

How to cope with supply-demand mismatch in DTH capacity

BY DR ALI R EBADI

With MEASAT and its anchor customer, Astro, heavily invested in the direct-to-home (DTH) business, I would like to focus on an issue that continues to trouble the industry — the mismatch between the supply and demand of satellite capacity for DTH across the Asia-Pacific.

First, the good news: Despite some false starts, DTH seems to have

taken off regionwide. While not yet at the levels of penetration seen in Europe or the US, there was a very respectable seven million homes subscribing to DTH across the Asia-Pacific by 2003.

Although this accounts for only 1.5% of the TV households, there are core markets (such as Japan, Australia, Malaysia and New Zealand) where penetration is substantial. Further, these markets are forecasted to continue to grow, and grow well. In New Zealand, the growth last year

topped 15% while Malaysia's was 26%.

In addition, other countries, including India, South Korea and Vietnam, have recently launched, or are in the process of launching, new commercial DTH systems. Granted that some of the launches may have been a little

later than first predicted, the general industry consensus is that these markets will soon support strong DTH platforms. Some

platforms may even rival the more developed DTH markets going forward.

There have also been setbacks in the industry. Combinations of market structure, regulation and lack of investment have all held back DTH development. But, whichever way you look, the overall industry trajectory in the region is positive. Barriers are gradually coming down, new systems are being launched (or relaunched, with stronger partners able to provide the necessary capital funding)

and DTH is increasingly vying with cable as the dominant pay-TV delivery technology across the region.

But when you look at the region's markets, in many cases, there is a mismatch between the demand and supply

of DTH capacity. At the macro level, there is an oversupply of Ku-band capacity — only 60% of the 700 Ku-band 36MHz transponders available in 2002 was being used — while at the country level, the situation looks decidedly patchy.

This is partly because DTH cannot be provided by *any* Ku-band payload but requires satellite beams to be designed with tight geographic coverage. It requires satellites with high EIRP (especially in regions of high rain fade where heavy rain can bring down a signal) and with in-orbit satellite redundancy to protect against satellite failures. Where satellites provide the sole delivery backbone, and single point of failure for a service that



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tends to the needs of millions of subscribers, a solution based on a single satellite is often untenable.

However, the lack of quality Ku-band capacity does not explain everything. You still have a situation where some markets, such as China, have a significant oversupply of quality capacity from multiple satellites, while others, such as Malaysia, have the coverage but lack the capacity; and yet others, such as Indonesia, where choices are limited.

This situation, in my view, is the natural result of operators needing to design satellites and make investment decisions, based on DTH demand projected 17 years ahead (two years to build the satellite and 15 years to operate it). While we are all

pretty confident of our abilities, even satellite operators have problems predicting the evolution of the DTH market between now and 2021.

Given this supply-demand mismatch and the limitations faced by satellite operators, how can DTH operators help? We have three suggestions:

■ **Think about partnerships.** In an industry that has seen a trend towards short-term contracts and price competition, DTH is a segment where it pays to think long term. What is important is finding a satellite partner that is able to support the growth of your DTH business. Issues such as quality of the satellite fleet, existing DTH neighbourhood, financial security and established reputation in sup-

tips

Faced with major upfront investments and long, uncertain payback periods, satellite operators have formulated their own strategies to mitigate risks. Some of these have worked well, others not so well. Here are some of the approaches:

■ **Build small and many.** Rather than build large satellites with banks of transponders, some operators are focusing their efforts on building much smaller satellites, tailored to meet specific market needs. As the market develops, new satellites can be added to build capacity.

MEASAT took this approach with its initial satellites. MEASAT-1, for example, was built with only four Ku-band transponders focused on the Malaysian market to allow the launch of Astro's DTH service, and with 12 C-band focused on the South-east Asian market. Now well established and supporting a strong customer base, MEASAT-3 is being developed to grow the business, adding capacity and providing that all-important in-orbit redundancy.

■ **Focus on major markets.** Develop a satellite with beams designed to support DTH operators in the major regional markets where, over time, there are likely to be multiple strong DTH operators looking for satellite capacity. Markets such as India and China currently have a series of satellites able to provide excellent-quality DTH coverage. The key here is to be in the right markets at the right time and, of course, to be selected.

