

BROADBAND INTERNET ACCESS: A Solution to Tribal Economic Development Challenges



Darrah Blackwater*

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* Darrah Blackwater is a graduate of the James E. Rogers College of Law at the University of Arizona, which lies on the homelands of the homelands of the Tohono O’odham Nation and the Pascua Yaqui Tribe. She is a citizen of the Navajo Nation and studies Indigenous and telecommunications law. She is from Farmington, New Mexico. The author gives the following acknowledgement:

I owe many thanks to those who helped this Comment come to life. I appreciate the hard work that this Journal’s staff has put into editing this Comment. Thanks to Mariel Triggs, Debra Socia, Matt Rantanen, and Geoffrey Blackwell for sharing your knowledge and expertise repeatedly until I could fully digest it. Many thanks to Professors Andrew Woods and Torivio Foder for reviewing pieces contributing to and born from this Comment. Most of all, thanks to Professor Rebecca Tsosie for mentoring me through the publishing process and believing in me.

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I. Basic Broadband Background

A. What is Broadband?

The term “broadband” refers to Internet access that is high speed and provides a connection that does not turn off when it is not being used so that users do not have to reestablish a connection each time they access the Internet.¹ Under the Farm Bill, “broadband service” is defined as “any technology identified by the Secretary [of Agriculture] as having the capacity to transmit data to enable a subscriber to the service to originate and receive high-quality voice, data, graphics, and video.”² Broadband connection, when utilized effectively, has the power to stimulate economic development, provide remote educational opportunities, and increase public health and safety. Broadband internet and the tools necessary to access it are critical for economic development, educational and job opportunities, and public health and safety for tribal nations and Native Americans living in both urban and rural areas across America.³ Broadband connection comes in multiple forms, and can be wireless like a cell phone, or wired like an ethernet cord that plugs into a desktop computer. A material called fiber-optic cable offers the best broadband connection today (fiber), but fiber is very expensive to purchase and install. Therefore, rural areas need alternative connections to reach homes and businesses, covering what is called the “last mile.” Connecting the “last mile” is the primary focus of this Comment.

¹ U.S. GOV’T ACCOUNTABILITY OFF., GAO-18-630, BROADBAND INTERNET: FCC’S DATA OVERSTATE ACCESS ON TRIBAL LANDS 7 (2018), <http://www.gao.gov/products/GAO-18-630> [hereinafter GAO-18-30].

² 7 U.S.C. § 950bb (b)(1).

³ GAO-18-630, *supra* note 1 at 7.

B. *Relevant Types of Broadband*⁴

1. Fiber

Fiber optic technology converts data to light before sending the light through hair-fine glass fibers. The fibers can be buried in the ground or run along a telephone wire. Fiber is much faster than DSL or cable modem data transmission speeds (which use copper telephone cables), typically by tens or even hundreds of Mbps (megabits per second). Speeds can vary depending on how near a service provider is and the amount of bandwidth used. Many fiber broadband providers also simultaneously deliver voice and video services. Often, to save money on grant-funded fiber projects, fiber cables are laid to connect schools and hospitals, then either a wireless connection or copper lines travel the rest of the way to homes in the community, if the community is allowed to access it (more on this later). In metropolitan areas, fiber may go right up to homes. In a perfect world, there would be fiber running to every home in every tribal community in America. But, as previously stated, fiber is expensive to lay, especially if it must reach all the way out to many homes that are “off grid,” and not necessarily grouped into tight neighborhoods.

2. Cable

Cable broadband is provided by television cable providers using the same infrastructure as cable television, coaxial cables. Cable broadband is not always as fast as DSL and can vary inconveniently in reliability and speed. It is also not an option where the cable infrastructure has not already been laid.

3. Digital Subscriber Line (DSL)

DSL transmits data to homes and businesses over traditional copper telephone lines. DSL-based broadband provides transmission speeds ranging from several hundred thousand (Kbps) to millions of bits per second (Mbps). DSL service speed and availability may depend on the distance from a home or business to the closest telephone company facility. This means that it is probably not a good option for tribal communities or homes located in remote areas, far away from a telephone company facility.

4. Wireless

Wireless broadband provides Internet using a radio link between the customer’s location and the service provider’s facility. It is better for remote or sparsely populated areas where DSL, fiber, or cable service would be costly to provide. Speeds are generally comparable to DSL. Wireless broadband sometimes requires a direct line-of-sight between the wireless transmitter and receiver for fixed (not mobile) connections

⁴ *Types of Broadband Connections*, FED. COMMS. COMM’N, <http://www.fcc.gov/general/types-broadband-connections> (last visited July 7, 2019).

and can also struggle getting through adobe walls and foliage, depending on the spectrum channel on which it is traveling. These services have been offered using both licensed spectrum and unlicensed devices (more on spectrum later).

