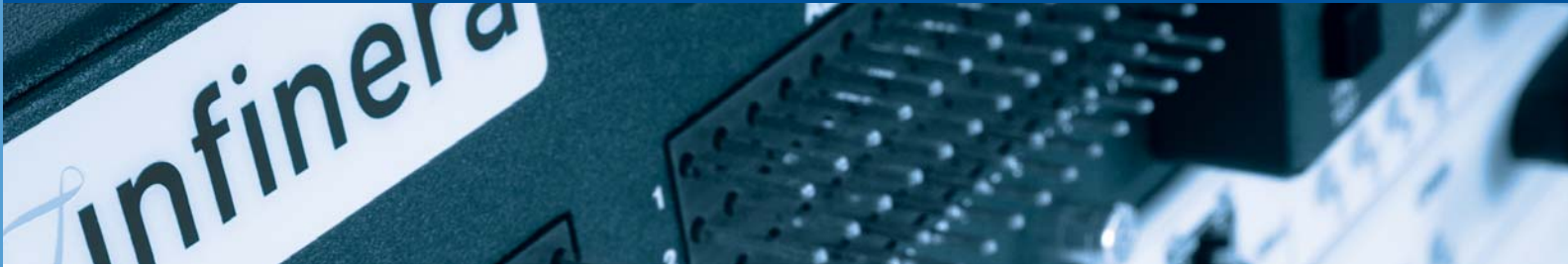


## Infinera Case Study: Deltacom



### Deltacom Deploys the Infinera ATN to Bring Infinera Speed and Flexibility to the Metro Edge

*Deltacom has enjoyed the benefits of Infinera in its long-haul network in the southeastern United States. In 2009, Deltacom deployed the new Infinera ATN platform to bring similar benefits to metro markets. Deltacom's network team and Deltacom's customers are now enjoying the speed of service delivery, simple, reliable management, and other benefits of Infinera throughout the optical network.*

Deltacom, through its Interstate FiberNet Affiliate, operates a 12,020 route-mile fiber network in the southeastern United States and offers a wide range of business services and wholesale services to enterprises and carriers in its markets. In 2006, Deltacom deployed the Infinera DTN through its long-haul network in six states (see Figure 1). Deltacom enjoyed the benefits of Infinera's Digital Optical Networks architecture, which enabled the operations team to deploy new services and provision circuits very quickly, while at the same time reducing operating expenses due to the ease of use of the Infinera system. In 2009, Infinera introduced the Infinera ATN, which brings many of the benefits of the Infinera digital architecture to metro edge networks.

Deltacom decided to deploy the Infinera ATN in several metro areas, to bring the Infinera benefits to those parts of the network. Deltacom looked at a number of other metro DWDM systems before deciding to go with Infinera. An important advantage of the Infinera ATN for Deltacom is that it is managed by the same Digital Network Administrator (DNA) network management platform as is used by the Infinera DTN system. This enables the Infinera DTN network and the ATN network to be managed on a common software platform and on one screen, simplifying the task of managing the network. The Infinera DTN network enables Bandwidth Virtualization™, a key architectural feature making the capacity of the optical network a resource that can be used for any service between any points on the network. The ATN's ability to integrate seamlessly with the DTN means that all the add/drop locations on the ATN

network now have access to that bandwidth for a full range of services. Deltacom engineers can use Infinera DNA software for provisioning end-to-end circuits from any ATN or DTN location to any other ATN or DTN location. This simplifies the provisioning process significantly.

