

## Creating a New Business Model Through Network Transformation

### COMPANY

Dickey Rural Networks (DRN)

### BUSINESS TYPE

Rural ILEC

### LOCATION

Ellendale, ND

### NETWORK

28 exchanges, approximately  
10,000 access lines

### SERVICES

Voice, Video, High-Speed Data,  
Managed IT Support, In-Home Networking,  
Video Surveillance

### CALIX SOLUTIONS

C7, E7, CMS, Compass Flow Analyzer



### THE CHALLENGE

Founded in 1950, Dickey Rural Networks (DRN) is an incumbent local exchange carrier (ILEC) that operates 26 exchanges in rural North Dakota and two in South Dakota. Despite reaching an all-time high in voice minutes and access lines in 2004, DRN's leadership could see that the future of the business was vulnerable due to a variety of emerging factors:

- ▶ **An aging network infrastructure:** Many of its copper access lines were in poor condition
- ▶ **High service call volumes:** DRN's aging network was contributing to an accelerating volume of service issues from subscribers
- ▶ **Declining revenues:** Long-distance calling minutes and associated revenues were decreasing
- ▶ **Heightening competition:** Emerging competitors were anticipated to bring new technologies into DRN's market.

### THE SOLUTION

DRN needed to embark upon a network transformation that could lay the foundation for a new business model that would help carry the company forward. Over the course of the next six years, DRN systematically transformed its entire network to a pure fiber access infrastructure, leveraging a wide variety of solutions from the Calix Unified Access portfolio – starting with the Calix F-Series, and then deploying the C- and E-Series platforms. By the end of 2011, DRN had completed its fiber access build-out, deploying a broad range of Calix optical network terminals to all of the residences, businesses, and community institutions that it serves and utilizing the Calix Management System (CMS) to provision, manage, and support the network. This transformed network infrastructure has provided DRN with the advantage of operating one network across all of its subscribers, leveraging both gigabit passive optical network (GPON) and point-to-point gigabit Ethernet (GE) technologies to deliver advanced services throughout its serving area. DRN also leveraged CMS, the Calix Compatible program, and certified partner ETI to create a fully automated services provisioning model.



## THE RESULTS

DRN's network and business transformation is a textbook example of the extraordinary results that communications service providers, Calix, and Calix partners can achieve by working together.

- ▶ **A better service experience:** New services like high-speed data and video have driven broadband subscriber adoption. High-speed data take rates have grown from six percent in 2004 to over 75 percent today, with packages that range from 5 megabits per second (Mbps) to 100 Mbps to the home or business. In addition, DRN plans to offer a 500 Mbps service in the future.
- ▶ **Dramatically lower service call volumes:** As new fiber optic cable replaced DRN's maintenance-heavy aging copper plant, the company has seen after-hours help calls reduced by an order of magnitude – from 3000 per month to less than 300 per month.
- ▶ **New provisioning efficiencies:** Working with Calix Compatible partners like ETI (with its Triad provisioning system), DRN has completely automated its service provisioning model. In addition, the team of five employees that historically had been charged with manually provisioning each service to subscribers has been disbanded and its members retrained to focus on new service areas.
- ▶ **Re-deployment of resources:** Because of the much lower maintenance requirements and higher efficiencies of a fiber access infrastructure, DRN has reduced its overall number of employees by over 25 percent. In addition, many field technicians and former service provisioning team members have been retrained to support new roles like technical assistance and new service research and testing.
- ▶ **An enhanced focus on new subscriber services:** For business customers, DRN has created a managed IT service team that works with schools and businesses for large-scale IT programs. For residential subscribers, the DRN residential technical support team helps subscribers install and manage the devices and systems in their homes. This includes conducting classes on general computer information, e-mail, web applications, and web cameras. The success of these programs, along with computer and smart TV giveaway promotions, has further enhanced service take rates and revenues.

*“Fiber-to-the-home can do a great deal for residents and businesses in rural America.*

*The speed and reliability of fiber has allowed DRN to outpace the competition with bandwidth-rich services, while reducing our operating expenses and re-energizing our workforce.”*

– Jeff T. Wilson, General Manager, DRN

## THE FUTURE

Enabled by a Calix powered, all-fiber network, DRN has shifted its focus from maintenance of the network to rewarding its subscribers. Through network transformation, DRN has created a new, efficient internal structure with re-allocated and trained employees for accelerated introduction of new services to the market. Operational spending has been reduced dramatically, with field support resources at 50 percent of their 2004 levels. According to the 2011 Telergee Alliance Benchmarking Study of the rural telecom industry – which surveyed operational metrics of over 200 companies – DRN's operating margins of over 27 percent are nearly 2.5 times better than the average of their similar-size peers and more than five times better than the industry as a whole. In addition, DRN has introduced compelling new services and revenue opportunities, from IPTV and high-speed data services to new broadband-enabled service opportunities such as managed IT support, video surveillance, and in-home networking. Perhaps most importantly, DRN has been able to strengthen its community ties through bringing the promise of broadband to the communities it serves, furthering the reach of rural broadband as part of a 9000-square-mile area all connected with fiber, and educating subscribers on the opportunities broadband brings.