5. Satellite

Satellites can provide necessary links for broadband, just as they can provide phone and television service. Satellite broadband is a form of wireless broadband that can be useful for serving remote or sparsely populated areas, making it a good possibility for tribes in rural areas. Satellite broadband speeds depend on several factors including the provider, the service package purchased, the consumer's line of sight to the orbiting satellite, and the weather. One downside of satellite service is that it can be disrupted in extreme weather conditions, so it may not be a good option for tribes in areas with lots of inclement weather and cloud coverage. A consumer can generally expect to receive (download) at a speed of about 500 Kbps and send (upload) at a speed of about 80 Kbps. In the past, satellite speeds have been slower than DSL and cable. But more recently, some of the world's wealthiest people have poured a small fortune into satellite technology.⁵ Specifically, the funding has developed the newest LEO (low earth orbiting) satellites, which orbit anywhere from 500 to 2,000 kilometers over the Earth's surface. Successful deployment of a network of LEO satellites could offer faster and more affordable Internet access in rural, tribal areas as soon as 2021. Unfortunately, that does not help Native Nations today.

C. *Other Definitions and Abbreviations*

1. Tribe

Throughout this Comment, I will be referring to a "tribe" as one of the 574 tribes⁶ that have been recognized by the United States' federal government, as this status is required to be eligible for many of the programs discussed. However, it is important to acknowledge that there are many state-recognized tribes, and tribes that are seeking "official" (federal) recognition whose citizens would similarly benefit from broadband internet service.⁷

2. Bandwidth

Generally speaking, bandwidth is the maximum rate at which you can download data (YouTube videos, IndianZ articles, Supreme Court

⁵ Greg Ritchie & Thomas Seal, *Why Low-Earth Orbit Satellites Are the New Space Race*, WASHINGTON POST (July 10, 2020), http://www.washingtonpost.com/business/why-low-earth-orbit-satellites-are-the-new-space-race/2020/07/10/51ef1ff8-c2bb-11ea-8908-68a2b9eae9e0_story.html.

⁶ *Frequently Asked Questions*, BUR. OF INDIAN AFF., <http://www.bia.gov/about-us> (last visited August 30, 2020).

⁷ *Id.* at 27.

opinions, memes, etc.) from the Internet to your computer.⁸ It helps to think about bandwidth like a water hose. If you needed to fill up a 100-gallon tank to take out to Cheii's (grandpa's) house in Monument Valley and your garden hose puts out only 5 gallons of water per minute, you'll be waiting 20 minutes to fill the tank. But if you call your cousin who is a firefighter for the Tuba City fire department and she uses a hose that puts out a gallon of water every second, the tank will be filled in less than two minutes. In this example, bandwidth is like the size of the hose. The larger it is, the more data you can download and/or upload.

3. Mbps

Megabits per second are the unit of measurement of bandwidth.⁹ Video streaming generally takes up the most bandwidth, and households expecting that multiple people will be using the Internet at once need more bandwidth. Netflix recommends a connection of 3 Mbps for one standard-quality stream and 5 Mbps for a high-definition stream. Two simultaneous high-definition quality streams would need about 10 Mbps, and so on.

4. Spectrum

The electromagnetic spectrum (spectrum) refers to the invisible and nontangible radio frequencies over which we transmit data.¹⁰ In short, spectrum is a river in the sky. It is an essential part of wireless Internet. Think of spectrum like the road or highway that your Khan Academy© teachers travel on to get from your service provider's location to your living room (such as when you start a lesson on your smart TV or laptop). If you only have a small dirt road leading to your neighborhood, and all of your neighbors are also summoning from the Internet their teachers, tutors, doctors, therapists, and favorite entertainers, the traffic on the road is going to get jammed. More spectrum means more lanes, allowing traffic to flow freely from the Internet provider to your house. Also, the road must extend all the way from the highway to your house, or else your teachers will not be able to make it to your living room.

Spectrum is measured in gigahertz (GHz) and is another piece of the broadband puzzle which, when complete, allows a user to attend school online, stream, download and upload videos, participate in social media, read articles, utilize telehealth, etc. Spectrum's range of frequencies is fixed and limited by the physics of the universe,¹¹ meaning that there is only so much spectrum available to use at any given time. While spectrum ranges and capabilities are vast, including low- (under 3

⁸ Stephen Layton, *How to Decide What Internet Speed You Need*, NERDWALLET (Jan. 11, 2017), <http://www.nerdwallet.com/blog/utilities/how-to-decide-what-internet-speed-you-need>.

⁹ *Id.*

¹⁰ Riley Davis, *What is Spectrum? A Brief Explainer*, CTIA (June 5, 2018), <http://www.ctia.org/news/what-is-spectrum-a-brief-explainer>.

¹¹ *Id.*

GHz), mid- (3–24 GHz), and high-band spectrum (above 24 GHz), this Comment will discuss mostly low-band spectrum, which travels longer distances with minimal signal interruption, making it ideal for rural areas. Most wireless networks today are built on low-band spectrum.¹²

II. Introduction

Residents of tribal lands have lower levels of broadband access relative to the U.S. population.¹³ As of December 2016, 77 percent of all Americans lack access to fixed broadband services,¹⁴ and 80 percent of those unconnected citizens live in rural communities.¹⁵ This amounts to more than 24 million Americans lacking broadband services, which is more people than live in the States of New York or Florida.¹⁶ Still, tribal communities are disproportionately impacted: 35.4 percent of Americans residing on tribal lands lack access to fixed broadband services, depriving these citizens of a wealth of opportunities and possibilities. The FCC has reported that the lack of service in tribal lands presents impediments to the efforts of tribal nations related to self-governance, economic opportunity, education, public safety, and cultural preservation.¹⁷ Further, early in 2020, America was hit with the Coronavirus pandemic, which disproportionately affected tribal communities.¹⁸ Tribal leaders closed borders and released stay-at-home orders, making broadband internet access imperative for the education, health, and financial success of tribal citizens at home. Congress has tasked the FCC with orchestrating the effective and efficient deployment of advanced telecommunications throughout America, including rural areas and tribal lands.¹⁹ This Comment looks at the legislative history and funding opportunities for broadband service deployment on rural tribal lands, and proposes progressive solutions to the expansion of broadband service (which is considered a basic utility service) to rural tribal areas for the benefit of economic development. This economic development then extends to the success of a community's healthcare and education services.

