

Saddleback Communications’ Fiber Network Serves as Blueprint for Advancing Tribal Broadband

The tribal provider makes good on 10-year plan to replace aging copper plant with fiber in a bid to create new opportunities for residents, students and businesses.

By Sean Buckley / *Broadband Communities*

The Salt River Pima-Maricopa Indian Community (SRPMIC) in the greater Phoenix, Arizona, area comprises two Native American tribes: the Onk Okimel O’odham (Pima) and the Xalychidom Piipaash (Maricopa). Like many Native American communities, it has limited broadband and telecom options. But Saddleback Communications, a provider of fiber-based voice and data communications to business and residential customers, recently completed a fiber-to-the-home (FTTH) deployment, enabling internet access up to 500 Mbps to all homes in the community.

The deployment could serve as a case study for making broadband a reality for tribal communities across the country.

The network upgrade, 10 years in development, was especially crucial over the past year as the need for reliable home internet connections skyrocketed during the ongoing COVID-19 crisis. But the story of how it came to pass goes back far more than a decade.

Following the passage of the landmark Telecom Act of 1996, the SRPMIC founded Saddleback in 1998 to upgrade and enhance the quality of telephone, data and internet services for residents and businesses on the reservation. At that time, the company acquired

the copper assets from what was then known as US West, now Lumen. Saddleback became a federally regulated telephone company and the sole authorized provider of local telephone services and communications infrastructure to the SRPMIC.

Bill Bryant, president of Saddleback Communications, credits this accomplishment to the foresight of the SRPMIC Tribal Council and particularly its former president, Ivan Makil, who spearheaded the formation of Saddleback Communications in 1998 by acquiring the aging copper network from US West. Makil later urged the Tribal Council to invest in upgrading to high-speed fiber.

“It took four years to settle on a price for the assets, but the vision was to lay in world-class infrastructure for the community,” Bryant says. “It was the vision of the tribal leaders, who understood the importance of world-class infrastructure. This was before *broadband* was even much of a term.”

Like Bryant, many Saddleback staff previously worked at larger providers but share a mission of serving a local community, not Wall Street.

“Most of us are quite happy to be where we are because we’re doing the work of the people, and it gives us a sense of mission, which is healthy for our corporate culture,” Bryant says.



A new Saddleback Communications service vehicle used to provide services to the Salt River Pima-Maricopa Indian Community.

LEAPFROGGING TO FIBER

Upon becoming Saddleback's president in 2005, Bryant saw an opportunity to rebuild an aging network with new technology that bypassed any interim steps, such as a hybrid copper/fiber-to-the-node (FTTN) VDSL network.

Bryant has had plenty of experience making disruptive technology changes. Earlier in his career, he worked for the former MCI and TW Telecom, an early Ethernet provider.

"When you have old infrastructure that's in less-than-ideal shape, it's really easy to leapfrog technology," Bryant says of upgrading from copper to fiber. The opportunity to move to an all-fiber infrastructure also created greater operational efficiencies; reliability issues are commonplace with aging copper networks.

Saddleback is not alone. For example, incumbent telcos such as Verizon continue to retire copper in certain markets and migrate customers to fiber.

For Saddleback, a key problem with the copper network was rain. If rain was coming – especially in the monsoon season – Saddleback had to bring in additional staff to handle a large number of trouble tickets.

"When I got here, the copper infrastructure was still largely the

legacy infrastructure that US West put in and neglected for about 40 or 50 years," Bryant says. "Whenever it rained, people would experience really bad static and lose their phone service."

Leveraging the FCC's Universal Service Fund (USF) program, the tribal community migrated to an all-fiber network, realizing a long-term vision.

Native communities traditionally honor the "7th Generation Principle," meaning they make decisions to benefit seven generations of descendants. Typically, this principle is invoked to make environmentally sustainable decisions, such as about water and energy use, but arguably it also applies to technology.

"Native communities want to think through the implications," Bryant says. "When you think that way, you think about 40 to 50 years ahead and what will be a long-term solution. So, you go for the best technology."

Staying independent is also important to the tribe. Just as it manages other infrastructure, such as water and sewer, the tribe valued building and maintaining its own telecom network.

"We don't have facilities-based competition," Bryant says. "This is a point the Tribal Council has consistently taken, which is that it

prefers to provide its own infrastructure in the community, and that goes beyond telecom and broadband."

QUICK SERVICE TURNAROUND

Saddleback covers 100 percent of the tribal community's member homes and can quickly respond to service requests. Today, 83 percent of member homes use Saddleback fiber-based broadband services.

Eligible users can choose speeds between 250 and 500 Mbps. "The 500 Mbps speed tier is relatively new, but we do have some subscribers on it already," Bryant says. "We will be running promotions to encourage more people to increase their speeds."

