and upgrade for the program that is going to reach 4,400 cities to provide Internet and VOIP and potential distance Learning programs until the end of 2005. The new phase of the project was awarded to Comsat International, its Vicom subsidiary in Brazil. This program will provide an integrated communications network for broadband Internet access, Voice, Data, and Application Services to schools and municipalities throughout Brazil.

This phase of the GESAC Program is to be implemented under a 30 months contract valued US\$ 42 Million. GESAC is a Brazilian Government initiative for digital inclusion and connectivity for undeserved areas of Brazil. This second phase of the program adds new services and additional sites to the original project in which Comsat's Vicom unit participated as a subcontractor. Brazil other project is being implemented by Telemar. Telemar is the regional Telco covering North, Northeast and SoutEast part Brazil. Telemar just selected Siemens and Nera to implement rural telephony via satellite with a DVB-RCS platform in more than 2,000 cities in Brazil to comply with the ANATEL universal telephony services in the remote areas of Brazil but will allow to provide internet connectivity at the same time.

The Brazilian Government is planning to implement during 2005 a new challenging project named PC Connected. The main intention is to provide seven million computers for homes of the

population of Class C (medium income). The same project will provide 1.8 million computers to SME (Small and medium enterprise). Both Projects the government intend to provide Internet Access with dial up or broadband and finance the equipment and services.

In Addition of the Country by Country Projects the Institute of the Connectivity of the Americas (ICA) is implementing during this year a Regional project to reach all Latin America region called E-Link Americas. The project will use a mix of Satellite and WI-Fi solution to support projects in the education and health areas in the region. This project is developed in collaboration with the World Bank and the Organization of American States, as well as Canadian and regional companies, regulators, and governments.

The potential for the Latin America in 2005 is very positive for this specific market segment that use Satellite to break the digital gap considering this country by country and regional projects. **SM**

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VIEWPOINT

Vertical Integration in the Teleport Business

by Bruce Elbert
Application Technology Strategy, Inc.

The number of satellite operators has been dwindling over the past ten years, but their average size has increased markedly. This allows mega-operators to show larger numbers in terms of available capacity, revenue and profit. A new breed of owners will seek added cash flow from satellites already launched (our industry's version of a "sunk" cost). However, we have a situation today where sought-after large purchases of transponder capacity are relatively infrequent and operators are motivated to find new revenue streams that don't cost them too dearly.

New revenue opportunities for operators fall into three categories:

(1) those from ancillary services that the existing organization can reasonably provide (partial time/partial frequency transponder capacity, teleport transmission from existing earth station sites, systems integration, and consulting);
(b) those obtained by growing through developing a new communications platform (direct satellite broadcasting to the consumer, broadband access using low-cost VSATs, and mobile communications to a specific community such as government users or civilian aviation);
and
(c) acquisition of a teleport operator that provides one or more of the

previous revenue generation capabilities.

In this article, I'll focus on the teleport service segment, and examine the tradeoffs of building up the internal capability versus purchasing an existing service provider with known revenues. Also discussed is how dedicated teleport operators manage to survive in this environment by focusing on niches in media and government services.

The Teleport Business Today

As discussed by Virgil Labrador elsewhere in this issue, the teleport business is a vital segment of the overall satellite industry because you cannot provide or deliver any satellite communications service without at least one working teleport site. Along with this, there is demand for the teleport service in any city that needs a connection from the space segment to the terrestrial infrastructure (telephone system, the Internet or a primary user location). Under US regulatory policy, every C, Ku and Ka-band teleport earth station must be licensed by the FCC.

Teleport sites are like orbit slots – the best "locations" are valuable because of access to an attractive customer base. Thus, a centrally located teleport in Los Angeles, New York or London would allow the operator to satisfy bandwidth and service demand where the money is. The one big difference from a "hot bird"

orbit slot is that capex and opex within a major city can be substantially higher than the corresponding amounts for a more remote location.

