

GROWING ASIAN HDTV THE MEASAT WAY

by Peter I. Galace

For broadcast operators and media consumers worldwide, high definition TV (HDTV) is hot—really hot.

By the close of this year, research firm Digital Entertainment Group (DEG) predicts more than 52 million homes will have HDTV. That's 36 percent of all U.S. homes. Analysts predict HDTV growth has been far faster than originally forecast, driven largely by the frantic market race by satellite pay TV providers DirecTV and EchoStar.

With the launch of its DirecTV-10 last July and the impending launch of DirecTV-11 later this year, DirecTV will have the capability to broadcast HDTV to 90 percent of its U.S. customers. DirecTV expects to offer 100 HDTV channels by year's end.

The HDTV picture looks even better in Western Europe. By 2010, Western Europe is projected to account for 60 percent of all expected HDTV households. From a mere six HD channels in 2005, Europe at the end of 2006 fielded 36 HD channels. By 2010, that number is expected to jump to 160 channels with an audience of more than nine million households.

IMS Research indicates the growth in satellite HDTV households will be driven by the US and Western Europe until 2010. Much of the growth will be fueled by lower costs for MPEG-4 Advanced Video Coding (AVC) set-top boxes for both operators and consumers, more local HD content, better competitive pricing for HD services, the growing popularity of flat-screen TVs and sports-driven demand for HDTV.

Where exactly is Asia in this rosy state of affairs?

Right smack dab in the middle and growing fast, thank you. HDTV growth in the Asia-Pacific exceeds Europe's, but only until 2011. Europe is expected to surpass Asia-Pacific at that point to become the second-largest HDTV market in the world behind the Americas.

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Asia's situation has sufficient room for growth, especially on the operator side. Malaysian satellite operator Measat Satellite Systems' Sdn Bhd believes the High Definition (HD) video sector has strong potential across the wider Asia-Pacific region.



Measat Antenna Farm

Measat CEO Paul Brown-Kenyon noted that while HD has established itself across some of Asia's leading media markets (such as Japan, Hong Kong and Singapore), it has failed, so far, to achieve traction across much of the region.

"Given this situation, Measat is working with a number of partners, including Ascent Media, Pacific Century Matrix (PCM), Scientific Atlanta and Tandberg, to help create the conditions for the market to develop," he said.

"We are doing this through the development of a complete end-to-end HD solution that leverages the latest compression technology to enable flexible and cost-effective distribution. The platform's design addresses content acquisition, MPEG-4 compression, encryption, uplink and content distribution via satellite with existing broadcaster content being acquired, converted into MPEG-4 format and encrypted before being uplinked to satellite for distribution across the region."

This past July, Measat launched its HDTV Distribution Platform to meet the needs of international broadcasters distributing HD content across the wider Asia-Pacific region.

Brown-Kenyon pointed out that HD content has established a foothold in the more developed media but has not extended much further than that, for the following reason, "We believe the reason for this is three fold: less developed media markets (compared to North America and Europe) with lower consumer awareness; a diverse region with strong preference for local content; and a shortage of transmission capacity to support the bandwidth hungry HD content. These roadblocks limit the ability pay-TV operators and content providers have to develop a viable HD segment."

For its initial HD service, Brown-Kenyon said Measat we will be using its recently launched Measat-3 satellite. The satellite, which provides 24 C-band transponders at the 91.5E orbital location, is able to distribute content across 110 countries through a single, high-powered, C-band beam.

"Capacity for the HD services will be further expanded in 2008 with the launch of the Measat-1R satellite into the same orbital location. Co-located with Measat-3, Measat-1R will provide an additional 12 transponders, allowing customers to expand their services without having to expand their ground facilities. The launch of Measat-1R next year will also introduce satellite redundancy into the Measat systems."

September 2007



Measat Teleport & Broadcast Center

In late July, Measat finalized a \$381 million agreement with Astro All Asia Networks Plc's subsidiary, Measat Broadcast Network Systems Sdn Bhd, for the utilization of Ku-band transponder capacity on Measat-3.

Under the agreement, Measat will provide Astro with as many as 13 Ku-band transponders on Measat-3. This represents more than one quarter of the satellite's communication capacity. Brown-Kenyon said the Ku-band payload was designed to support direct-to-home

(DTH) operators across Malaysia, Indonesia, and South Asia.

