

Satellite Executive BRIEFING

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Industry Trends, News Analysis, Market Intelligence and Opportunities

Satellite: The Secret to Successful Broadcast Events

More than ever, to compete businesses need to inform, engage and motivate employees, stakeholders, and constituents around the country or world.

by Dan Freyer

Employee training. Product launches. "Town Hall" meetings. Customer appreciation events. Shareholder events. Marketing lead-generation events. Conferences. More than ever, to compete businesses need to inform, engage and motivate employees, stakeholders, and constituents around the country or world. But how do you efficiently gather together large numbers of people in many locations at the same time while minimizing travel, other expenses, and wasted time? How do you meet "virtually" with staff, colleagues, suppliers or customers in real-time even if you can't be there physically?

Corporate Video Events – Benefits of Using a Satellite-based Service

Businesses, among them the likes of Nokia, HP, Microsoft, Apple, and others are turning to satellite experts to help them rev up their events. Satellites offer nationwide and global reach, letting you share your message cost-effectively with virtually any authorized and equipped site, and there are thousands of satellite-capable venues available around

(Continued on page 6)

Mobile Satellite TV for Europe?

by Elisabeth Tweedie

At the opening of CeBit Fair in 2006 Viviane Reding Member of the European Commission (EC) responsible for Information Society and Media said: "Mobile TV seems set to become the next high growth consumer technology," She then went on to argue in favor of harmonized European wide spectrum in order to facilitate Mobile TV. Three years later on May 13, 2009 the EC announced the award of two S-Band satellite licenses. Thus opening the door for the winning operators - Solaris Mobile and Inmarsat - to provide broadcast mobile satellite TV and other services throughout Europe. Unfortunately the path leading from that door is beginning to look more like an obstacle course than an open road.

Both companies received 2 x 15MHz pan-European spectrum in the 2GHz band, located adjacent to the UMTS spectrum. This spectrum can be used for hybrid satellite - terrestrial services including television, radio, internet and emergency services delivered to mobile devices. Reusing the frequencies terrestrially eliminates many of the issues associated

with satellite signals in urban areas and also allows for in-building penetration.

The first obstacle is that some of those frequencies have previously been allocated to ICO-P. For reasons too lengthy to explain here, although the first MEO satellite was launched in 2001, none of the remaining nine that would complete the constellation are in orbit.

The second obstacle is this is the first time that the EC has awarded frequencies. Licensing normally takes place on a national level with the ITU responsible for frequency coordination. Even though the frequencies have been awarded at a pan-European level Solaris Mobile and Inmarsat will still have to obtain national

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So many paths to choose from. So many technology providers, so many IP over satellite solutions. So many plans in your head.

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Fact #1: No technology provider offers in-house hardware and software expertise like Newtec does. Integration should not cost you extra.

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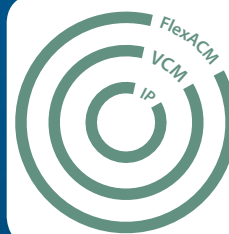
All things considered, maybe this is not such a tough choice after all.

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From the Editor

Indicators are Looking Good



The 1st half of 2009 financial reports from the three largest satellite operators, Intelsat, SES and Eutelsat are very good indicators of how the industry is doing as a whole.

Intelsat reported that its revenues increased 10 percent in the second quarter due to new business, expanded contracts and more favorable terms with existing clients. "Our network services business and Intelsat General Corporation government business are thriving as a result of the demand for the communications infrastructure we provide for applications such as broadband networking, cellular backhaul, and mobility," said Intelsat CEO Dave McGlade.

SES reported operating profits of 359.9 million euros in the first half of 2009, an increase of 9.2 percent over the first half of 2008, according to the company's financial results released July 31. SES generated revenues of 843.4 million euros (\$1.2 billion) in the first six months of 2009, an increase of about 7 percent compared to 2008.

"A steady stream of contract wins, including a major contract renewal by **BSkyB**, have contributed to the growth of our contract backlog to 6.5 billion euros (\$9.1 billion), equivalent to four times 2008 revenue. The operational outlook is favorable, and SES is pursuing numerous opportunities to continue on its profitable growth path," SES CEO Romain Bausch said.

Eutelsat Communications reported solid gains for its fiscal year that ended on June 30. Eutelsat reported 7.2 percent increase in total revenues for the year, net income jumped 43.6 percent in that time as compared to the 2008 fiscal year.

Encouraged by these results, Eutelsat raised its short and medium term goals for fiscal year 2009-2010 to a seven percent growth rate and EUR 1 billion in revenues. SES is projecting a modest 5 percent growth in 2009. These growth rates are in line with the overall projections made by Euroconsult of continued growth in several key sectors of the satellite industry (See details in the Vital Stats section, page 16 of this issue). Euroconsult is projecting that different sectors of the industry will experience from 6-30 percent growth by the end of 2009.

Virgil Labrador



EDITORIAL STAFF

Virgil Labrador
Editor-in-Chief
virgil@satellitemarkets.com

Peter I. Galace
Editor, Asia-Pacific
peter@satellitemarkets.com

Howard Greenfield
Contributing Editor, Europe, Middle East
and Africa (EMEA)
howard@satellitemarkets.com

Contributing Writers:

**Bruce Elbert, Dan Freyer,
Robert Bell, Elisabeth Tweedie
Alan Gottlieb, Lou Zacharilla,
B. H. Schneiderman, Tom Watts**

Advertising

Michelle Elbert
Director of Marketing
michelle@satellitemarkets.com

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SYNTHESIS PUBLICATIONS LLC
P.O. Box 4174, West Covina CA 91791 USA
Phone: +1-626-931-6395 Fax +1-425-969-2654
E-mail: info@satellitemarkets.com

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Mobile TV for Europe?...from page 1

licenses and pay any associated fees required by the individual countries.

The challenges started long before the announcement. In October last year ICO Global began proceedings in the European Court of First Instance to annul the actual process by which the EC was awarding the licenses stating that the process was illegal. (However, without prejudice, presumably in case it lost it ICO Global also submitted an application to the EC).

