

## MARKET BRIEFS

**Executive summaries of market trends and opportunities in key** market segments and regions worldwide



- Asia Pacific is now the world's largest TV market and will pass the one billion TV sets mark this year.
- Digitization is driving growth in India, ASEAN.
- Equipment suppliers enjoy a boom; Equipment continue to evolve and they're moving quickly across Asia.
- •Intelsat's \$1.3 B fleet investment for Asia-Pacific region on; Regional operators survive competition.

A quick look at the 2012 Asian Satellite Industry

# Asia's continued march to progress assures satellite industry of further growth

by Peter I. Galace

t the 45th annual meeting of the Asian Development Bank's Board of Governors in Manila last month, the mood of 4,000 delegates from 48 Asian countries was upbeat, mixed with a sense of pride. Amidst the recession in Europe and the tepid economic growth in North America was the revelation that the combined national wealth of India, China and the ten-member Association of Southeast Asian Nations (ASEAN) could exceed that of the U.S. and European countries put together in the next 18 years, according to an ADB study.

ADB President Haruhiko Kuroda predicted a healthy GDP of 6.9 percent for developing Asia and the Pacific this year, which is expected to climb to 7.3% in 2013. "These three region and countries (India, China and ASEAN) are on a path to significantly improve the quality of life of their citizensin aggregate approaching half of the world's population by 2030," he said.

For the satellite industry, the ADB disclosure only confirms a growth trend that had been going on in Asia for some time. It also assures the satellite industry of continued development to serve 4 billion people in 51 countries of Asia, 60 percent of the world's population, and provide 30% of the Earth's landmass with services already enjoyed by the developed countries of the world.

Driven by the continued strong demand



**Click**: Asia-Pacific region is now the world's largest TV market.

for satellite services in the Asia Pacific region, the industry's most important drivers — high-definition TV conversion, DTH television and intercontinental video transmissions — remain in high growth mode. Multi-year contracts of satellite operators are enabling the industry to maintain a dependable revenue stream despite the turmoil in other parts of the world. Transponder fill rates have remained generally high with good revenues from transponder leasing and purchase of satellite equipment by Asian countries remain buoyant. Even more encouraging, as Asia's economic growth increases, the market for satellite services keeps getting bigger.

#### Asia Pacific: 1B TV sets in 2012

In a development that augurs well for equipment manufacturers and satellite oper-(Continued on page 2)



**Japan:** Full digital service as of July 24, 2011. In March this year, even the regions that suffered massive damage caused by the earthquake and tsunami terminated their analog broadcast. (Photos from www.cableaml.com and *Culture Japan*)

#### The Asian Satellite Market

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ators, the Asia Pacific is now the world's largest TV market and will pass the one billion TV sets mark this year according to the latest research from Informa Telecoms & Media. In addition, the region leads the way in terms of pay-TV subscribers with 394 million households taking pay-TV at the end of 2011. This is largely because it contains the world's two biggest pay-TV subscriber markets – China and India.

The caveat: despite its leading position in terms of subscribers, Asia Pacific's pay-TV revenues continue to lag behind those of other regions. China and India rank only fourth and fifth respectively, despite having a combined subscriber base three times bigger than the US. The US generates more than five times the combined pay-TV revenue totals of China and India. Informa's research shows that Asia Pacific generated US\$33.5 billion in TV advertising revenues with a further US\$33.1 billion coming from pay-TV revenues - making the regional TV market worth almost US\$67 billion.

According to Informa's Media Research Manager Adam Thomas, the Iow-ARPUs found in India, and particularly China, will continue to limit their revenue-generating capability for the foreseeable future. While their sheer size and potential, understandably, often make them the focus for TV executives, there are other markets in the region that are more successfully convincing their audiences

to prioritize pay-TV expenditure.

Measuring the level of 2011 revenues generated within a country against its GDP, Informa said Malaysia is the regional pay-TV leader - putting it into Informa's "high expenditure" category. In 2011 Malaysia generated pay-TV revenues of just over US\$1 billion – equivalent to 0.41% of GDP. This compares to just 0.06% of GDP generated by Indonesian pay-TV – the least productive of the 14 countries analyzed. China's 0.12% ratio also places it near the bottom (and classified by Informa as a "low expenditure" market) although India's 0.35% shows how much it has benefitted from the swift growth of its digital satellite services.

