

## Personalized Ethernet

By Michael Scott

***How customized, all-optical metro Ethernet solutions can improve business productivity, eliminate network downtime and save money in the process.***

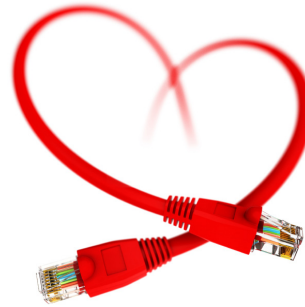
Joe Winn, the technology manager for Sequoyah Electric, a commercial electrical contracting company based in Redmond, Wash., knew he needed a dedicated fiber solution to provide the higher capacity and more reliable bandwidth that would keep his facilities around the Seattle region connected and properly backed up. But he also assumed that upgrading to an all-optical option would be cost-prohibitive.

The 10 Mbps pipe Winn was paying for to transport and back up as much as 5 TB of data—mostly consisting of big Autocad files and other data from all of the contracting company's various job sites—was expensive and slow. Backups typically took 16 hours. Winn needed the speed and reliability of fiber, but he assumed (based on what he knew of his current service provider) that a dedicated fiber connection would be out of his budget.

What Winn also needed was a service provider with the skills and experience to help him map out a unique solution and set up the optimum routing and configuration he needed. Ultimately, a point-to-multipoint metro Ethernet solution delivered over dedicated fiber ensured that Sequoyah's multiple locations could quickly, seamlessly and securely transport and back up the data that keeps the companies moving. That approach reduced Sequoyah's backup time from 16 hours to 3, and reduced the company's monthly costs for network services from \$6000 to \$2500.

### The Ethernet Advantage

Business Ethernet is the rapidly becoming the go-to solution for organizations seeking flexible, cost-effective connectivity solutions that will expand with their businesses and allow them to securely share data and



network services across all locations in and outside a metropolitan area.

Ethernet is a highly flexible protocol that utilizes packet switching, which allows bandwidth to be dynamically allocated to maximize efficiency. This is significantly different from the more rigid standard of time-division multiplexing used by T-carrier services (T1, T3, etc.), in which data is transmitted in a fixed order and pre-allocated to sub-channels of a circuit. Because packet switching moves data across networks more efficiently, Ethernet is significantly less expensive to deliver.

In addition to affordability, Ethernet services also mean ease of installation and more reliability and scalability.

Other business connectivity services, like T1 and T3 lines, rely on phone lines of telecom companies rather than dedicated fiber for transport. Not only is that approach more expensive, it also means slower speeds.

Point-to-multipoint metro Ethernet configurations enable

faster speeds at lower costs and scale with the always-changing needs of a business. Metro Ethernet delivered over fiber ranges in speeds from 10 Mb/s to 100 Gb/s, compared to T1 lines, which run at a fixed speed of 1.5 Mb/s and T3 lines that reach data transfer speeds of about 45 Mb/s.



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Kevin Eld, Vice President of facility management for 360° Hotel Group, a Linwood, Wash.-based owner and operator of branded and independent hotels, discovered just that when he was shopping for connectivity solutions for a new location. Eld, who is responsible for all technology and oversees engineering projects for all his company's properties, was challenged with selecting a solution for a SpringHill Suites location that the 360° Hotel Group had just opened in Bellingham, Wash.

Eld wanted to bring a full fiber cable into the new facility that would provide services all the way up to 1 Gbps to serve all the connectivity needs of the hotel's guests and staff. His challenges were primarily cost-based in that he was not able to identify solutions that offered high enough speeds for the value he was seeking.

"The hotel industry used to be only T-1 but rapidly changed," Eld said. "The price for bandwidth from major providers became ridiculous. A lot of them were charging \$1400 to \$1500 per month for 10 Mbps circuits. So we started looking at all kinds of different options."

Ultimately, Eld decided on a service that offers a 100 Mbps Ethernet connection. That pipe provides enough bandwidth to serve the whole hotel for \$1400 per month. His decision was driven by the value of the offering as well as the timely responsiveness to service issues, he said.

"That's what you look for. No one wants to be on the phone with someone for four hours trying to solve a problem," he said. "The ordering process was streamlined and the service level has been really good. And the Internet connectivity is outstanding."

### **The Power of Customization**

How can a service provider offer more speed and more reliability for less money? The solution isn't in an off-the-shelf offering, but rather a customized solution that's tailor-made for the particular requirements of Sequoyah and other businesses. Those solutions are the result of a series of one-on-one meetings and a lot of research into customers' very unique needs, followed by the creation of custom-designed and custom-provisioned network solutions.

The rapidly-evolving pace of doing business today demands rapidly-evolving business connectivity. One-size-fits-all, quite simply, just no longer fits. Winn's problem was unique to Winn and required a customized approach to get the more reliable, faster and less expensive connectivity the company needed. Given the complexity of business connectivity needs and how much they vary from one business to the next, there just isn't a single out-of-the-box solution.

Every form of service for businesses—from simple Internet connectivity to complex and extensive MPLS configurations—should get the same personalized treatment. Business customers should have the opportunity to explain their unique situations in depth to their service provider, and have the chance to ask the tough questions that will help ensure that their providers not only know what they're doing, but also know that they have the right network resources in the right places to supply the most economical and capable solutions—for the price quoted.

How do such customized solutions get designed, built and delivered? By leveraging state-of-the-art optical infrastructure that's reliable, flexible and dynamic enough to continually adapt to the changing needs of a broad range of customers:1)by being established in carrier points of presence to allow access to expansive fiber connections at competitive rates;2)by listening to the customer;and3) by not price-gouging the customer, but rather delivering a higher-quality service at a fair price .

When designed and delivered to order, optical networking facilities don't have to be cost-prohibitive—in fact, they can be provisioned to provide far more customized, more reliable, and more scalable to businesses at a far better price point than the alternatives. While advanced services and superfast 4G LTE are great ways to upsell current subscribers into buying more services, Julio Puschel, principal analyst, Informa Telecoms & Media believes building customer relationships and loyalty starts with meeting the customer's expectations.