



The sun is shining

Once again held at the Washington Convention Centre in Washington DC, the Satellite 2007 Conference and Exhibition renewed its position as the leading satellite event in the world.

According to the organisers, this year's event, held on 19-22 February, boasted some impressive numbers: '50,000 square feet of cutting-edge satellite technology under one roof', hosting more than 270 exhibitors and their staff who had the opportunity to strike lucrative business deals, discuss the latest industry trend or quite simply meet up with old friends. In terms of participation, the three-day event was an astounding success: more than 8,000 attendees registered

Giovanni Verlini, Editor of Satellite Evolution Asia, reports from the Satellite 2007 Conference and Exhibition, an event that traditionally sets the tone for the year ahead in the global satellite industry.



Solutions' and 'The Middle East: Commercial, Government and Enterprise Opportunities'. But what was the underlying mood that could be felt on the floor at the twenty-sixth Annual Satellite Conference and Exhibition?

The opening salvo

As for any conference in any industry, the best possible occasion to understand the general feeling in the industry is the opening session. As by tradition, at the Satellite event, the opening session was dedicated to the CEOs of global satellite operators.

Interestingly, while in the past the session was dedicated to those companies that were once known as Fixed Satellite Service (FSS) operators, this year the panel was made up of executives from companies operating in FSS, but also in Broadcasting Satellite Services (BSS) and Mobile Satellite Services (MSS). This fact could be taken as a sign of the times: consolidation is finally having a visible effect on the industry. In fact, during the days of the conference, an announcement from the North American Digital Audio Radio Satellite (DARS) operators XM Radio and Sirius was made public: the two companies, barring an intervention from the Federal Communica-



as exhibitors or simple participants - a remarkable ten per cent increase from Satellite 2006. Decision makers from 50 countries, representing all sectors within the satellite-enabled communications marketplace, military, enterprise, broadcast, emergency response, and commercial, gathered in the US capital city to get up-to-date with what is going on in the industry.

The conference side of the event was equally impressive. More than 300 speakers presented a total of 45 panel discussions targeting satellite technology-end users within the enterprise, military, and broadcast markets. Topics covered included: 'Business Continuity via Satellite: How Real is the Opportunity?', 'Space Situational Awareness: A Neighbourhood Watch in Space', 'Emergency Response



C2SAT introduces new stabilised 4 axes VSAT antenna

C2SAT formally introduced its new Stabilised 4 Axes 1.2 m VSAT antenna. The new antenna constitutes the first product in a series of stabilised satellite terminals based on the same mechanical rig, where the high performance inherent to the patented design produces a competitive edge for a range of transponder frequencies and satellite dish sizes.

Best-in-Class Accuracy

When in motion, the system achieves superbly high 0.1 dB satellite tracking accuracy, which is comparable to a terrestrial satellite antenna. The high tracking accuracy is a result of the system's gradient tracking method, a predetermined tracking parameter and the 4 Axes design, where the fourth axis refers to the cross-level elevation. Higher accuracy results in improved availability, more efficient use of shared lines and network bandwidth, lower transmission power, and wider operational area in the satellite footprint. It also permits equally perfect communication whilst operating under severe and harsh conditions.

Fast and More Robust System

The system is faster due to the gimbal design with AC servo motors on each axis, and the gradient satellite tracking method on all 4 axes. Where competing systems need minutes, the system locks on the satellite within 6 sec acquisition time, starting from its parking position. This also speeds up the transition from one satellite to another and results in extremely fast recovery time. Because the gimbal design excludes the balancing counter-weights usually necessary in centre pole-based systems, the servo motors on the axes are subjected to less torque. This also leads to lower stress on the mechanical rig. The construction is ruggedised and designed to meet US MIL-standards, including shock, vibration and EMC.

Always On

Other maritime systems commonly experience sync losses, down-times and restarts when a vessel rolls back and forth and the satellite is located in zenith, or when an object such as a ship's mast or a dense thundercloud interferes with the signal-based satellite tracking method.

C2SAT's 4 axes design combined with the predetermined tracking parameter keeps the antenna targeted at the satellite at all times, whether or not the satellite is in line of sight. This is key in providing truly reliable Satcom services that are "always on, not almost always on".

"In addition to the superior performance of the system, customers wanting to simplify the service and maintenance endorse our modular approach and easily accessible construction" says Fredrik Hånell, CEO of C2SAT. "The system has proven itself in customer tests and trials, and judging from the commercial response we get it clearly fulfils a previously unsatisfied need in the market."



tion Commission (FCC), are to merge.

