



Efficient Consolidation for Teleport Networks

Access Concentration Reduces Costs and Complexity

An Important Role in Global Communications

Teleports are the ground-based side of the global satellite network – gateways that provide terrestrial networks with access to orbiting satellite transponders. But they are more than simple gateways. Teleports bridge incompatible systems and protocols, host and distribute content, and act as the hubs of broadband B2B networks. These companies range from small entrepreneurial operations with one to three facilities to large, publicly-traded companies with teleports in multiple geographic markets.

Driven by deregulation and the broadband explosion, teleports have experienced astonishing growth. Yet, despite this growth, current economic conditions have created business challenges that require teleport operators to control operating expenses and capital investments and rethink telecom equipment deployments. As the number of users and their bandwidth consumption increases, rack space within the teleport becomes more of a concern and the need for bandwidth grooming becomes paramount.

Current Teleport Infrastructure

Teleport architecture typically includes banks of satellite modems, racks of CSU/NTUs, and multiplexers. Terrestrial circuits from the local carrier (carrying user data) are terminated with individual CSU/NTUs and/or multiplexers and connected to the bank of satellite modems on a one-for-one basis. This implementation consumes valuable rack space and does not support switching or centralized management.

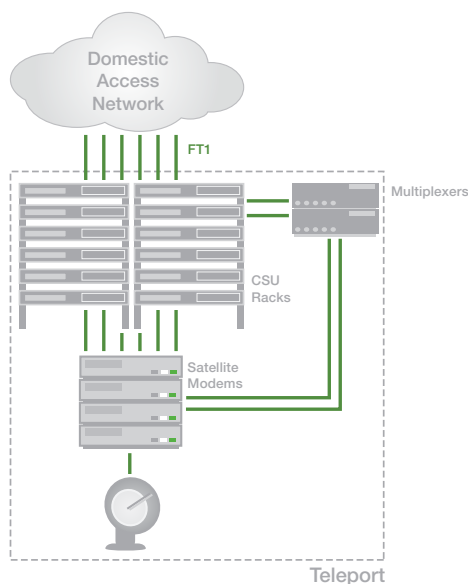


Figure 1: Typical Teleport Network Infrastructure

Features and Benefits

- Reduce Rack Space and Recurring Costs
- Improve Circuit Provisioning Time
- Enable Proactive Performance Monitoring
- Enhance Remote Management Access and Diagnostics
- Support T1/E1, T3/E3, OC-3/STM-1 Interfaces, T1/E1 Conversion, and G.747

DNX Access Concentration Solution

Sycamore DNX Cross-Connects offer an access concentration solution that combines the functionality of a digital switch, multiple CSUs, and multiplexers within a small, scalable, and highly reliable platform. By replacing multiple legacy devices, the DNX enables substantial cost savings, reduced rack space, and more efficient circuit provisioning.

Using a DNX system provides the teleport engineer with complete bandwidth grooming control. Individual DSO timeslots or groups of DSOs (Nx56/64Kbps) can be switched from the local access network to the appropriate satellite modem.

Centralized control enables real-time performance monitoring and diagnostic capabilities for the Network Operations Center (NOC) or field technician. The NOC performs circuit provisioning, automates diagnostic testing, and can view performance data via ENvision Plus Network Management.

To ensure high reliability, the DNX can be configured with all common components redundant and N+1 redundancy for the narrowband and broadband network interfaces.

Drop and Insert

The grooming features of the DNX provide true Drop and Insert capabilities. User data can be cross-connected directly to the satellite network without demultiplexing. Bandwidth can also be switched directly between satellite networks. IP traffic can be dropped at the teleport site and handed off to an Internet/Intranet gateway router via a high-speed channelized interface.

Large End-User Applications

For large end-users, DNX systems can be placed on the customer premises. Rather than backhauling multiple T1/E1 circuits, a T3/E3/OC-3/STM-1 circuit can be used to interconnect the user site directly with the teleport. In addition to providing a cost savings, this allows the teleport operator to quickly respond to bandwidth demands by activating additional T1/E1 ports as needed. DNX cross-connects also enable switching between end-user locations. End-to-end management ensures overall network resilience, with visibility and testing to the endpoint.

For more information about our intelligent networking products and solutions, please contact your Sycamore Sales Representative.

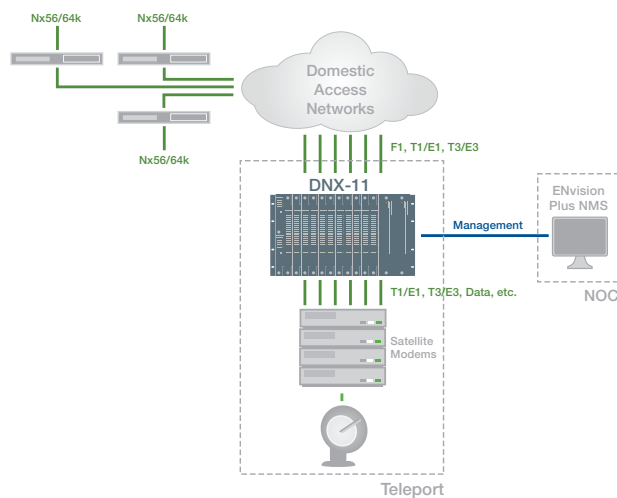


Figure 2: DNX Access Concentration

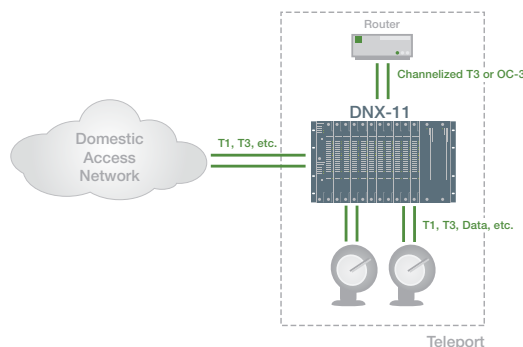


Figure 3: Drop and Insert

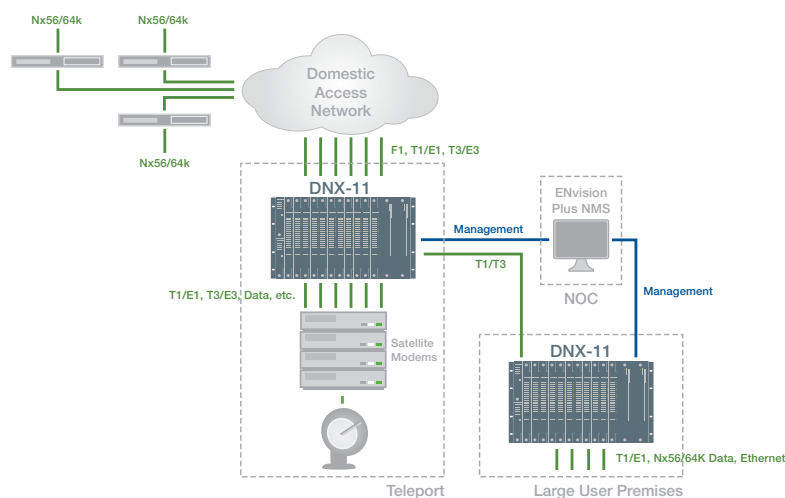


Figure 4: Large End-User Applications

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Sycamore Networks, Inc. (NASDAQ: SCMR) is a leading provider of intelligent bandwidth management solutions for fixed line and mobile network operators worldwide. From multiservice access networks to the optical core, Sycamore products enable network operators to lower overall network costs, increase operational efficiencies, and rapidly deploy new revenue-generating services.

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