There are other important differentiators besides location of the teleports. A given teleport operator will have entered the industry from a unique perspective, based on the application and customers being served. Thus, the teleports that form Ascent Media derive from services to cable and broadcast television (i.e., media), and their prime locations are in places like Los Angeles and New York City. As is evident from their informative website, the company has a very broad range of services and satellite transmission is but one element of the overall package that they can put together.

Niche Operators Can Be Successful

Lyman Brothers, out of Salt Lake City, has focused on the government transmission sector and thus ably serves the varied satellite communication needs of a variety of agencies, ranging from the US State Department and DoD to emergency management departments in several western states. Their two-way digital links are provided on a dedicated

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(SCPC) basis or through broadband VSAT equipment from iDirect and others. The two primary teleports of Lyman Brothers have individual business names and markets. LBiSat concentrates on the western region and state government customers from its teleport in Jordan, UT (the Salt Lake City area). Globalsat, on the other hand, is stationed in Laurel, MD, where it can address the needs of the Federal government and particularly the US military and Department of State. Lyman Brothers prides itself on its ability to respond quickly to customer needs and to provide a good service at a reasonable price.

The fact that a given teleport operator has grown its business from a single root is born witness by my personal experience with one of the high-flyers on the 1980s. IDB, founded by Jeffrey Sudikoff, started with a small site in Culver City, CA, and grew by a combination of internal development and acquisition. GlobeCast now owns that teleport which still exists on Washington Blvd just across from Sony Pictures (and having more antennas per square meter than anywhere else I've encountered). Jeffrey leveraged smart buying of equipment and bandwidth into rapid growth in virtually every segment of commercial satellite communications. Locations were added in Los Angeles and New York City, and he ultimately purchased from ITT a little-known international record carrier called WorldCom. When IDB ran into serious financial difficulties, the teleport was sold off to Keystone Communications (later acquired by GlobeCast) and the carrier business to none other than Bernie Ebbers. The latter adopted the WorldCom name and the rest is history. Interestingly, no satellite operator at that time was interested in purchasing these assets in order to grow revenues.

Vertical Integration for Satellite Operators

During the same period, I was part of the Hughes Communications (Galaxy Satellites) team and was asked to update the marketing plan. Back then in the mid-1980s, we were very much a pure space segment provider. In fact, our market focus was on full transponder sales. I was charged with expanding our business into more vertical markets to generate additional revenues, primarily from empty C-band transponders. I explored the teleport market to consider how we could "monetize" some of these transponders in a way that didn't cost a lot of money. What I discovered very quickly was that the teleport business requires investment in more than antennas and buildings, of which we had several; you had to commit capital and human resources to grow capabilities in video and private line communications services. I quickly learned that it was more effective for us to seek out smaller space segment users who were not interested in bulk transponder purchases yet who could produce good revenue streams in the aggregate.

Times have changed and literally all of the pure space segment buyers are more than adequately addressed (they are also quite astute at playing one provider of space segment off against the others to get really excellent deals). Teleport operators have been for sale from time to time – SES Americom purchased Verestar and Intelsat purchased COMSAT General (the oldest teleport operator in the world). Previously, PanAmSat developed teleports in Napa, CA and Atlanta, GA. These were added to those in Fillmore, CA, Castlerock, CO and Brooklyn, NY, gained through the merger with Hughes Communications. These capabilities give the satellite operator more direct control over the ground segment piece to protect the space segment piece of the business from competitive buying. Integration with readily-available fiber services has produced what PanAmSat calls a "virtual teleport" which is not tied to one particular city. What a customer can expect is true one-stop shopping with their preferred satellite operator and pay for services from one bill.

