Q&A With Ralph Cunha and Dennis Johnson, Endeavor Communications

Small-Town Telco Thinks Big

A small telephone cooperative in Indiana provides a range of innovative services to its members.

Clay County Rural Telephone Cooperative Inc., doing business as Endeavor Communications, serves about 9,000 members in 500-plus square miles of south-central Indiana. The cooperative, formed in 1950, comprises nine local exchanges that were started independently around the turn of the 20th century. But Endeavor, though a small company that serves small towns and rural areas, thinks very big – that's why most of its members have access to better and more varied telecom services than their urban neighbors.

Recently, **Broadband Communities** had the opportunity to speak with Ralph Cunha, Endeavor's president and chief executive officer, and Dennis Johnson, its director of network operations. Following are highlights of that conversation.

Broadband Communities: *Why did you decide to build fiber to the home in your service area?*

Ralph Cunha: In the early 2000s, we began exploring how we could upgrade our long copper loops. By 2004, when we were

Ralph Cunha, Endeavor CEO and president

ready to start, new technology had become available, and we decided to make the investment in fiber to the home. The board made the decision that, no matter where members were living, they would get fiber to the home. So we started in one exchange, and by this time next year, we will have overbuilt everything.

Learn more about new services for FTTH networks at the **Broadband Communities Summit,** April 14–16.

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Endeavor offers community classes several times per year, covering such topics as Internet basics, social media, digital security and cyberbullying.

BBC: *How did you decide where to start?*

RC: We started right where our headquarters is located, in Cloverdale. It has a dense population, so it was a good starting point. Then we went to the high-cost rural areas to build up the funding [with support from the Universal Service Fund high-cost program], and after that to a rural area with a decent amount of population. We then planned to build out the second-largest exchange, in Monrovia, but the town was doing roadwork at the time so, to develop the skill set on our teams, we went into two rural exchanges that were a little easier. Then we went back and finalized Cloverdale and also went back to Monrovia. We knew all along that we would have FTTP to all our members by 2015, and we're remaining on schedule for the total project even though the actual roadmap moved around somewhat.

It was fortunate that we were able to do the project over a long period of time – that allowed us to fund it as we moved along and to minimize the amount of debt we incurred. We benefited from a cash flow point of view, and because technology was improving as we went along, when we hit the last four exchanges, we transitioned from a PON design to active Ethernet, which enables us to deploy 1 Gbps if someone needs it. So we benefited in many ways from innovation and the advancement of technology.

BBC: *Over that period, there have been changes in the regulatory environment. Have those affected the project?*

RC: We are a rate-of-return carrier in the NECA pool, so when we make investments, we earn a fixed rate of return. One of our challenges was whether to continue investing given the uncertainty and unpredictability of the regulatory environment. There are carriers out there that have slowed down because they don't want to take out additional loans. We decided to move forward because we had made great strides already and because we believed it was in the best interests of our members.

The board and the management went through a lot of discussion and analysis, and our decision was based on several variables. One important one was that we could stop at any point – we were able to make a decision at each exchange. The fact that we were doing the project internally, and not using contractors, enabled us to move forward exchange by exchange, at a slower pace than in a contractor-based environment. And we have been fortunate that the USF has continued to allow us to make those investments, so we've progressed without skipping a beat.

BBC: *Why didn't you use contractors? Most smaller telcos rely on contractors to build FTTH networks.*

RC: Initially, we were contractor-based, but after building out the first couple of exchanges, we invested in construction equipment and hired employees so we could do the majority of the construction

ourselves. The timing was right in terms of the economy because people were losing their jobs, and equipment became reasonably priced. A considerable number of our members came on board and worked for us – we were fortunate, and so were they because they were able to work close to home.

It's shifted back again toward the end of the project; as the economy picked up again, employees found permanent positions with other organizations, and we had to integrate strategies with contractors to fill the void. Now we have employees and contractors working side by side. In the last exchange we built out, the majority of the construction was handled by contractors and overseen by internal quality inspectors.

BBC: *Aside from internal funding, how have you financed the project?*

RC: We had RUS funding at the beginning of the project, but when we shifted from using contractors to hiring employees, the structure of the loan changed. We tried to restructure it, but we weren't successful, so we secured additional financing to have on hand if we needed it. Fortunately, we haven't had to use it, but that's not to say we might not need to draw it down in the future. We're continuing to manage our cash flow on a monthly basis to minimize borrowing.

BBC: *Indiana has a strong tradition of cooperation among its independent telephone companies. Did that help your business case for fiber?*

RC: We belong to the Indiana Video Network, which allows us to share an IPTV headend with seven other telephone companies. TV is expensive to begin with – the set-top boxes are expensive, the programming is expensive and we're in the least desirable position to negotiate deals – but sharing the headend lowers our capex and opex costs. We are also one of the 20 member-owners of the Indiana Fiber Network (IFN), which provides

Internet backbone and transport services. That definitely helps with costs, and it gives us more control. IFN looks out for us as members.

BBC: *What else were you able to do to control costs?*

Dennis Johnson: Because we can now use a softswitch for voice service, we were able to eliminate the nine DMS-10 switches and collapse nine stand-alone central offices into one, saving real estate costs. We don't have to travel to those offices to maintain the switches – the softswitch is maintained remotely. And because VoIP is more efficient than traditional switching, it reduces the amount of transport we need to buy.

BBC: *How many of your members are signing up for FTTH services?*

RC: We see different rates in different exchanges. Some folks who were active members [that is, who subscribed to copper-based voice services] may now be going wireless-only. We knock on every door, both residents and businesses, and ask if they're willing for us to drop fiber. Some of those who declined at first are now coming back because they see they made a mistake.

