Success Story: Arthur Mutual Telephone

Getting things done
The town of Arthur is “between places”. It is located about halfway between Toledo, Ohio and Fort Wayne, Indiana in a rural area. You would not expect the town of Arthur to be the center of high technology with IPTV and Fiber to the Home (FTTH) but it certainly is. When people in Arthur need something done, the community comes together and things definitely get done.

Back in 1905, area farmers could not get telephone service from surrounding towns so they built their own company and the Arthur Mutual Telephone Company was born. The farmers in the area installed and maintained the telephone poles and “iron wire.” Their first switch was a Magneto Switch and the last operator was Ruth Mae Colgan, who operated the switchboard for twenty eight years!

Arthur Mutual Telephone Company has come a long way from then. After an RFP and exhaustive trials, the Cooperative selected the ADTRAN® Total Access® 5000 FTTH platform to ensure their customers would get a leading edge, ultra reliable platform backed by a solid company that would be around for a long time. Deployment is going very well and the people of Arthur are getting turned up on one of the most advanced networks in Ohio.
A Cooperative Approach for the future
The Arthur Mutual Telephone Company is a Cooperative. This means that all customers are also shareholders, with each one holding a vote. The cooperative members decided to deploy broadband data service based on ADSL ADSL and later full IPTV service by capitalizing on a shared head-end system (add info).

Successful companies always put the customer first but in a co-op, it is even more important since your customers are also your shareholders. In a small town like Arthur, Ohio, your customers and shareholders are also your community. Residents and businesses rely on you for their communications and even their entertainment. People are counting on you and you in turn have to count on your suppliers to provide leading edge reliable products. Sadly, Arthur Mutual Telephone had been let down in the past by purchasing products from companies that would ultimately no longer be in business or that had gone through acquisitions that impacted their products and support extensively.

When selecting a vendor for their Fiber to the Home (FTTH) roll-out, it was critical to find a company that could deliver leading edge products with a long future backed by company that is rock solid and that would be around for decades to come. The co-op picked ADTRAN and has been very happy with the choice, especially since over 10% of residents have already been successfully turned up.

“We picked ADTRAN because our trials and analysis demonstrated that the Total Access 5000 was very capable and robust, just like ADTRAN, the company. With that product as the foundation, and the backing of ADTRAN, we are well positioned for the future and our members and shareholders are very happy” – Eric Roughton, General Manager, Arthur Mutual Telephone Company

Future proofing
The co-op had been providing video over DSL for the last five years, but it became clear that DSL could not deliver the bandwidth necessary for the advanced IPTV they wanted to serve based on the loop lengths in the region. They applied for, and were granted, an RUS loan for approximately $6M to completely modernize their plant with fiber.

Making the right investment was absolutely crucial. Their customers and shareholders were counting on them to make the right call to carry them far into the future. It would have been natural to extend their existing DSL platform to support fiber but it was time to explore alternatives.

They decided to issue a RFP in the fall of 2010 with the support of an Engineering firm to explore new vendors. They got submissions from several vendors and after some exhaustive testing the unanimous winner was the ADTRAN Total Access 5000.

There were three critical factors that helped ADTRAN win the RFP:
• Feature rich: advanced video and backhaul solutions complemented by very high port density (24 port Active Ethernet card for a total of 504 ports per chassis)
• Rock solid: product with a great reputation and warranty backed by a company that is known for working closely with service providers to ensure they are successful
• Stable company: ADTRAN has been profitable for many years and will be around for a long time

In short, they picked ADTRAN to future proof their investment.

The Architecture
It’s never as simple as it seems. Deploying FTTH from scratch requires many steps and involves a large number of partners. It ranges from planners and network architects to fiber installers for the different fiber spans, CO technicians, ONT installers, in-home installers to turn up the service and finally the provider of the electronics, ADTRAN in this case. Since much of this is new, staff also needs to be trained to install, turn-up and troubleshoot the service.

Deploying FTTH is a complex undertaking. This reality makes the choice of vendors even more critical. It goes
beyond just electronics. It is crucial to use an ultra robust and reliable platform that just works backed by a service-oriented company. ADTRAN has been there for Arthur Mutual through thick and thin helping to deploy services on top of a brand new fiber plant where nearly every piece of the network is new.

Quote from Eric. “ADTRAN has been there for us all the way through. They helped punch through any issues that came up and we persevered together. We’re so excited to finally deploy our advanced service after years of planning.”

In order to future proof their network while staying within the allotted budget, an architecture based on point-to-point Active Ethernet was chosen with deployment from the CO as well as remotes to minimize fiber deployment where possible. The point-to-point topology implies that there is a direct fiber from the electronics to the side of a subscriber’s home. This provides virtually unlimited bandwidth over time, but also requires a fiber port on the electronics for every customer instead of one for 32 or 64 subscribers that is typical of GPON based topologies.

For this to be feasible, the solution needs to provide very high port density. Fortunately, ADTRAN’s Total Access 5000 leads the market with 504 Active Ethernet ports in a very compact 9 RUs of rack space.

The RTs and CO equipment are interconnected through a 10Gbps ERPS ring. If this ring ultimately gets congested, they can simply install ADTRAN’s Optical Networking Edge (ONE) solution by simply plugging in some new cards into the existing Total Access 5000. This provides access to advanced packet optical features such as WDM and even a mini-ROADM providing the co-op virtually unlimited backhaul bandwidth.
A Great Success Story

Arthur Mutual Telephone Company and their customers/shareholders have been dreaming of ultra high speed broadband for a long time. They have progressed from “iron wire” and a Magnet switch to triple play featuring ultra high speed broadband over fiber powered by ADTRAN. Approximately 10% of the residents have already been turned up using the new network and they couldn’t be happier. This will continue until all residents are turned up.

ADTRAN has been part of this success story helping this dream ultra high bandwidth become a reality and is proud to help this town that is “between places” become a model for others to emulate.

The co-op now has a solid foundation and a bright future based on a fiber network and gleaming new electronics from ADTRAN, a new partner that has been there throughout the process and that will be around in the future.