

Helping organizations achieve greater value through the advancement of fiber optic telecommunications

**Manager's Message**

*By Evan Hass, GM*

**Investment and Innovation**

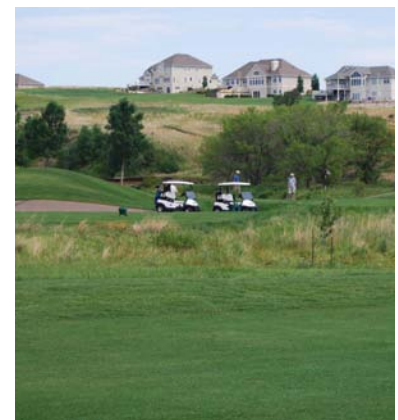
In my travels around our great country the conversation often turns to the economy and the state of the industry – often ending with the question, “How’s Business?” My quick and candid response is, “Business is great” in North Dakota. That often is met with surprise.

What Dakota Carrier Network has seen in the transport and wide area network part of the communications business is a continued demand for additional high quality broadband connectivity. This year is shaping up to be one of the best years for growth in the roll out of new services. Let me tell you why:

Credit goes to the investments that DCN has made in improving the network. We are reaping the benefits of creating a Dense Wave Division Multiplexing (DWDM) network that is the infrastructure for our networks and services. DCN has been aggressively investing in new technology as we modernize by replacing equipment initially installed  
*(continued on next page)*

**DCN Classic:**

It was a classic summer day in North Dakota and conditions proved to be perfect for over 120 golfers who were guests at the Seventh Annual DCN Classic on July 15. Warm temps, light winds, cold drinks, and hot prime rib provided a perfect combination for relaxation, enjoyment and memories.



## Manager's Message

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to provide services such as long distance signaling and Internet gateways.

Innovation is at the heart of what we have done to create a dynamic network. The building blocks have been designed to take advantage of the network that we have in place.

Wide Area Ethernet service is an example of creating a service that was conceived, designed and rolled out – which is being widely implemented by our customers. For example, Ethernet service will be used to serve the network that connects the State of North Dakota – dramatically increasing the broadband capacity to the K-12 schools, higher education and state agencies.

DCN's dynamic network will continue to grow. We will turn up additional wavelengths in 2009 that will support the rapid growth we are experiencing. In addition, it is now possible to increase the capacity of a wavelength from 10 Mbps to 40 Mbps across our network – truly taking full advantage of the best telecommunications technology.

DCN is answering this demand by continuing to invest in our statewide network. In some cases we have simply outgrown the capacity. In others, newer technology improves the reliability and capacity of service ... benefiting our state's businesses and communities.

# Equipment upgrades improve capacity, speed, reliability

By the time this newsletter reaches its audience, there's a good chance DCN will have completed the installation of major technology advances, according to Don Pedersen, operations manager at the Network Operations Center in Bismarck.

"What we're doing is replacing the Digital Access Crossconnect System (DACS) that was originally installed in 1999," says Pedersen. "We simply outgrew the old one, but the new DACS only takes up two-thirds of a bay, compared to the old one, which took up five bays. How's that for size reduction?"

The DACS serves to cross connect T-1 circuits between various DS-3s, often used

by cellular phone providers and other large users of the network.

Pedersen says the company is adding two new Signal Transfer Points (STPs) in Fargo and Bismarck, noting that every long distance telephone call connects central offices using an STP. This upgrade was required as the older STPs had reached end of life.

"We're also upgrading our Internet network, replacing two routers with two Cisco and two Foundry XMR routers, one each in Fargo and Bismarck," Pederson explains. "The cutovers essentially provide no disruption or shutdowns to our customers."

## North Dakota schools going to the 'head of the technology class'

In less than three years, the popularity of Dakota Carrier Network's Ethernet product has captured the attention of current and new customers, especially at the state level with North Dakota.

In order for rural school districts to keep providing contemporary and varied classes, it became apparent to state government that its network needed to be upgraded and expanded. That's where DCN came in.

Seth Arndorfer, product development manager for DCN, says amidst some Requests for Proposals (RFPs) from the State of North Dakota, was a separate one for adding Ethernet capacity at a minimum of 5 Mega Bits Per Second (MBPS) and up to as much as 100 MBPS.

"The RFP came out in the spring of 2008 and it addressed the needs of 130 schools, all of higher education, state agencies, and government institutions," explains Arndorfer. "Why Ethernet? Because the schools have a growing need for more multiple videoconferencing studios and the

bandwidth restrictions of the old ATM network prohibited greater use of video."

Arndorfer notes that Ethernet provides lower cost bandwidth per megabit and lower equipment costs with scalable bandwidth potential. It also simplifies the needs for the Information Technology Department as far as provisioning and education.