As of today, the service provider has either already deployed fiber or can deploy fiber to any part of the community within 10 days.

A few things have kept Saddleback from reaching every customer, however. Some community members don't buy services from Saddleback, and others have property issues preventing FTTH installation.

For instance, if a member of the tribe is allotted land and wants to give some to a favorite nephew or another relative to build a home, problems can arise if the home is not registered with the Bureau of Indian Affairs (BIA).

“When there’s a situation like that, we’re constricted from bringing fiber in until the person gets the issues straight with the BIA,” Bryant says. “We have probably a couple hundred homes like that.”

Saddleback’s long-term network vision is also reflected in its FTTH technology choice. Unlike other FTTH providers that use PON, Saddleback leverages an active Ethernet approach.

Active Ethernet is a point-to-point technology that connects an optical line terminal (OLT) to remote optical network terminals (ONTs). An active Ethernet network has a direct point-to-point connection from the OLT to the subscriber ONT location.

“In terms of thinking long term and providing the best possible value to our community members, we decided to go active Ethernet,” Bryant says. “As you know, it’s a lot more expensive and ties up more bandwidth, but it delivers a better value.”

COVID-19’S EFFECT

As the COVID-19 pandemic hit the country, several tribal communities committed to ensure that their members would continue to be able to access affordable broadband services.

Former FCC Chairman Ajit Pai issued the Keep Americans Connected initiative on March 13, 2020, and extended it to June 30, 2020. It asked

broadband and telephone service providers and trade associations to pledge not to terminate services to any residential or small business customers because of their inability to pay, to waive late fees, and to activate Wi-Fi hot spots for people in need.

Saddleback reduced service fees by 50 percent for five months. “We cut our fees as a way to assist community members as did other community departments,” Bryant says. “We had no way of knowing the pandemic would go this long, so obviously we can’t sustain this level of discount.”

In addition, Saddleback tried to find out which households included students who lacked broadband access.

FCC’S NATIVE NATIONS TASK FORCE ADDRESSES BROADBAND NEEDS

In 2018, then-FCC Chairman Ajit Pai appointed 19 tribal members and eight FCC members to the renewed Native Nations Communications Task Force, intended to help the commission fulfill its commitment to increase access to broadband and other communications infrastructure deployment and services on tribal lands.

Originally created in 2011 as the Native Nations Broadband Task Force, it was renamed to reflect its involvement in issues including, but also reaching beyond, broadband deployment.

At the end of 2020, the task force developed a report that offered recommendations concerning the five required elements of tribal engagement. The task force also made several overarching recommendations and suggestions for additional FCC action:

- **Needs assessment:** Covered providers should request a needs assessment from the tribe during or following engagement activities. Needs assessments would contain but are not limited to locations needing service, types of service requested, infrastructure updates and other relevant requirements. The task force said the FCC should clarify the specific topics that covered providers address during the discussion of deployment planning.
- **Guidelines:** The FCC should provide guidelines for covered providers to communicate their intentions regarding feasible and sustainable deployment and service on tribal lands and examine the interplay

between buildout requirements and feasibility and sustainability planning.

- **Cultural issues:** Covered providers should be encouraged to designate a Native American affairs department or representative to better enable understanding and marketing in a culturally sensitive manner.
- **Rights of way/permitting:** The FCC should provide clear guidance to deter covered providers from using the existence of rights of way and other permitting processes as reasons to deny provision of service on tribal lands.
- **Tribal compliance:** The FCC should reiterate and strongly emphasize the need for covered providers to take seriously the obligation to discuss compliance with tribal licensing and business requirements to facilitate speedy deployment and service provisioning.

The task force currently is working on creating common tribal codes and zoning ordinances. Specifically, it’s using zoning codes from tribes that are further along as templates available to tribes that don’t have any zoning or regulatory ordinances.

“What we have found is the lack of a regulatory framework is a big frustration for carriers,” says Bill Bryant, president of Saddleback Communications and an appointed member of the task force. “If there are no set rules on oversight in place, it’s discouraging. It could mean the difference between which carrier is working today versus tomorrow.”

“We made it a point to get those people connected following our COVID-19 protocols as quickly as possible,” Bryant says. “Our last students were connected in August, so all of our students can get a fiber-based internet connection for remote learning.”

TRIBAL LAND STRUGGLES

Saddleback has made strides in serving its community and is keen on helping other tribal communities develop similar broadband plans.

The National Telecommunications and Information Administration (NTIA), part of the U.S. Department of Commerce, recently issued more details about its allocation of \$1 billion to expand broadband access on tribal lands under the Consolidated Appropriations Act of 2021. The NTIA outlined the types of programs and specific communities eligible for the grants, which must go to unserved areas.