¹² Davis, *supra* note 10.

¹³ GAO-18-630, *supra* note 1.

¹⁴ *Id.*

¹⁵ FED. COMMS. COMM'N, 2018 BROADBAND DEPLOYMENT REPORT (Feb. 2, 2019), <http://www.fcc.gov/reports-research/reports/broadband-progress-reports/2018-broadband-deployment-report>.

¹⁶ *In re Improving Comms. Servs. for Native Nations*, 26 FCC Rcd 2672, 73 (2011).

¹⁷ *Id.*

¹⁸ Hollie Silverman, Konstantin Toropin, & Sara Sidner, *Navajo Nation Surpasses New York State for the Highest Covid-19 Infection Rate in the U.S.*, CNN (May 18, 2020), <http://www.cnn.com/2020/05/18/us/navajo-nation-infection-rate-trnd/index.html>.

¹⁹ 47 U.S.C. § 1302(a). Advanced telecommunications capability enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.

At this moment there are 574 federally recognized tribes in America,²⁰ and each tribe has its own unique set of challenges in deciding how to develop its economy with the available tools. Each tribe is situated uniquely with respect to location (the bottom of the Grand Canyon, between mountain ranges, surrounded by forest lands, etc.), size, population, and ownership status of land (whether the tribe's land is held in trust, owned by the tribe or by individuals, etc.). The size of a tribe's land base in the eyes of the Federal Government can range anywhere from about a square acre to more than 24,000 square miles (about the size of West Virginia).²¹ Further, some tribes do not have federally recognized reservations of land, but nonetheless have an interest in connecting their members to broadband, especially if the nucleus of the community is located in a rural area where broadband service is not currently accessible. Today it is undeniable that a broadband internet connection is a key factor in spurring economic growth for tribes, tribal entities, and individual tribal citizens.

Broadband access allows individual tribal citizens to work from home more effectively, which is vital for persons on tribal lands who experience higher unemployment than any other racial group.²² Of course, tribal citizens are not just members of a racial group, but hold a political status as well.²³ The unemployment rate for Native Americans approaches 80 percent or higher on some reservations,²⁴ and there is ample opportunity for e-commerce in these remote regions. A broadband connection supports advanced healthcare and security systems, and can catalyze longterm social investments in the form of better-connected schools, libraries, and homes.²⁵ Broadband networks improve the productivity, efficiency, and communication of businesses already located on tribal lands, and helps tribal communities attract new outside businesses that may be looking to expand into tribal areas. Broadband access and sovereignty over spectrum can help to create millions (or billions) of dollars in revenue that can be reinvested into local economies.²⁶ This income could provide many Native Nations with the ability to cultivate healthy and stable communities where tribal citizens are happy to live and where students are proud to return to after earning their degrees or learning a trade outside of their home tribal community.

Though many obstacles stand in the way of tribes attempting to expand broadband access, there are also many success stories indicating

²⁰ *Frequently Asked Questions*, *supra* note 6.

²¹ GAO-18-630, *supra* note 1 at 5.

²² U.S. COMM'N ON C.R., *BROKEN PROMISES: CONTINUING FEDERAL FUNDING SHORTFALL FOR NATIVE AMERICANS* 8 (2018).

²³ *Morton v. Mancari*, 417 U.S. 535 (1974).

²⁴ U.S. COMM'N ON C.R., *supra* note 22.

²⁵ *Municipal Networks and Economic Development*, INST. FOR LOCAL SELF RELIANCE, <http://muninetworks.org/content/municipal-networks-and-economic-development> (last visited Feb. 5, 2019).

²⁶ *Id.*

these challenges may be overcome. Congress must pass bills that make it easier for tribes to tap into the myriad benefits of broadband access. Likewise, tribal leaders should place broadband access at the forefront of conversations about healthcare, education, and economic development. This Comment explores how broadband programs are currently working for rural tribal lands and proposes solutions that will expand broadband service to rural, tribal areas for the benefit of economic development, as well as healthcare, education, and more.

III. Roadmap

This Comment gives a brief summary of the federal legislation leading up to what constitutes the laws and programs regulating and supposedly implementing broadband in rural, tribal areas. It explains the roles of the FCC and other federal agencies, as well as service providers in building broadband infrastructure, distributing hardware, and offering service to rural tribal communities. It then turns to the evaluation of a few common obstacles that stand in the way of a tribal community's connection. Finally, potential solutions to these obstacles are provided. The obstacles identified here perpetuate the "digital divide," which refers to the fact that lacking internet access creates a virtual Grand Canyon between unconnected communities and the knowledge and progress that connected communities enjoy. Thankfully, tribes have found many ways to connect their citizens across Turtle Island, even at the bottom of the Grand Canyon.