Astro said that with the enhanced capacity of Measat-3, the company has been able to introduce numerous new services, including new channels and Astro-on-Demand. Customers can look forward to more new services over the next 12 months.

Brown-Kenyon stated that 13 other customers were now leasing capacity on the Measat-3 satellite, including Radio Televisyen Malaysia, TV3, Ho Chi Minh City Television, Celcom, and BBC Worldwide.

"We are delighted by the initial take-up of capacity on the new satellite. Having reached almost 50 percent utilization, we expect the satellite to be operating close to capacity by yearend," he said.

With the Asian HDTV market still in its infancy, Measat sees the need to collaborate with leaders from each element in the value chain to develop an initial business model as well as build a HD neighborhood on Measat-3.

"While the solution we are working on does not address all these 'roadblocks' to the development of a strong region wide HD industry, we believe it will help to jump start the development of a market in the region," noted Brown-Kenyon.

Wee Way Kiat, managing director of Ascent Media Network Services Asia, noted that, until now, the distribution of HD content has been unable to meet bandwidth and compression expectations. "As a provider of playout services to key broadcasters in Singapore, this has been a crucial step in the development of an HD workflow. We are now able to drive the transition to HDTV forward in Singapore and across the region."

"Being a vertically integrated company providing a diversity of solutions to premium broadcasters, PCM is in a unique position to offer customized HD solutions (both technical and commercial solutions) to HD broadcasters expanding into Asia, in a most cost-effective manner. If the playout is overseas, we have access to global fibre networks to bring our HD platform virtually to the customer's broadcast center," said Guenter Kring, CEO of PCM.

"We have been a front-runner in utilizing the most advanced and reliable technologies for our customers' commercial gains, and together with our long-standing partner Measat, we are committed to facilitating the rapid growth of HD channels in Asia."

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Brown-Kenyon said that with the successful launch of Measat-3 at the end of 2006, Measat is primarily focused on building the customer base on the new satellite. He revealed that at the end of the first quarter in 2007, over 30% of the capacity on Measat-3 had been leased. The same customers have already committed to an additional 25% over the next few years.

"As an example, we recently finalized agreement with Astro, Malaysia's DTH platform, for significant amount of Ku-band capacity on MEASAT-3 over the 15 year satellite life."

In addition to Measat-3, the company is also working on the new Measat-1R satellite to provide additional satellite capacity at the company's key 91.5°E orbital location, and on the Measat-5 satellite, which will extend the reach of the Measat network into the African region.

Measat's current strategy is focused on building scale at the 91.5E orbital location and expanding the reach of the network. Measat-5 is a key part of that strategy. To be launched in the fourth quarter of 2009, the satellite will provide high-powered C and Ku-band coverage over Africa and the Middle East and will extend to areas of Southern Europe.

Measat-3 was launched successfully on December 12, 2006 from the Baikonur Cosmodrome in Kazakhstan. The launch event was broadcast live via satellite in Malaysia.

Measat-3 was launched on board an ILS Proton M/Breeze M with a five-burn to orbit sequence. It entered commercial service in January 2007 at a geostationary orbit of 91.5 degrees East (co-located with Measat-1). The C-band and Ku-band beams cover geographically remote areas such as Sabah, Sarawak, and northern India and expands the Measat fleet's coverage to more than 100 countries embracing Australia, Middle East, Eastern Europe and Africa.

Measat ordered Measat-3, a Boeing 601HP satellite, in March 2003. Measat-3 joins the existing Boeing-built Measat-1 and Measat-2 spacecraft in the Malaysia-East Asia Satellite (Measat) system.

Satellites will become the most important mode of receiving HDTV programming over the next four years, said IMS. The research firm forecasts the global HDTV market to reach almost 150 million households by 2011, with some 40 percent of these households receiving HDTV programming via satellite.

In Western Europe, the slow growth of digital cable in recent years has helped position satellite as the most common method of receiving pay-HDTV. Recent consolidation of the cable TV markets in several countries is expected to aid European cable HDTV growth over the long term.

Satellite is still expected to make substantial gains in the US, thanks to focused marketing efforts by US satellite operators to push HDTV as a competitive differentiator. ■