

## METRO ETHERNET CASE STUDY – FEBRUARY 2004

### Century Old Utility Provider Moves in to the 21<sup>st</sup> Century

In 1900 the Idaho Falls Powers (IFP) municipal electric Utility company was formed to deliver services within the corporate city limits of Idaho Falls, Idaho. More than 100 years later, Idaho Falls Power has moved into the new age of networking communications, by embracing the newest advancements in communications technologies. IFP has built a fiber optic network backbone and is utilizing metro Ethernet technology to deliver profitable new services such as voice, video, and data to expand their business reach within the community.

In this new era of opportunity, IFP realized that creating a communications network of their own would alleviate many of the customary problems that came from working with traditional carriers. IFP went “optical,” making the decision to deploy their own fiber optic network via the right of way available to most city municipalities. This decision enabled IFP to provide profitable communications services via metro Ethernet technology within its market, growing their business and opening up a world of increased revenue opportunities.

IFP’s new optical network provides a scalable infrastructure, which traditionally was constrained by incumbent carriers. Typically, the incumbent carrier’s facilities had been essentially full and any new leased services desired by the Utility required the carrier to build the infrastructure specifically for the Utility. This resulted in high costs and long lead times for the services to be completed. Because of the flexibility and scalability of metro Ethernet technology, IFP is able to respond quickly to ever-changing customer needs.

Today, IFP utilizes their network to offer traditional broadband services to their customers, such as high-speed Internet access. Future service offerings will include Voice-over IP (VoIP) telephony and high-speed video delivery. IFP is focused on promoting high-speed access for the community, offering an alternative to local carriers. The Utility delivers internal networking capabilities and access to dark fiber to their customers, while building a platform where the City can migrate to a Carriers’ Carrier or even to a service provider if needed.

The network build-out employed by IFP included an install of Luminous Networks PacketWave™ platforms deployed in RPR rings with MPLS abstraction, which provided the a peak solution for transport of multiple services with various Class of Service (CoS) and resiliency guarantees. \*A snapshot of the actual network is shown in Figure 1. This network provides a true example of how a multi-service provisioning platform (MSPP) can deliver revenue-generating voice, data and video services on a single platform cost-effectively and efficiently

“The City’s internal network must be the foundation for advanced services like VoIP,” said Scott Brinkman, network engineer. “In addition, IFP should have the capability and flexibility to transport delay sensitive services like traditional voice traffic, video or even DWDM wavelengths if their customers demand it.”

The fiber is laid out in a ring topology and some of the requirements driving the network architecture are:

1. Transport of mission critical data to the head office from various sub-stations
2. Ethernet private line
3. Transport of multiple services like VoIP, video surveillance and data
4. Very little service level staff to maintain the network
5. Scalability to multiple interconnected rings
6. Potential for leasing wavelengths instead of fiber strands
7. Resiliency and automatic facility protection for the fiber

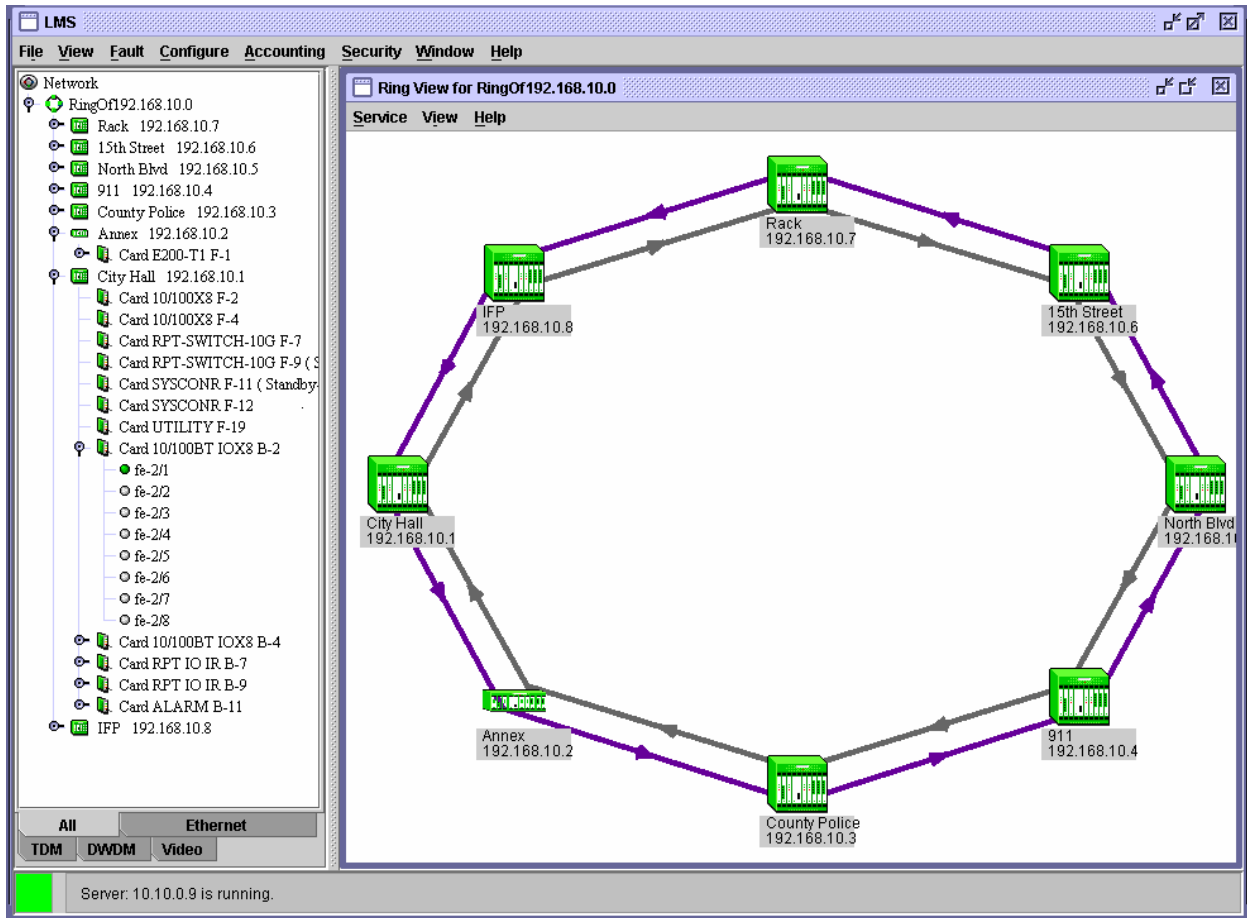


Figure 1: IFP Network topology

**MEF Comments:** Idaho Falls Power is an example of how a Service Provider can easily install a metro Ethernet network to deliver advanced communication services to its customers. IFP further validates metro Ethernet as a compelling alternative to limited-capability voice-oriented technology currently offered to deliver data services.