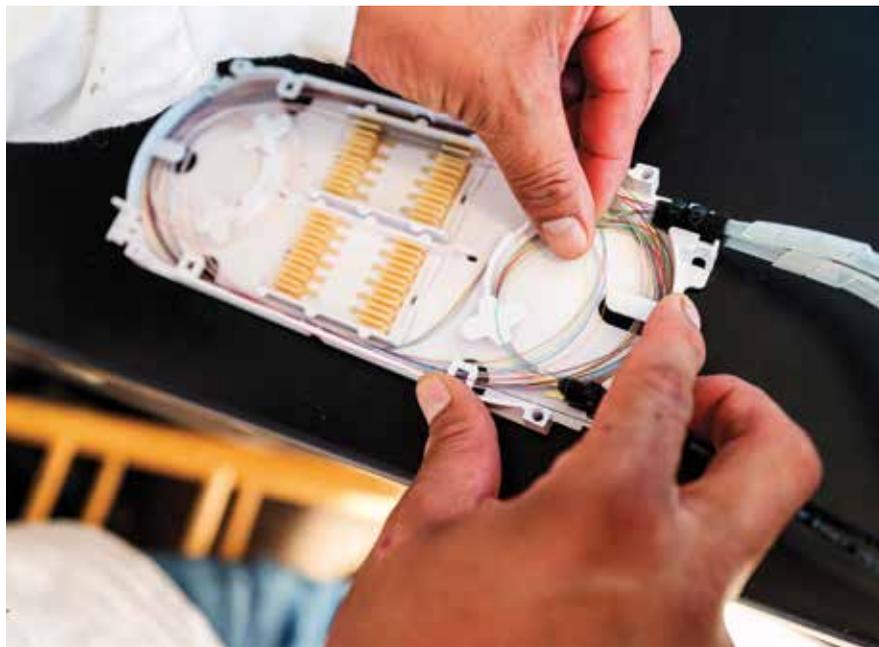
Because it already has its own infrastructure, Saddleback isn't eligible for many federal funding programs, but Bryant says the company can serve as a guide for other tribes.

“In our work with the National Tribal Telecom Association (NTTA) and the FCC, we're involved with those issues to help others,” he says. “Of the 574 tribes, very few own their own broadband or phone company, and most struggle with telecom and broadband infrastructure.”

A key challenge is statutory. For instance, “the E-Rate program offers a way for rural communities to get broadband into schools or libraries, but the law requires that it go to only that one location,” Bryant says. “The community may not have broadband anywhere else and is not permitted to distribute that internet to their community, which is starving for internet.”

But constrictive laws are just one obstacle. Another is the rural nature of tribal lands, which have terrain that makes it hard to construct networks, and sparse populations.

“Typically, the FCC requirements of an eligible telecom provider receiving USF funds do not go down to the



A Saddleback Communications commercial technician demonstrates how to splice fiber.

level of ensuring that they meet the needs of the tribal community they may be serving,” Bryant says. “It's not uncommon for a third-party carrier to have area on the reservation and off the reservation. It's usually easier to deploy off the reservation. While there are a lot of reasons carriers meet their buildout requirements off the reservation, they have not done anything to help the tribes, and that's a big issue.”

Cultural issues and marketing also pose a challenge. “Tribal people are not typically marketing people, so it is harder for them to make a sales pitch,” Bryant says.

DRAWING BUSINESS TALENT

Enabling residential users with broadband is a key focus for Saddleback, but the provider also is keen to draw in businesses and create economic development opportunities.

SRPMIC has the population density to attract and retain a good talent pool from the Phoenix area.

Saddleback launched a subsidiary company, Meridian Telecom, focused on unified communications as a service (UCaaS). Today, Meridian has about 415 commercial business customers

along a major freeway in the Scottsdale, Arizona, area.

“We have all the benefits of being urban and being rural in terms of attracting USF funding,” Bryant says.

Saddleback sees itself as the tip of the spear on economic development. Because the business corridor in its market was greenfield, fiber was a key element to attract customers. In fact, the business corridor has always been served over fiber.

“We have doubled in the last 10 to 15 years the total number of business customers,” Bryant says. “Early on, we understood you're not going to attract the kind of businesses you want to attract without high-speed internet and without the ability to go into two sides of a building for more-demanding customers.”

He adds, “We also need to make sure we have cooperative relationships with other carriers to make sure we can get alternative services through our fiber facilities for more-demanding applications such as call centers.” ❖

Sean Buckley is the editor-in-chief of BROADBAND COMMUNITIES. He can be reached at sean@bbcmag.com.