IV. Current Broadband Legislation

A. *Legislative History of Broadband*

Until 1996, the Communications Act of 1934 (1934 Act) was the statutory framework for U.S. communications policy, governing telecommunications and broadcasting.²⁷ The FCC was born from the 1934 Act. Its intended purpose was to implement and administer economic regulation of the interstate activities of telephone companies.²⁸ Today, the FCC serves the public in the areas of broadband access, fair competition, radio frequency use, media responsibility, public safety, and homeland security.²⁹ The 1934 Act also codified the modern concept of universal service, eventually leading to the implementation of the Universal Service Fund (USF) and E-Rate, which provides discounts of up to 90 percent on communications services, and provides funding to schools and libraries in low-income areas, allowing for affordable internet and telecommunications connections, respectively.³⁰ The FCC set the short-term goal during

²⁷ 47 U.S.C. § 151 et seq.

²⁸ *Id.*

²⁹ *What We Do*, FED. COMMS. COMM'N, <http://www.fcc.gov/about-fcc/what-we-do> (last visited Mar. 3, 2019).

³⁰ Communications Act of 1934, 47 U.S.C. § 307(a) (1982 and Supp. V 1987).

a 2014 program update to reach 100 megabits (Mbps) per second, the bandwidth threshold that allows for basic Web-based classroom activities such as watching YouTube videos.³¹ However, there is speculation that the current administration will curtail the E-Rate program, negatively impacting the schools and students it currently serves.³²

The Telecommunications Act of 1996 (1996 Act) overhauled telecommunications law.³³ For the first time, the Internet was included in broadcasting and spectrum allotment alongside radio, telephone, and television.³⁴ The Telecommunications Act of 1996 claims to ensure that all Americans, regardless of where they live, will have access to communication services at reasonable rates.³⁵ This resulted in the creation of various programs by the FCC, including the USF, to accomplish the goal of providing communication services to rural and tribal areas.³⁶ Today, the FCC provides universal service support through the USF, which includes four mechanisms:³⁷

- High Cost Support Mechanism provides support to certain qualifying telephone companies that serve high cost areas (also known as rural areas), thereby making phone service affordable for the residents of these regions.
- Low Income Support Mechanism (also known as Lifeline, administered through the Universal Service Administrative Company (USAC)³⁸) assists low-income customers by helping to pay for monthly telephone bills by collecting a sort of tax from telecommunications companies.
- Rural Health Care Support Mechanism allows rural health-care providers to pay rates for telecommunications services similar to those of their urban counterparts, making telehealth services affordable.
- Schools and Libraries Support Mechanism, popularly known as the “E-Rate,” provides telecommunication services (e.g. local and long-distance calling, high-speed lines), Internet access, and internal connections (the equipment to deliver these services) to eligible schools and libraries.

³¹ Laura Fay, *First, the FCC Targeted ‘Net Neutrality.’ Could the E-rate Program, and Subsidized School Internet, Be Next?*, THE 74, (Nov. 27, 2017), <http://www.the74million.org/first-the-fcc-targeted-net-neutrality-could-the-e-rate-program-and-subsidized-school-internet-be-next>.

³² *Id.*

³³ Telecommunications Act of 1996, 1996 Enacted S. 652, 104 Enacted S. 652, 110 Stat. 56 (1996).

³⁴ *Id.* at Title 3, § 301.

³⁵ *Id.*

³⁶ *Universal Service Fund*, FED. COMMS. COMM’N, <http://www.fcc.gov/general/universal-service-fund> (last visited Mar. 27, 2019).

³⁷ *Id.*

³⁸ *Lifeline Program for Low-Income Consumers*, FED. COMMS. COMM’N, <http://www.fcc.gov/general/lifeline-program-low-income-consumers> (last visited May 25, 2020).

By statute, every telecommunications carrier providing interstate telecommunications services—including Lifeline providers—must contribute to USF unless exempted by the FCC.³⁹ Carriers usually pass on the cost of USF fees as a separate line item to their customers’ phone bills.⁴⁰ The USAC is a private not-for-profit corporation designated by the FCC to administer universal service programs.⁴¹ It is the entity that pays Lifeline providers (which are usually the “middlemen” between the consumer and big companies like Sprint® or AT&T®) a subsidy from the USF to offset forgone revenues for each subscriber in the program.⁴² Between 1998 and 2016, the USAC had disbursed approximately \$20.2 billion to Lifeline providers.⁴³

B. *The Role of the Federal Communications Commission, Service Providers, and Other Federal Agencies*

The Rural Electrification Act (REA) was enacted in 1936 to provide electrical services and telephone services to rural parts of the United States.⁴⁴ Congress amended the REA in 1949 and again in 2002 by enacting the Farm Security and Rural Investment Act (the “Farm Bill”), which, among other purposes, aims to spread broadband technologies to rural areas.⁴⁵ Section 6103 of the Farm Bill authorizes the USDA “to provide loans and loan guarantees to provide funds for the costs of construction, improvement, and acquisition of facilities and equipment for broadband service in eligible rural communities.”⁴⁶ The USDA administers the Farm Bill’s requirements through its Rural Utilities Service (RUS).⁴⁷ RUS aims to connect rural residents to the global economy by increasing access to broadband and 21st century telecommunications services in addition to other services such as water and electric.⁴⁸ Broadband is on the same level of importance as these basic utilities when it comes to engaging in modern society. RUS’s Community Connect program also provides high-speed Internet service to unserved rural areas with \$95.2 million in grants disbursed to 36 recipients from 2010 to 2017.⁴⁹ The Community

³⁹ 47 U.S.C. § 254(d).