Advancing Teleport Technology

At the World Teleport Association/ Society of Satellite Professionals International panel I chaired at NAB '05 a few weeks ago, executives of prominent teleport technology firms described how an operator can put a network together to serve the new media. Ovadia Cohen, Vice President, Marketing, Scopus Network Technologies, discussed the integration of IP content into an MPEG stream to employ multicast and unicast modes or delivery. John Delay, Director, Strategic Management, Networking and Government Solutions, Harris Broadcast Communications, reviewed their vision of a multi-service platform that uses satellites and terrestrial networks to take material from one location and deliver it almost anywhere and to a multitude of devices. Jim McGrath, Senior Vice President, Engineering & Technology,
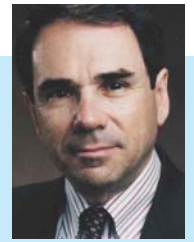
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Ascent Media Systems & Technology Services, reviewed the systems integration experience and accomplishments of his firm in serving broadcasters and new media providers. And finally, Thomas Parish, Vice President, Broadcast Technologies, Globecomm Systems, Inc, presented some case studies where the latest technology may address needs in rather remote parts of the planet. What I take away from this is that a small or large teleport operator has many ways to proceed and can purchase literally any capability from manufacturers and integrators such as the above.

Some New Directions

Telesat Canada recently took vertical integration one step further by purchasing The Space Connection, one of the largest resellers and packagers of transmission services based here in Southern California. This company, run by its former owner, Bob Patterson, has done an excellent job of piecing together the bits of satellite and terrestrial capacity needed to get video, audio or data from one place to another. Of course, The Space Connection has used literally every satellite and fiber carrier in the business, so it is likely that Telesat will continue to rely on that business model.

These examples and samples of teleport businesses demonstrate that there has been and will likely continue to be room for lots of players. Efficient and responsive smaller teleport operators like Lyman Brothers can flourish at the same time that giants like Ascent Media and GlobeCast grow into big markets that demand big investments (and a large operations staff). Satellite operators can bulk up their operations and add revenues through the teleport mechanism since many of their customers will want to outsource satellite transmission. I can also see partnerships and cross-ownership models evolve as pieces of the puzzle come together to serve some of the new media like content distribution and interactive entertainment. **SM**

Bruce Elbert has over 30 years of experience in satellite communications and is the President of Application Technology Strategy, Inc., which assists satellite operators, network providers and users in the public and private sectors. He is an author and educator in these fields, having produced seven titles and conducted technical and business training around the world. During 25 years with Hughes Electronics, he directed major technical projects and led business activities in the U.S. and overseas. He is the author of The Satellite Communication Applications Handbook, second edition (Artech House, 2004). Web site: www.applicationstrategy.com / Email: bruce@applicationstrategy.com

Executive Spotlight

Interview with iDirect CEO John Kealey

*F*or our executive spotlight this month, **SatMagazine** Managing Editor, **Virgil Labrador** interviewed **John Kealey,** CEO of Herndon, VA-based iDirect Technologies. Kealey was recently awarded the "Satellite Executive of the Year" award by Access Intelligence during the SAT 2005 trade show in Washington, D.C. iDirect also won "Teleport Technology of the Year" award from the World Teleport Association given at the same trade show. Established in 1994, iDirect Technologies first dedicated itself to the development of satellite modems for VPN applications. In 1998, the company released the DAMA NetModem Broadband Router, strategically enhancing the company's technology offerings to address the Internet and related broadband services. Kealey was brought in to organize a new management team in December 2001 and just six quarters later managed to achieve profitability. The company revenues grew 150 percent last year and expects to grow at aan average rate of 50 percent in the next few years. In a candid interview, Kealey explained their strategy and provided insights on the broadband market. Excerpts of the interview:

Q. *For the benefit of our readers, give us a background on your company and the major milestones and turning points that got you where you are now?*

John Kealey (J.K.) I've been with the company only since very late in 2001, so I experienced directly only the last three and a half years, but from what I gathered, the first seven years was spent focusing on product development—there was a bunch of very smart engineers that came together and had really one thought in mind and that is that IP and broadband communications were going to matter. Now today that's a pretty easy mindset to get into but back in 1994 that was a pretty bold thought. Most of the world did not have internet access, did not have e-mail addresses, or did not live off their Blackberrys, if you will. It wasn't yet crystal clear that IP will become the standard that it is today and that broadband networking will be as needed as it is

today. So I give them a lot of credit for having the foresight and guts to say that it's going to be a big market.