In February of this year Ofcom which is the UK representative to the ITU announced that following a 3 year review it was going to ask the ITU to cancel the ICO-P frequency assignments. Unsurprisingly ICO responded by applying to the High Court for a judicial review of the decision. This happened on May 22nd followed by Ofcom filing contesting ICO's claim.

ICO is allegedly also claiming that no consideration was given to the fact that its involvement in legal proceedings against Boeing prevented it from submitting additional information by the required deadline. Therefore the EC's decision is illegal.

Terrestar, the other failed applicant, has also initiated legal proceedings in the European Court of the First Instance seeking an annulment of the decision on the basis that its application was not read correctly initially, nor were the clarifications it submitted evaluated correctly.

If all of this wasn't enough to contend with Solaris Mobile, which already had

an S-Band payload in orbit and was therefore (unlike Inmarsat whose satellite was still in the design review stage) almost ready to begin service, found serious anomalies with the payload. It has been reported that it may

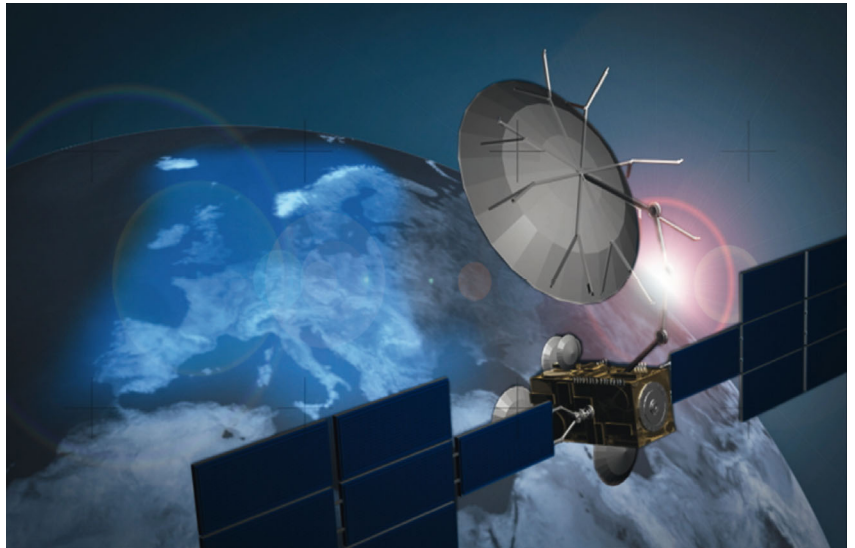
“...The other big question of course is “Is the market going to be large enough to support two operators?”... Europe is still in recession, but given the complexity of the emerging target markets, it will take some nimble footwork by both operators to stay in the game...”

be possible to start a limited service but alternative solutions in the form of other capacity or expediting the launch of the second satellite will be needed for full service.

Assuming that none of these obstacles turn into roadblocks is there a business for mobile satellite TV in Europe? Mobile TV around the world is struggling to find a successful business model. With around 40 million viewers

worldwide, i.e. just 1% of all mobile phone users it is still a nascent industry. Japan and South Korea with 18 and 17 million users respectively represent the largest markets. 90% of viewers in South Korea are using the advertising supported T-DMB service which currently reports an accumulated loss of over \$100 million. In Japan the service is also free and running at a loss and a competing subscription service closed down due to lack of subscribers.

Although Europe at 117% has one of the highest penetration rates of mobile phones in the world, mobile TV has got off to a shaky start. Italy is the largest market with 1.2 million users (2% penetration). In Germany the license was handed back and at the time of writing the French broadcasters and operators still hadn't reached agreement on the preferred business model meaning that the frequencies may soon be reallocated. As yet none of the trials in the UK have made it to a lasting commercial business. Meanwhile launches of streamed video, a



(Photo courtesy of Solaris Mobile)

unicast service (using 3G frequencies) continue; France for example has over 1million viewers using this technology.

Numerous reasons have been given for the slow start in Europe not the least of which is that this is a emerging industry and whilst there have been many trials there haven't been many commercial launches. This is true but it is not the whole story. As with all new convergence businesses there are some key parameters that need resolution. These include:


- Technology – multiple standards exist worldwide making economies of scale at all points in the network harder to achieve. Europe has endorsed DVB-H, but this is now being challenged by a multi-national partnership formed in June promoting DMB as a standard.
- Business model – what is the optimum relationship between content providers, broadcasters, mobile operators, infrastructure providers and retailers?
- Revenue Stream: Viewers seem to prefer free – advertisers have a clear preference for a large audience, something which is not available in the early stages
- Digital Rights Management (DRM) and Conditional Access (CA) issues.
- Content: opinion differs as to whether viewers simply want what is available on a regular screen or short form specifically made for mobile content. Is the same content

suitable for handsets as for seat back devices. With a limited number of channels this is a critical issue. (~9 from the satellite and an additional 18 from the repeaters, using Alcatel technology)

None of these is going to be resolved overnight; it will likely take several false starts before a viable model emerges. However while all these issues are being hammered out viewing habits appear to be on the threshold of a major transition. The PVR is diminishing the importance of real time viewing for all but a few genres. Recent research from Nielsen showed that in the US time spent watching time-shifted TV increased by 40% from Q1 2008 to the same period this year. Streamed and downloaded video on the web coupled with Apps to deliver the same to mobile phones are driving a shift to instant gratification, i.e. video on demand, something that technically broadcast mobile TV cannot deliver. However with ever increasing storage on mobile devices theoretically operators would be able to push content to the device in off-peak periods thereby creating a limited amount of pseudo VOD. The key to success here will be identifying the right mixture of programming to satisfy diverse viewer needs. In years to come this may well pose the most significant threat to broadcast mobile TV.

There are currently five viable satellite consumer businesses: DTH, Mobile Telephony, fixed broadband, radio and satellite navigation (SatNav). In all of these except SatNav, satellite has been very much

a follower. It took successful terrestrial services and extended their reach. (Although with WorldSpace in bankruptcy and a combined Sirius-XM still not profitable it's questionable whether satellite radio can yet be considered a viable business). If this model holds true the market for mobile satellite TV in Europe is many years away and may well be overtaken by mobile Video (i.e. unicast not broadcast) which with the increased capacity offered by LTE will present less of a challenge to operators than it does today. Inmarsat has said very little about its business model other than it is looking for partners. As would be expected with a satellite already launched Solaris Mobile has been clearer. Wisely given the above, it has chosen to be the infrastructure provider, letting the operators and broadcasters sort out the optimal value chain. Perhaps even more wisely it is planning on using the frequencies not just for mobile TV but for value-added services including data-gathering, LBS and web-browsing; targeting public authorities, utilities and emergency services as well as well as consumers.