⁴⁰ GAO-18-630, *supra* note 1.

⁴¹ *Id.*

⁴² According to USAC documents, USAC is not a federal agency, a government corporation, a government-controlled corporation, or other establishment in the executive branch of the U.S. government. USAC is also not a contractor to the federal government, but is an independent, not-for-profit, private corporation registered in Delaware, subject to all applicable federal, state, and local taxes. The money for USAC is kept in a private bank account, outside of Treasury. The GAO has also suggested that this money should be kept in Treasury.

⁴³ GAO-18-630, *supra* note 1.

⁴⁴ See Pub. L. 107-171, 116 Stat. 134, *codified as amended at* 7 U.S.C. § 950bb.

⁴⁵ *Id.*

⁴⁶ *Id.* at § 6103.

⁴⁷ *Id.*

⁴⁸ *Rural Utilities Service*, U.S. DEP’T OF AGRIC., <http://www.rd.usda.gov/about-rd/agencies/rural-utilities-service> (last visited May 25, 2020).

⁴⁹ GAO-18-630, *supra* note 1.

Connect program is significantly smaller than the FCC's programs. The RUS Community Connect program aims to provide financial assistance to eligible applicants that will allow them to access broadband service.

Additionally, RUS previously administered the Broadband Initiatives Program (BIP), authorized by the Recovery Act to expand high-speed Internet service in unserved areas.⁵⁰ BIP funding included \$2.2 billion dedicated to deploy broadband infrastructure, such as fiber, modems, and routers.⁵¹ Through BIP, RUS provided funding for 247 tribal infrastructure projects with a June 30, 2015 deadline. 12 technical assistance grants also went to tribal communities to help develop regional plans to provide broadband service in underserved rural areas.⁵²

Furthermore, the American Recovery and Reinvestment Act of 2009⁵³ required the FCC to draft the National Broadband Plan, which was to "include a detailed strategy for achieving affordability and maximizing the use of broadband to advance consumer welfare, civic participation, public safety and homeland security, community development, health-care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes."⁵⁴ This led to the creation of several programs that can be utilized by tribal schools to increase their level of internet connectivity. For example, President Barack Obama launched a program called "ConnectED" in 2013 with the goal of connecting 99 percent of the nation's students to high-speed internet by the year 2018.⁵⁵ The most recent major update on this program came in June 2015, when the White House reported that ConnectED successfully cut the "connectivity divide" in half by increasing the percentage of school districts with high-speed broadband in their classrooms from 30 percent to 77 percent.⁵⁶

⁵⁰ *Id* at 8.

⁵¹ *Id* at 9.

⁵² *Id.*

⁵³ *See* Pub. L. 111-5.

⁵⁴ *Connecting America: The National Broadband Plan*, FED. COMMS. COMM'N (Mar. 17, 2010), <http://www.fcc.gov/general/national-broadband-plan>.

⁵⁵ THE WHITE HOUSE, OFF. OF THE PRESS SEC'Y, *President Obama Unveils ConnectED Initiative to Bring America's Students into Digital Age* (June 6, 2013), <http://obamawhitehouse.archives.gov/the-press-office/2013/06/06/president-obama-unveils-connected-initiative-bring-america-s-students-di>.

⁵⁶ THE WHITE HOUSE, OFF. OF THE PRESS SEC'Y, *ConnectED: Realizing the Promise of Digital Learning* (Dec. 15, 2016), http://obamawhitehouse.archives.gov/sites/default/files/docs/fact-sheet_connected_realizing-the-promise-of-digital-learning.pdf. The United States Commission on Civil Rights (USCCR) was unable to find any updates regarding the status of the E-rate program since 2016. U.S. COMM'N ON C.R., *supra* note 22 at 127, note 740. *See also Universal Service Program for Schools and Libraries (E-Rate)*, FED. COMMS. COMM'N, (Dec. 31, 2019) <http://www.fcc.gov/consumers/guides/universal-service-program-schools-and-libraries-e-rate> (explaining that E-rate is a program administered by the FCC to improve the affordability of telecommunications in schools and libraries).

The Department of Interior, the federal agency that oversees the Bureau of Indian Affairs, works with the private sector to upgrade internet connectivity in Bureau of Indian Education (BIE) schools and dormitories serving Native American students.⁵⁷ Forty-five BIE schools were updated before 2014.⁵⁸ During the 2014–2015 school year, BIE schools received \$4.3 million in E-Rate program funding, freeing up funds for Internet service upgrades at thirty-five additional BIE schools.⁵⁹ It is DOI's responsibility to provide technical assistance to BIE schools by helping them to improve their applications in order to compete for E-Rate program discounts.⁶⁰

While it is a positive development for tribes to have myriad federal-funding avenues, it can be overwhelming and resource-consuming for tribes to decide which funding source best meets their individual needs. These bills and programs have been invaluable in helping tribal citizens to access telephone services, but the statistics are clear that there is still much work to be done in the realm of connecting tribal communities to broadband.