Satellite has wonderful characteristics such as pervasiveness, so that satellite would be a great way to transport IP packets to various applications to various places around the world. The thinking then was they are going to build a product that is uniquely positioned to do that as efficiently as it possibly can. So they did that and they funded it through, like a typical start-up, consulting projects, angel money, friends and family and the like. They added an engineer here and there and then in the late 1999- early 2000 timeframe and the

world of venture capital changed dramatically and almost every business plan imaginable was getting funded—they raised a lot of capital and finished the product to a state that it could be rolled into the market and made commercially available. And then they made some very interesting decisions on the business, at one point tried to be a network operator. Then this management team was brought in the very end of 2001. And we made some very early decisions—we had a phenomenal technology and a great engineering team and we were going to build a technology company around that group and around that technology we had in place. And we were going to partner with network operators around the world to get that product to the hands of end-customers being commercial and government

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"We see an insatiable demand for broad band connectivity around the world. Every business, every educational institution, every government agency needs broadband connectivity—it's just a matter of how we get it to them."

customers. And we began to build out network operator base in early 2002—we targeted several verticals such as oil and gas and government—DOD specifically—the military. These are big users of satellite communications and we felt we really got a product that has incredible value compared to competitive products and we should have success in those markets and on the whole we did. So we leveraged that success into a lot of other verticals beyond oil and gas and DOD and built a very large network operator base.

Q. When you came on board did you have an equity share in the company?

J.K. Every one of our employees has equity participation in our company.

Q. In 2001 what was the reasoning behind bringing an outsider like you into the company?

J.K. The board concluded a couple of things: one of them was the product was ready for commercial acceptance—a lot of development work has been done, a great engineering team has been built, but now you needed to build a company that had more infrastructure than that—so you had to put in sales, marketing, operations, etc. There was a management team in place and that management team took the direction of being a network operator, the board concluded that that was not the right strategy. So, what they wanted us to do was to build the sales,

marketing and operating team to work with the rest of the engineering team. One of the board members is a gentleman I have done business with and had a long-term business relation with and he knew I had a background in telecom, not only the services side but the infrastructure side and he recruited me.

Q. When did you become profitable?

J.K. In fact we achieved profitability in 2003, within six quarters of the installation of the new management team.

Q. To what do you attribute your success?

I attribute it all to the guys and gals in our management team. It's really been a team effort. It really comes from a deep understanding of what our business model was—where we needed to focus and bringing intense financial discipline and management to the company. We understood that you can build a fairly big business quickly by partnering with companies that owned all of the enterprise end-user accounts. There are many network operators in the world—we needed to create

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the right partnership with them—one that is profitable for them as well as for us- build that base pretty broadly and you can build momentum very quickly. We needed to be very disciplined on how we manage our overhead structures. So we keep our overheads costs extremely low and charge a fair price, so that we can make sure that we earn a profit on the products that we are selling. We also learned a lot of tough lessons from the late 90s early 2000 timeframe that there should be no "build and they will come" mentality. You have to do things that make absolute economic sense and be very disciplined in your execution.

Q. Talk about your unique strategy of "cooperate before you compete'?

J.K. We understand at iDirect that our job is to help our network operators make money. We have a model that helps them get to profitability that is always focused on helping them be more successful and that is going to give us an opportunity to make money also. So that's how we got fast acceptance in the marketplace in difficult economic times, so that we had to focus on what is truly most important to our customers—that is, make me more profitable, help me reduce my operating cost and help me get a better return on my capital investment. Let's not get lost in features and functionalities and all these wonderful buzz words—make sure that your sales organization understands that they are there for one reason and that is to make their customers more successful.