The other big question of course is “Is the market going to be large enough to support two operators?” It is early days and Europe is still in recession, but given the complexity of the emerging target markets, it will take some nimble footwork by both operators to stay in the game. 



Elisabeth Tweedie has over 20 years experience at the cutting edge of new communication and entertainment technologies. She can be reached at: etweedie@definitivedirection.com or phone at +1 310-292-0755 or +44 (0)7768 610574.

Satellite: Key to Successful Broadcast Events...from page 1

the world. Thanks to huge improvements in recent years in the cost-efficiency of satellite and video technology, satellite links are more affordable than ever before.

Town Hall Meetings: A Typical Satellite Success Story

Marsh & McLennan (MMC) (www.mmc.com), a global professional services firm, insurance broker, and risk advisor, has around 54,000 employees in 100 countries, and annual revenues of US \$11 billion. International financial market dynamics have a huge impact on its business, and timely communications is critical.

When MMC's new CEO wanted a "Town Hall" meeting to discuss the company's new strategies with employees on four continents, it first tried a video webcast. It brought hundreds of employees to seven offsite locations from cities around the world, while thousands more watched live from conference rooms and ballrooms via a secure Internet hookup.

Although the event was a success, MMC's Director of Internal Communications Vincent Beatty wanted an even better solution in the future. "At the end of the day our experience was that web-based video suffered a lot of glitches," says Beatty. MMC decided to move to satellite for its next event.

Broadcasting from London to seven locations across Europe, Asia and the Pacific, the event brought together an estimated 5,000 participants. "We brought people into conference facilities around the world and had call-ins from other cities. "The technical challenges were enormous, and we needed the utmost confidence in a vendor. We needed a home run," explains MMC's

Beatty. After a rigorous RFQ process, MMC turned to Alden HD of Bristol, CT to produce its program, with Keystone Enterprise Services of Salt Lake City, UT (www.keystonebtv.com) as their satellite technical partner for the job.

"The results were spectacular," says Beatty. "98% of polled participants



(Photo courtesy of Keystone Enterprise Services)

ranked the satellite-delivered event as good to excellent, an improvement over webcast figures. We also gauge success by replay numbers, served from Australia, NY and London based on connectivity. The satellite event had over 19,000 replay views," he says.

Advantages over webcasting that satellite offers include:

- **High-resolution video:** Satellite delivers video suitable for display on large monitors and large projectors, at up to full High Definition (HD)

quality. Streaming video over the web, "webcasting," is possible where a broadband Internet connection is available, but still can result in jerky and intermittent video and audio, and is delivered at too low a resolution for projection. Internet connectivity capable of supporting real-time video via webcasting is not available from many venues. Hotel LANs connecting conference rooms may share bandwidth with reservation systems. With satellite distribution, TV media can easily capture and use your high-quality signal for on-air broadcasting – great publicity for product launches.

- **Wide Geographic Coverage:** Satellite's nationwide coverage blankets even the most remote, rural, and 'un-wired' locales. Whether your event is hosted at an exotic tropical resort or remote ski lodge, satellite connectivity provides ample bandwidth, where landlines may not. Secure broadcasting also can protect content and restrict its delivery to only authorized corporate sites and equipment.
- **More Sites – Not More Cost:** Satellite's broadcast nature means that, unlike landline-based solutions, there is no additional bandwidth cost to add more receive sites, whether hundreds or thousands more. For product launches and events hoping to get broadcast media coverage, satellites provide an ideal way for TV stations to also tune in to the event.

Feature

- **Fast deployment at venues (vs. telco circuits):** Set-up time can be just days, whether it's installing an HD capable receive system at a venue, or setting up a portable uplink at a signal origination site.

Taking Advantage of Satellite

With all these pros, how do you take advantage of satellite technology to make your next event a success? Experience has shown that successful events depend on working with a provider that has a successful track record supporting live program production, transmission for special events.

Companies like Keystone Enterprise Services can manage end-to-end satellite production and broadcast of corporate special events, as well as on-site TV

production services, from creative to technical crew. Services typically include satellite transmission and scheduling, video signal encryption for security, arranging transportable and ad-hoc satellite uplinks to broadcast from remotely located venues, and for downlinks at receive venues.

What to Look For in a Provider

The larger and the more complex your event will be, the more you may want to find a seasoned shop for the job. Only a few top players can handle global and large international events and have the ability to deploy specialists worldwide to install and support their production and transmission solutions. "The technical expertise of the provider is essential," explains MMC's Beatty. Look for companies with dedicated and highly trained technical and support staff

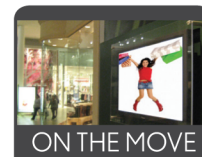
that can help you with every aspect of events and live transmissions including production, engineering, transmission control and monitoring.

Your satellite vendor should have specialized experience in corporate events. "There is a ton of coordination involved. You never want to have someone cut their teeth on a job for your business," explains Beatty, adding "Keystone allayed our fears from the start, having done this many times."

"Over the past 28 years, Keystone has helped thousands of companies pull off successful satellite events, and we handle hundreds of events and thousands of hours of transmission per year, offering total event management and production services," says Dan Loveless, Sr. Vice President of Keystone Enterprise Services.



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www.keystonebtv.com

One-Stop Shopping

As an event planner, chances are you have more than enough on your plate to plan the event and your program. That is where a ‘one-stop-shop’ satellite ‘satellite partner’ can help by serving as a single point of contact for technical management of the broadcast.

Ask for a single invoice and see if your provider can coordinate the many ancillary services you may need. A full-service provider can also help clients achieve the ‘on-air’ look they envision, and may offer related services such as set design, rendering diagrams, signage, lighting schematics for the set and audience, power point production, event entertainment, event management services, strategic meeting management, web surveys, and travel reservations and services.