It is important to note that not all policy is good policy when it comes to tribal communities accessing broadband. Some broadband-related legislation has had negative impacts in tribal communities by promoting mergers of smaller service providers into large ones without offering incentives for these new, larger corporations to serve rural areas that are less dense in population, and therefore, less lucrative for telecom companies.⁶¹ When tribal leadership contemplates bringing broadband to their lands, they contemplate a longterm investment into the education, health, and economic opportunities of and for their citizens.

V. The Problem: A Disproportionate Number of Tribal Citizens Lack Broadband Access

Compared to the rest of the United States' population, a disproportionate number of tribal citizens lack broadband access.⁶² There is poor data on how many tribal citizens have broadband access, meaning the problem is probably even worse than reported. However, there are snapshots of the weight of the problem in federal reports, such as by the Indian Education Study Group, which described BIE broadband connectivity as “woefully inadequate to meet the demands of twenty-first

⁵⁷ U.S. EXEC. OFF. OF THE PRES., 2014 NATIVE YOUTH REPORT 34 (2014).

⁵⁸ *Id.*

⁵⁹ U.S. COMM'N ON C.R., *supra* note 22 at 127.

⁶⁰ *Id.*

⁶¹ Gigi Sohn, *Why a T-Mobile/Sprint Merger Would be Bad for the Public*, WIRED (May 21, 2019), <http://www.wired.com/story/t-mobile-sprint-merger-would-be-bad-for-the-public>.

⁶² NAT'L CONGRESS OF AMERICAN INDIANS, TRIBAL INFRASTRUCTURE: INVESTING IN INDIAN COUNTRY FOR A STRONGER AMERICA 22–23 (2017), <http://www.ncai.org/NCAI-InfrastructureReport-FINAL.pdf>.

century teaching and learning.”⁶³ The FCC collects data on broadband availability from providers, but these data do not accurately or completely capture broadband access on tribal lands.⁶⁴ Specifically, the FCC’s data captures where providers may have broadband infrastructure.⁶⁵ However, the FCC considers broadband to be “available” for an entire census block if the provider could serve at least one location in the census block.⁶⁶ Because the FCC uses these data to measure broadband access, it overstates broadband access on tribal lands.⁶⁷ This leads decisionmakers to believe that the problem is much *less* serious than it actually is, resulting in inadequate resources and solutions being allocated to tribes.⁶⁸

Bad data is not the only cause of the digital divide, but having accurate data helps experts understand how to approach the digital divide with proper solutions. The disparity in broadband access in rural communities versus urban and suburban areas is caused by a multitude of factors. First, the lower density of homes and businesses in rural settings means that more infrastructure is necessary to provide high-speed Internet services, increasing the “unit cost,” or cost per customer served.⁶⁹ Additionally, the lower density means that more land is crossed to erect broadband infrastructure, increasing the acquisition, permitting, and easement requirements, especially in western states.⁷⁰ This dispersed development also means that each connected place bears a higher proportion of the ongoing operating costs. These factors increase costs for rural broadband construction and operation, resulting in higher service charges, and making broadband service less affordable for rural customers.⁷¹

⁶³ BUREAU OF INDIAN EDUC. STUDY GRP., FINDINGS AND RECOMMENDATIONS: SUBMITTED TO THE SECRETARIES OF THE DEPARTMENTS OF THE INTERIOR AND EDUCATION 18 (July 9, 2014), <http://www.doi.gov/sites/doi.gov/files/migrated/news/upload/Study-Group-Blueprint-DOI-FINAL.pdf> at 22. See also Catherine E. Lhamon, U.S. DEP’T OF EDUC., OFF. FOR C.R., DEAR COLLEAGUE LETTER: RESOURCE COMPARABILITY GUIDANCE PACKAGE 11–19 (Oct. 1, 2014), <http://www2.ed.gov/about/offices/list/ocr/letters/colleague-resourcecomp-201410.pdf>; U.S. COMM’N ON C.R., PUBLIC EDUCATION FUNDING INEQUITY IN AN ERA OF INCREASING CONCENTRATION OF POVERTY AND RESEGREGATION 18–19 (2018).

⁶⁴ GAO-18-630, *supra* note 1.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ AMERICAN BROADBAND INITIATIVE, MILESTONES REPORT (Feb. 2019), http://broadbandusa.ntia.doc.gov/sites/default/files/resource-files/american_broadband_initiative_milestones_report_2.pdf.

⁷⁰ *Id.*

⁷¹ ROBERT D. ATKINSON, *The Role of Competition in a National Broadband Policy*, 7 J. TELECOMM & HIGH TECH. L. 1(2009).

