

Sovereign Nations Network’s Response to the “Digital Divide”

Sovereign Nations Network and its participating partners have focused their efforts in three distinct yet interrelated areas, each focused on the common goal of creating and sustaining a low-cost yet high quality wireless delivery platform for subscribers who currently do not have access high speed Internet-delivered services. This includes:

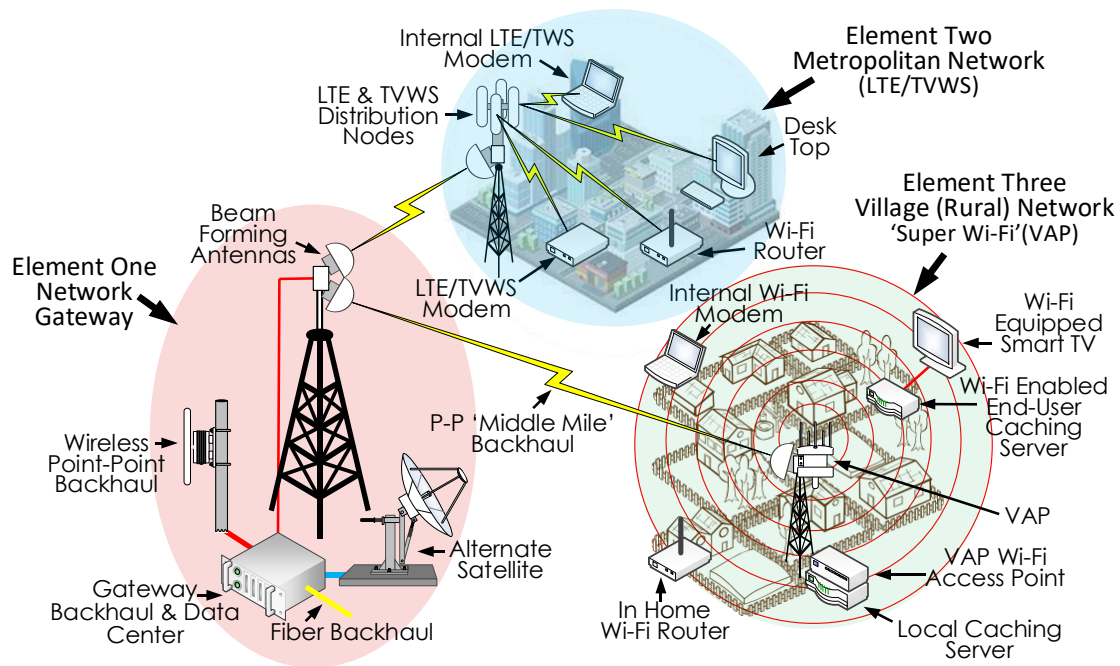
- ▶ *‘Best-of-Breed’ Proprietary Wireless Technology:* The SNN concept is based on employing ‘next generation’ wireless technology, and seamlessly combining it with other advanced telecom and data storage systems, into a fully integrated network, incorporating Internet access, backhaul, transport and distribution. EdgeNet uses High-Power Wi-Fi, TV White Space, LTE, fixed wireless, satellite, and advanced support systems, combined with content caching and intelligent network management, to offer high-speed Internet access at the lowest possible cost.
- ▶ *Providing Leading-Edge Support Resources:* Creating and adapting support resources, applications, and software in the areas of operations, sales, finance, and administration to allow greater ‘back office’ efficiencies in operating rural wireless networks thus increasing profitability and creating sustainable business opportunities.
- ▶ *Offering Meaningful Applications & Content for Health & Education:* Acquiring and packaging content and applications for education, healthcare and life-skills which is distributed over these networks to aid in economic development and improve the lives of people living in ‘marginalized’ and/or underserved areas.

The applications, products and services offered by SNN through the Tribal Internet Program are the result of close collaboration between like-minded strategic partners who collectively bring unique and valuable contributions to the enterprise. Problems which have plagued similar enterprises (most notably funding program growth and ensuring long-term sustainability) are mitigated by combining an altruistic initiative with a commercial venture.

A. Wireless Network Deployments: ‘Supercharging’ Wireless Internet

A major obstacle in providing high-speed wireless Internet access to people living in rural, remote, and underserved areas is the ability to deploy Internet-based network infrastructure cost-effectively, without sacrificing quality or reliability. The partners in the Tribal Lands Network’s Program have solved this dilemma by developing an innovative integrated wireless network design which allows end-users access to the Internet ‘cloud’ in ways previously unavailable in rural or remote areas.

B. The SNN *EdgeNet* Wireless Hybrid Network



EdgeNet is based on utilizing the latest in high-power outdoor Wi-Fi , LTE and Private LTE technologies and seamlessly combining them with other advanced wireless telecom systems, into a fully integrated network, incorporating Internet access, backhaul, transport and distribution.