Other value-added services include venue site selection and catering services, a help desk, logistical planning, post-event reporting, audio bridges and video conferencing. International events may require multiple satellites and language translation services, in addition to coordinating production across time zones.

Venue Selection and Field Support Experience

Depending on the type of event and the type of audience you are trying to reach, potential event venues may include hotels, convention facilities, universities and colleges, auditoriums, theaters, stadium and arenas, private dining rooms for smaller groups at restaurants, as well as ‘public’ and private videoconferencing rooms. Top vendors know what to look for and how to get things done. For example, Keystone Enterprise Services offers access to 15,000 commercial satellite video locations worldwide. “We have field experience working at thousands of venues in the Keystone Events network, so we can help you find and select venues, and then provide satellite link-ups, letting you take your broadcast event into these venues,” says Keystone Enterprise Services’ Dan Loveless.

Engage and Interact with Participants. Measure Audience Response


The value of direct viewer interaction with a broadcast is huge. Audience-response solutions can help engage participants and measure participation. These can include live audience polling, on-screen audience poll results and graphics integration, audio conferencing, and chat/email viewer-interaction management. Experienced vendors will be able to advise you on how to

take advantage of these applications and can employ them for your event.

Post-Event Support

For viewers unable to attend live from a satellite location, webcasting may be a better option than no video. Offering the post-event video for download on demand is another way to reach your audience. Ask your vendor if they can offer a simultaneous webcast, and recorded on-demand download of the video. Remember to take ‘exit polls,’ for example by email surveys, after each event and even during sessions to assess the opinions of participants on the value of the event.

The Bottom Line

Satellite broadcast technology offers a powerful way to help make your large-scale video event a success. With an experienced satellite events partner on ‘your team,’ you will be ideally positioned to ensure your audience will enjoy the best quality video and audio. That, combined with options for total event support by the leading satellite service providers, lets you focus on achieving your goal: powerful communications. 



Dan Freyer has 20 years of experience in satellite communications. He wrote the chapter on “Satellite Services” in the industry reference book, *The Satellite Technology Guide for the 21st Century* (Synthesis

Publications, 2008). Dan has written extensively on satellite communications for several industry trade magazines. He can be reached at:

inquire@adwavez.com

MSS Operators In for a Bumpy Ride


In the recently released “Mobile Satellite Services 5th Edition” report, **NSR** (www.nsr.com) noted that fears of the bottom line falling out for all MSS operators due to the economic crisis were overestimated; however, caution was still the best attitude one could take for the short-term. We also noted that the first quarter 2009 numbers had already given indications that operators are not protected from hardship and slowdowns.

As we just passed the mid-point of the calendar year, MSS operators now have a better idea if annual results will look as expected or worsen. It is also a time to reflect on a serious realignment of the business for the next six months to meet annual targets, which is especially important early in the third quarter when most customers are back from holidays and start using their equipment again on a more regular basis.

For some, it is a much bumpier ride with some markets showing signs of exhaustion coupled to the world economic slowdown affecting oil and gas exploration, transportation, shipping, and last (but not least) financing.

With less than 2 million subscribers, the main MSS players are generally holding their own as three constellations totaling 128 satellites in Low Earth Orbit and another 23 satellites in MEO and GEO could be launched in the next six years. This capacity surge is second to none since the origin of the sector and comes with high expectations that will either see the industry get a facelift with hundreds of thousands of new subscribers or go through an extreme makeover that could considerably reduce the number of operators.

All in all, the underlying current on subscriber numbers is that they are slowing their consumption of MSS products and services, and some of them are simply shutting down their

equipment due once again to the economy. If operators are looking at the calendar regularly, they know that the next quarter is well underway and that the push to meet end-of-year results is on and that the name of the game is subscribers...and lots of them. 

Media Sharing Platforms

GlobeCast and NETIA help you manage your workflow from ingest to delivery



A guide to key products and services at upcoming trade shows. This month we are featuring products and services that will be showcased at the IBC 2009 exhibition in Amsterdam from September 11-15.



GlobeCast and NETIA Join Forces at IBC 2009

GlobeCast has joined forces with recently acquired subsidiary **NETIA** to showcase the group's integrated solutions across the whole broadcast chain with a shared stand at this year's IBC.

Media Sharing and Delivery demonstration

GlobeCast and NETIA will take advantage of their shared space at this year's IBC to demonstrate the progression of content from contribution to playout and delivery using a broad selection of products and services. GlobeCast's Content Exchange, NETIA's Hypercast Warehouse as well as GlobeCast's playout and delivery services will be in the spotlight at stand 1.B40. The demonstration highlights the group's

new position as an integrator of broadcast technology and a leading service provider.

GlobeCast gears up for 2010


GlobeCast's sports contribution team will also be on hand to discuss upcoming sporting events such as the South African World Cup, Vancouver Winter Olympics, Asian Games and Commonwealth Games, all taking place around the world in 2010. Services are planned for both rightsholders and non-rightsholders to bring these special events from the stadiums to the rest of the world.

New fibre links and satellite capacity share the spotlight

GlobeCast has new direct access to major cities with the expansion of its

next-generation global fibre ring into Jordan Media City (JMC) in Amman and Munich in Germany. These latest additions to the network are part of GlobeCast's ongoing expansion of its fibre and satellite connectivity.

International content makes its mark

International content takes the spotlight again at IBC. Representatives from GlobeCast, which can deliver European content to multiple platforms anywhere in the world and vice versa, will be on hand to discuss opportunities for broadcasters looking to reach ethnic communities throughout the continent or European communities abroad. 

At IBC 2009, visit GlobeCast and NETIA at Hall 1B booth # 40




ND SatCom Launches SkyWAN® IDU 1070

ND SatCom's next generation *SkyWAN®* satellite modems continue their performance evolution: ND SatCom introduces the new 1HU (Height Unit), cost-efficient, IP-only terminal, which includes the full set of *SkyWAN®* features, e.g. Turbo- δ -Coding, IP Routing, true full mesh capability and dynamic bandwidth allocation. The IDU 1070 is ideally suited for mobile stations such as broadcaster's SNG vehicles, FlyAways or transportable units, where rack space counts. The support of QPSK/8PSK modulation schemes with a wide range of code rates optimises bandwidth efficiency for

any kind of network topologies. The separation of the user from network management traffic combined with Link Encryption makes the IDU 1070 the terminal of choice in government and military settings.

