IMC Networks

Case Study

Telecommunications Services Delivered Over a Multi-service Platform

Major Cable Network Operator Uses Modular FiberLinX-II Intelligent Media Converters and modular T1/E1 Extenders from IMC Networks to Cost Effectively Deliver Broadband Services to Business Customers

As TV viewers and especially cable TV customers begin to get more and more entertainment from the Internet, the most successful cable companies rely on the delivery of broadband services for a greater share of their revenue.

A major cable system operator and long-time IMC Networks customer is a pioneer in the delivery of broadband services, having successfully grown its business as a full-service, facilities-based provider of communications solutions for residential and commercial customers. The operator spent billions of dollars to deploy its network, which is primarily hybrid fiber/coax to residential locations, but the company has also invested heavily to run fiber optic cable to commercial locations, where there is often no nearby coaxial cable infrastructure. The core advantages of fiber are its range and data carrying capacity.

With fiber cable in place, the cable operator was ready to capitalize on another telecommunications trend, the increased demand for managed Metro Ethernet services. Ethernet has many advantages over other wide area network (WAN) technologies, such as Frame Relay and ATM. Metro Ethernet is usually less expensive, less complicated to set up and more flexible, particularly with scaling up bandwidth to customers. Since most companies are already running Ethernet over their LANs, a migration to Ethernet on the WAN side makes a lot of sense.

Since Metro Ethernet is relatively inexpensive and easy to use, there are fewer barriers to alternative service providers (such as ISPs) offering their own competitive telecommunications services. Wireless Ethernet services, for example, are offering bandwidth at up to 80% less than traditional Telco fees. For the cable operator to be competitive, they knew they needed to keep their prices low, which made the cost of the service delivery equipment a major consideration.

While the greatest recent growth in service demand has been for Metro Ethernet, many business customers served by the cable operator still required a traditional T1 connection, often to backhaul PBX traffic to the phone network. In order to compete with the phone companies, the operator had to also provide T1 service.

Traditional T1 service is carried over the legacy solid copper phone wire, and has a range of about 12,000 ft (3.5km). More recently, DSL technology has improved T1 performance, but distance is still a limitation. IMC Networks' customer didn't want to have to rent the wire from the phone company to use for the T1 service, so it made sense to try to find a way to deliver T1 over their existing fiber cables.

The last issue the cable company had to face was how to keep their operational expenses down. Low cost equipment is easy to deploy, but there are higher operating costs when using typical low cost, unmanaged equipment. Without managed equipment, which is designed to identify and isolate network issues, the operator would need more frequent truck rolls and would have to spend more time troubleshooting. These troubleshooting costs can quickly eliminate any equipment cost advantages. Therefore, the company knew they needed managed equipment, but much of the current managed fiber equipment made offering service prohibitively expensive.

CASE STUDY

Case Study

The IMC Networks Solution

Network engineers from the cable operator started talking with IMC Networks to find a solution which would allow the operator to deliver a mixture of T1 and managed Ethernet services, without a costly investment. IMC Networks has been a pioneer in the media conversion, having released the first SNMP managed media converter in 1996. IMC Networks offers a variety of modular media converters and other devices designed to allow fiber demarcation and extension of traditional T1 services over fiber.