■ **Build with flexibility.** Design flexibility will

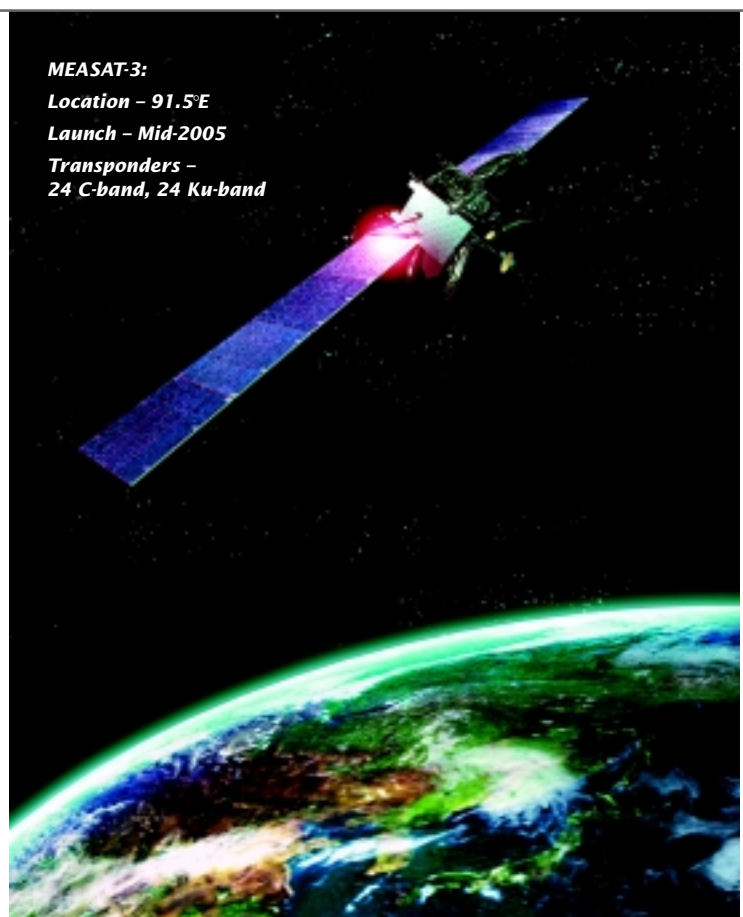
enable the satellite to adapt to a changing DTH environment. One example is MEASAT-3, to be launched in mid-2005 to expand capacity in the 91.5°E slot. The satellite has been designed with two levels of flexibility. First, it is being built with four possible Ku-band reflectors (for China, Indonesia, Malaysia and South Asia) of which only three will be flown on the satellite.

Secondly, MEASAT-3 has been designed with the ability to switch capacity in virtually any configuration between the beams. These two levels of flexibility will allow MEASAT to switch and match satellite capacity to meet demand as required across the markets, greatly reducing satellite risk.

■ **Build with zonal beams.** Some operators have adopted the approach of designing and building satellites with wider zonal beams that can serve DTH operators in many neighbouring countries. Although this will ensure that the satellite operator has the capacity at hand to meet demand, it leads to other potential problems: Reduced satellite-power levels (especially in high-rain regions where power satellites are required to deal with the rainfall), regulatory issues and problems in obtaining programming rights may limit the ability of the satellite operator to market its satellite as a DTH bird.

While no single approach will solve all the issues, there are things satellite operators are doing to help ensure that DTH operators are provided with the capacity they need, when they need it.

MEASAT-3:
Location - 91.5°E
Launch - Mid-2005
Transponders -
24 C-band, 24 Ku-band



The MEASAT-3 satellite has been designed with two levels of flexibility, allowing it to switch and match its capacity according to demand.

porting DTH customers all indicate a long-term partnership potential. The key point to make is that adopting a long-term focus may even lead the DTH operator into a decision, which in the very short term may be partially sub-optimal.

■ **Engage early.** When planning the launch of a new service, it is crucial to involve the satellite operator in the thinking process from an early point. It is important to scope out the requirements in coverage, power and redundancy, and to discuss these with the satellite operator.

In doing so, do not expect operators to launch capacity specifically for your DTH service ahead of time. But do expect them to find viable interim solutions and build their satellite fleet to support your business as it grows.

■ **Work on the issues together.** Much of the mismatch between the supply and demand

of satellite transponders is due to regulatory obstacles. Issues such as the lack of clear landing rights in specific countries or a closed-skies policy sometimes restrict the development of a DTH market by limiting the available satellite capacity. The DTH operator and satellite operator should tackle these issues in tandem. Working together to explain to the local regulator the benefits of removing regulatory obstacles can be a powerful approach to changing mindsets and bringing down barriers.

While the imperfect matching of supply and demand of DTH satellite capacity is, to some extent, a natural result of a classic fixed-cost industry, there are ways to mitigate the effects. Although developing a strong partnership, engaging early and working the issues together will not solve all the problems, it should make everyone's life a little easier.



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