PTC 07: Sub Telecom Boom, Bust, Boom?

Industry Cautiously Positive, But Some Fret

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Could it be the good old times again for the submarine telecom community? Fresh from a major bust – probably the most severe of any sector in telecom – more or less everyone sees growth, with new projects in prospects and expansion generally in an area not seen since the height of the dotcom boom. "There are certainly a lot of new projects on the drawing board," says John Hibbard, an industry consultant, based in Australia. "Some of those will not be realized, but some will be."

Many observers remain cautious given that the industry has essentially spent the last four years in a state of hibernation, or, for many major projects that entered Chapter 11 soon after they were built, outright deep freeze. The reason for the apparent recovery, however, remains relatively evident. In spite of the overbuilt cable infrastructure spanning the planet, internet traffic has kept on growing and growing and growing, posting annual increases of 100%. This all finds its way by various routés to the very backbones supporting global telecom. Entering the telecom downturn, network providers lit a proportion of their fibre facility but that lit capacity has essentially been used up on key routes. Now, is the time for additional facility either through new build or through upgrade of existing infrastructure. Either way, more money needs to be spent.

The new growth scenarios are nothing so much as a tribute to those executives who were relentlessly optimistic about what the growth of broadband would do to the raw infrastructure demand worldwide. And this has in turn driven spurred new projects in many regions, particularly connecting those parts of Asia-Pacific that have continued to exhibit enormous domestic growth. And there is huge traffic pull from the US to east Asia as new internet services catch on in Japan, Korea and perhaps even China. "We see an increase of 1Gbps demand per month," says KDDI's Vice President and General Manager of Corporate Technology, Yutaka Yasuda, "because of YouTube-like services that are attracting the Japanese market."

Some of these projects also reflect regional or local needs that finally bring underserved

communities into the telecom and internet community. Alcatel, for example, is laying Gondwana-1, a so-called thin route cable, from New Caledonia to Australia, and a similar technology cable to Morocco from Mediterranean Europe. “Wet costs [the submerged component of the cable system] account for between 45% to 60% of total costs, so it makes sense to minimize these [with technologies such as thin route]” says Alcatel Submarine Network’s Marc Fullenbaum.

One intriguing by-product of the downturn, in fact, has been to make players far more creative and ingenious in how they think about projects. A particularly interesting example is the wholesale re-use of a major but recently decommissioned submarine cable in the Pacific, recovered and reused as a new link between Australia and Papua New Guinea. Hibbard, who was involved in the project, says it is the first example of a long length of cable being used in this way. He estimates that the procedure cost only 30% of what a new build would have cost, and suggests that the same techniques could be used in other regions of the world and perhaps ten cable systems could be repurposed.

Elsewhere, other expertise has been spun-off and resulted – indirectly in the development of young companies and start- ups specializing in particular business opportunities, or established vendors extending their portfolios. Various intriguing developments continue to suggest that more can be squeezed out of cable performance. US-based Xtera says it has a portfolio of patented expertise in driving much more performance and extending the range of short haul unrepeatered cables using Raman amplification techniques, whilst Azea Networks in the UK has made a business from continually refining the capacity potential and upgrading cables in service. Other vendors such as NEC are looking closely at Ethernet terminal technologies that will make it easier and cheaper to directly connect submarine cables into telecom networks.

But several executives suggest that the make-or-buy decision where new builds were rejected in favour of clever refinements in upgrading existing technology may be a fine point as pricing power of capacity on some key routes seems to have recovered to the point where operator users are contemplating building their own systems. There have been some extremely large projects made public too. Amongst the most high profile have been announcements by Asian network operators for new major trans-Pacific builds. At the end of 2006, Chinese operators China Telecom, China Netcom and China Unicom joined Chunghwa Telecom, Korea Telecom and Verizon Business in a consortium that will build the Trans-Pacific Express (TPE) cable, a major project linking the US mainland and China via South Korea and Taiwan. The system is planned to be ready for service in the third quarter of 2008.

Other cable systems are also well past the planning stage. On Monday this week, Asia Netcom, a regional cable operator in east Asia, announced plans to build a complete trans-Pacific system in a 23 500km infrastructure featuring a ringed design circling the ocean. Scheduled for completion in July 2008, the ring will consist of a northern route from Japan to the US and a southern route linking Philippines to the mainland US via Guam and Hawaii. The system – designated EAC Pacific - will use relatively state of the art technology of 4 fibre pairs each capable of supporting a minimum design capacity of 2.56Tbps using 64 wavelength DWDM technology with 10Gbps per wavelength capability.

“There is clearly a need for more [route] diversity between Asia and the US,” said Bill Barney, CEO of Asia Netcom in making the announcement, a reference to the painful aftermath of the Taiwan earthquake that managed to sever an entire group of major cable systems on Boxing Day, 2006. Six out of seven cable systems passing through the Luzon Strait were badly damaged by the earthquake measured at 7.1 on the Richter Scale, essentially knocking out internet capability between north and south Asia and the US. The fact that armoured cable systems buried in the sea floor can be so easily disrupted has clearly shocked telecom operators whose customers immediately saw their internet connectivity demolished. The industry may have suffered, but it hardly been bad for the repair business and serves to remind the rest of the telecom sector – which might have just taken the submarine telecom segment for granted – that more capacity and more options are probably a good thing.

Big projects such as these come with big price tags; building a transoceanic system is at least a USD 500 million endeavour. And they seem to be good for most in the submarine telecom industry, and it is evident that there is a marked improvement in sentiment amongst specialist vendors, who are responding to the upturn and taking facilities and people out of the mothballed condition they were placed in during the downturn.

But some executives fear it could lead to a repetition of the overbuild - and subsequent collapse - featured in the dotcom boom, and essentially condemn the industry to an ongoing boom-bust cycle vicious in its intensity. One CEO of an existing major cable system in Asia-Pacific remarks: “the problem is not in forecasting the traffic: we can do that quite accurately and the underlying demand keeps growing; the problem is knowing how many players are going to jump in and what the price points [of the services] will be.” Eyes may roll and old-timers say they have seen it all before, but for the moment, most executives in this sector seem happy to be talking once again about future possibilities and high growth markets.

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