

The Public Gigabit Ethernet Race

Some of the hares are in financial trouble.

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Not long ago, everyone was excited about Gigabit Ethernet service providers. In the US, early entrants obtained funding, built networks and started winning customers. Aggressive pricing policies have stressed the finances of all these new entrants. Can the Gig-E players survive, or will this be a repeat of the DSL story?

In 1999, public Gigabit Ethernet was one of the most exciting developments on the horizon. Large enterprises planned to implement the technology in-house and looked forward to linking LANs with TLS (transparent LAN service) using IP over Ethernet over fiber – fully compatible, familiar and an order of magnitude less expensive.

Competitive service providers quickly realized that the equipment available to supply 1Gbps Ethernet was much less expensive than the equipment needed to deliver OC12 (622Mbps). 90% savings on the electronics is possible. All the major manufacturers had products in the pipeline, and expectations were that the price would fall rapidly once the market was established. There was customer demand, and a clear opportunity to undercut existing rates and still retain handsome margins.

The Gig-E new entrants (companies like Cogent Communications, Yipes, Sigma Networks and Telseon) offered a 100Mbps link for less than the price of a 1.5 Mbps T1. Or 1 Gbps for about one third the price of an OC3 (155 Mbps). And 10 Gbps was on the way too with even more savings promised. Sounds like a compelling value proposition.

At first, market observers and investors agreed. The new entrants were able to raise equity and debt funding to get started, and big name customers came on board. Early revenue forecasts for the US market for public Ethernet ranged up to \$24 billion by 2005.

Then the “telecom meltdown” happened, and Gig-E was not left out. Sigma Networks lasted around a year before being liquidated in January this year. Yipes filed for bankruptcy protection (Chapter 11) in March 2002. Concern over the finances of the other players continues and share prices are low as investors direct their money elsewhere. None of the pure-play Gig-E companies is in profit, or close to it. Most analysts are quoting lower revenue forecasts now, reflecting both company performance and the generally depressed state of the telecoms market: for example, \$4 billion by 2005 (Gartner); \$2.7 billion by 2006 (Infonetics Research).

Cogent targets the multi-tenancy market and claims more than 3000 customers in over 500 wired buildings. Telseon is reported to have less than 50 customers, but since the company sells a wholesale product, the number of end-users on the Telseon network is likely to be higher. Yipes had around 550 customers at the end of 2001 and is still operating while its finances are being sorted out.

These customer numbers are not enormous, but taking into account that they are all big users, it represents a small but significant shift of capacity from the incumbents to the

new companies. It's a start. The Gigabit Ethernet market did not exist until 1999, and the progress achieved since then is disappointing only when measured against the abnormal expectations of an abnormal decade.

Customers for these services have saved money as promised, and write appreciatively of the performance of the networks and the simplicity of the offering. IT managers like to be able to manage bandwidth in real time, using the web-based tools supplied by the service providers. There is no sign that customers are migrating back to their previous service providers because they don't like what they're getting.

But the Gig-E companies are still financially vulnerable. Clearly they are not generating the revenues they need to drive to profitability in the sort of timescales the investors expect. Without intending to over-simplify a complicated situation, it is probably fair to say that although the customers are happy, the investors aren't. And that means that although the customers are paying, they aren't paying enough.

The classic approach to the introduction of any high technology product is to set the price high at the outset, and then lower the price as the market gathers momentum. There are several reasons for this learned by executives in many industries over the years, from hi-fi to computers to golf clubs. First, once a price has been set, it's easier to reduce it than to increase it. Second, during the immediate post-launch period, there is usually a need to fine-tune the offering, optimize processes, understand the best market/price positioning and put quality assurance firmly in place. It is easier to do all these things if there is a manageable flow of new customers, rather than a torrent. Self-selecting enthusiastic early adopters can be very helpful in this phase. Third, it creates a revenue flow that is more realistically related to the cost of the service. This may be important if the market has been underestimated. Fourth, it may add to the attractiveness of the product for the mass market. People don't appreciate things so much if they can get them too easily.

Getting the launch price right, not too high, but also not too low, is a useful management skill. Many dotcom companies set prices for their on-line services low or at zero, intending to start charging downstream, or hoping to persuade advertisers to support them. That strategy didn't work for many. And when DSL was launched in the US, the price quickly settled at around \$40 per month in most markets. Compared with the cost of other options for residential or small business users, ISDN or a fractional T1, this was a bargain. Demand outstripped supply, service quality was disappointing and no one made money.

In hindsight, perhaps dotcom and DSL customers, service providers, and investors, might all have been better served by a more traditional approach to pricing strategy.

Could the same be true of public Ethernet? The 1Gbps and 10Gps services are, for now, aimed at big enterprises, government departments, universities, hospitals and others who need (or long for) such high data rates. The lower infrastructure and running costs of Gig-E enable service providers to offer compellingly large price reductions, compared to established TLS services from the incumbents. Large corporate IT department budgets for LAN and WAN equipment and services run to millions per year. Twice the capacity at half the price must be an easy sell.

But how about twice the capacity at 25% less? Or 10% more for 25% less? What is the highest price that could be charged and still achieve a sale to a cost-conscious enterprise

customer? Barriers to sale include lack of fiber availability at their locations, multi-year service agreements with existing suppliers, and lack of confidence that “carrier grade” performance can be guaranteed. But how many potential customers have stayed with their high cost incumbent supplier just because the Gig-E price tag was too high?

It is difficult to avoid concluding that some pricing decisions have been made on the basis of a flawed competitive analysis. Gig-E vendors priced their services to compete with each other, not with the incumbent’s legacy services. Prices were aimed at beating competitors who initially had 0% of the market, instead of simply undercutting the prices of the incumbents who had 100% of the market.

Time will tell whether this gamble will pay off for the new competitors. Meantime, as the hares are running the tortoises are getting organized. SBC and Qwest have been in this market for some time. Other RBOCs plan a controlled entry this year. Their caution is understandable – after all, entering this market means cannibalizing their own services revenues. Some municipalities are involved in public/private initiatives to build the networks that they know their local economies need. And the telecom groups spawned by the power utilities are likely to join in too. ConEd is already in the Gig-E business.

If the early starters burn out because they can’t generate enough cash, there will be plenty of service providers ready to pick up the pieces, and the customers. But not at any price.

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