On our strategy of "cooperation before competition," we have to grow the overall market. As CEOs of companies our job is not to grow the business, but to grow the business opportunity. If my salespeople are selling into a $100 million market –they do not have nearly the same opportunity as in selling to a billion-dollar market. Overall as an industry, if we can do things to expand the overall addressable market for us, then collectively we're all going to be more successful. So we work

together towards that and afterwards we can compete. You may get a bigger piece than we get—good for you, shame on us—but if we don't work together to grow the market, even if you get a bigger piece it may not be that big.

So we need to do things as an industry like drive down the overall cost to provide a bit of data via satellite, because by doing that macroeconomics will help us expand our overall market opportunity. We have to raise awareness of satellite technology across the enterprise and across the world so that CIOs and CTOs realize that satellite communications is a great alternative for IP transport in many places around the world where they are trying to get broadband connectivity. If the CIOs and CTOs of the world are not aware of this, then it's our fault, not theirs. If we work together as industry to drive the costs down and raise awareness, we will expand our market opportunity and then we can go and compete for that business.

Q. How successful are you in this strategy and how have your competitors received this strategy?

J.K. To be perfectly candid, we have not been successful at all. I wish I could see more industry cooperation. We just

can't give up on it. I think we have to do it and find the right forum for it. We've very busy running our business and probably preaching too much and not doing it enough. Other industries have done it.

Q. Tell us more about your IP Alliances program?

J.K. The IP alliance strategy is working very well for several reasons. First of all, our customers usually inte- grate our technology with other kinds of technology, so we are an edge access device, if you will, for IP transport. Then once you have the IP access you're going to use that for something, right? Like you're getting broadband access for a computer or run a VOIP phone or do a videoconference. Our network operators like to know that there are a lot of different products that I could connect to your device and it would be nice to know that you've done some basic evaluation on them and you could give us some feed- back on which one performs better or worse across satcoms. And so we do a lot of work essentially to evaluate those products and then that makes it easier for them to provide voice, video and data services to their customers and they are going to sell more of our products. So that's kind of our view, since we know a lot about our technology, let's go ahead and do some of the evaluation for them so we make it easier for them to do their job.

And then, we develop partnerships with these technology companies and that does a few things for us. First, we may get an opportunity to see some of their deal flow, so they are going to have customers who could use satellite connectivity and they'll bring those deals back to us. Secondly, it gives us some insight into where those technologies are going. We establish a closer partnership with them and we understand where the technology is going and that helps us make sure that we continue to evolve our product in a way that would enable it to perform best with the other products that are going to hang off it. So it gives us some idea where

Executive Spotlight

the market is headed and gives us feedback from their customers.

Q. So in essence you are getting synergy from these companies while letting you focus on your core technology, is that correct?

J.K. Yes, realizing of course at the end of the day, we effectively extend the pipe. But off that pipe there will be many other applications and technologies and its best if we make sure that those all work together and perform extremely well. Because if that overall experience is better for the end-user then they will buy more of our products and that's good for all of us.

Q. What are your impressions on the broadband market?

J.K. It goes back to what I said earlier that ten years ago when we started, there was hardly any internet to speak off. But now how do you educate a child today without broadband access, how do you run a hospital and even the smallest of businesses without broadband connectivity. So you very simply conclude that everybody needs broadband access, everybody who is going to participate in the economy in any reasonable way needs broadband

connectivity. And the terrestrial last mile isn't there in a lot of parts of the world yet. That means that there is an opportunity for the other networks to come in to provide broadband connectivity. So that why we at iDirect are seeing pretty healthy growth around the world and we think it will continue to grow because people are not going to wake up in the morning and say "you know what I don't want broadband anymore, it will be great to go back to dial up." So we see an insatiable demand for broadband connectivity around the world. Eevery business, every educational institution, every government agency needs broadband connectivity—it's just a matter of how we get it to them.

Q. How is your company's position in the broadband market?

J.K. I think we have a very good position in the broadband market. As you know, a lot of the VSAT market has been narrowband, like point-of sale applications, certainly that not an area of the market that we focused on. We focused on broadband connectivity and I think that when it comes to number of network operators that provide iDirect technology as their broadband solution, defining the

market that way, we have a very position in the market.

