

## Fiber-Optic Future

# Grant County's Zipp network sets new standards

Adam Haas

Urban telecommunications markets took a beating last year as revenues failed to materialize, venture capitalists pulled the plug, and telecom companies filed bankruptcy under crushing debt loads.

Every sector of the telecom industry took it on the chin, including competitive local exchange carriers, point-to-point wireless providers, and high-speed Internet providers, particularly Excite@Home's spectacular year-end bankruptcy.

Even the incumbent telephone companies like Qwest and Verizon cut staff and slashed capital spending.

But drive 170 miles east of Seattle into rural Washington, and the picture looks entirely different.

Here, in the rural communities of Ephrata, Moses Lake and Grand Coulee, residents and businesses are enjoying a level of telecommunications capability that is unparalleled in any market, be it urban, suburban or rural.

While the once mighty AT&T is dismantling its \$100 billion gamble to offer an integrated communications service, residents and businesses in Grant County can make Voice Over IP telephone calls, order Video On Demand movies and access the Internet over their 1 gigabit fiber-optic connections.

Full credit goes to the Grant County Public Utility District and its Zipp network. For the past 50 years, Grant County PUD has been providing power across its 2,700-square-mile service area through its publicly owned hydroelectric plants.

Expanding service to include telecommunications capabilities seemed like a logical next step for the PUD. Dubbed Zipp, for Zealous Innovators of Public Power, the fiber-optic network currently passes 6,000 homes and businesses.

The Zipp network will be built out to an additional 6,000 homes this year, passing a third of the PUD's 36,000 homes and businesses by year-end. When complete, the Zipp network will include 47,000 miles of glass fiber at an investment of \$120 million.

The PUD is installing the fiber along its existing power lines and then creating community hubs that each can service up to 280 homes or businesses. The PUD installs fiber directly to the home or business from its SONET network.

In turn, Zipp is connected to NoaNet for its long-haul transport. NoaNet, which stands for Northwest Open Access Network, is a nonprofit corporation that has licensed fiber-optic cables from the Bonneville Power Administration to serve as a backbone provider to rural communities in the Pacific Northwest.

Each Zipp connection to the home or business is capable of two-way service at 1 gigabit per second speeds. A gigabit is equivalent to 1 million kilobits per second.

In comparison, a dial-up computer modem runs at 56 kilobits per second. Under state law, the PUD is not allowed to provide retail telecommunications services. Instead, it sells wholesale capacity to service providers, who in turn offer Internet, telephone and television services directly to the consumer.

#### **- The rural network**

In some urban markets, both incumbent cable TV and telephone companies have upgraded their networks with a considerable amount of fiber cable. But apparently, the Zipp network is the first in the nation to deliver all services via fiber cable in an entirely Internet Protocol (IP) format.

Kelly Ryan, CEO of VIB.tv, says "Grant County is ahead of the pack and is setting new standards. It's far better than anything you'd find in a major metro area. What private company would dump \$100 million into a rural community?"

VIB.tv is one of the service providers on the Zipp network. It provides high-speed Internet, television service and, within a few months, IP telephony over the network.

Instead of watching a cable TV channel, the consumer is watching the equivalent of a Web site delivering MPEG 2 video streams through an HTML browser. In essence, the TV set is turned into a Web browser. Like Web sites on the Internet, "we can have unlimited TV channels", says Ryan. "Right now, we deliver 100 channels and soon, as many as 250 plus."

In addition to television channels, VIB.tv offers Video On Demand (VOD), allowing subscribers to access a library of movies delivered to their television set via a 4 megabit video stream, at any time, day or night. The subscriber controls the video stream to his television set, allowing him to "rewind" the movie, or pause it for a refrigerator break.

#### **- Economic development**

It's still early days for the Zipp network. There were 43 test customers on the network 12 months ago and a total of 1,300 customers today. But the economic impact is already being felt.

A number of Grant County businesses are already taking advantage of the service with the goal of increasing productivity. Eka Chemicals has a production plant in Moses Lake

and uses the Zipp network to connect to its North American corporate office in Atlanta. The company also accesses its company Intranet via Zipp.

Another manufacturer in Moses Lake, ChemiCon Materials Corp., has been using Zipp for Internet access but just recently added a Zipp data circuit to its plant in Japan. According to Carl Barr, of ChemiCon, the new circuit will be a great assistance in their manufacturing control, inventory and quality testing processes.

"It gives us online, on-time control of product manufacturing. Already, the Internet access has picked up productivity. It used to take a long time to download a 365 page document. ... Now we can do it almost instantly."

With such a big infrastructure investment, customers hold the key to the success of the Zipp network. And growing the customer base will take some time. Certainly, the price advantage of Zipp will be one strong selling point.

Kelly Ryan, of VIB.tv, thinks it's only a matter of time for the ZIPP network to catch on.

"It's a huge break for local communities. It may take a little while to develop and we have to figure out how to best market this," he says.

*Adam Haas is executive director of telecommunications services for W&H Pacific. He can be reached at [ahaas@whpacific.com](mailto:ahaas@whpacific.com).*