

smartoptics

Case study Colorado D11 school district

# Colorado Springs gets connected with simple and effective M-Series DWDM

*"Smartoptics provided us with a wavelength service at every one of our schools in the district, replacing the shared capacity solution. Now we've stepped up our performance and at the same time significantly reduced annual operating costs."*

— Ray Caplinger, Director Networking and Telecommunications

## CONNECTING COLORADO SPRINGS SCHOOLS

District 11 (D 11) provides more choices for parents and students than any other school district in Colorado Springs. The sixth largest school district in the state, District 11 has 60 schools, all of which are working to serve students with individualized programs designed to meet their specific needs.

## INCREASING CAPACITY

District 11 had exhausted its shared capacity utilized by its schools and needed to significantly expand capacity. They needed to offer all of the schools a wavelength service to handle their current and future needs. All totaled, sixty schools situated over two large geographical fiber rings needed to be linked together. Optical protection was required at each school and in the event of a fiber cut, the service had to seamlessly carry on regardless. Distances were such that amplification was required at several key sites. Other key elements? Pricing had to be right and according to Ray Caplinger, director of networking and telecommunications at D11, "Smartoptics

offered us the biggest bang for the buck. The overall cost proposal was impressive and with the Smartoptics solution, the size of our footprint was significantly reduced as well. Each Smartoptics node required just 2U of rack space instead of 12U we used to require."

And arguably the most important factor: The solution needed to be simple to use, install and operate. Something that Caplinger felt strongly about: "Our former supplier's equipment was far too complex for what we needed. The total cost of ownership of the Smartoptics solution was less than the annual operational cost of the old solution."

## PLUG AND PLAY CONNECTIVITY

District 11 quickly realized that the Smartoptics solution ticked all the boxes. It was the best value transmission system available with the simplest approach.

Smartoptics revolutionary M-Series platform is a 1U DWDM multiplexer with built-in amplification, signal conditioning and optical management. This was crucial to give the capacity needed at each of the



sites and the required signal power to reach the far stretches of the network. To ensure fiber path protection, T-1608s were used with dual line outputs that switch over in <50ms in the event of a fiber cut. Shortly after the solution was installed, a fiber cut near one of the schools tested this feature. All services, including the phones, switched over to the new path and school business continued uninterrupted.

OADM's (optical add drop multiplexers) working in tandem with the M-Series ensure the right amount of capacity at each site. The large number of sites and long distances pushed the embedded DWDM technology to the limit. The Smartoptics design gave D11 all the bandwidth and performance they required, not just at day 1 but also in the future. The network

was designed in such a way as to make the future scaling of the WAN network simple and future proof.

All these factors, coupled with Smartoptics unique relationship with Brocade (Smartoptics is the only vendor Layer One tested and approved by Brocade) made the choice an easy one.

## SMARTOPTICS, THE PERFECT FIT

Caplinger concluded by saying that, "Smartoptics provided us with a wavelength service at every one of our schools in the district, replacing the shared capacity solution. Now we've stepped up our performance and at the same time, significantly reduced annual operating costs."



**Ray Caplinger**  
Director Networking and  
Telecommunications

## ABOUT SMARTOPTICS

Smartoptics offers optical transmission solutions making networks more powerful. Expanding bandwidth without the upfront investment or hassle of traditional WDM. Our products allow corporate data centers, governments, hosting solution providers and ISPs to build simple, straightforward and cost effective solutions to fulfill their ongoing and future network capacity needs. Headquartered in Oslo, Norway, Smartoptics is an international provider with thousands of installations all around the world. Our award-winning approach has helped companies from every industry sector stay ahead of expanding network demands.

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