

Expedient Communications Launches First Nationwide Ethernet over Copper Service



Executive Summary

Customer Name:

Expedient Communications

Business Challenge:

Expedient wanted to extend their existing nationwide fiber-based Ethernet service to the 80 percent of businesses without access to fiber.

Solution:

Deployed Hatteras Networks' metro Ethernet copper access products – enabling high-speed, symmetrical, business-grade Ethernet services.

Business Value:

- Profitable deployment with just one customer.
- Utilized lower cost UNE-Ls from incumbent carrier.
- Significantly increased Ethernet services market opportunity.
- Faster deployment versus fiber-based services – for improved customer satisfaction and quicker revenues.
- Maximized revenues by supporting multiple customers and applications over the same physical connection.

Another Ethernet over Bonded Copper (2BASE-TL) Success Story

“Hatteras Networks gives Expedient a clear first-mover advantage as we target the 80 percent of businesses connected with copper to high-bandwidth, high-value business services such as Expedient’s LAN-to-LAN, Internet access, Voice over IP and Managed IP Services. Not only does Hatteras Networks’ solution give us an advantage in winning new customers with high performance last-mile services, it enables Expedient to generate additional revenue from existing customers, as we can now seamlessly interconnect our fiber-based customers to facilities served with last-mile copper.”

**> Mark McGinness, Vice President of Business Development,
Expedient Communications**

The Bottom Line

Carrier Discovers Money in Symmetrical, Business-Grade, Ethernet Over Copper Services

While Expedient had an existing nationwide fiber-based Gigabit Ethernet access offering, they were receiving many calls from copper-fed businesses looking for Ethernet access at speeds of 2-45 Mbps. Because running fiber to these smaller, but abundant opportunities was not a profitable option, Expedient began looking for a cost-effective way to provide high-speed, business-class, symmetrical services to these 80 percent of businesses that did not have access to fiber.

After talking to Hatteras Networks about their Ethernet bonded copper access solutions, Expedient realized that they could utilize low-cost dry copper loops (UNE-Ls) from the incumbent carrier to *PROFITABLY* deliver 2-45 Mbps of business-class, symmetrical Ethernet where fiber was not available. Expedient now had the solution and business case to tap into the lucrative, but underserved, mid-band Ethernet services market opportunity.

Customer Background and Needs

Using Dry Copper (UNE-L) to Extend Ethernet Services to Copper-fed Businesses

Expedient Communications (www.expedient.com) is a leading national telecommunications company offering Connectivity and Managed IP services through its Ethernet Anywhere network, the industry’s first nationwide deployment of Gigabit Ethernet and Ethernet over copper services – leveraging the IEEE 802.3ah 2BASE-TL Ethernet in the First Mile (EFM) standard. The company’s clients include some of the most technologically savvy and telecom-intensive enterprises and organizations — in industries ranging from health care to retailing, from advanced manufacturing to broadcasting and entertainment.

Expedient received many requests from businesses for Ethernet access services at 2-45 Mbps rates, and often from several businesses located in the same building. Unfortunately, these businesses were connected to the public network via a copper loop and the business case for trenching fiber didn’t work. Expedient realized that there was a large untapped market opportunity for Ethernet services and began searching for a cost-effective way to deliver Ethernet services over a copper infrastructure. To further maximize the profitability of the service, Expedient also wanted to serve multiple businesses over a single connection, thus minimizing the cost of the customer premise equipment and increasing the potential revenue per connection.

The Solution

Leveraging the Existing Copper Plant to Deploy Standards-Based, Fiber-Quality Ethernet Services

Expedient chose to deploy Hatteras Networks' Ethernet bonded copper access solutions to deliver a high-speed, symmetrical Ethernet service to customers located in copper-fed buildings. Expedient's solution consists of the following:

- Hatteras HN4000 metro Ethernet copper access switch co-located in the nearest central office (CO).
- Single Hatteras HN400 customer demarcation device deployed in the Telco room of the customer's building.
- Expedient obtained access to the building by leasing dry copper loops (UNE-Ls) from the local provider.
- Expedient leased an additional loop from the local provider's CO to Expedient's own local PoP and IP network.

The HN4000 metro Ethernet copper access switch supports point-to-point (Ethernet Private Line) and multipoint (Transparent LAN) services, and can support up to 40 customers with a single rack unit (RU) device – the highest density in the industry. The HN4000 is scalable and can be managed remotely. The HN4000 is a full carrier layer-2 Ethernet switch, supporting quality of service (QoS) to enable SLAs for real-time applications such as voice and video.

Business Value

Maximizing Revenues by Supporting Multiple Customers and Applications via a Single Physical Connection

Hatteras' equipment supports the bonding of 1-8 copper pairs, allowing Expedient to provide up to 45 Mbps of symmetrical bandwidth (per customer demarcation device) that can either be dedicated to a single customer or partitioned among several customers – maximizing the revenue opportunity per building.

By leveraging Hatteras' patented Q-in-Q VLAN tagging and rewriting capabilities, Expedient provided secure, broadband service to multiple customers using the same carrier-grade demarcation device – all over the same bonded copper connection. This capability saved Expedient money by not having to deploy a customer demarcation device for each customer. Furthermore, Expedient was able to offer the businesses different speed services and application specific SLAs (i.e., voice, video, data) – thereby multiplying the revenue without adding any infrastructure.

Another benefit is that by leveraging the existing copper plant, Expedient can more quickly deploy new services versus having to trench for fiber – resulting in significant cost savings, improved customer satisfaction and much faster time to revenue.

Several of Expedient's first Ethernet Anywhere customers initially purchased the service for a single location. After enjoying a positive service experience – including high-speed service, QoS, and premium SLAs – these customers began ordering the service for additional locations, resulting in improved customer loyalty and retention.

“Before deploying Hatteras Networks' technology in areas where our fiber network was not accessible to them, customers were forced to over-buy traditional SONET-based services bonding multiple T-1s or full DS-3s. New customers of our Ethernet Anywhere service powered by Hatteras Networks' technology are now afforded the flexibility of purchasing bandwidth in manageable 1 Mbps increments as their demand increases. We have been pleasantly surprised by the high-level of interest demonstrated from the market.”

> Jonathan Rosenson, Director of Strategic Initiatives, Expedient Communications

Next Steps

Nationwide Deployment of Symmetrical, Business-grade Ethernet Over Copper Services

Having realized the simplicity and cost-effectiveness of the Hatteras solution and the untapped market opportunity for Ethernet over copper services, Expedient has decided to conduct a focused rollout of copper-based Ethernet services to more than 5 major metropolitan markets in 2005. Plans for 2006 have the company offering the service in over 20 markets. Ethernet over bonded copper will be coming to your city soon!