In the fiber areas, we are seeing higher broadband penetration.

Dennis Johnson, network operations director

Eighty-three percent of active members have broadband from us overall, and the number grows as we deploy more fiber. There's a nice uptick every time we drive fiber in, as people realize we have higher speeds available.

We're offering 50 Mbps now, and I definitely see that jumping each year. Our relationship with IFN allows us to scale up bandwidth – and that gives us an opportunity to grow organically in our service territory when the wireless-only customers' needs shift to higher broadband.

BBC: *What competition do you have for broadband?*

RC: There is some cable broadband in the main towns. But we don't cherry-pick the way the cable companies do. We use those USF funds to serve entire communities. In most cases, we have newer plant than the cable companies, and our speed, reliability and quality of service are better. Another big difference is our involvement with the community as a co-op. We are actively involved in providing scholarships, parades, tailgating at sporting events. We have community TV and YouTube channels for local sports – that sets us apart from national and regional providers. One big point of differentiation is the technical team and the customer service team. A member who calls in can talk to a real voice and get timely, responsive service. We deliver a premium level of service.

There are also some wireless ISPs in the rural areas – but we believe wireless is a complementary offering, not a competitive one. In fact, we will be rolling out our own Endeavor wireless service in the first quarter of 2015. That's a service we can grow not only for members but also outside our current territory.

BBC: *How about takers for video? And what's your video competition?*

RC: Our major video competitors are DISH Network and DIRECTV.

Recognizing that video is a break-even game, our strategy was to get our members tied to the complete offering, so we made the triple play more compelling from a price perspective. It's a way to increase penetration and grow the customer base. About 45 percent of our members are taking video.

BBC: And you didn't stop at the triple play! I see you have several other offerings as well.

RC: We're selling security and smart-home services that can be used to control thermostats, lights, garage doors and other devices from anywhere. That's also an offering that we can share outside our current territory, and our E-TECHS IT service is another one. We can maintain and repair members' or nonmembers' computers, including small and midsized businesses that don't have full-time IT teams. We generate revenue via service agreements and provide help to small businesses.

We also provide business phone services. One of our recent offerings is hosted PBX for business. We partnered with ANPI for that; we're offering the ANPI solution to businesses in our territory and even to those outside our territory if they have a solid broadband connection. It's hosted in ANPI's data center. We're just in the early stages, but it's been very well received both inside and outside our network, and we look forward to it being a major offering. That's the direction communications is going in, and we'll be able to capitalize on it.

BBC: *How do you decide which services to provide directly and which to resell?*

RC: In each avenue, we ask ourselves, "Do we re-create the wheel, or is there a good model we can use?" For the security service, we have a good partner that handles the monitoring. For hosted PBX, ANPI has a wholesale service and support offering that we couldn't match if we invested in it ourselves. So we're leveraging it by making it a turnkey solution, making the effort to customize it for our needs.

For our next service, Endeavor Wireless, we'll be reselling service over an existing network, and we're going to partner with Telispire, a wholly owned subsidiary of NRTC, for the support and handsets. Again, we chose the resale opportunity versus investing in a fixed-wireless infrastructure.

Another item we're exploring is over-the-top video solutions. We're evaluating a number of vendors that offer OTT platforms. Our IPTV subscription already includes TV Everywhere for a number of channels, but for the cord cutters and cord nevers, we'd like to provide a streamed OTT solution – a Roku-type solution. We looked to see what the market has done, and we've seen others pursue it with some early success, though it's still in the early stages.

This is a way to introduce our technology team and our members to a platform that's going to grow in the future as well as to derive ancillary revenues on top of what we're earning today. To get back to the programming discussion, are we going to have content we can deliver, or will we be held hostage by the content providers?

We know the technology is there today. We could continue to distribute content over the existing platform or over the top. We're willing to pay consistent with the rates that we're paying today, where they are reasonable. We're educating those in the content community that we have the technology to provide content in the many forms and formats that end users want. And some of them are on board already – HBO, Showtime, CBS.

BBC: *How is fiber to the home helping the communities you serve?*

RC: We're very engaged in the economic development organizations – we sit on several boards – and one of the first questions from any site selection consultant is, "Where is the fiber?" We're able to be there firsthand to say, "Yes, we have fiber right here, and we could turn you up right away." So it's important for the future development and attraction of businesses. And for existing businesses, we've been in the position of extending fiber to create connectivity for large data centers.

There's a benefit to folks who are thinking about leaving the community to work elsewhere, but when they realize what technology they have available, some of them find they can work from home or telecommute. They can stay and enjoy where they live. We also see a number of folks coming from larger cities to a small rural community, and they're surprised they have fiber right to their homes. The larger cities aren't there yet.

The schools all have fiber – there's just one remaining to be turned up. Students can have the connectivity, and so can the educators and the staff. Students can go home and do their homework at high speed and with significant reliability. It's enabled us to do more with the schools, such as recording their events. We expect those relationships to continue to grow as the schools realize this technology can give their students the best experience on a daily basis.

BBC: *What's next for Endeavor after you finish building fiber throughout your territory?*

RC: We've done a little build outside our territory already, and in the next stages we'll be looking for more. We're looking at all the options that may be beneficial for investment and that could benefit our members. In fact, we're having ongoing discussions with electric membership cooperatives – four of them overlap with our territory to a small extent, and they're struggling to get broadband to their members. We're looking to see if there are opportunities to collaborate with them. ❖