A similar report released last month from Digital TV Research confirms that Asia Pacific is undergoing a digital TV boom that will see penetration increase from 36% in 2011 to 83% in 2017 – or up by 440 million homes. Digital TV Asia Pacific forecasts that China alone will provide 268 million of the additional digital TV homes, with India adding 82 million.

Of the 440 million digital homes to be added between 2011 and 2017, 103 million will come from digital terrestrial television (DTT). Digital cable will contribute a further 195 million, with pay DTH supplying a 34 million more and pay IPTV 86 million. By contrast, the region will lose 152 million analog cable homes and 196 million analog terrestrial ones. China and India have a massive influence over the region,

due principally to their one billion-plus populations. By 2017, they will provide 541 million digital TV homes combined — or three-quarters of Asia Pacific's total.

"Despite the rapid conversion, digital TV will still have plenty of room for growth for some time to come. Only half of the countries covered in this report will have fully converted to digital by 2017. By then, Indonesia and the Philippines will still have analog penetration of 70% and 64% respectively. China will have 24 million analog homes and India 57 million," says report author Simon Murray.

Inevitably, pay TV penetration will rise from 53% in 2011 to 67% in 2017, adding 165 million subs to take the total to 569 million. China will provide 315 million pay TV households, with India supplying a further 145 million. However, pay TV penetration will be higher in South Korea (93%) and Singapore (90%). Legitimate pay TV penetration will be lowest in Indonesia (23%), with the Philippines the next lowest at 27%.

Digital TV Research says pay TV revenues in Asia Pacific will be US\$11.7 billion higher in 2017 (US\$40.7 billion total) than in 2011. Japan (US\$10.6 billion) will remain market leader in 2017, followed by China (US\$9.7 billion) and India (US\$7.1 billion). However, pay TV revenues will be flat in New Zealand, Hong Kong, Singapore and South Korea.

Cable TV will remain the highest earner, with revenues at US\$23.6 billion by 2017. Digital cable TV revenues will climb by 137% between 2011 and 2017 to US\$21.2 billion, with analog cable TV falling from US\$11.4 billion to US\$2.3 billion. There will be 383 million cable homes by 2017, up only 44 million from 339 million at end-2011. Cable penetration will be 44.7% by 2017, almost unchanged from 44.4% at end-2011.

The good news for cable operators is that the number of digital subs will nearly triple over the same period to nearly 332 million, though the analog

total will fall to a quarter of its 2011 total. Although the total is falling rapidly, there will still be 51 million analog cable subs (6.0% of TV households) by 2017.

The number of homes paying for IPTV will reach 110 million by 2017 – or 12.8% of TV households. China will contribute 77 million IPTV subscription (or 70% of the region's total) by 2017. IPTV subscription will overtake pay DTH ones in 2013. About 34 million pay DTH homes will be added between 2011 and 2017 taking the total to 76 million, the report says.

Primary DTT households (homes not subscribing to cable, DTH or IPTV but taking DTT) will rocket from 30 million (4.0% penetration) at end-2011 to 133 million (15.5%) by 2017. China will provide 84 million of the 2017 total, followed by Japan with 10 million and India 9 million.

### Digitization drives growth in India, ASEAN

In December last year, the Indian Parliament passed an amendment to its Cable TV networks law paving the way for mandatory digitization of cable television in India. The new law regulates cable operators and digitalize the analog TV network across the country in a phased manner by the end of 2014 and gives the government the right to cancel licences of cable operators who flout rules.

Vivek Couto, executive director of Media Partners Asia (MPA), says India's digitization timetable to full digital TV (DTV) conversion will make the industry capital-intensive until 2017 due to the CAPEX requirements associated with digitization. He predicted this will lead to more mergers and acquisitions and the sector's improved transparency, scale and operating leverage will attract large domestic and international strategic players.

MPA said the government mandate to digitize cable networks across India will bring a significant transformation to the US\$7 billion TV industry with a positive impact on the nascent broad-

band market.

According to the MPA report, digital pay-TV penetration of Indian television households is expected to grow from less than 20% in 2011 to 50% by 2016, and 61% by 2020. It said key demand drivers for this growth will come from cable operators, six commercial DTH pay-TV platforms, and DD Direct, the government-owned free DTH platform.

"India's broadcasting and pay-TV market is on the cusp of a high growth value phase similar to North America between 1998 and 2003, Korea during 2003–2007, and Taiwan during 2005–2010. Valuations of the domestic companies in these markets during the high-growth value stage typically skyrocketed, as networks were upgraded and services to consumers expanded. In India, domestic players and foreign investors will both do well, to the benefit of consumers, when the government's policies take shape," Couto said.