"Plus, Ethernet provides greater reliability through Quality Of Service that delivers high voice quality and video that is clean and consistent, with quick access to data and Websites in 'real time,'" he points out. "State employees will refresh the ATM equipment and work with DCN personnel on the installation, testing and turning up of the Ethernet circuits."

It takes a lot of coordination between DCN, owner companies and the state's technology department. It's expected that 130 schools will be converted by 2009, and another 170 locations after the initial installation.

## OUT & ABOUT

### Visits paid to group events

Dakota Carrier Network was a booth participant and a sponsor at the ICBND (Independent Community Banks of North Dakota) 41st annual convention at the Ramkota Hotel in Bismarck August 10-12. DCN will also be a booth participant at the upcoming holiday mixer chamber of commerce events in both Fargo and Bismarck in December.

### DCN earns ITCND award



Receiving the ITCND award (left to right): Kari Thesing, Kevin Kaeding, Seth Arndorfer and General Manager Evan Hass at the Fargo awards ceremony.

On October 14 Dakota Carrier Network was honored at the annual awards ceremony of the Information Technology Council of North Dakota held at the Fargo Holiday Inn. Being recognized for Outstanding Achievement in Business, DCN was joined by five others who were honored for their achievements in the state's IT community.

Criteria for the award included demonstrating both product and company financial strength and overall success, long-term growth and corporate citizenship.



advanced business methods

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#### CASE STUDY:

## Advanced Business Methods

*Name of organization:* Advanced Business Methods

*Spokesperson:* Bob Boese, Network Administrator and Certified Technical Instructor for Savin and Canon products

*Headquarters:* West Fargo, ND

*Other locations:* Bismarck, Minot, Dickinson, Grand Forks

*Number of employees:* 75

*Year connected to DCN:* 2003

*Type of DCN services purchased:* T-1 Frame Relay

*How do you use your DCN connections?:*

We use our DCN connections to connect all branches to West Fargo home office for data, Internet and voice communications.

*Problems solved with DCN:* Dakota Carrier Network provides us with a one-stop solution for connecting our branches. Originally founded in 1970, the five locations are owned by Ken Retzer, Lee Peyerl and Tom Ystebøe. Advanced Business

*"When we deal with Dakota Carrier Network we always get a person who has the correct information we need, whether its sales for a new circuit or the Network Operations Center for a technical issue."*

*Bob Boese*

*Network Administrator*

Methods has followed a management style that rewards and encourages employees. This helps explain why so many of the staff have been working at ABM between 10 and 20 years.

*"Our business has been pretty consistent; when one sector of the economy is down others are up ... every business needs printers and copiers," says Boese. "Serving North Dakota, South Dakota, and northwest Minnesota, we've seen lots of growth in the last decade. That's part of the reason we were named one of the Top 100 Progressive Companies by Job Service North Dakota in 2004. We have our own leasing company and can provide a lot of options for our customers, with a completely stocked warehouse and service departments. The business is very competitive and the challenges are quite rewarding."*

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## Gaining the DCN advantage & value

Dakota Carrier Network is pleased to welcome the following new/renewing customers who are now enjoying the most contemporary network options in the country with their DCN service agreements:

**NEW CUSTOMERS**  
Midwest Motor Express  
Dakota Supply Group  
ND Association of Counties  
Arthur Companies

**RENEWING CUSTOMERS**  
EAPC Architects Engineers  
Northland Financial

## Did you know ...

One of the innovative applications of the network provided by DCN to the State of North Dakota will help protect law enforcement officers. According to the state's CIO, officers in patrol vehicles with laptop computers will be able to access court records for individuals based on license plates and approach suspect vehicles with extra caution when necessary.

## Jesse Heck: networking for customers

Jesse Heck didn't start out his career path as a network technician; instead, he was in a pre-med education track in Bismarck at the University of Mary. He completed the requirements to earn his degree in biology, passed the entrance exam for medical school at the University of North Dakota, and then had a change of heart.

"When I went through the interview process I began to think that I just couldn't be committed to the program," recalls the Mandan native. "So, through a self-study program I earned a certificate as a Microsoft Certified Systems Engineer and went to work for a Bismarck network consulting firm for two years."

Joining Dakota Carrier Network in 2000, Heck now provides his expertise in the managed services division of DCN, providing end equipment and routers for the firm's clients, and supporting their Wide Area Networks.

"My role at DCN has changed quite a bit in the last eight years; now, we're getting back to my original networking skill sets, but on a larger scale," he says. "We help our clients with Internet firewalls and filters, and manage Internet traffic using Border Gateway Protocol (BGP) for our member companies and their customers ...



*Jesse Heck, Network Technician*

it's approaching a million routes on the Internet."

Doing transition work for member companies and clients who are converting to Ethernet, he says most of the work can be performed in a maintenance window with minimal disruption during the switch over.

Jesse and his wife Candice have two young children. He likes to hunt in the fall and he coaches hockey in the winter.