VI. The Obstacles

A. *The Spectrum Problem*

Because spectrum is a finite and crucial resource, the FCC governs the allocation of spectrum frequencies.⁷² The FCC's job is to organize spectrum users so that no two transmitters in one area and frequency overlap and interfere with each other.⁷³ This process is referred to as "spectrum allocation."⁷⁴ However, the FCC is allocating spectrum in such a way that keeps control out of the hands of Native Nations. While the FCC oversees spectrum license auctions, broadband infrastructure development and actual service is carried out by other federal agencies and private service providers, such as Sprint® or AT&T®. The FCC distributes the spectrum to service providers and others by either allotment or by auctioning exclusive licenses to use a specific range of frequencies in a defined geographic area.⁷⁵ These spectrum licenses each cover a certain "block" of spectrum, which are classified as either Cellular (centered around 800 MHz) or PCS (which stands for personal communications service and is centered roughly around 1900 MHz).⁷⁶ Sprint is currently licensed for 204 MHz on average across the country, compared to roughly 155MHz, 115MHz, and 79 MHz for AT&T, Verizon, and T-Mobile, respectively.⁷⁷ The April 2020 Sprint/T-Mobile merger means this new entity holds significantly more spectrum, minus the spectrum the Department of Justice directed it to give to Dish Network.⁷⁸ These telecom giants acquire this spectrum at auction and have been able to do so since 1994.⁷⁹ The FCC chooses to conduct competitive auctions rather than assign spectrum through comparative hearings, under which the specific merits of each applicant would be presented, or through lotteries.⁸⁰

Auctions designating spectrum to the highest bidder are designed to allocate spectrum efficiently to the parties that value them the most and that can, in theory, use them the most efficiently, while the government secures the highest revenue in the process.⁸¹ As with any capitalist system

⁷² Davis, *supra* note 10.

⁷³ *Id.*

⁷⁴ *Id.* See also *About Auctions*, FED. COMMS. COMM'N (Dec. 11, 2017), <http://www.fcc.gov/auctions/about-auctions>.

⁷⁵ *Id.*

⁷⁶ *800 MHz Cellular Service*, FED. COMMS. COMM'N (Apr. 13, 2017), <http://www.fcc.gov/wireless/bureau-divisions/mobility-division/800-mhz-cellular-service#-block-menu-block-4>.

⁷⁷ *What is Spectrum, and Where are You on It?*, NAT'L GEOGRAPHIC, (Jan. 23, 2018), <http://news.nationalgeographic.com/2018/01/sprint-what-is-spectrum>.

⁷⁸ JUSTICE DEPARTMENT SETTLES WITH T-MOBILE AND SPRINT IN THEIR PROPOSED MERGER BY REQUIRING A PACKAGE OF DIVESTITURES TO DISH, U.S. DEPT. OF JUST., OFF. OF PUB. AFF. (July 26, 2019), <http://www.justice.gov/opa/pr/justice-department-settles-t-mobile-and-sprint-their-proposed-merger-requiring-package>.

⁷⁹ *About Auctions*, *supra* note 74.

⁸⁰ *Id.*

⁸¹ PETER CRAMTON, *Spectrum Auctions*, in HANDBOOK OF TELECOMMUNICATIONS ECON.

of distribution, this results in the richest entities holding the majority of this invaluable and limited resource, as demonstrated by the Sprint/T-Mobile merger. Critics of spectrum auctions argue that the system results in less competition among service providers, harming rural America especially with higher prices and less speed or innovation. Other countries employ alternative means of spectrum distribution.

Some countries choose to assess the merits of each service provider's plan for what it will do with the spectrum in a process called comparative tender (this is sometimes referred to as a "beauty contest").⁸² In comparative tender, there are predetermined criteria to evaluate an application for spectrum. This is similar to how the Office of Navajo Nation Scholarships and Financial Aid evaluates a scholarship application. Here, the criteria for spectrum allocation could include speed of network rollout, quality and investment of research, coverage requirements, pricing, technology, or competitiveness. Critics of the beauty contest method argue that it is too time and resource consuming, and lacks transparency, leaving too much room for political controversy.⁸³ This is a highly competitive industry; as companies compete to buy valuable and finite spectrum, its price becomes increasingly steep.

Other countries combine these methods of distribution, creating a hybrid set of rules for spectrum allocation. No matter how a regulatory body chooses to allocate spectrum, the general goals are to maximize government revenue and avoid monopolies that kill healthy competition and innovation. When big corporate service providers hold a majority of spectrum licenses, they can choose to offer service to high-density population areas and ignore rural areas, as is the case in America today. The further privatization of telecommunications and technological advancements such as 5G technology means that many tribes may not have the budgets to compete with telecom companies at FCC spectrum auctions.⁸⁴

In an effort to provide an opportunity for tribes to claim spectrum, the FCC opened a tribal priority window, where tribes can apply for spectrum licenses for the 2.5 GHz band of unassigned spectrum on tribal lands.⁸⁵ NCAI and Indigenous telecommunications experts urged the FCC to do this for years before their requests were finally heard.⁸⁶ The

605–49 (2002).

⁸² K. KOTOBİ, P. B. MAINWARING, & S. G. BILEN, *Puzzle-Based Auction Mechanism for Spectrum Sharing in Cognitive Radio Networks*, 2016 IEEE 12TH INTERNATIONAL CONFERENCE ON WIRELESS AND MOBILE COMPUTING, NETWORKING AND COMMUNICATIONS (WiMob) (2016).