EdgeNet Networks include many of these proprietary systems and applications:

- ▶ *High Power Outdoor Wi-Fi* systems distributing low-cost Internet service directly to Wi-Fi enabled devices (smart phones, tablets, laptops, etc.).
- ▶ *Licensed and Unlicensed PTP Systems:* Point-to-point radios used to link wireless access points and provide backhaul to a carrier point of presence (POP).
- ▶ *High-Capacity Satellite Earth Stations* used for high bandwidth streaming applications and to backhaul Internet traffic into areas where fiber or other terrestrial access does not exist.
- ▶ *SMART:* An AI-based platform embedded in *EdgeNet*, and other Tribal Lands Network products used to monitor, groom, route, and cache 'on-net' Internet data traffic.
- ▶ *NOC:* A Network Operations Center staffed on a 7x24 basis which dynamically monitors network performance down to the end-user level.
- ▶ *Mobile Telecom:* A rapidly deployed mobile communications platform which can be used for disaster recovery and temporary and semi-permanent telecom installations.

C. Best of Breed Wireless Technology

The development of advanced highly proprietary wireless technology positions the SNN Program to become a major 'disruptive' factor in the rural wireless industry. Therefore, new technology is the first element which provides a firm foundation to this opportunity. The introduction of innovative low-cost products is critical since current wireless technology makes it virtually impossible to cost effectively serve a sparsely populated area *without major (and ongoing) subsidization*. As such, most major carriers have relegated rural areas to the 'backwater' of Internet access. And while there is currently a great deal of pontificating coming from companies such as Microsoft, Google, and others, much of this is 'posturing' lacking substance, primarily due to the high cost of the deployment and operation of LTE and similar high-speed wireless delivery systems.

To overcome this challenge, Sovereign Nations Network and its partners are developing several revolutionary, yet low-cost solutions, designed specifically for rural Internet delivery under the '*EdgeNet*' brand name. *EdgeNet* 'hybrid' systems include high-power outdoor Wi-Fi, LTE, Private LTE, and point-to-point wireless, coupled with advanced data handling and network monitoring products and applications. *EdgeNet* 'next generation' products can provide high-speed connectivity over a very wide area of up to fifty (or more) miles.

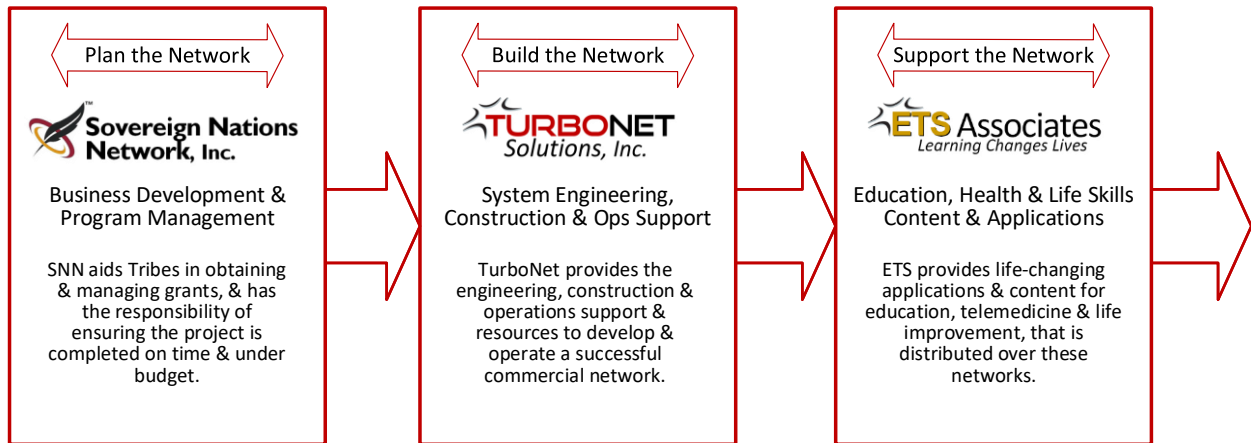
While the potential of the *EdgeNet* concept is significant, Tribal Lands Network is taking a "*crawl before you walk- walk before you run*" approach to the introduction of innovative technology. The first *EdgeNet* products are intended to solve issues currently at hand (lowering the cost of end-user equipment, providing efficient operation in less densely populated areas, etc.). These products will be introduced prior to tackling the 'holy grail' of the business, (producing a 'next generation' product which can cover large areas, in a non-line-of-sight' mode, with customer premises equipment priced below that of cable modems).

Work is already underway for both a near-term and a 'next generation' solution. Systems are currently in the final stages of development with some in 'beta test' deployments. The results are highly encouraging. The first generation of *EdgeNet* products are expected to be deployed in a pilot project network in early 2025.

D. "End-to-End" & "Sole-Source" Capabilities

The one factor that sets SNN apart from other companies offering "turnkey" like services is its ability to support network development from the planning and early-stage funding phase, into the contraction and operations phase, and offering meaningful content, applications, and support services to make the network a commercial success.

SNN, and Its Affiliated Partners Offer End-to-End Service



SNN’s collaborative approach to develop networks allows SNN to provide Tribes with all the resources to plan for, fund, construct, and operate a successful commercial network. Not only that, but SNN’s access to meaningful content and applications for education, telemedicine and life-improvement means that a Tribal entity will have the necessary tools to improve the lives of their people through learning, healthcare, and specialized training.

In addition, SNN can show the tribe how to expand the network off the reservation into the surrounding countryside where Internet access may be marginal or lacking. This capability can rapidly propel the tribal-owned network to become a self-sustaining commercial enterprise, generating significant profits for the Tribe.

More information can be found on the SNN website at: www.sovnatnet.com or by contacting John Lytle at 720-234-3565.