Q. What can more we expect from iDirect in the coming months?

J.K As you know, we have the Infinity product and that's going to allow us to enter into areas of the VSAT market that we haven't been in the past. Continued aggressive rollout globally and as you can appreciate that by itself can be all-consuming, recruit people and train them and go into new markets and partner with network operators. Continued focus execution. Roll the platform that we've built in parts of the world towards the entire world. Continue to build our distribution broadly and build more creative products that we can pump through that distribution channel. In sum, better vertical market penetration, better market segmentation. **SM**

MARKET INTELLIGENCE

Interactive Satellite: GVF Meets the Challenges of New Installation Standards

by Martin Jarrold
Chief, International Programme Development, GVF

"The quality of satellite signals has been significantly degraded due to earth stations that are improperly installed and commissioned."

-Inter-Union Satellite Operations Group

A very costly problem indeed!

The identification by the Inter-Union Satellite Operations Group (ISOG) of the chronic problem of satellite signal interference as a major industry issue in many parts of the world, linked with the fact of there being no real regulation of ground equipment installation quality, together with the absence – in many areas of the world – of any authority that offers guidance for installers, is the three-part premise to which GVF has so successfully responded with the development and deployment of its VSAT Installation & Maintenance Training Program.

A product of the GVF Education & Training Working Group (E&TWG), the already well-tested VSAT Installation & Maintenance Training Program was created to serve as the global industry standard for installers of bi-directional satellite earth stations. It represents a consensus of the expert volunteer members that comprise the E&TWG, in pursuit of the Group's mission to identify, formulate and share knowledge that is beneficial to the satellite industry, it shareholders and stakeholders.

Today's increasing deployment of innovative, two-way, interactive, broadband satellite networks has created new challenges for the satellite operator, system integrator, and equipment installer communities in many parts of the world because installation procedures for such satellite systems are complex. As demand for and installation of these satellite-based solutions rises, the absence of an industry-standard installation training course has meant that such satellite industry companies have paid a steep price due to signal interference, arising from the "downstream" costs of network inefficiencies, low mean time between failures, higher maintenance and after-sale service requirements, as well as impaired customer perceptions. This steep price can mean many thousands – and in some cases millions – of dollars in increased costs and decreased competitiveness.

GVF has already begun rolling out the training course worldwide, using a network of GVF instructors based in the Middle East, Africa, Europe, North and South America, and Asia. The response to this deployment – from installers, service providers, manufac-

turers and satellite communications customers – has been overwhelmingly positive. For example, GVF delivered the training course to personnel of the U.N. High Commission for Refugees, by whom the course was described as "one of the best technical courses that had ever been given to the U.N."

Ongoing demand for the training course continues to come both from within the industry and from organizations that depend on satellite solutions to support their communications operations, including:

Commercial entities e.g. banks, oil & gas companies, retailers, GSM operators, etc.
Inter-governmental groups
e.g. U.N., E.U., World Bank, etc
Government operations
e.g. the military, telcos, public security, etc.
Relief Organizations
e.g. World Food Program,

An instructor's aid: pointing out how to... © GVF, 2005.
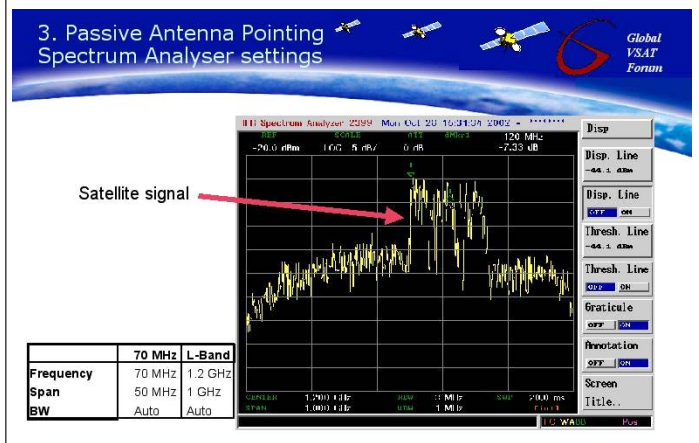
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A recognition of achievement: The course certificate © GVF, 2005.