Live Demonstration of Media Fleet Manager

Ease of use in planning, scheduling and booking transmission resources – this is what leading US broadcasters as well as cost-oriented European service providers and broadcasters enjoy when using ND SatCom's Media Fleet Manager, with round-the-clock news

coverage. Through ND SatCom's track-proven *SkyWAN®* technology, the scheduling system allows the remote management and networking of transmission resources and fully automated SNG/ENG fleets and/or fixed uplink/downlink stations. The Media Fleet manager controls video contributions via DVB uplinks or alternatively supports IP video contributions e.g. MPEG4 over IP using *SkyWAN®*. 

At IBC 2009, visit ND SatCom at the Outdoor Exhibits area OE320



SHAPING THE FUTURE OF SATELLITE COMMUNICATIONS

Newtec's FlexACM Solution

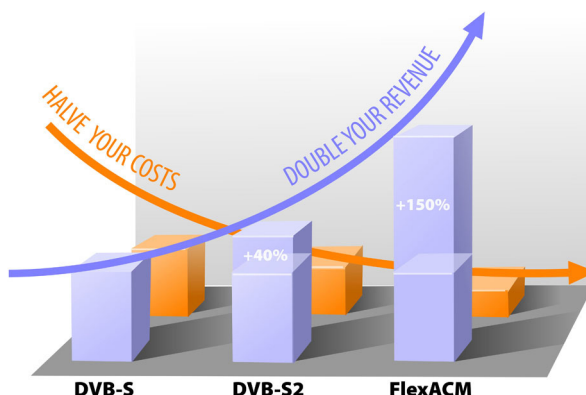
Newtec's FlexACM is a unique end-to-end solution for implementing ACM (Adaptive Coding and Modulation) technology, IP shaping, compression and acceleration in a very efficient way for IP trunking and IP backbone satellite links. The implementation of FlexACM can result in a doubling of the data throughput in a given satellite segment while also guaranteeing a 100% link availability.

ACM is part of the DVB-S2 standard, allows modification of the modulation and coding parameters (modcods) of a satellite signal on the fly, without interrupting the transmission and without losing data.

Newtec's FlexACM solution is more than DVB-S2 ACM: it is the first commercially available system on the market, which integrates DVB-S2 ACM with advanced IP optimization technologies such as traffic accelerating, compression and shaping. The FlexACM solution can be used in point-to-point and point-to-multipoint systems, in one way (with terrestrial return channel) as well as in two way configurations (with the return channel also over satellite). It is also possible to implement the FlexACM solution in existing satellite links without changing the rest of the transmission chain, such as the antenna and HPA.


The FlexACM solution combines ACM technology with an automatic measurement of the instantaneous link conditions (signal to noise ratio) every few seconds and a system that automatically adjusts the modcods parameters when needed. Under these circumstances, the satellite link always uses the highest possible modulation scheme and the lowest possible level of error correction, while still keeping the signal to noise ratio above the minimum threshold to guarantee an error free transmission at all times.

By using FlexACM, teleport operators do not have to take rain margin into account at all. When the conditions of the link become worse because of rain fade or other reasons, the system will automatically change the parameters to avoid loss of signal reception. In fact, in almost every form of interference or in less optimal transmit or receive conditions, like ground noise, tracking losses, cross poll and inter-satellite interference, FlexACM proves to be beneficial.



The FlexACM system must then decide how the remaining capacity is distributed among the different services and receiving points. This requires a dynamic shaping of the IP services and a QoS management in line with the bandwidth variations caused by the ACM behavior. In addition to this, the built-in traffic shaper also needs to ensure priority for services with predefined SLA, VoIP, audio and video services. By using FlexACM, technology teleport operators can turn the additional rain margin that was

wasted before, into increased data throughput, resulting in extra revenue for the teleport operator. To further optimize the efficiency of the system, FlexACM includes *cross layer optimization* using advanced features such as traffic acceleration and dynamic compression of the IP traffic, which bring a considerable reduction of the data traffic that needs to be sent over the satellite link.

FlexACM® is part of Newtec's *Elevation* product line that allows simple, yet very efficient implementation of ACM in IP trunking and IP backbone systems. 

At IBC 2009, visit Newtec at
Hall 1A booth # 49

A guide to new products and services**Harmonic to Demonstrate New Video Solutions at IBC**

At IBC 2009, Harmonic Inc. will showcase its comprehensive solution portfolio for video delivery to a variety of devices, including the TV, PC, iPhone, and other mobile devices. Harmonic will introduce enhancements to its ProStream™



Harmonic's ProView™ 7000 Integrated Receiver

stream processing platform, Carbon Server™ transcoding software, and MediaPrism™ software suite for multi-screen video delivery. Key demonstrations will also include Harmonic's market-leading systems for broadcast contribution/distribution, encoding, and stream processing, as well as cable IPTV, universal edgeQAM and HFC access solutions.

One of the products Harmonic is showcasing at IBC is the ProView™ 7000 Integrated Receiver Stream Processing Platform. Based on industry-leading Scopus IRD technology, the ProView 7000 is the world's first solution to combine a scalable video receiver, DVB descrambler, multi-format decoder, and MPEG stream processor in a single rack unit. The versatile ProView 7000 paves the way for content providers, broadcasters, cable/telco, and terrestrial operators to deploy today's most advanced and cost-effective IP-based contribution and distribution applications. By integrating ASI aggregation, powerful multiplexing, and the ability to decode all formats and standards, the ProView 7000 provides the ideal solution for customers looking to future-proof their operations and cut capital and operating costs.

At IBC, Harmonic will be exhibiting at stand 1.C61.

Colem to Showcase New SNG Solutions

Colem will showcase a number of new SNG solutions at this year's IBC. Colem has developed a solution for detecting and avoiding SNG and wireless camera black-spots, which is an all-too-prevalent problem faced by camera crews. This new

development to Colem's Link Camera Control System means that crews can go anywhere in the world and already know the areas to avoid, saving vital time in setting-up.

