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The Little Difference that Could Spell Big Changes for the Commercial Satellite Market

Last year, a September press release from SES Astra received little notice in the industry. The subject appeared to be a rather mundane announcement from Germany's Tele 5. The company said it was increasing its leased capacity in order to "improve and optimise the picture quality in Standard Definition (SD) transmissions". As was noted in the release, the uptake of large, flat screen televisions among TV households have obliged broadcasters to begin to take more notice of how their content, even that broadcast in SD, appears to viewers on the screen.

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NSR would contend that this announcement could in fact signal one of the most profound trends the commercial satellite industry will confront in the coming five to ten years and may even signal a period of enormous transponder demand growth that could dwarf what has been seen in recent years. To understand the impact of this issue, one has to look closely at one of the key trends of the commercial satellite age, that of moving to digital broadcasting, and investigate just how incredibly sensitive capacity demand growth is to small changes in the average size of TV channels broadcast.

Taking Western Europe as an example, NSR's recent "Global Assessment of Satellite Demand, 4th Edition" study shows that the number of SD channels carried for the Ku-band free-to-air, cable and DTH market has increased by about 975 between 2003 and 2006 and is forecast to grow by another 1,400 to 1,500 SD channels by 2012. HD channels have gone from zero in 2003 to about 50 in 2006 and another roughly 110 HD channels will be added in the coming six years. In the same time span, NSR can show that the average number of SD channels carried per leased 36 MHz transponder equivalent in the Western European market has gone from about 7.5 in 2003 to 9.4 in 2006. For HD channels, an average of 2.6 were carried on each leased 36 MHz transponder equivalent as of the end of 2006.

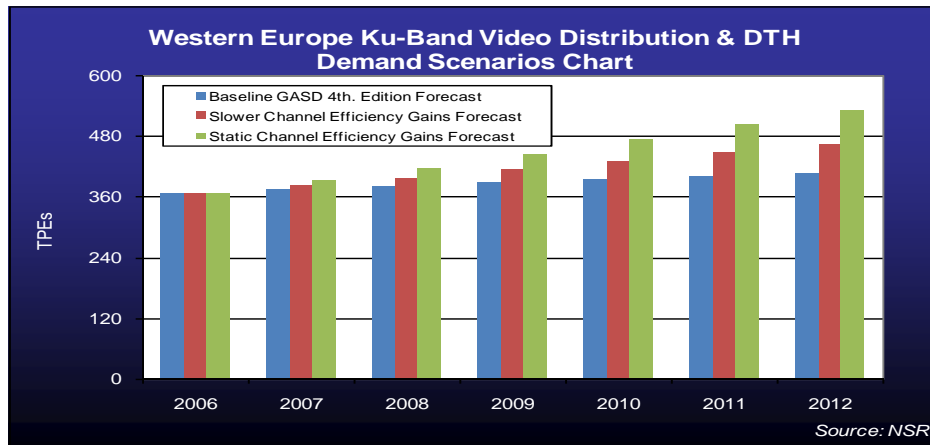
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This improvement in average carriage of SD channels per leased transponder is typical of the satellite industry and, as is well known, is one of the main drivers for growth in video markets. The less capacity it takes to carry each SD channel means that costs go down and more channels are produced and brought to TV

households over satellite. No one doubts that this trend will continue with the gradual adoption of new technologies like MPEG-4 and DVB-S2. NSR is currently estimating in its GASD 4th. Edition study that the average number of SD channels to be carried on each 36 MHz equivalent of leased transponder capacity in the Western European market will hit 12.2 by 2012. This is roughly a 4% annual improvement in carriage efficiency between 2006 and 2012. For HD channels, NSR thinks that over 4 HD channels will be carried per 36 MHz transponder equivalent by 2012. Some analog channel conversion along with the just described improved carriage efficiency will offset new Ku-band transponder demand in the coming years, yet NSR is still projecting that about 40 new Ku-band 36 MHz transponder equivalents will be needed in Western Europe to carry all the new SD and HD channels projected to be launched in the coming six years.

SES Astra at the recent Satellite 2008 conference assessed that there will not be any major improvement, on average, in Western Europe for the number of channels carried per transponder.

Yet, what happens if more broadcasters imitate Tele 5 and add new capacity to improve the quality of their existing channels? As noted, MPEG-4 and DVB-S2 can offset the lease of new capacity, but adoption of these technologies is a gradual process. SES Astra representatives at the recent Satellite 2008 conference publicly stated that their current going in assessment is that there will not be any major improvement, on average, in Western Europe for the number of channels carried per transponder. NSR has gone back to its original forecasts in the GASD 4th. Edition study and reran its projections assuming that SD channel carriage only improve by 2% per year through 2012 to about 10.7 SD channels per leased 36 MHz transponder equivalent and HD channels only reach 3.3 per 36 MHz of leased capacity. In this case, new Ku-band capacity demand with the same assumptions for channel growth and analog conversion jumps to nearly 97 new 36 MHz transponder equivalents in Western Europe compared to the current forecast, or two and a half times as much new demand. Going with SES's assumption of no carriage efficiency improvement, Ku-band capacity demand is 425% greater than NSR's current forecasts!



So who is right in their market assessment? As with anything related to market forecasting, it is simply a matter of opinion today and no one will know the answer until the market forces have had their chance to play out. Still, the point of this illustrative example is that future capacity demand in the core video markets is incredibly sensitive to even small differences in average channel carriage per transponder simply because we are dealing with such a large and important part of the industry. On a global basis, the difference in projections for future capacity demand for video services could number well over a thousand of transponders over the next six years. This is many, many, times the size of any number of new and emerging niche markets that so many in the industry are focused on such as cell backhaul, maritime, business continuity, yet almost no attention within the industry is being given to such a key and core issue related to future demand growth. The impact of video carriage trends could literally have seismic impacts on our industry and will determine everything from how many new satellite will be needed in the future along with corresponding launches to just how much capacity will be available for all the other critical applications served by the satellite industry. NSR hopes that by highlighting these trends, the industry will become more cognizant of this apparently small issue that in fact has an outsized impact on our future.

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