Save the Children, Oxfam, etc.
Educational institutions
e.g. African Virtual University

In order to service this demand GVF aims to provide access to the training course through a wide range of delivery mechanisms, including specifically

training course-dedicated events that are deliverable anywhere in the world, and also in association with as many relevant satellite and telecommunications industry-related events as possible including, in London over 11-12 May, at Mediacast 2005 located at the Olympia conference and exhibition facility.

Mediacast is a key event in the telecommunications industry calendar. It will this year, for the first time, incorporate this training opportunity for the further professional development of the satellite equipment installer community, an industry that can now fully ready itself for the full exploitation of the manifold revenue opportunities presented by the growth of broadband interactivity over two-way satellite.

For more information on the GVF VSAT Installation & Maintenance Training Program contact me at martin.jarrold@gvf.org, and for details of the Mediacast training course visit www.mediacast.net/gvf. **SM**

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

STOCK MONITOR

COMPANY NAME	Symbol	Price (April 28)	52-Week Range
APT SATELLITE	ATS	1.32	1.25 - 2.12
ANDREW CORP	ANDW	12.10	9.30 - 21.08
ASIA SATELLITE TELECOMMUNICATION (ASIASAT)	SAT	18.80	15.20 - 19.81
BALL CORP	BLL	38.98	30.20 - 46.45
BOEING CO	BA	58.72	42.29 - 60.10
BRITISH SKY ADS	BSY	41.10	33.22 - 50.40
CALAMP CORP	CAMP	5.48	5.12 - 10.50
C-COM SATELLITE SYSTEMS	CMI.V	0.34	0.32 - 0.60
COMTECH TELECOM	CMTL	34.20	9.9533 - 36.65
THE DIRECTTV GROUP	DTV	13.95	13.88 - 18.81
ECHOSTAR COMMUNICATIONS	DISH	28.47	26.95 - 34.68
FREQUENCY ELECTRONICS	FEI	11.63	9.80 - 16.05
GILAT SATELLITE NETWORKS	GILTF	5.95	3.95 - 8.03
GLOBECOMM SYS INC	GCOM	5.85	4.67 - 7.58
HARRIS CORP	HRS	28.13	21.185 - 35.00
HONEYWELL INTL	HON	35.93	31.85 - 39.50
INTEGRAL SYSTEMS	ISYS	20.75	15.35 - 24.70
KVH INDS INC	KVHI	10.10	6.61 - 15.84
L-3 COMM HLDGS	LLL	70.14	56.20 - 77.26
LOCKHEED MARTIN CORP	LMT	60.47	46.38 - 62.98
NEWS CORP	NWS	15.88	15.305 - 19.41
NORSAT INTL INC	NSATF.OB	0.705	0.425 - 0.83
NTL INC	NTLI	63.94	46.65 - 73.79
ORBITAL SCIENCES	ORB	9.75	8.94 - 14.19
QUALCOMM INC	QCOM	34.84	30.90 - 44.99
RADYNE COMSTREAM	RADN	7.45	6.26 - 10.00
SCIENTIFIC ATLANTA	SFA	30.42	24.61 - 36.35
SIRIUS SATELLITE RADIO	SIRI	4.73	2.01 - 9.43
SES GLOBAL	SDSFa.F	10.25	6.30 - 11.10
TRIMBLE NAVIGATION	TRMB	34.32	21.55 - 38.24
VIASAT INC	VSAT	18.30	16.79 - 25.17
XM SATELLITE RADIO	XMSR	27.25	20.35 - 40.89

For real-time, up-to-the-minute stock quotes of satellite companies go to:
www.satnews.com/free/finance.html