Crossing the Digital Divide (v98)

"Homework"

By Joseph Feigon

For the Observer

Laytonville, a rural incorporated community located Mendocino County, California. There are roughly 88,000 people living in the County, which encompasses 3,500 square miles.

San Francisco, the Gateway to the Pacific, is a mere two hours south of the County line. San Francisco proper has a population of roughly 800,000, and occupies 50 square miles.

Population density: Mendocino has 25 people per square mile, San Francisco has 16,000.

You may have heard Frontier, the telecommunications company that purchased the Central Office, telephone poles and wires that service our community from Verizon. Verizon is one of the giant, post Ma Bell companies, but still a youngster, as they didn't exist prior to 2000. GTE, once the largest independent telephone utility in the USA, was formed in 1934. GTE, years ago, bought the assets of another failing telephone company, Continental, or ConTel. Much of rural California was ConTel territory, which then became GTE, then Verizon. Verizon sold a book of business to Frontier less than two years ago, most of the assets were antique Central Offices like ours here in town. Verizon sold very little of their fiber optic subscriber base.

Why would any telecommunications company would purchase a low-density, copper subscriber base is beyond comprehension. The industry giants are running away from analog (copper) infrastructure – it's failing, most of the deployments are at least 30 years old, and it's functionality questionable. High speed *real* broadband cannot be delivered to a home or business on a twisted pair of copper wires. (DSL is not true broadband). The bigger companies are pushing cellular service as the replacement for land-lines. Fixed wireless is not Cellular data.

What would I do with the Central Office and infrastructure in Laytonville if Frontier were to "give away" their liability? What *is* of value is the telephone poles, and the central office itself. The switching equipment needed to support standard analog telephones (touch tone or rotary dial) generates 48v of power for each connection. 48v is commonly referred to as low-voltage.

Using EXISTING assets, a "phone" company could utilize older central office equipment to power fixed wireless nodes placed onto every telephone pole in their service area. The wires that currently connect the poles to homes would no longer be necessary. Each "node" in the phone company's network (anywhere 984 is today) would be provisioned to carry both voice traffic as well as high speed broadband.

The technology exists today. The reality is demand. Demand draws competition, competition pressures price. I'm working a small project for a client in San Francisco, currently paying $150/month for Comcast Business Grade coax Internet service. AT&T is promoting new fiber optic service in his neighborhood. For a mere $80/month, without having to bundle twelve different AT&T products, the client can receive a direct fiber connection from AT&T, with a two-way (fully symmetrical) 1GB/second connection, and NO DATA CAPS. Within the County of Mendocino, a 1GB/second fiber optic connection from AT&T would cost between $2-5,000/month. Granted, the contract terms for an $80/month termination would restrict resale or sharing, even so…you think market density has much to do with pricing differences?

Control those things you can, and keep the surprises to a minimum!