

Supply & Demand

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The former leader at Worldcom/UUNET once exulted famously that Internet traffic was doubling every three months with the addition of new Internet users and more data intensive applications. Albeit absent any independently-verifiable data, his claim seemed credible at the time – as an industry analyst said in 2000, “the sky’s the limit”— and it was embraced by carriers, their financiers, and equipment vendors. In 11/2000, Level 3’s president opined that the “real challenge” would not be a capacity glut but “keeping pace with rapidly increasing demand.”

This view fueled overbuilding by fiber carriers, competitive local exchange carriers (CLECs), and fixed wireless operators, abetted by easy debt and euphoric equity investors.

Now the market is awash in excess capacity and rates have fallen precipitously. Within two years, prices for OC-3 capacity from New York to Los Angeles declined 97%, from \$105,000 to \$2,500 per month. In addition to “lit” fiber capacity, tremendous reserve capacity resides untapped in dark fibers and grows “in the dark” with advances in electronics that increase capacity per fiber. For example, optical equipment will become available that will provide 40Gbps (OC-768) per wavelength, four times the 10Gbps (OC-192) capacity now installed by carriers. Carriers also can multiply capacity using DWDM (Dense Wavelength Division Multiplexing) of 10Gbps streams up to 1.6Tbps. Although additional investment in electronics will be needed to activate this latent capacity, the fact that it can be brought to market quickly depresses rates even as usage increases.

There are still bandwidth shortages on some secondary routes and numerous last-mile bottlenecks, but overall supply is out of balance with demand.

Many of the large long haul fiber carriers have been forced into bankruptcy: Worldcom (UUNET), 360Networks, XO Communications, McLeod USA, FLAG,

Global Crossing, Williams Communications, Genuity, and KPNQwest in Europe. Level 3 Communications teetered at the brink, selling off its Asian undersea cable assets for only \$80M, until being rescued – at least temporarily -- by a symbolic investment by a group including Warren Buffett.

Carriers have resorted to selling dark fiber although this provides a lower return than selling data networking capacity over lit fiber. Level 3 is reported to have sold dark fiber links to Qmedia for transmission of uncompressed video. Carriers are looking at regional or national video-on-demand (VOD) networks as potential new applications for abundant dark fiber capacity.

The market correction encompasses the entire service supply chain, from ISPs, to the CLECs which served them, to the fiber carriers which provided capacity to the CLECs, to the equipment suppliers that financed and equipped the CLECs and fiber carriers. Since reaching a high-water mark by eoy2000 with 16.4M access lines, 8.5% of all US access lines, major CLECs have shut down leaving customers to find other suppliers.

Eventually, as the economy recovers, so will growth in telecommunications revenues and investment. Meanwhile, there are opportunities for acquisition and consolidation of network assets. IDT purchased bankrupt Winstar for a tiny fraction of the original Winstar investment, and continues to seek out other distressed Operator bargains; Level 3 is purchasing Genuity’s network assets; Global Crossing’s assets will be taken over for pennies on the dollar; 360 Networks’ first act as it re-emerged from bankruptcy was to scoop up a bankrupt Canadian CLEC. However, operators re-emerging from bankruptcy with reduced or eliminated debt burdens, such as 360 Networks and XO Communications, threaten to exacerbate pricing pressures on the remaining suppliers. The market would benefit from consolidation of suppliers but major bankrupt players and their creditors still prefer re-structuring and re-entry to liquidation.