

Asia staking its own key DTH hotspot

BY PAUL BROWN-KENYON

Fuelled by rapid economic growth, and supported by market deregulation, the Asian direct-to-home (DTH) pay-TV sector has enjoyed remarkable growth in recent years. Over the past five years, the DTH customer base in the region has grown by 300%, from 12 million subscribers in 2006 to 49 million in 2011. In India alone, there are now six DTH operators with an estimated 30 million subscribers.

The increase in the number of DTH subscribers is also being matched by an increase in the number of channels being delivered. In Asia, DTH platforms delivered 980 channels in 2006, increasing to 3,250 in 2011. This growth is expected to continue over the next five years as channel bouquets expand and HD replaces SD as the preferred content.

Against this environment, the timely availability of reliable satellite capacity is a key concern for CEOs of DTH platform.

DTH as a delivery platform

Compared to other delivery technologies (for example, digital cable), satellites provide many advantages. Satellites are able to provide national coverage with the launch of a single spacecraft. Once launched, satellites are able to support growth in subscribers with limited incremental capex. Ultimately, the investment in satellite capacity is independent of the number of subscribers tuning in.

But as with any delivery technology, satellites have some drawbacks. A satellite is a complex piece of equipment which can take three years from procurement to operation. Investment in new capacity is lumpy, with each satellite costing anywhere from US\$200 million-\$400 million.

Finally, operating in a harsh environment 36,000km above the earth, and with no option to repair, satellites represent a single point of failure for a DTH pay-TV system.

To mitigate these limitations,



Measat's state-of-the-art teleport and broadcast centre located on the outskirts of Kuala Lumpur, Malaysia.



satellite operators in the more developed media markets have focused their support for DTH platforms into a small number of orbital slots.

By focusing in this way and creating "DTH neighbourhoods", or "DTH hotspots", with multiple DTH platforms being supported by a constellation of satellites operating at the same orbital slot, satellite operators are able to create significant advantages for both themselves and the DTH platforms they support:

■ **Adding incremental capacity becomes easier:** While a single satellite developed for a single DTH platform represents a very lumpy investment, which can sometimes be difficult to justify, developing a new satellite to support multiple DTH platforms operating from the same orbital slot reduces the investment risk. This allows the satellite operator to invest more easily ahead of demand, reducing the lead time required to support DTH growth.

■ **Capacity becomes more cost-effective:** While supporting a single DTH platform will require the operator to select a small or medium-sized satellite, sizing a new satellite to meet the requirements of multiple DTH platforms operating from the same orbital slot allows the selection of larger satellite sizes. This reduces the per-

unit cost of the capacity, improving economics of both the satellite operator and DTH platform.

■ **Satellite systems become more robust:** Supporting a number of DTH platforms at a single orbital slot will allow the satellite operator, over time, to move from operating one satellite in the orbital slot to operating a constellation of satellites co-located in the same orbital slot.

By either spreading their services across multiple satellites, or by securing spare satellite capacity on a second satellite at the same orbital slot, DTH platforms are able to mitigate the risk from a single point of failure.

In the more mature media markets, specific orbital locations have developed into DTH hotspots to leverage these advantages. In the Americas, 119°W provides

With continued investment in satellite capacity to meet ever-increasing demand for DTH capacity, Measat has been quietly and deliberately building Asia's own satellite DTH hotspot to challenge those that can already be found in the markets in the Americas and Europe.

222 transponders to 33 million subscribers across the US and Latin America from four co-located satellites. In Europe, Eutelsat's *Hot-Bird 6, 8 and 9* at 13°E provide 156 transponders to 13 DTH platforms serving Europe, North Africa and the Middle East.

Development of Asia's DTH hotspot

Given a fragmented market structure and national regulation which limits the development of cross-border media platforms, the Asian DTH market has developed with a large number of DTH platforms working from single satellites. Quietly, over the past five years, the market structure has begun to change with the development of 91.5°E as the region's key DTH hotspot.

The 91.5°E orbital slot started supporting DTH as far back as 1996 with the launch of the Malaysian Astro platform. Supported with four Ku-band transponders on the original *Measat-1* satellite, Astro grew into one of South-east Asia's strongest DTH platforms with close to three million subscribers.

In 2006, the *Measat-1* satellite was replaced by *Measat-3 (M3)*. Given the need for additional capacity to support Astro, *M3* was designed with 24 Ku-band transponders. Additional beams were added to mitigate the US\$250 million investments allowing the satellite to expand coverage to India and Indonesia.

Investment in *M3* was followed

shortly after by the procurement of *Measat-3a (M3a)* to provide an additional 12 Ku-band transponders at the same orbital location. Designed to provide backup to the *M3* satellite, for the first time customers in Malaysia and Indonesia could mitigate the satellite risk by utilising two co-located satellites.

With DTH capacity available increasing from four to 36 transponders, Measat was able to support the growth of the Astro platform in Malaysia (which had committed to take up 50% of the capacity on the two satellites). Further, it supported the launch of DTH platforms in India and Indonesia.

Looking forward

Today, the *M3/M3a* DTH neighbourhood at 91.5°E delivers more than 600 channels to 14.5 million satellite TV households on six DTH platforms across four countries.

With a vibrant DTH neighbourhood, Measat has continued to invest in satellite capacity to support the rapidly increasing satellite capacity needs of its DTH partners.

Last year, Measat contracted for the procurement of the *Measat-3b (M3b)* spacecraft. Designed to operate in tandem with *M3* and *M3a*, *M3b* will provide a minimum of 48 Ku-band transponders to Measat's core DTH customers across Malaysia, India and Indonesia.

Given the demand for the capacity, the company minimised programme and schedule risk by selecting the reliable Astrium *Eurostar 3000* platform for the satellite and the Ariane-V ECA for the launch.

With 50% of the satellite capacity on *M3b* already contracted, and with the remaining capacity expected to be contracted before the launch, plans have already been approved for a fourth spacecraft (*Measat-3c*) to back up the 91.5°E constellation of satellites. The satellite, which will be launched in 2014, will be designed to provide an additional 18 DTH transponders to core DTH markets.

With the launch of *M3b* and *M3c* over the next few years, capacity at 91.5°E will grow from 36 DTH transponders across two spacecraft today to over 100 DTH transponders across four spacecraft in three years.

With continued investment in satellite capacity to meet ever-increasing demand for DTH capacity, Measat has been quietly and deliberately building Asia's own satellite DTH hotspot to challenge those that can already be found in the markets in the Americas and Europe. This is great news for Asia and Asian DTH operators.

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