But who were the executives on the stage? David McGlade, CEO of Intelsat; Andrew Sukawaty, Chairman and CEO of Inmarsat; Romain Bausch, CEO of SES Global; Giuliano Berretta, CEO of Eutelsat; and Michael B. Targoff, CEO of Loral Skynet.

The themes introduced by the moderator as the latest 'hot' trends in satellite were, of course, High Definition (HD), Internet Protocol Television (IPTV) and broadband. However, as it often happens in these cases, the really interesting debate revolved around something completely different: consolidation.

McGlade opened the discussion with an extremely positive preamble: this is a great time for the satellite industry, with the underlying situation being completely different from the days back in 2004. The fundamentals are improving, and we can look forward to a good few years of growth.

Sukawaty, who spoke soon after McGlade, brought the conversation back on the topic of consolidation. He stressed the fact that consolidation is affecting even a relatively small sector as MSS, as the operation of Inmarsat taking over ACeS in Asia clearly shows. His outlook on the industry was also positive, although he warned

that in the MSS sector there are projects that might be spiralling out of control. In particular, Sukawaty mentioned 'constellation projects' that are projected to cost up to US\$4 billion, and that, in his personal opinion, do not make much business sense. He asked himself and the audience: how do they plan to recoup their investments?

Bausch, on the other hand, spoke of consolidation from the point of view of SES GLOBAL: "We are in a consolidation mood since 2000." The main result of this trend is the rationalisation of the industry, he said, as new investors (ie, private equity firms) have brought financial discipline. The difficulty, however, is integration, Bausch stressed. "A merger of equals is difficult, while absorbing a smaller entity is a much easier task." Finally he added that SES' deal with GE shows how under present market conditions divesting assets is also a possibility.

On this latest issue, the moderator asked Bausch what was the significance of SES Global shedding their interests in AsiaSat and other companies. "We now have three 100 per cent controlled companies (ie, SES AMERICOM, SES ASTRA and SES NEW SKIES), and this gives us more freedom of operation and more flexibility. When you have a minority position in a company it is difficult to leverage



Comtech EF Data awarded Teleport Technology of the Year by WTA

Comtech EF Data Corporation received the 2007 Teleport Technology of the Year Award by the World Teleport Association (WTA) for its DoubleTalk™ Carrier-in-Carrier® technology. The WTA presents the Teleport Awards for Excellence each year to organizations and individuals whose achievements have been deemed exceptional by the international trade association and its awards committee.

A unanimous selection by WTA's Technology of the Year committee, DoubleTalk Carrier-in-Carrier by Comtech EF Data was cited for its ability to reduce bandwidth requirements by 50 per cent nominally, while keeping equivalent throughput and performance. The technology allows for both sides of a duplex link to be transmitted concurrently in the same segment of transponder bandwidth, which is of critical importance to teleport operators seeking to drive down costs and gain efficiencies as they serve customers.

"If you sign the checks for space segment," one of our com-



Daniel Enns, Senior Vice President Strategic Marketing and Business Development, and Bob Hansen, Senior Vice President of Global Sales and Marketing holding the award.



said Daniel Enns, senior vice president strategic marketing and business development for Comtech EF Data. "We appreciate the WTA's recognition of the unprecedented bandwidth savings that our DoubleTalk Carrier-in-Carrier offers for teleport operators, service providers and enterprise users."

The CDM-Qx and CDM-QxL Satellite Modems have a modular architecture that fits in a 1RU chassis.

The unique 4-slot chassis allows a cost-effective deployment of multiple modulators, demodulators or modems. CDM-Qx and CDM-QxL with DoubleTalk Carrier-in-Carrier address common challenges encountered in satellite communications, including reducing operating expenses for full-duplex links, increasing throughput or availability of full-duplex links without using additional transponder resources, reducing capital expenses by allowing a smaller BUC/HPA and/or antenna and managing limited rack space.

mittee members said, 'then this technology must be considered a true innovation that will continue to create value and shift the economics for anyone who chooses to adopt this method,'" said Louis A. Zacharilla, director of development for World Teleport Association, quoting one of the members of the awards committee. Zacharilla once again served as the emcee of the 12th annual Awards luncheon and ceremony.

Comtech EF Data's CDM-Qx and CDM-QxL Multi-Channel Satellite Modems are the first modems to present the powerful DoubleTalk Carrier-in-Carrier functionality. Designed for bandwidth compression, Carrier-in-Carrier is based on Applied Signal Technology's DoubleTalk™, which uses the patented "Adaptive Cancellation" technology.

"We are honored to be the recipient of this esteemed award,"

scale and do the things you would like to do," Bausch replied.