The report said digitization will help the government pursue India's broadband goals and thereby help to boost economic growth. Potentially, a 10% increase in broadband penetration would increase India's GDP by about1.5%.

Despite their differing pace of development, ASEAN countries have pledged to set a common target date to migrate their terrestrial broadcasting from analogue to the digital age by 2015. The collective switch to digital TV was

affirmed again in March this year by ASEAN in line with the bloc's economic integration schedule.

ASEAN ministers have also noted that Digital Video Broadcasting – Terrestrial Second Generation (DVB-T2) is a more advanced technology compared to DVB-T and acknowledges the benefits of migrating directly to DVB-T2. The Ministers also noted that the ADB will be developing common specifications for DVB-T2 receivers to enjoy economies of scale.

As early as 2003, China has been saying all cable TV broadcasting in China will be in the digital mode by 2010, while existing analog broadcasts will be terminated by 2015. An official of the State Administration of Radio, Film and Television said China initiated a large-scale promotion of digital cable TV in 2003 with 25 cities starting to operate digital cable TV broadcasting on a trial basis, 19 of which have started digital pay-TV channels. The official predicted that most regions in China would complete the transition from analog TV broadcasting to digital TV broadcasting by 2008.

But it appears the program didn't take off well as its digitization program has been extended to 2015 for completion. China has recently admitted the absence of a unified regulatory body to digitize has largely hampered digitization plans.

China Daily has quoted Horse Liu, an analyst with IHS iSuppli, as saying that bringing cable TV networks together had been a greater challenge than the technical aspects of digitization.

Another industry watcher, Wei Leping, said there were areas TV broadcasters and telecom carriers disagreed on, making the task of consolidating these operators more challenging.

Among Asian countries, only Japan has made the full switch. On July 24, 2011, as planned, Japan switched off



**Top:** Mandatory digitization of cable TV in India is bringing significant transformation in the US\$7 billion TV industry. (Photo of Reliance Digital TV).

# Featured Product: Communications Anywhere, Anytime with AAE Systems, Inc.

For years, AAE's customers have requested a wide range of customized, field-deployable solutions that leverage the far-reaching capabilities of satellite. Realizing that there is not a "one-size-fits-all" solution, AAE offers customizable mobile and portable platforms that are easily transported, quickly set up, and ready for operation within minutes. Tailored to the unique communications requirements of each customer, these products are ideal for use across multiple industries for a wide range of applications in remote and disaster-stricken areas or anywhere a gap in communications coverage exists.

AAE designs three (3) self-contained, mobile communications platforms that enable voice, video, and data communications independent of terrestrial infrastructure. The Rapid Response Vehicle is a vehicular solution; whereas, the Emergency Communications Trailer and the Integrated Communications Pod are trailerized solutions that integrate with a vehicle, yet are light enough for air transport. Each platform integrates extensive communications subsystems, as per the requirements of the customer, which are accessed via a satellite link.

For even greater portability, AAE offers the FST-120K and



the FST-75K Flyaway Satellite Terminals. These products include a basic communications package and are further configured according to the application requirements of the customer.

For more information go to http://www.aaesys.com/

its analog television network, except those worst hit by the March 11 earthquake and tsunami. But in March this year, Japan also terminated its analog broadcasting in the prefectures of Iwate, Miyagi and Fukushima, the regions that suffered massive damage caused by the earthquake and tsunami.

#### Equipment suppliers enjoy a boom

Anver Anderson, Vice President of Sales for Asia of satellite equipment manufacturer Newtec says the current demand for ground equipment and software throughout Asia is extremely buoyant. Although there has been lots of talk about convergence for many years now, he said it's only now that equipment are coming out that harness the real capabilities and reap the benefits of IP to provide for broadcast and telecom services. The equipment in the market continue to evolve, he says, but they're moving much more quickly across Asia now.

He cited Newtec's modulators capable of providing very high throughput capabilities, pushing the limits of the DVB-S2 standard, or the Newtec's Clean Channel Technology, coupled with Bandwidth Cancellation and our FlexACM(R), that push the envelope of an extended DVB–S2 standard. These technologies, he says, enable space segment to work as hard as possible to increase the amount of data transmitted in the available bandwidth. This represents the best way of providing growth for service providers without the necessity to launch new satellites in the near term, he explains.

