

A Struggling Industry With A Bright Future

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Three prominent themes carried through the three-day Comnet Conference and Expo in Washington, DC, last week: guarded optimism that two years of distress in the telecom/IT industry could soon give way to an upturn; a reluctant but inevitable coming together of voice networks and Internet-centered data networks; and federal policies that are out of step with advancing technologies and unsuccessful in guiding the industry toward fair competition and enhanced services.

About 300 companies – the familiar mix of large, established equipment and service companies, surrounded by many smaller vendors – displayed their latest systems and technologies for just over 28,000 people who came for the presentations, discussions and seminars, according to information released by IDG, the event's sponsor. Some exhibitors said traffic was somewhat slower than in previous years, but to this observer it was way up from similar events last fall and seemed fairly constant over the three days.

Verizon's Ivan Seidenberg offered a determined, positive approach to the year ahead for his company, but acknowledged that further cuts were under way. Verizon would soon release numbers showing some reduction in the \$17B spent on capital investments in 2001, he noted, and, two days later, the company did announce a \$15B-\$16B capital expenditure budget for the year. Telecom companies have become key players in the IT industry,

Seidenberg said, "...what we do in the marketplace will determine how, and how soon, a new era of technology-driven growth will be delivered to American homes and businesses." Verizon's twofold challenge over the past decade, as he put it, has been to "reinvent" itself around wireless telecommunications and the Internet, and the company has had to grow significantly and make large capital investments to meet the challenge. Verizon's present goal is to provide not just high-speed access in wireless and landline services, but "true, ubiquitous connectivity."

Patrick H. Nettles, Executive Chairman of Ciena, spoke of telecom/IT recovery in a context of industry restructuring and consolidation. His talk outlined a profound and continuing shakeout in the industry, forcing new economies in the network and in operations. Stated simply, service providers are moving toward Internet-based networks and services.

Many competitive local exchange carriers have been forced to restructure debt and still have not survived, Nettles said, while incumbent carriers are winning at present because they have cash. But Nettles sees positive signs. Carriers are tackling the capital expenditure issue head-on and expenditures are now coming into better balance with demand. Bandwidth prices continue to decline, he says, and demand remains strong.

Against much conventional wisdom, Nettle argues that emerging drivers – digital photography, interactive gaming, wireless

data, streaming media, peer-to-peer networking and high-definition video conferencing, as examples – are spurring demand. At the same time, equipment inventories are being reduced, capacity is almost fully utilized on key routes and investment capital is becoming more available.

Nettles believes that advances in silicon technology, micro-electro-mechanical systems (MEMS), liquid crystals, power systems, and software, together with the need to reduce capital costs, are driving revolutionary change in network architecture, particularly in optical networks. Cost is now a primary consideration in networks, and the transition to voice over the Internet protocol (VoIP) is “just a detail”. The latter statement stuck fast and took on new meaning when a systems exhibitor remarked later in the conference, “Voice? We don’t pay much attention to voice now; data is where it’s at.”

The policy and regulation session at Comnet, moderated by former FCC Chairman Richard Wiley, highlighted important issues – broadband, spectrum allocation for third-generation (3G) wireless, regional Bell companies’ entry into long distance services, and national security concerns – but offered little reason to expect real policy breakthroughs in any of these areas this year.

The Administration and the FCC are expected to address the slow pace of broadband rollout, particularly outside metropolitan areas, but don’t expect any near-term resolution of this contentious issue or even agreement on what broadband Internet access means. On spectrum allocation for wireless services, there was discussion of spectrum scarcity, whether 3G wireless is a priority, and recognition that 3G has rolled out more slowly in the U.S. than in other countries. Panelist David Gross, with the International Communications & Information Policy office of the U.S. State Department, pointed out that wireless plays a more critical role in other nations than it does in the U.S. In Africa, Asia, Europe and Latin America, he said, there has been a dramatic growth in wireless, providing basic telephone access for many people who, without wireless, did not and would not have any service.

One of the more forward-looking presentations at Comnet was a talk by Dr. Ian Foster, professor of computer science at the University of Chicago and head of distributed systems research at Argonne National Laboratories, on the so-called “Grid”. A sophisticated system of scaleable, secure, high-performance procedures for accessing and utilizing remote resources, the Grid offers a glimpse

of what real broadband access is about and why excess network capacity may be a quickly passing phenomenon.

If it evolves as expected, the Grid could enable scientific collaboration and sharing of resources on an unprecedented scale, allowing geographically distributed groups to work together in ways previously impossible. Researchers will not be restricted to using local resources to solve problems, but, instead, will be able to call on the collective computing power of distant colleagues or buy added computer power from a provider. And when their research results are in, geographically dispersed colleagues can examine and discuss them together, using sophisticated collaboration and visualization tools.

In a number of discussions during the conference, concern with the lingering malaise in the telecom/IT industry was accompanied by a view that a stronger, wiser, more efficient industry is already taking shape and that it will once again become the engine of the nation’s economy.

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