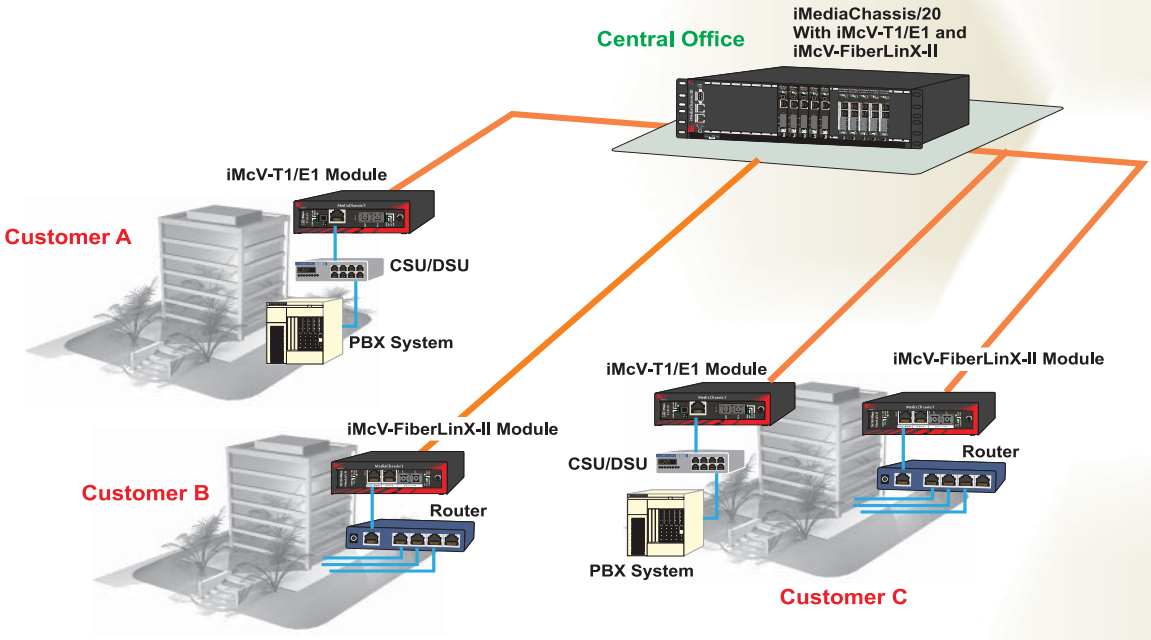
IMC Networks recommended the iMcV-FiberLinX-II intelligent demarcation module, and the iMcV-T1/E1 module.

The iMcV-FiberLinX-II combines copper to fiber media conversion with a built-in IP stack and integrated troubleshooting features to make management easy. The iMcV-FiberLinX-II offers a convenient demarcation point for the operator's business customers. Advanced features include traffic prioritization and bandwidth VLAN tagging, including extra tagging. In addition, host management traffic is not visible to the remote or customer network nor is access to the customer network required, guaranteeing end-to-end data integrity.

The iMcV-T1/E1 takes a T1 or E1 signal through a standard RJ-48 connector and converts the signal to a signal running on single-mode fiber.

The T1 signal can travel up to 80 km on the fiber from the cable central office to the customer premise, where the signal is converted back to copper to provide a customer demarcation point.

Since the operator has a large customer base, they needed a way to deploy and mount a large number of the modules. IMC Networks offers a family of rack-mountable chassis in which the modules can be mixed and matched. At the central office, the modules are mounted in a 20-slot IMC Networks iMediaChassis, and the remote modules are mounted into single slot CPE chassis. This high density deployment is ideal for the operator's needs.



RoHS

Made in USA

ISO 9001:2000 REGISTERED

IMC Networks
Headquarters
19772 Pauling
Foothill Ranch, CA 92610
TEL: 949-465-3000
FAX: 949-465-3020
sales@imcnetworks.com
www.imcnetworks.com

IMC Networks
Europe
Herseltsesteenweg 268
B-3200 Aarschot | Belgium
TEL: +32-16-550880
FAX: +32-16-550888
eurosales@imcnetworks.com

IMC Networks
Eastern US/Latin America
18840 US Hwy. 19 North Suite 400
Clearwater, FL 33764
TEL: 727-524-8152/524-8071 (Latin)
FAX: 727-524-8432
latinsales@imcnetworks.com

IMC Networks
Fiber Consulting Services
For information call:
TEL: 949-465-3000
1-800-624-1070 (US/CAN)
+32-16-550880 (Europe)
fcs@imcnetworks.com