In its more than 26 years of existence, Newtec, he says, has always been one of the pioneers in the creation and participation of standards for satellite communication. "Now again Newtec together with industry partners have put the proposal to update the DVB-S2 standard. As a first step in extending the current DVB-S2 standard, Newtec is launching its Clean Channel Technology that further improves satellite efficiency by up to 15% compared to the current DVB-S2 standard for IP trunking, backhauling and government networks," says Anderson.

Nowadays, Anderson says, Newtec is promoting its M6100 Satellite Broadcast Modulator, which he says provides the most flexible of platforms for the future. "We launched this at NAB this year and already demand is very high. Coupling this newest product with Newtec's Clean Channel Technology and Bandwidth Cancellation (combining the forward and return transmissions in the same satellite bandwidth extra capacity can be made available), as well as Flex-ACM, means that Newtec can meet all the needs of our customers, maximising use of their expensive resources, increasing their data throughput and allowing them to increase their own market impact and revenue." He added Newtec's M6100 modulator also provides for carrier ID – an important feature customers suggested for the prevention of interference.

Another provider of satellite communications products and services, Gilat Satellite Networks, says the demand for ground equipment is also being driven by demand for cellular backhaul. David Leichner, VP Corpo-

rate Marketing of Gilat, says demand come from GSM operators across all regions of Asia, but particularly high in Australia and Indonesia.

"In many instances networks are operated in a private mode with the GSM operator simply taking on operation as another aspect of the GSM network infrastructure. In Indonesia the environment is almost unique in that all of the networks of which we are aware have been granted to separate VSAT-focused companies, so the absolute scale of the deployment is very evident." Leichner says Malaysia, Laos and Vietnam now all use satellite for backhaul from GSM BTS locations. "The major operators in Malaysia have continued to grow their businesses, but mostly in the same segments — the agricultural area and government agencies. Again, just like Indonesia, there has been a continual investment in new systems, both Ku and C-band, with the intention of expanding into new markets," he says.

Leichner says Gilat will almost certainly continue to deliver solid revenues based on specialised niche markets, with maritime considered to be among those with the most potential. He says the market potential for Asia-Pacific region is huge but warned that the biggest fly in the ointment is the fact that Asia already has the most abundant and low cost space segment anywhere in the world. With prices rising and good capacity harder to find, this will be a growing concern for most operators, adds Leichner.

Leichner believes that cellular backhaul will continue to shape the trend with new pica and micro-BTS products that are IP-based and able to offer local switching. This solution, he says, is very compelling for all parties involved and the jostling to get into the best position is evident.

"GSM backhaul in Indonesia, extraction and government customers

in Australia, regional corporate networking out of Hong Kong and Singapore and disaster recovery in Japan have all demanded either high-end IP broadband TDMA, mesh DAMA or SCPC based services generating thousands rather than hundreds of dollars per site per month."

## Intelsat's \$1.3 B Fleet Investment for Asia-Pacific region

On the operator side, Intelsat is set to launch this second quarter of the year Intelsat 19, the second of its four-satellite \$1.3 billion fleet investment program for the Asia-Pacific region. Designed to refresh and expand satellite capacity available for media programmers and communications providers offering services in the region, Intelsat said the program will deploy a significant portion of the company's global mobility beams, a Ku-band network designed to deliver broadband services for maritime, aero and other mobility services.

Intelsat 19 will be located at 166° East longitude and will replace Intelsat 8, a video neighborhood providing distribution to cable head ends across the Asia-Pacific region and reaching more than 37 million pay-tv subscribers around the Pacific rim. The satellite's C-band will provide enhanced performance capacity for distribution of international video content throughout the Asia-Pacific

region and will include Ku-band mobility beams for maritime broadband services across the Pacific.

On March 25 this year, Intelsat successfully launched Intelsat 22 satellite, replacing Intelsat 709 at 72° East. Built by Boeing Space & Intelligence Systems, the satellite became fully operational on May 7 and now provides

C- and Ku-band capacity for media, government and network services customers in Africa, Asia, Europe and the Middle East. In addition, Intelsat 22 hosts a specialized UHF communications payload for the Australian Defence Force (ADF).