Berretta, on the other hand, maintained a positive outlook of the situation without forgetting to mention some of the possible problems looming ahead: "At present there is more discipline in the industry, and prices are not as bad as they used to be. However, while big players are consolidating, there is a resurgence of smaller national operators, and this is bad news for the industry."

New is beautiful

But what do the great and the good of satellite operators think of new satellite services? What is their role in today's industry? Even on this issue, the CEOs' ideas largely coincided.

Berretta observed how strangely things 'are going back to basics'. Television is resurgent in a way that it has not been for a while. "In our portfolio," he said, "Broadcasting now accounts for 70 per



Third-generation Eclipse products

AAE Systems, Inc. (AAE), a satellite-based equipment manufacturer and communication turnkey solutions provider, officially launched the DSR-12 and DSR-48 at Satellite 2007. The third-generation Eclipse products are digital satellite routers and will demonstrate a quantum improvement in network size and capacity, feature enhancements, as well as cost-effectiveness.

A number of feature enhancements are found in the new products, including the latest in Turbo Product Code, TCP enhancement protocols, advanced routing, and security capabilities. Switchless, seamless redundancy ensures that network operation never halts in the event of failure. The newly introduced products include an automatic adaptive rain fade and power control feature, as well as full featured QoS and traffic shaping tools.

Flexibility is a key benefit offered by the DSR product family. The Eclipse DSR products operate in True Mesh, Star, or a variety of DVB Hybrid architectures and easily accommodate the demands of any network. In addition to functioning as a satellite router, both the DSR-12 and DSR-48 can function in several designated operating modes acting in primary Moderator, secondary Moderator, or candidate Moderator modes. More units can be added to create expanded capacity for larger networks. This flexibility makes the Eclipse product line more accessible to the networking requirements of government, military, and commercial customers who increasingly value high uplink and downlink speeds at a node and desire to blend terrestrial solutions with their satellite backhaul.

The DSR-12 supports scalable uplink and downlink user data rate capacities between 340 Kbps to 12 Mbps. The on-board DVB-S/S2 receiver accommodates an additional throughput of up to 80 Mbps downlink. The DSR-12 is flexible and configurable to assume the Moderator role in smaller networks.

The DSR-48 provides scalable uplink and downlink user data rates of up to 48 Mbps, supporting larger networks and more capacity. The DSR-48 offers the versatility to function as multiple Moderators for independent networks on the same or separate transponders, or as a multi-carrier bandwidth aggregator in up to four networks. Another key feature of the DSR-48 is the ability to manage timeslot allocation.

Consistent with the current Eclipse product family, the third-generation of Eclipse products maintain full backward compatibility with the Eclipse DSM-1 and DMM-6 platforms. The addition of the digital satellite routers to currently deployed Eclipse based systems allow for continued expansion and support.

cent of our revenues, up from 67 per cent last year." In Value Added Services (VAS) price remains an issue, while he announced that Eutelsat is now looking into deploying Data Over Cable Service Interface Specification (DOCSIS) rather than Direct Broadcast Satel-

lite (DBS). Besides, maritime and aero services are also on the up.

Targoff, whose acquisition of Telesat Canada was largely commented by the rest of the panel, spoke of the fact that the explosion of IP is still a relevant topic. He said: "We will be using satellites for a host of Internet services, from DARS to Digital Multimedia Broadcasting (DMB) and more."

McGlade widely agreed with his colleagues, as he said that there are a number of areas of growth for the satellite industry that appear to be positive. But he also warned that now more than ever satellite companies need to maintain a balanced portfolio. Bausch agreed with McGlade and added that mobility is also an opportunity.

Sukawaty, however, explained how the MSS sector is different from the rest of the satellite industry. He said: "The growth in wireless is pushing MSS. Terrestrial wireless is not a threat to satellite as many people think." He also added how the maritime and aero sectors are demanding more and more bandwidth from Inmarsat.

But are these new applications as hot as many pundits keep saying? The question is far from being an academic one, as it is a well-known fact that so-called new satellite applications have largely failed to deliver in the past. In this sense, Berretta said that: "HD has not grown as people thought it would because pay-TV companies are reluctant to change decoders. The current generation of decoders has been amortised and there is no incentive for pay-TV operators to replace them as yet." He also insisted on one of his beliefs: IPTV is an absolute exaggeration, as it is not as effective as satellite to distribute TV.

His master's voice

Another area of extreme interest that was debated during the CEO roundtable was the role of private capital in the satellite industry. In this sense, the general consensus seemed to be that while a period of growth for the satellite industry lies ahead, expectations from investors of double digit growth as an industry norm would be misplaced.

Targoff stressed this position by saying that: "We are in the infrastructure business: we are not driving growth at a consumer level apart from a few exceptions."