In addition, showcased at this year's IBC, is a new add-on application for all Colem's SNG FlyAway and Camera systems using Google maps. Those systems with internet access will mean that a broadcaster can find the desired location via an interactive map, and zoom in to get a better view of their exact position.

At IBC, Colem will be exhibiting at stands 1.F58b and 6.C28a.

IDC to Launch PRO IPTV Blade Receiver

A highlight of IDC's booth at IBC will be the unveiling of IDC's next generation PRO IPTV blade receiver and the first time showing of the recently acquired Tiernan line of digital video compression and decompression products. The Tiernan product line includes High Definition ("HD") and Standard Definition ("SD") video encoders (MPEG2 and H.264 MPEG4), video receivers, interface converters for a broad range of television contribution and distribution network applications. The product line also includes satellite equipment originally developed and marketed by Comstream for professional radio broadcast applications. IDC announced the acquisition of the Tiernan product lines in August.



IDC's PRO IPTV blade receiver

"This is an exciting IBC for us this year. In addition to launching our highly innovative Pro IPTV blade receiver and formally unveiling the exciting Tiernan line of products, we have a host of other new products that we are announcing and demonstrating," said Ron Clifton, IDC President and CEO. "In this year of troubled economic times we are particularly pleased to be able to continue providing new products and applications for our diverse, leading edge customers," he added.

At IBC, IDC will be exhibiting at stand 1.C29.





3-6 November Grand Hyatt, Hong Kong

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"Life Is Bursty"

by Robert Bell
World Teleport Association

A communications technician once told me that "life is bursty." He was talking about life in the control room, where long hours of quiet, with all of the boards green, can suddenly turn into minutes of controlled panic as the red lights start flashing.

"Bursty," as you probably know, is a term for communications traffic that unexpectedly lurches from low data rates to high data rates. It is hard to deal with because it presents two unpleasant alternatives: sizing the circuit to handle the maximum requirement, which leaves a lot of expensive capacity idle, or settling for less capacity and knowing that service will slow to a crawl during periods of peak demand. The latest shared-bandwidth and bandwidth-on-demand solutions are specifically designed to deal with bursty traffic.

But beyond all this jargon, life really *is* bursty. Whether it is your personal life or working life, stuff has a way of "coming out of nowhere" to surprise you. In most cases, it doesn't really come out of nowhere. You just don't see it coming. It is the health problem you have been living with for years without knowing it. It is the economic turmoil of the Great Recession, which is the result of years of living beyond our collective means and allowing fundamental oversight of business to lapse. But when it hits you, all you can do is shake your head and dazedly ask if anybody got the number of that truck.

Television broadcasting is a case in point. For decades, it was *the* electronic medium. So much did it dominate life in industrialized nations that the socialist Robert Putnam (author of *Bowling Alone*) invented a term, "social capital," to describe the aspect of American life that was being eroded by too many hours spent in front of the glowing box. Fast forward to today, and we see a business grappling with an unbelievable burst of change. After

the recorded music industry showed what could happen to media companies that ignored the Internet, networks have lost no time in moving their shows onto the Web, whether on their own sites or aggregators like Hulu. One exasperated network executive said to me recently, "Can anybody explain why it's a good idea to give our content away for free on the Web?" Well, sure, I can. They already give it away "free" on-air, with advertisers paying the fare. Internet TV is also advertiser supported, though the small audiences involved mean that content owners are currently trading digital pennies for analog dollars, as the saying goes. It remains to be seen what kind of advertising rates they can command when the online audience reaches levels comparable to DTH and cable channel audiences.

But things are only beginning to get interesting. ABI Research recently forecast that there would be 20 million "Internet-enabled" televisions in homes around the world by 2012. That is, televisions plugged into broadband and able to receive so called "over the top" Internet-based services from YouTube to Weather.com. Sets-in-homes, of course, do not translate into viewer experiences. Most consumers with HDTVs in their homes are not watching HDTV – they are just seeing SDTV on a bigger screen. So it may be years before there are enough homes with robust broadband and enough digitally sophisticated viewers to make a further big dent in viewership of

traditional television. But when it does happen, I bet you it will leave us shaking our heads and asking dazedly about that truck.

Broadcasting, of course, continues to be the anchor application for the world's satellite networks. It has given the business a great ride over the past few years, as compression

"... 'Bursty' is a term for communications traffic that unexpectedly lurches from low data rates to high data rates. It is hard to deal with because it presents two unpleasant alternatives: sizing the circuit to handle the maximum requirement, which leaves a lot of expensive capacity idle, or settling for less capacity and knowing that service will slow to a crawl during periods of peak demand..."




Robert Bell is Executive Director of the World Teleport Association, which represents the world's most innovative teleport operators, carriers and technology providers in 20 nations. He can be reached at rbell@worldteleport.org.

has lowered costs and encouraged growth in channels, while HDTV has driven up bandwidth requirements. But if there were ever a time to work hard on finding and growing new niches and innovative applications in the business, this is it.

At the 2009 NAB Show, I spoke with an engineering consultant for a European standards body about mobile TV. He asked me another of those "can you explain?" questions but it was one for which I had no quick-and-easy answer.

"Why does anybody think," he asked, "that they can build a business delivering TV programs to a mobile device? Any 3G phone today – and all 4G phones tomorrow – with a decent browser can access video content from the Web. Why would a user stay inside the walled garden of some content provider when they have the entire Internet to choose from?"

That's the question confronting satellite's anchor tenants as they contemplate a world of Internet-enabled TVs. Their ability to find an answer will do much to determine the long-term health of the business. 

