



## Texas A&M University

Texas A&M University (TAMU) is the largest land-grant, space-grant and sea-grant public research institution and the fourth-largest university in the United States. The computing needs of 45,000 students, along with a growing demand for videoconferencing and web-based courses, were creating network congestion. The growth of the university's renowned research programs also meant increased sharing of massive data files in collaborative work with the Geochemical and Environmental Research Group and the U.S. Forestry Service. TAMU shares its fiber optic network with the City of College Station, Texas which operates a full range of web-based municipal services.

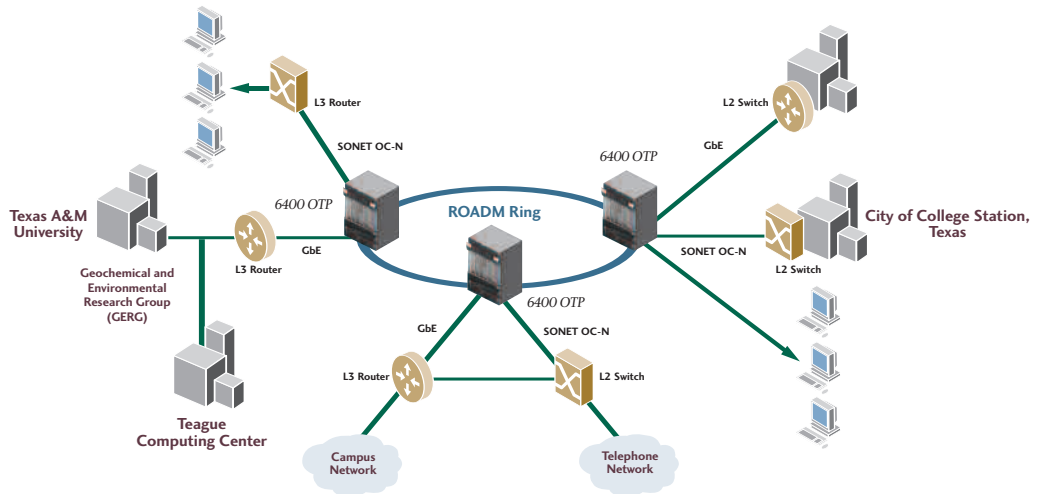
### BUSINESS ISSUE

TAMU's installed optical network simply couldn't handle the growing voice and data traffic, but they wanted to avoid laying new fiber to expand their capacity. They needed a solution that would allow them to get more out of their existing infrastructure. As a major center for research and innovation, TAMU was very receptive to providing a proving ground for a then-new technology: ROADM – DWDM-based reconfigurable optical add-drop multiplexers. TAMU adopted the Meriton solution based on the recommendation of Verizon, who had thoroughly tested the new technology in their labs. In addition to dramatically increasing the network's capacity, the new technology would allow them to change and expand services with minimal effort and cost.

### MERITON SOLUTION

The Meriton solution is based on a three node ring, using the Meriton 6400 OTP (Optical Transport Platform). Two 6400 OTP nodes are on the TAMU campus and one is located in the administrative hub of the City of College Station. The DWDM solution splits and combines light waves, which enables TAMU to get significantly more capacity out of its existing fiber optic transmission plant. The Reconfigurable Optical Add/Drop Multiplexer (ROADM) capabilities of the 6400 OTP provide the university and city with an extremely flexible solution that can be readily adapted and expanded as their needs change. It allows the two organizations to share a system, while ensuring administrative separation.

The TAMU network, which is the first fully functioning ROADM network deployed in the world, has been operating efficiently since it was installed in mid-2003. In 2005, TAMU upgraded the network, increasing capacity with additional ports. Meriton continues to support TAMU as it has from the first days of the network, remotely monitoring operations and being on hand whenever the University needs support.



- 1) The three-node ROADM ring transports Ethernet and SONET services between multiple nodes on the ring.
- 2) The network carries multiple traffic types, including massive research data, and administrative and telephony traffic.
- 3) The fully automated GMPLS control plane enables end-to-end monitoring and automatic load balancing.
- 4) As a ROADM, each 6400 OTP is easily upgradeable, so TAMU can add new nodes to the service on the fly, without impacting existing traffic.

#### BENEFITS

- **Flexible infrastructure** — the new multiservice network carries both SONET and Ethernet traffic over a common infrastructure
- **Efficient bandwidth utilization** — the use of DWDM has significantly improved network capacity enabling both TAMU and the City of College Station to support the growing demands of their users without laying additional fiber
- **Ability to add services quickly** — the Meriton ROADM makes it very easy to adapt services on the fly, a real bonus in a research environment where needs change dramatically as some projects gear up and others reach completion

#### TESTIMONIAL

“This DWDM solution enables us to upgrade the network quickly and cost-effectively with a minimum of reengineering...with a very rapid and trouble-free cutover and full interoperability with our existing network elements,” said Dr. Walt Magnussen, Texas A&M’s telecommunications director.

#### ABOUT MERITON NETWORKS INC.

Meriton Networks Inc., provider of the optical networking foundation for 21<sup>st</sup> century networks has developed the industry’s first unified end-to-end Agile Optical Networking architecture. Meriton customers, which include incumbent and competitive carriers as well as world-class enterprises, deploy a single, cost-effective solution that addresses the issues of fiber relief and network cost reduction, while also enabling the delivery of all high-speed metro and regional services. The Meriton solution includes metro access, metro core and regional extension products, which are fully managed by a best-in-class suite of network and service management and network planning tools.



www.meriton.com  
info@meriton.com

**Corporate Headquarters**  
3026 Solandt Road  
Ottawa, ON, Canada  
K2K 2A5  
Phone: +1.613.270.9279  
Fax: +1.613.270.9628  
North America toll-free:  
+1.866.270.2007

**United States of America**  
20 Corporate Place S.  
Piscataway, NJ 08854  
Phone: +1.732.465.1000  
Fax: +1.732.465.1010

**Europe**  
Regus House  
1 Friary  
Temple Quay  
Bristol, BS1 6EA  
UK  
Phone: +44.(0)117.344.5028  
Fax: +44.(0)117.344.5208

**Asia Pacific**  
3302, Lippo Centre, Tower 2  
89 Queensway  
Admiralty,  
Hong Kong SAR  
Phone: +852.2150.1328  
Fax: +852.2150.1388

**Caribbean and Latin America**  
155 E. Enid Drive  
Miami, FL 33149  
Phone: +1.305.365.2205  
Fax: +1.613.270.9628

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