Sukawaty said that while voice has grown in volume, competition from Iridium and Globalstar has put pressure on prices. He said:





Giovanni Verlini talked to Steve Spengler, Senior VP, Europe, Middle East, Africa and Asia-Pacific Sales at Intelsat.

Question: Looking at the Asia-Pacific, how would you view Intelsat's current position in the region?

Steve Spengler: The Asia-Pacific region is made up of so many markets: it is so fragmented and competitive, but also extremely challenging. Historically, we have done a lot of business in and out of China, with TV channels such as CCTV, but never any domestic-based business.

In India, on the other hand, we do international and domestic business through ISRO, who are our partners there.

Q: And what about the rest of the region?

SS: Southeast Asia and the Pacific are interesting markets for us: relatively speaking small, but very interesting. We are active in areas such as DTH and video distribution there.

Q: I seem to remember that you were involved in extraordinary activities of late. What happened?

SS: When the Taiwan earthquake severed six major undersea fibre optic cables, disrupting telecommunications throughout the Asia-Pacific region, Intelsat was able to restore services for many voice, video and data providers, some within hours of the event.

From the first reports of fibre communications disruptions, Intelsat was working around the clock to provide additional satellite capacity to customers throughout Southeast Asia. In one instance, we were able to establish a new 56 Mbps of Internet service for a Southeast Asian telecommunications provider within four hours after the fibre outage.



Q: Let us move on to other regions in the world. There has been a lot of noise about Africa of late. Are you strong in that market?

SS: Historically, Africa is a strong market for Intelsat, with many customers there being early adopters of some of the company's newer services such as managed services for IP, cellular backhaul, and broadband.

It is a very robust market that is growing, driven by deregulation and progressive regulation regimes. This environment has facilitated the introduction of new technologies.

Q: What is driving the African market presently?

SS: The main driver remains GSM growth, and Intelsat has been an enabler of that growth.

Q: Is there any interest in video?

SS: DTH is of interest in some areas. However, more interestingly, we are seeing an interest in TV channels coming out of Africa.

Q: There has been a lot of talk about transponder prices in Africa. What is Intelsat's position in this regard?

SS: Historically, prices have been on the low side in Africa, due to the fact that there was an over supply of capacity. The situation now is turning around, and it is important to stress, it is not company-specific.

Q: What is happening for Intelsat elsewhere?

SS: The Middle East and Northern Africa (MENA) is a very healthy market for Intelsat, because of international traffic, but also because of local demand. There are signs of liberalisation in the region, particularly from Saudi Arabia, which has recently issued licenses for VSAT operators to North Africa.

In Europe, Intelsat's position is different from that of SES and Eutelsat. Intelsat's customer base in the region is made up of international businesses with a presence in the old Continent. In this sense, our global reach gives us an advantage over our competitors. However, there are interesting signs of growth in Eastern Europe, in Romania, for example, as well as in Russia.

"Data has grown less, perhaps, but margins are better there." Then, once again, he made the point that financial discipline is needed in the MSS sector.

Bausch stressed how, perhaps in comparison with a few years ago, investors these days understand the business better, expecting a combination of growth and stability from their investments.

Berretta, however, refused to play by the same hymn sheet. He strongly reminded the audience that: "Our sector is capital intensive, and there is a choice to be made between growth and profitability." Producing one of his famous figures of speech that have made him into one of the popular satellite executives in the world, he said: "We should have a BMW rather than a FIAT approach: we deal with expensive articles that can produce fat margins rather than growth."

He then went on to say: "Besides, double digit growth is a kind of a myth in our industry. I prefer a constant 4.5 per cent growth rate with high profitability."

Targoff finally added that an element that distinguishes the satellite sector from other industries is the predictability, which is an attractive feature.

Size and scale

A looming question on the panel was that of size and scale: what does it take these days to be able to compete in a global market? The answer was clear: the ability to develop a critical mass. On the panel, however, there were two giants, Intelsat and SES Global, and two smaller operators, ie, Loral Skynet and Eutelsat – Inmarsat be-



FileCatalyst from Unlimi-Tech Software

FileCatalyst from Unlimi-Tech Software Inc. offers satellite data users and providers a software-only solution offering maximum throughput for large point-to-point or multi-cast file transfer applications. In addition, FileCatalyst can be easily installed in less than 20 minutes for fast, interactive collaboration on large datasets and is specifically designed for satellite-based media, government, military and enterprise Wide Area Networks (WANs).

Previous to FileCatalyst, satellite data users and providers relied on traditional software solutions for file transfers that were severely affected by degrading network conditions. Alternatively, users deployed hardware acceleration applications requiring three to five days to physically set up and test at each end of a transmission, while offering inferior connection throughput.