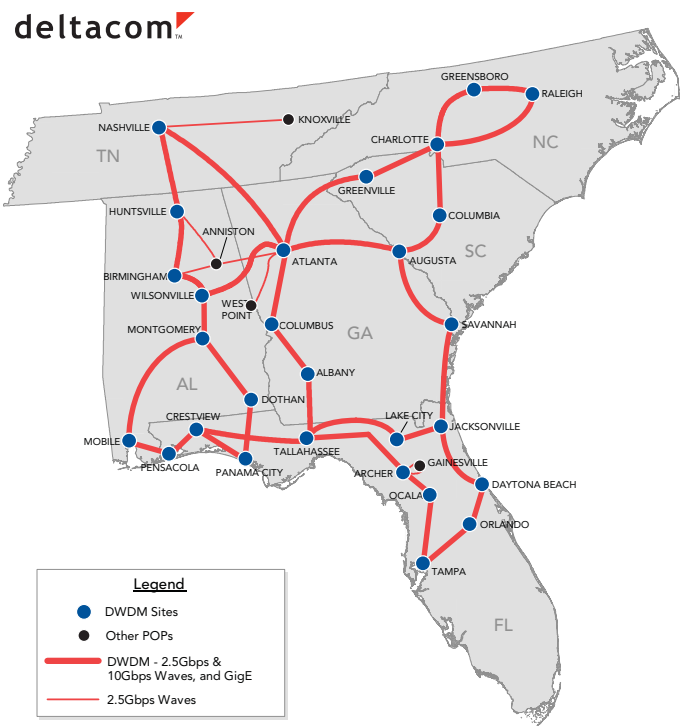


Figure 1. Deltacom's Infinera network spans the southeastern US.

Another advantage of ATN-DTN interworking comes from the ATN's ability to use the integrated bandwidth management capabilities of the Infinera DTN. This enables services from the ATN network to be groomed onto different wavelengths on the DTN and travel on different paths, without the need for a separate bandwidth management platform. This positions Deltacom to meet customer needs for a wide variety of circuits between multiple endpoints, while keeping cost and complexity in check. "When you have your metro network and your high-speed intercity DWDM network all on one view on one screen, and you are able to switch services from low speeds to high speeds, that's a very powerful advantage," says Deltacom Vice-President of Engineering Eric Douglas.



Figure 2. Infinera ATN Metro Edge Platform.

Infinera is one of the few vendors offering state-of-the-art long-haul and metro platforms today. Mr. Douglas points out that while some vendors do offer both long-haul and metro platforms, they often cannot be managed with the same operating system. "When you have that kind of network, you either face the prospect of a lot of IT operations to make the two systems compatible, or else you end up doing a lot of swivel-chair provisioning," he adds.

all the fiber types in the Deltacom network. "The reach of the ATN is very good and has helped us optimize our capital expenditure," says Deltacom Director of Engineering Brent Williams.

Deltacom has also been impressed with Infinera customer service. They have found the Infinera team highly responsive, technically skilled, and

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—Deltacom Vice-President of Engineering Eric Douglas

The Infinera ATN is a compact platform, offering up to 40 wavelengths of 10 Gigabits/second (Gb/s) waves. Fully pluggable client and line-side optics are designed to provide simple operations and reduced sparing requirements. Ethernet, Fibre Channel, SONET, and other services, delivered over both 2.5 and 10Gb/s wavelengths, enable Deltacom to meet the needs of its customers, in particular the fast-growing demand for IP services. It is anticipated that future services will include storage area networking (SAN) services, an area of interest for Deltacom. "This is an important market opportunity that we are looking at now," says Mr. Douglas.

very helpful. "Infinera has enabled us to do extensive network testing at the Infinera facility in Sunnyvale. This is a great service that not many other vendors offer," says Mr. Williams.

The most valuable feature of the Infinera ATN, says Mr. Douglas, "is its close interworking with the DTN network." This will enable Deltacom to bring the key Infinera benefits of speed of service delivery and ease of operations to more parts of their network. "Infinera lets us drive revenue, because we can turn up services and revenue faster," says Mr. Douglas.

Another feature that impressed Deltacom was the high-quality optics in the ATN. Some parts of the Deltacom network have legacy dispersion-shifted fiber (DSF) in the network. Many metro DWDM platforms are unable to operate over DSF, but the ATN encountered no problems with

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