



LightRiver Technologies has developed and implemented a proprietary turnkey process, serving as a predictable and proven methodology of deploying complex telecommunications networks. LightRiver specialists build and deploy the highest-performing, most reliable transport networks with unprecedented speed and cost-efficiency. After an unparalleled battery of extended testing and burn-in in LightRiver's facility, networks are deployed rapidly and efficiently in the field, completing new network

LightRiver Technologies guides clients through the entire lifecycle of their network – from initial market entry strategy, infrastructure design and acquisition, network installation and integration, program management and network management to knowledge transfer, maintenance and support. They design, engineer, procure, commission and support next-generation solutions for mission-critical clients that require the highest capacity, reliability and resiliency that today's optical communications technology can deliver. They specialize in integrating the multi-vendor network for Tier 1 Packet Optical, DWDM/ROADM, MPLS and Carrier Ethernet systems, and in successfully migrating legacy wide area networks to the next generation.

Telecom Review recently sat down with Mike Jonas, President Global Sales and Marketing at LightRiver Technologies. With LightRiver Technologies since 2003, Mike is responsible for corporate, business and technology development and strategic marketing and sales in all areas as President Global Sales & Marketing.

Mike has founded, built and run several companies during his career, both public and private, and has been successful in applying new software, hardware, communications and manufacturing technologies, methods and services to the needs of his clients.

Client Deployments

GVTC

GVTC Communications with more than 2,200 miles of fiber optic cable recently selected LightRiver to perform a significant network upgrade and expansion.

Utilizing its Factory Built Network® approach, supported by the 6500 Packet-Optical Platform from Ciena®, LightRiver has provided a full turnkey solution from consultative engineering and architectural design support to manufacture certified installation of the network. This enables GVTC to leverage best-in-class, feature-rich packet and optical technologies with multilayer end-to-end network management and planning for maximum scale and operational efficiencies.

This project has also helped further the goals of the GVTC GigaRegion, in which the company has partnered with the Texas cities of Boerne, Bulverde and Gonzales to deliver gigabit Internet service to the region, supporting economic development and higher quality of life for local residents and businesses.

Ciena's programmable 6500 Packet-Optical Platform offers unparalleled integrated packet-optical capabilities for customizable packet service delivery from the edge to the core. Coupled with LightRiver's Factory Built Network offering, this allowed for the construction and deployment of a high-performing, reliable transport network with speed and cost-efficiency.

With the network upgrade, GVTC now has the ability to build unique low-latency rings between San Antonio and Austin, giving the company the ability to meet the strict requirements of content providers and wireless carriers. This platform will support GVTC's continued aggressive expansion in offering carrier-class Ethernet access and protected transport throughout the San Antonio, Austin, and Central Texas regional markets.

"Our expanding footprint is incredibly unique and the first-class engineering services from LightRiver, paired with equipment from Ciena, are ushering in an exciting time at GVTC," states Josh Pettiette, GVTC Vice President, Product, Business Development, and Strategic Planning. "We built a dynamic network to deliver carrier-class Ethernet solutions, with capacities exceeding 100 Gbps. These services deliver the protection and low-latency our customers demand in order to support synchronous data replication and other latency-sensitive applications. GVTC will now be able to easily facilitate network-to-network interfaces and deliver a highly resilient and dependable network connecting rural and metro markets."

LightRiver's Certified Integration Services offered technical support during the planning, implementation and deployment of Ciena's equipment into GVTC's network. The company's technical staff provided network design review, site surveys and recommendations for site readiness, along with detailed engineering and comprehensive methods of procedure for installation, and test and integration.

"At LightRiver, we take great pride in providing the design, deployment and care of complex, best-of-breed transport networks," says Mike. "We specifically tailored this solution for GVTC, in concert with Ciena, and built and deployed the highest-performing, most reliable transport network quickly and cost-efficiently. GVTC is now able to handle next-gen traffic through its carrier-grade network, managing increased bandwidth loads and providing services to

customers that are not found anywhere else in the area.”

FirstLight Fiber

For more than 15 years, FirstLight Fiber, a provider of fiber-optic data, Internet, data center and voice services to enterprise and carrier customers, has been building and operating its own fiber optic network throughout New York and Northern New England. Over the years, the company has grown both organically as well as strategically including the acquisition of Lebanon, NH-based segTEL in 2011 and the assets of VT-based TelJet in 2013 and G4 Communications in 2014. The FirstLight network today spans more than 260,000 fiber miles in five states and up to Canada. While each of these acquisitions (segTEL, TelJet and G4 Communications) was very good at moving traffic around their regional networks, it was clear that just simply interconnecting these disparate networks at one or two common locations would not be enough to meet FirstLight’s business goals. Connecting the networks together in this the combined network and create high latency due to the number of nodes data would have to traverse to get to the final destination. FirstLight sought to create a unified platform leveraging best in breed technology that would “future-proof” its network, while at the same time enable 100 Gbps connectivity ubiquitously across its network; and eventually scale to 200 Gbps and 400 Gbps capabilities. This unified platform would interconnect FirstLight’s key markets and would allow for the company to continue the organic growth of its native network and take advantage of potential strategic network-expansion opportunities in the future. Thus began FirstLight’s search for the right network solution providers.

To satisfy FirstLight’s needs for a unified platform, the design needed to seamlessly adapt to changing bandwidth needs, interconnect its key markets, be cost-effective, and able to handle its long-haul needs. fashion would have resulted in maintaining multiple equipment types and software versions in

Upon the engagement with FirstLight, LightRiver designed a network solution to FirstLight’s exact specifications. Ciena, one of the industry’s top network specialists and valued LightRiver partner, was crucial in enabling the 100-Gbps network upgrade. LightRiver’s design utilized Ciena’s 6500 Packet-Optical Platform equipped with third generation WaveLogic Coherent Optics as its Core network platform. LightRiver’s complementary expertise in methodically delivering turnkey networks from greenfield to fully operational next-generation transport solutions is deeply rooted in comprehensive knowledge of multi-technology protocols, the latest carrier-grade equipment offerings, legacy migration strategies and a thorough understanding of FirstLight’s business drivers.

Another tool FirstLight needed was a platform that would be able to better manage, monitor and control network performance. The platform FirstLight chose was Ciena's OneControl Unified Management System, which provides simple point-and-click service provisioning to enable faster service turn-up and end-to-end visibility of network performance.

After an in-depth analysis of available and roadmap technologies by LightRiver and FirstLight technical, operations and executive teams, the Ciena 6500 was selected for the backbone network. LightRiver designed, furnished and deployed a multi-degree ROADM solution that fully addressed all of FirstLight's network needs. FirstLight is now well positioned to provide Ethernet and Wavelength services at nearly every granularity up to 100 Gpbs ubiquitously across its network. The LightRiver and Ciena longhaul DWDM platform is among the best on the market, and with the multi-degree ROADM, FirstLight has the flexibility to add capacity to existing markets while simplifying the addition of new markets as the company continues to expand.

Mike noted, "LightRiver was proud to work with FirstLight on this important project and applauds the company for continuing to offer the innovative solutions needed for businesses to thrive in the digital age. After evaluating what's available in the market, FirstLight has taken decisive action to undertake this network upgrade leveraging best-in-breed technology from Ciena. In doing so, it proves that 100 Gbps connections are no longer just for customers located in tier 1 markets by making them available for everyone throughout Upstate New York and Northern New England. This network upgrade is a game changer for customers by providing increased flexibility and bandwidth opportunities."