"We can guarantee a FileCatalyst customer's connection throughput improvement before we even deliver the software," said Chris Bailey, Unlimi-Tech's CEO, "and it is usually a dramatic increase. FileCatalyst provides a cross-platform file transfer solution that improves bandwidth utilization and file transfer reliability to save time and money. New features of FileCatalyst that benefit the satellite market include multicast, incremental transfers and compression on the fly."

Founded in 2002, Rain Network is a Brazilian company that has created a solution for the independent cinema market by interconnecting theatres in a digital network. With offices in Sao Paulo, Rio de Janeiro, New York and London, Rain Network uses FileCatalyst to transmit films in digital format, by satellite, cable and DSL to more than 120 locations around the world.

"We tested a number of products and decided on FileCatalyst from a company and technology perspective," said Fernando Fortes, Technical Manager of Rain Network. FileCatalyst features include:

- Transfer data at line speed, immune to affects of RTT and packet loss;
- No additional hardware requirements or line upgrades;
- Push and Pull files or entire directories;
- Incremental transfers of file deltas;
- On the fly compression;
- Industry standard SSL for control channel, and AES for data encryption;
- Automatically detect line speed with adaptive rate control;
- User based authentication with permissions control;
- Universal Plug and Play automatically maps required UDP ports; and
- Cross platform support (Windows, Linux, Solaris, Mac OSX).

ing a case apart. Are the two smaller companies going to remain competitive? The two CEOs in question left little or no room to doubt: yes.

Targoff said: "You need to have a certain size to be competitive, and with the acquisition of Telesat Canada we have reached that size." Berretta, also displayed an equally remarkable confidence: "With 23 satellites and US\$1 billion turnover we have the critical mass."

It's only rocket science

Of all the numerous interesting sessions held at the conference on topics as disparate as military sitcoms and emerging regional markets, the one event that really generated a heap of interest and sparked an animated discussion was launch services.

At the centre of the debate was the recent Sea Launch failure that caused the total loss of the NSS-8 satellite for the satellite operator SES New Skies.

The question on everybody's lips was: how long will Sea Launch be out of action for? At the time of going to press there is no certain answer to this question. Clearly, the unfortunate episode could have caused severe delays to the Boeing subsidiary, but this does not seem to be the case. Whilst damaged by the rocket explosion, the Sea Launch platform managed to sail unaided to its home port, where a thorough assessment of its condition is currently being carried out. Paula Korn, Director of Communications at Sea Launch, was able to confirm to your correspondent that according to a preliminary inspection, the damages suffered by the platform seem to be superficial, and that the platform could be sea-bound once again, relatively speaking, soon.

The story with the launch vehicle, however, is a different matter altogether. At present, the problem seems to be the fact that Sea Launch has no clear idea as to what caused the failure. Naturally, until the cause of the failure is identified no meaningful corrective action can be taken. At a press conference held during Satellite 2007, Rob Peckham, President and General Manager of Sea Launch, said

that an investigation into the accident has been launched, but that at this stage it is not possible to say when it will be concluded. Despite this uncertainty, however, Peckham was confident that Sea Launch will stick to plans to conduct two launches by the end of 2007.

The Sea Launch problems have come at a moment in time when launch slots are scarce in the commercial marketplace. According to Jean Yves Le Gall, CEO of Arianespace, this situation is the consequence of a number of reasons.

Firstly, the high level of demand coming from the US Government and Agencies that keeps US launchers such as Atlas and Delta extremely busy. Secondly, the slight delays being experienced by ILS as a result of last year's Proton failure. Thirdly, the lack of progress from launchers coming from space developing nations, such as Japan's H2A and India's GSLV, which so far have failed to make an impression on the marketplace. Finally, the ITAR regulation that prevents US-manufactured space gear to be launched on Chinese vehicles – a situation that was exacerbated by China's recent anti-satellite missile test.

In other words, according to Le Gall, there is no simple solution in sight: the current situation of under capacity can only be fully addressed when Sea Launch returns to market. And if this does not happen soon, then the entire industrial chain for the satellite sector will be slowed down considerably, with delays affecting manufacturers and satellite operators alike.

Conclusion

While at Satellite 2007 the doom and gloom of the early '00s was clearly a thing of the past, the positive business atmosphere was somehow lined with a few question marks: when will Sea Launch return to market? Are the new MSS constellations going to deliver on expectations? Will HDTV generate the business everybody has been predicting? What will be the long term impact of consolidation? For the answers to all this questions you will have to attend Satellite 2008. ■