Also to be launched this third quarter of 2012 is Intelsat 20, which be located at 68.5° E and will replace Intelsat 10 and Intelsat 7. The satellite will serve as premier video distribution and contribution community linking Asia, Africa and Europe with more than 160 video channels

The first of the four satellite fleet expansion, Intelsat 18, was successfully launched in October last year. Intelsat 18 satellite, built by Orbital Sciences Corporation, now provides capacity to enable enhanced DTH coverage and network services capabilities via Ku-band and C-band platforms. The satellite replaced Intelsat 701 at 180° E and is expected to have a useful life of nearly 17 years.

In April this year, Intelsat and PCCW Global, an operating division of HKT, Hong Kong's telecommunications service provider, have agreed to interconnect their MPLS (multiprotocol label switching) networks. This will result in Intelsat and PCCW Global ability to offer networking solutions and access to Intelsat's video neighborhoods customers in



Intelsat 19, was launched in June, the second of Intelsat's four-satellite \$1.3 billion fleet investment program for the Asia-Pacific region.

Asia and other regions of the world. It will also enable Intelsat's customers to expand into new regions via PCCW Global's extensive and robust network.

To strengthen its presence in Asia, SES in January this year relocated its SES-3 satellite from its former location over North America to 108.2° East to provide coverage of the Middle East and South Asia regions, where SES experiences growing customer demand. SES-3, which was only launched in July of 2011, now supports video, voice, data, and endto-end communications networks in Asia.

SES claimed in February this year its satellite leadership in TV channel carriage and high definition transmission. SES said that as of end of 2011, SES broadcasts over 5,200 TV channels, including over 1,200 High Definition (HD) channels, adding more than 100 HD channels in the second half of the year alone.

SES said channel growth is coming from emerging markets such as Latin America, Asia-Pacific and Africa. SES says it now carries 44 DTH platforms, more than any other satellite operator in the world. In addition to over 5,200 TV channels, close to 1,000 radio channels are broadcast via the global satellite fleet of SES.

## Regional operators survive competition

#### Asia Broadcast Satellite

Since the original acquisition of its flagship satellite ABS-1 in 2006, ABS has grown to operating four satellites in orbit — ABS-1, ABS-1A, ABS-3, and ABS-7. Its fifth satellite, ABS-2, is currently under construction. ABS currently hosts over 175 TV channels making it as one of the top broadcasters of TV channels in the Asia Pacific.

Reports say ABS is seeking a loan of about \$215 million from the Export-Import Bank of the United States and HSBC Holdings Plc is advis-



Tom Choi, CEO of Asia Broadcast Satellite, and Arianespace Chairman and CEO Jean-Yves Le Gall after the signing of agreement for the launch of ABS-2 satellite.

ing on the financing. Proceeds will be used to fund the purchase of a satellite from Loral Space & Communications Inc. and two from Boeing Co. (BA).

In March, Boeing Co. announced it has been awarded a four-satellite contract, with options for four additional satellites, through a joint procurement by ABS and Satelites Mexicanos (Satmex). The first two satellites, ABS-3A and Satmex 7, are scheduled to be delivered together in late 2014 or early 2015. Details about the other two satellites, including names and launch plans, will be announced at a later date.

Space Exploration Technologies (SpaceX) said in mid-March it signed contracts with ABS and Satmex for two launches aboard SpaceX's Falcon 9 rocket.

#### **AsiaSat**

AsiaSat, which operates four satellites -- AsiaSat 3S, AsiaSat 4, AsiaSat 5 and AsiaSat 7 -- provides services to both the broadcast and telecommunications industries. It recently announced continued growth in core transponder-leasing business with its subsidiary SpeedCast reporting an overall utilization rate in 2011 of 82% after a 9% rise.

Asiasat reported a turnover in 2011 of HK\$1,718 million (US\$221.28 million), an increase of HK\$262 million (US\$33.74 million), representing a rise of 18% compared with the previous year. The increase came from the continued growth of our core business, bolstered by winning significant contracts from new customers. SpeedCast also reported revenue of HK\$239 million (US\$30.78 million), from steady demand in the broadband and maritime sectors.

In February this year, Asiasat announced that SpaceX will loft its new satellites, AsiaSat 6 and AsiaSat 8, in the first half of 2014.

#### Measat

Measat supplies satellite communication services to leading international broadcasters, DTH platforms and telecom operators. With capacity across a fleet of five communications satellites, Measat is able to provide satellite services to over 145 countries representing 80% of the world's population across Asia Pacific, Middle East, Africa, Europe and Australia.

