The Net Economy

March 4, 2002

The All-Optical Dream Lives On

By Joe McGarvey

Two startups marshal on with plans to deliver components for an all-photonic network

Despite the slump in telecommunications and drastic cutbacks in capital spending among service providers, equipment makers have not abandoned the quest for the all-optical network.

At least two startups, Ceyba and Innovance Networks, are set to introduce optical equipment for the core of the public network. Both say they will begin to deliver on the promise of cost-cutting network efficiencies after past efforts with first-generation all-optical gear failed.

Although equipment suppliers such as Corvis introduced optical gear that enabled carriers to eliminate costly electronics from their networks, early all-optical systems did little more than lengthen static transport routes, says Benoit Fleury, VP of marketing at Ceyba.

"Removing electronic regeneration isn't enough," says Fleury. "A collection of innovative capabilities is needed for the idea of an all-optical network to be realized."

Ceyba set March 4 as the launch date for its Agile Networking Solution, a line of transport and switching devices that enable the monitoring, power balancing and provisioning functions usually performed by electronic gear to be handled in the optical domain.

A Useful Purpose

Obfuscated by the hype surrounding all-optical networking is the fact that while costly, electronic regeneration of optical signals provides network operators with the control points to provision new services, equalize power imbalances and adjust for noise and dispersion. First-generation optical systems failed to compensate for the loss of these functions with the removal of electronic gear, says James Frodsham, COO at Innovance, which just announced $55 million in additional funding.

While Innovance and Ceyba are both providing the tools for carriers to build optical networks with the agility of electronic equipment, they are approaching the task in different ways.

Innovance appears to be ready to deliver dynamic switching technology with its initial product family. Ceyba, meanwhile, is concentrating on first providing pure photonic transport gear. Optical hubs along long-haul and ultralong-haul paths will be able to evolve from optical add/drop modules into full-fledged optical switches, says Fleury.

Both companies agree that to be attractive to carriers, equipment for the core of the network must offer extremely compelling economic value, as well as the ability to implement the technology on a route-by-route basis. Gone are the days of greenfield network buildouts, says Frodsham.

"It's not like the late '90s with four or five players building a new network," Frodsham says. "The players are on the field with established networks and it's about showing them a technology plan that allows them to evolve incrementally to a more efficient value proposition."