



WYETH PHARMACEUTICALS

Everyday, millions of people and animals around the world benefit from Wyeth's extensive line of medicines and consumer healthcare products. With research and development programs focused on small molecules, vaccines and biotechnology, Wyeth is exploring more than 60 new therapies for diabetes, breast cancer, multiple sclerosis, HIV, Alzheimer's disease, schizophrenia and other conditions. To accelerate development of these medicines, Wyeth needed a WAN with affordable bandwidth—and lots of it.

Challenge:

- Needed greater WAN bandwidth to allow data center consolidation, data-intensive research applications and disaster recovery/data replication.

Solutions:

- Creating a DWDM WAN between 11 U.S. East Coast sites to increase bandwidth from 158 Megabit/sec to 12 Gigabit/sec, coupled with 6 Gigabit/sec of fiber channel for replication.

Results:

- Increasing capacity by 100 times while reducing its WAN monthly spend by 28 percent.
- Enabling new data-intensive applications.

Shedding Light on the Value of Enterprise DWDM

Most networking professionals view dense wave division multiplexing (DWDM) as strictly a carrier/service provider technology. While carriers were among the first to capitalize on this efficient method of fiber optic networking, enterprises such as Wyeth are realizing they can leverage this technology to gain affordable bandwidth for their enterprise WANs.

The pharmaceutical business requires serious bandwidth. Data-intensive research applications, manufacturing, warehousing, distribution and general business operations demand constant flow of information. In 1994, Nick Fiekowsky, enterprise consultant of network strategy for Wyeth, and Erik Molden, Wyeth's enterprise consultant of network architecture, began a research project of their own. These internal IT experts sought to increase bandwidth between Wyeth's Philadelphia and New York data centers. As Fiekowsky and Molden learned more about DWDM, possibilities began to mushroom. The project quickly evolved into a high-speed WAN linking 11 U.S. East Coast sites.

Laser Treatment: The Cure for Low Bandwidth

Wyeth's research sites, plants and warehouses are located along fiber optic routes, giving the pharmaceutical giant plenty of options. "There's a lot of fiber in the ground today—it's a buyer's market," states Fiekowsky, who explains that carriers already have incurred this sunk cost. "Since DWDM requires very little additional hardware to deploy, it's very appealing to cash-strapped carriers. It's a win-win situation—the carrier is spending less money on hardware and maintenance to give you a more reliable, higher-bandwidth service."

Small Carriers Aim to Please

Most large carriers are still struggling to find a cost-effective model in today's highly competitive telecom environment. They are used to what Fiekowsky calls scarcity economics, whereby they're trying to squeeze as much traffic onto a wire as possible. "Large carriers

are slowly waking up to DWDM, but tend to see this as a metro service and don't want to offer it over long hauls." Fiekowsky recommends seeking out small, young carriers as DWDM partners, because they are likely to be more aggressive, responsive and creative. These Internet-boom start-ups or carrier spin-offs typically:

- Have lower cost structures
- Are more nimble and hungry for sales
- Want to sell capacity and conserve capital

Check into Carrier Hotels

As Wyeth began to strategize the best course of action, it turned to a specialist. "Early on, we had two enlightening meetings with Burton Group. Burton Group told us to get into carrier hotels, which proved to be invaluable advice." recalls Fiekowsky. Carrier Hotels are buildings with secure equipment rooms for many carriers. This allows painless interconnection among carriers via short runs of fiber. Carrier hotel benefits include:

- Rapid implementation
- Increased flexibility
- Potential to connect to a greater choice of DWDM vendors
- Lower initial and monthly cost with higher reliability

Abundant Bandwidth Enables Change

Besides allowing data center consolidation and data replication, affordable bandwidth has another nice side-effect. According to Fiekowsky, "Bandwidth changes the way your company does business. We see a real synergy between increased bandwidth and increased problem solving. Not only is DWDM driving a lot of consolidation, it's also enabling groundbreaking pharmaceutical research applications." Wyeth is also revisiting former projects that were previously impractical and recognizing opportunities to substitute bandwidth for higher costs. "Make people in your organization aware that bandwidth is no longer an issue," imparts Fiekowsky.

"Abundant bandwidth changes the way your company does business. We see a real synergy between increased bandwidth and increased problem solving."

Nick Fiekowsky, Enterprise Consultant of Network Strategy, Wyeth

WYETH PHARMACEUTICALS

Abundant bandwidth gives you flexibility to consider:

- Data center consolidation
- Voice and data network convergence
- Streaming media
- New applications/application designs
- HDTV videoconferencing

Accelerate the Process

- Give potential vendors early notice via preliminary e-mail
- Engage an engineering firm before your RFP to survey core sites for fiber installation
- Share your findings with vendors—save them time and money
- Schedule mid-course design reviews to ensure vendors' designs will satisfy your requirements
- Impose penalties for additional vendor contact within your company
 - Clearly stated penalties will help overzealous sales reps and vendor CEOs respect the bid process and your coworkers' time

The Value of Innovation

Wyeth's DWDM network is expected to increase bandwidth from 158 Megabit/sec to 12 Gigabit/sec, while adding another six Gigabit/sec of fiber channel for replication. "We're increasing capacity by almost 100 times, while decreasing our monthly WAN expense by 28 percent," exclaims Fiekowsky, who reports this astounding price/performance improvement will cost a one-time charge of roughly ten times that savings. He goes on to offer these tips to maximize cost savings:

- Avoid long-term WAN contracts
- Meet your WAN carriers at a carrier hotel
 - It's less expensive than an ILEC's local loop, but may require you to purchase additional equipment
- Consider a large initial payment option
 - Many carriers have low credit ratings and high capital costs. If you have low capital

costs, a large initial capital payout could result in long-term savings

- Ensure that carriers propose comparable solutions (they won't want to)

Wyeth's DWDM footprint will continue to grow as people find even more useful things to do with it. The company is also looking into transatlantic possibilities, which Fiekowsky reports is very affordable.

Expert Analysis and Advice

Since 1990, Burton Group has enabled enterprise technologists to make smarter IT architecture and infrastructure decisions. Burton Group offers the following resources and insights to help your organization get technically in-depth, straight, and practical research and advice:

- Reference Architecture (decision-making framework)
- In-depth research
- TeleBriefings
- Unlimited Analyst dialogues
- Methodologies and Best Practices documents
- Catalyst Conference
- Consulting services

For more information, visit www.burtongroup.com today.

"Burton Group told us to get into carrier hotels, which proved to be invaluable advice."

Nick Fiekowsky, Enterprise Consultant of Network Strategy, Wyeth