

Provider Pioneers Flexible, Cost-Effective Ethernet Services

Early adopter of Carrier Ethernet technology, **tw telecom**, gains third-largest share of U.S. business Ethernet market

EXECUTIVE SUMMARY
<p>tw telecom</p> <ul style="list-style-type: none"> • Industry: Telecommunications Service Providers • Location: Littleton, Colorado • Number of Employees: 2,890 (June 2008)
<p>CHALLENGE</p> <ul style="list-style-type: none"> • Maintain technology leadership within the commercial Ethernet market • Enable the introduction of higher-bandwidth and converged services • Attract new customers to gain market share
<p>SOLUTION</p> <ul style="list-style-type: none"> • Introduce the latest Cisco Carrier Ethernet switching technology in the access network • Provide customers with GB and 10 GB bandwidth service options
<p>RESULTS</p> <ul style="list-style-type: none"> • Gained market share (number three in the U.S. enterprise Ethernet services market, based on port counts or revenue share) • Grew business data and IP services 24 percent from Q2 2007 to Q2 2008 • Strengthened competitive position with ability to pass through benefits to customers (converged services, lower total cost of ownership, increased functionality)

Challenge

Since Congress adopted the Telecommunications Act in 1996, the field of competing service providers has changed dramatically. During that time, **tw telecom**, formerly Time Warner Telecom, has not only survived, but thrived in a very competitive marketplace and is one of the leading providers of voice, Internet and data networking solutions in the U.S. Operating in 75 markets, spanning 30 states and Washington, D.C., **tw telecom** has provided Ethernet connections to more business customers compared to any telecom provider except AT&T and Verizon (source: Vertical Systems Group).



Key to **tw telecom's** success has been its ability to anticipate the needs of business customers and to provide a portfolio of services based on leading technology. Five years ago, **tw telecom** became an early adopter of Cisco® Carrier Ethernet solutions.

Now **tw telecom** delivers a complete range of business services that includes Internet and data products for building and managing enterprise networks, and switched and transport services to carry voice and broadband services at transmission speeds from 1.5 megabits (MB) to 10 gigabits (GB) per second. "We were one of the first to introduce Ethernet services locally and across the country for businesses, and since the beginning we've relied on Cisco equipment," says Troy Knuckles, president of **tw telecom's** Western division. "We've continually deployed the latest Cisco Carrier Ethernet solutions, and it has been a very successful platform for our business."

Today, more than 40 service providers compete to win business customers. To help ensure its continued growth and success in this competitive field, **tw telecom** recently carried out another evolution of its access solutions. The service provider constantly challenges itself to introduce network solutions that enhance its ability to deliver customized solutions and flexible service options. At the same time, **tw telecom** sets itself apart from the competition by shielding its customers from complexity and offering a simple services roadmap that is "easy to consume."

“We have delivered tremendous value to enterprises with our Ethernet solutions and the Cisco platform has been a primary reason that we have gained market share. Unlike our competitors, we are achieving this growth without eroding other service revenues.”

– Troy Knuckles, President, Western Division, **tw telecom**

Solution

The **tw telecom** network uses the Cisco 7600 Series for Ethernet aggregation. For its access solution, **tw telecom** had been using Cisco Catalyst 3550 Ethernet Switches. Originally, Cisco access solutions were selected for three reasons: the full feature set, the price, and the Cisco brand name. “When we started out in the business services market, partnering with Cisco was a big plus for us. Cisco is a name that business customers trust, and it helped establish our company as a high-quality commercial-grade provider,” says John Schindeler, senior manager, sales engineering at **tw telecom**.

The recent selection of a new access solution was decided based on almost identical criteria: features, price, and its long-term success with Cisco solutions. **tw telecom** selected the Cisco ME 3400 Series Ethernet Access Switches as the successor for the Catalyst 3550 switches. “The real plus of the Cisco ME 3400 Series access solution comes down to our ability to offer customers many types of networks,” says Knuckles. “We can give them a choice of a completely private network or a shared solution for those customers that are more value focused. The Cisco ME 3400 Series lets us put customers on the right native LAN solution for their business.”

The capabilities and performance of the Cisco Carrier Ethernet solution also contribute to **tw telecom’s** business services for connecting one location to another, helping ensure business continuity, and delivering disaster recovery capabilities. Office-to-office connectivity represents a high-growth area for gigabit Ethernet (GigE), and the Cisco ME 3400 Series supports this service with the cost efficiencies of Ethernet.

tw telecom also differentiates itself by helping customers with multiple services. The Cisco ME 3400 Series enables Internet and voice over IP services on the same infrastructure. “The ability to move towards convergence is a very strong value proposition for our enterprise customers,” says Knuckles.

Security has also set **tw telecom’s** business Ethernet services apart. From day one, **tw telecom** customers have been able to take advantage of secure managed services. The Cisco ME 3400 Series continues this tradition by enabling secure VPNs with bandwidth that can be dynamically shared for voice and data. The flexibility of the Cisco access solution allows **tw telecom** to design a custom network based on the customer’s needs at each individual office. “The flexibility of the Cisco access solutions gives us different ways to do things,” says Schindeler. “We can create a different Layer 2 circuit for each application, or deliver multiple services over the same circuit. We can manage services, or pass through traffic transparently for a trunk-like service. Ultimately, customers get the best value at the price points that fit their budget.”

Results

Choosing to introduce Cisco's latest Metro Ethernet switch into its access network meets the provider's technical and business goals. For technology leadership, the new switches support flexible network designs and protect local loops. For the overall business, the new solution helps **tw telecom** maintain its momentum in terms of gaining market share.

"This solution deployment is yet another example of how our partnership with Cisco puts **tw telecom** in a position of market leadership," says Knuckles. "When you compare the size of our company with the size of the other two leading providers, it shows that our market position is a phenomenal accomplishment. We got to this level because we were early in the Ethernet market, and because we partnered with Cisco."

PRODUCT LIST

Routing and Switching

- Cisco ME 3400 Series Ethernet Access Switches
- Cisco 7600 Series Routers (Ethernet Aggregation)

The introduction of the Cisco ME 3400 Series is the most recent enhancement to a network that goes back to **tw telecom's** first years as a carrier-to-carrier company. When the company wanted to deliver services directly to enterprises, its network engineers had the good fortune to be able to start

from the beginning. Competitors were trying to evolve business services over legacy ATM/Frame Relay networks, but **tw telecom** was able to select and deploy state-of-the-art technology. "We had the right technology at the right time," says Knuckles. "Having the latest and greatest platform was a great benefit to our customers and the overall market."

"We have delivered tremendous value to enterprises with our Ethernet solutions," continues Knuckles. "And the Cisco platform has been a primary reason that we have gained market share. Unlike our competitors, we are achieving this growth without eroding other service revenues. This allows us to pass along benefits to our commercial customers in the form of innovative solutions, lower cost of ownership, and increased functionality."

Next Steps

With the technology leadership of its Ethernet platform, **tw telecom** can continue to expand its portfolio of value-added services for enterprises and deliver bandwidth options beyond the Gigabit level. "What we are seeing daily is that our customers can get the bandwidth that they need to converge multiple applications," says Knuckles. "They can introduce voice solutions for toll avoidance, video, web, and email all using the same access devices."

For More Information

To find out more about the Cisco Carrier Ethernet solutions, go to:

<http://www.cisco.com/go/cedesign>.



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