The Measat fleet includes the state of art MEASAT-3/3a satellites at 91.5°E which support Asia's premium DTH and video distribution neighborhood. The Measat fleet will be further strengthened with the addition of Africasat-1a at 46°E in fourth quarter 2012 and Measat-3b at 91.5°E in fourth quarter 2013.

Measat says it will continue to focus on the development of video distribution. With its 26 HD channels, Measat's 91.5° East is said to be the region's most vibrant distribution hotspot.

#### **Thaicom**

Thailand-based Thaicom PCL reported last month a net operating profit of 83 million Baht (US\$2.65 million) on revenues of 1.95 billion Baht (US\$62.24 million) for the first three months of the 2012. Year-on-year, the company's revenues grew

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### GLOBAL COVERAGE, REGIONAL FOCUS

by 364 million Baht (US\$11.63 million) or 23% from the same period last year, with revenues from conventional satellite operations increasing by 18% year-on-year, and iPSTAR revenues growing by 47% over the same period.

But looking back, Thaicom posted 490 million Baht loss (\$15.8 million) in 2011 and Baht 804 million (US\$25.65 million) in 2010. After a seemingly endless pit of losses since Thaicom's iPSTAR (Thaicom 4) broadband satellite was launched in 2005, there are lots of doubts now whether the company should launch its planned iPSTAR 2 sometime in 2014 or early 2015.

iPSTAR satellite, which weighed 6.5 tons, was the world's heaviest-ever civilian telecommunications satellite and its launch in 2005 represented a bold venture into broadband Internet service in Asia-Pacific. But seven years after, iPSTAR satellite has so far failed to achieve its full commercial promise. Suphajee Suthumpun, Thaicom's chief executive, recently proclaimed that iPSTAR 1's bandwidth utilization has reached only 32%, up from 25% in late 2011.

Thaicom remains hopeful though. "This is the third consecutive quarter of consolidated net profits, and there was improvement across the board, including in our telephone and internet and media operations," said Suthumpun. "Our core satellite operations continue to show good

performance, and contribute nearly 80% of all revenues." Thaicom said its revenues grew from increased bandwidth utilization after long-term contracts were signed in 2011 in Australia, Malaysia, Japan and Myanmar. In the first quarter of 2012, additional revenues were also recognized from new telco deals signed in Japan and Thailand.

Suthumpun remains hopeful of launching iPSTAR 2 (Thaicom 8). She said the Thaicom 8 broadband satellite, to be positioned in the orbital slot at 119.5°, will cost no more than US\$200 million and will serve the anticipated increase in broadband demand. She said construction of the new satellites will begin once the company receives 30–50% of preorders for a new satellite and reaches its utilization goal.

Orbital Sciences is currently constructing Thaicom 6 scheduled for launch next year. Based on GeoStar-2 satellite platform, Thaicom 6 will be located at 78.5 degrees East Longitude, and carry a hybrid Ku- and C-band payload that will generate approximately 3.7 kilowatts of payload power. The Ku-band payload will be comprised of eight active transponders providing services to Thailand, Laos, Cambodia, and Myanmar. The C-band payload will feature 12 active C-band transponders providing services via a regional beam to Southeast Asia, and six active C-band transponders providing services via a

south Africa beam to southern Africa and Madagascar.

#### **Prospects and directions**

With all the developments in the region, the broadcast sector will continue to grow at a faster pace marked by an increase in the distribution of HD channels as well as some growth in 3D TV programming delivery but also in the traditional SD channel distribution as well. Also, DTT continues to be implemented and many projects are expected in that sector over the coming years.

As Newtec's Anderson points out, there will be an enormous increase in IP applications, both point to point and point to multipoint services in the telecom sector. Many links will be bringing Internet connectivity to the Pacific Islands, for example, or backbone services to rural areas throughout the region. There will also be a new interest in large network broadband systems for consumers and small business as well as potential for SCADA networks.

Favorable economic conditions in the Asia-Pacific region will allow satellite companies to maintain a stable customer base and solid performance in the broadcast, content provision and telecommunications sectors, while broadband service providers and occasional-use clients engaged in satellite news gathering will continue to experience healthy demand. Rapidly-growing DTH market and the trend towards High Definition Television (HDTV) conversion will predominate the industry.

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sively on telecommunications and satellite developments in Asia and other regions for numerous publications and research firms. He can be reached at peter@satellitemarkets.com.





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