Calendar of Events

September 7-10, 2009 **World Satellite Business Week 2009** Paris, France Tel: +33-(1) 49 23 75 24
e-mail: mandeng@euroconsult-ec.com
web: www.satellite-business.com

September 10-15, 2009 **IBC Conference and Expo 2009** RAI Exhibition Center, Amsterdam, The Netherlands Tel: +44-(0) 20-783-24100
e-mail: show@ibc.org web: www.ibc.org/

September 29-October 1, 2009 **APSCC 2009 Satellite Conference and Exhibition**, Kuala Lumpur, Malaysia. Tel: +82 31 783 6246 e-mail: info@apsc.or.kr
web: www.apsc.or.kr

October 5-9, 2009, **ITU Telecom World 2009**, Geneva, Switzerland, Tel. +41 22 730 6161 Fax: +41 22 730 6444 Email: itutelecom@itu.int
web: www.itu.int/WORLD2009/

October 7-11, 2009 **CeBIT Eurasia Bilisim International Trade Fair for Information Technology, Telecommunications, Software + Services**, held in conjunction with **CeBIT Broadcast, Cable+Satellite Eurasia**, Istanbul, Turkey Tel: +90 (212) 334 69 69
Fax: +90 (212) 334 69 70 e-mail: info@cebitbilisim.com
web: www.cebitbilisim.com/index.html
and www.cebit-bcs.com/en/index.html

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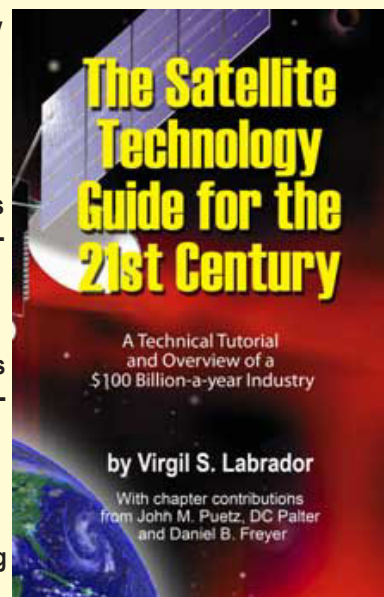
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with chapter contributions
from John M. Puetz, DC Palter
and Daniel B. Freyer.

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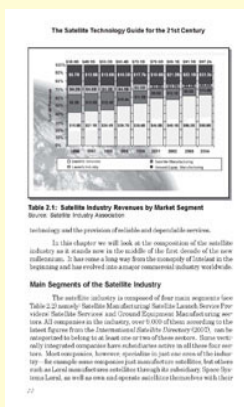
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The Satellite Technology Guide for the 21st Century clearly explains in non-technical terms the basics of satellite communications technology and how it works. This book also provides a historical background of the industry, its current status, market prospects, trends and the future of satellite communications.

Fully illustrated with graphs and tables, the book contains appendices including a glossary of terms and a list of industry resources.

Chapters include: A Brief History of the Satellite Communications Industry; Overview of the Satellite Communications Industry; The Space Segment; The Ground Segment; Satellite Services; VSATs; Satellites and the Internet; The Future of Satellite Communications.



An indispensable guide to the basics of satellite technology and the global industry. No other book in the market today provides a more comprehensive view of satellite technology and the industry in one easy-to-read volume at a very low price of only \$25.99 including shipping and handling.

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Vital Statistics

Satellite Industry Continues to Growth Despite Downturn

According to Euroconsult's latest survey of the satellite industry, the commercial satellite business remains healthy, though there are signs that the pace of growth may be slowing in 2009:

	2008 units	Growth Rate	
		2008	2009 (estimated)
TV channels broadcast by satellite	24,100	+13%	+ 6-9%
FSS* operators' capacity revenues (\$ billions)	9.2	+10%	+ 7%
Subscribers to satellite broadband access (millions)	1.2	+30%	+25-30%
MSS** operators' revenues (\$ billions)	1.23	+ 6%	+ 6-9%
Earth observation sales revenue (\$ millions)	916	+25%	+25-30%

*Fixed Satellite Services **Mobile Satellite Services

Source: Euroconsult (www.euroconsult-ec.com)




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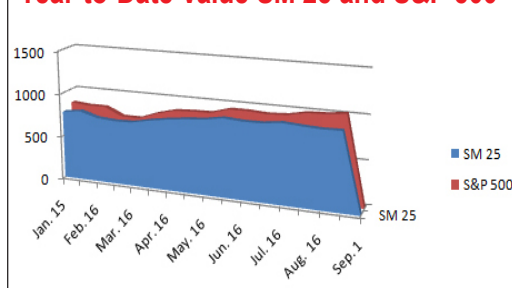
The Satellite Markets 25 Index™

Company Name	Symbol	Price (Aug 31)	% Change from 2-Weeks Ago	52-wk Range	% change from 52-wk High
Satellite Operators					
AsiaSat	1135.HK	12.20	22.12%	4.61 - 12.50	↓ 2.40%
Eutelsat Communications	ETL.PA	18.65	3.04%	14.14 - 20.305	↓ 8.15%
Hughes Communications Inc.	HUGH	26.01	11.30%	7.77 - 45.50	↓ 42.84%
Inmarsat	ISAT.L	521.00	-4.49%	300.00 - 614.00	↓ 15.15%
SES	SES.F	13.66	2.55%	11.36 - 16.47	↓ 17.06%
Satellite and Component Manufacturers					
Boeing	BA	49.67	19.40%	29.05 - 68.47	↓ 27.46%
COM DEV International Ltd.	CDV.TO	2.64	-13.44%	2.21 - 3.98	↓ 33.67%
Lockheed Martin Corp.	LMT	75.02	-8.31%	57.41 - 119.82	↓ 37.41%
Loral Space and Communications	LORL	20.64	-8.75%	6.02 - 34.83	↓ 40.74%
Orbital Sciences Corp.	ORB	14.79	-1.07%	11.60 - 27.16	↓ 45.54%
Ground Equipment Manufacturers					
C-COM Satellite Systems Inc.	CMI.V	0.2850	-8.06%	0.15 - 0.40	↓ 28.75%
Comtech Telecommunications Corp.	CMTL	34.11	4.79%	19.56 - 50.55	↓ 32.52%
CPI International, Inc.	CPII	9.34	2.98%	5.07 - 16.02	↓ 41.45%
EMS Technologies, Inc.	ELMG	18.74	-14.43%	16.20 - 28.53	↓ 34.31%
Viasat	VSAT	24.23	-6.45%	15.15 - 27.74	↓ 12.65%
Satellite Service Providers					
Gilat Satellite Networks Ltd.	GILT	4.25	-4.28%	2.17 - 8.45	↓ 49.70%
Globecom Systems Inc.	GCOM	7.57	6.02%	3.96 - 10.54	↓ 28.18%
International Datacasting Corp.	IDC.TO	0.26	10.64%	0.15 - 0.43	↓ 38.37%
ORBCOMM Inc.	ORBC	2.15	17.49%	1.16 - 5.99	↓ 64.11%
Skyterra Communications	SKYT.OB	3.20	-8.57%	0.80 - 5.00	↓ 63.84%
Consumer Satellite Services					
British Sky Broadcasting Group	BSY	35.33	9.75%	19.90 - 36.69	↓ 3.52%
The DIRECTV Group	DTV	24.76	0.65%	17.70 - 28.83	↓ 14.12%
ECHOSTAR Communications	DISH	16.31	3.03%	8.34 - 29.22	↓ 44.18%
Globalstar, Inc.	GSAT	0.83	-17.00%	0.15 - 3.42	↓ 75.73%
Sirius XM Radio Inc.	SIRI	0.67	67.54%	0.05 - 1.40	↓ 51.89%

The Satellite Markets 25 Index™ is a composite of 25 publicly-traded satellite companies worldwide with five companies representing each major market segment of the industry: satellite operators; satellite and component manufacturers; ground equipment manufacturers; satellite service providers and consumer satellite services. The base data for the Satellite Market Index is January 2, 2008--the first day of operation for Satellite Market and Research. The Index equals 1,000. The Satellite Market Index™ provides an investment benchmark to gauge the overall health of the satellite industry.

Comparison of Indices	Index value (Aug. 31'09)	Percentage Change 2-Weeks Ago Jan. 2 '08
Satellite Markets 25 Index™	894.27	↑ 1.52% ↓ 16.73%
S & P 500	1020.62	↑ 4.01% ↓ 29.26%

Year-to-Date Value SM 25 and S&P 500



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CASBAA 2009: Extending Your Reach

CASBAA Convention 2009
Grand Hyatt, Hong Kong
3 – 6 November 2009

CASBAA Convention 2009 is the only industry event in Asia that unites leading visionaries and influencers from satellite, cable TV, broadband, content providers, online platforms, telecommunications, technology, advertising and regulatory organizations in Asia's 14 markets, which now account for 315m subscription television subscribers.

This year's annual Convention, the 16th, themed "Extending Your Reach" will kick-off with introducing the big-picture issues facing the sector today such as where do the top decision-makers see the communications market heading in 2010 and beyond? What are the key trends most likely to sustain businesses in tough times and where and what are the next big untapped opportunities?

The intensive three-day programme will then go deeper into the industry and cover extensive presentations and CEO dialogues on specific topics such as reaping the dividends from digital broadcasting; the changing role of telecoms operators and advertising trends for broadcast, online and mobile programming platforms.

Meanwhile, the panels will examine the impact of new technologies on media consumption; co-operation between content providers and pay-TV operators to maximize their revenues; pay-TV opportunities in developing markets and the next consumer digital experience.

Reaching new customers remains fundamental to any business. At CASBAA Convention 2009 India will feature as another hot topic. The Indian market is enormously complex, but immense in terms of its potential particularly for pay-TV. Together with China, the convention will take an in-depth look at some of the yet untapped business opportunities in both these vast markets.

To tackle these key issues, CASBAA Convention 2009 has already announced a distinguished line-up of global media leaders headlining this year's event. The fast-paced programme will include:

- **David Haslingden**, Chief Executive Officer, **Fox International Channels & National Geographic Channels Worldwide**
- **Ronnie Screwvala**, CEO and Founder, **UTV Software Communications, India**
- **Tomoyuki Moriizumi**, President and CEO, **Jupiter Telecommunications (J:COM), Japan**
- **Eugenio Lopez III**, Chairman and CEO, **ABS-CBN Broadcasting Corporation, Philippines**
- **Mark Hollinger**, Chief Operating Officer, **Discovery Communications, USA**
- **Russell Wolff**, Executive Vice President and Managing Director, **ESPN International, USA**
- **Kim Williams**, Chief Executive Officer, **FOXTEL, Australia**
- **Hideaki Kido**, Senior Managing Executive Officer, **SKY Perfect JSAT Corporation, Japan**



CASBAA Convention 2009 will be held this year at the six-star Grand Hyatt in Hong Kong. The line-up of activities will continue to impress with the CASBAA Charity Ball, the CASBAA Golf Masters, exhibitions and ample networking opportunities to meet some of the most influential executives in the media sector.

Do not miss out on the opportunity to be part of the high value strategic debates and exchange ideas on the latest trends. Registration is now open.

Visit www.casbaaconvention.com for further details.

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ND SatCom, an SES ASTRA company, is a leading global supplier of satellite-based broadband VSAT, broadcast, government and defense communication network and ground station solutions. As a global company with more than 25 years of experience in the satellite networks and systems businesses, ND SatCom is a reliable source of comprehensive and secure turnkey and tailored system engineered solutions. Customers in over 130 countries benefit from our unmatched core technologies and broad experience.

With our well proven experience in systems integration and the provision of customized fixed and mobile satellite solutions, we are able to meet the toughest challenges in the areas of:

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/ Defense Network Solutions

/ Broadcast & Media Solutions

/ Telecom & Enterprise Network Solutions

/ Customer Services



ND SatCom Headquarters in Friedrichshafen, Germany

// Global Presence //

With regional strategic sales and support offices in Europe, Africa, the Middle East, Asia-Pacific and the United States, ND SatCom is uniquely capable of successfully servicing key satellite communication markets through customer proximity. Under the supervision of experienced ND SatCom management teams, our registered subsidiaries employ native satellite communications experts and cooperate with selected local suppliers and partners to offer their customers optimum technology solutions. With its world-spanning network of sales offices and representatives, we are set to reach, serve and truly satisfy customers.

// Reputation //

The key to the company's growth and stability has been its flexibility in serving both commercial and military markets. ND SatCom was awarded the Growth Strategy Leadership Award 2006 and earned listings on the World Teleport Association's Independent Top Ten Operators and Top Ten Fastest Growing Companies ratings. Furthermore the company is ranked in the Top 50 of Space Industry Manufacturers by Spacenews and was honored with the Product of the Year Award 2004 for the best satellite contribution/distribution technology by Cable & Satellite and with the Industry Award for Innovation and Technology by ISCe.

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