⁸³ AUCTIONING PUBLIC ASSETS: ANALYSIS AND ALTERNATIVES (Maarten C.W. Jansen, ed., 2006), available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.123.6094&rep=rep1&type=pdf>.

⁸⁴ SPECTRUM AUCTIONS AND COMPETITION IN TELECOMMUNICATIONS (Gerhard Illing & Ulrich Klüh, eds., 2003).

⁸⁵ 2.5 GHz Rural Tribal Window, FED. COMMS. COMM'N (July 31, 2020), <http://www.fcc.gov/25-ghz-rural-tribal-window>.

⁸⁶ NAT'L CONGRESS OF AMERICAN INDIANS, *Urging the Federal Communications Commission to Improve Access to Spectrum Licenses for Tribal Nations*,

window opened on February 3rd, 2020 and was set to close on September 2nd, 2020. Many experts argue that the FCC did not allow tribal governments enough time to pass the necessary resolutions and go through the internal legal and administrative procedures to meet the deadline. In fact, key lawmakers have pressured the FCC to extend the tribal window, stating that, “[i]t is unacceptable that sovereign Tribal Nations are not provided adequate time by the Commission to apply for access to unassigned spectrum over their Tribal lands.”⁸⁷ Access to spectrum licenses appears to be the largest challenge that tribes will face in gaining access to broadband and implementing sovereign community networks.

B. *Lack of Competition Among Service Providers*

The 1996 Act’s stated objective was to open up markets to competition by removing regulatory barriers to entry.⁸⁸ A House of Representatives conference report from 1996 explains that the bill will “provide for a pro-competitive, de-regulatory national policy framework designed to accelerate private sector deployment of advanced information technologies and services to all Americans by opening all telecommunications markets to competition.”⁸⁹ However, this is not the trend the markets saw after the implementation of the 1996 Act. Before the 1996 Act was passed, the four largest Incumbent Local Exchange Carriers (ILECs) owned less than half of all the lines in the country.⁹⁰ Five years later, the same four local telephone companies owned about 85 percent of all the lines in the country.⁹¹ This dramatic increase was due to company mergers, where a larger company purchased a smaller company and absorbed its clients and resources. These mergers are significant because the nuclei of power controlling communications in the country became more concentrated in big cities, moving farther away from the rural areas that the 1934 Act promised to serve.

C. *A Lack of Tribal Resources*

The pressure of every challenge discussed heretofore is amplified in Indian Country, especially in the wake of COVID-19. Many tribal lands are in remote areas with scattered populations and lack infrastructure for

Resolution #SD-15-037 (Oct. 18–23, 2015), http://www.ncai.org/attachments/Resolution_BUFFQLWvyvmqQzhoauWvqvPMTLKSQSkorRfklCFfkAvjEQvTZJcmE_SD-15-037.pdf.

⁸⁷ LETTER FROM SENATOR HEINRICH, CONGRESSWOMAN HAALAND, AND 33 MEMBERS OF CONGRESS TO CHAIRMAN PAI RE: 30-DAY EXTENSION PERIOD—2.5 GHz RURAL TRIBAL PRIORITY WINDOW ORDER (August 18, 2020) [requesting COVID-19 2.5 GHz Rural Tribal Priority Window extension of no less than 180 days].

⁸⁸ Telecommunications Act of 1996, *supra* note 33.

⁸⁹ Conference Report, Telecommunications Act of 1996, H.R. REP. NO. 104-458, at 1 (1996).

⁹⁰ CONSUMER FEDERATION OF AMERICA, LESSONS FROM 1996 TELECOMMUNICATION ACT: DEREGULATION BEFORE MEANINGFUL COMPETITION SPELLS CONSUMER DISASTER 12 (2000), <https://advocacy.consumerreports.org/wp-content/uploads/2013/03/lesson.pdf>.

⁹¹ *Id.*

deploying telecommunications services.⁹² Difficult terrain and vast spaces between houses create extremely high costs of service deployment with past technology.⁹³ Further, current market trends are showing that mobility providers serve only the most populated rural communities, thus ignoring the mobility needs of less populated and more remote tribal lands.⁹⁴

According to the National Congress of American Indians (NCAI), a tribal advocacy group, mobility services deployed to service tribal communities are sometimes done so in a careless or illegal manner, meaning that the infrastructure is not installed correctly or the service is provided through stolen spectrum.⁹⁵

The USF includes the Schools and Libraries Support Program (commonly referred to as E-Rate).⁹⁶ To be eligible for USF program support, a provider must be designated an eligible telecommunications carrier (ETC) by the appropriate state or by the FCC.⁹⁷ Under FCC rules, which many state programs mirror, ETCs must meet certain service obligations as described below.⁹⁸

- provide a 5-year plan showing how program support will be used to improve its coverage, service quality, or capacity in each service area where it seeks designation;
- demonstrate its ability to remain functional in emergency situations;
- demonstrate that it will satisfy consumer protection and service quality standards;
- offer local usage plans comparable to those offered by the incumbent carrier in the areas for which it seeks designation; and
- acknowledge that it may be required to provide equal access to other providers within the service area if all other ETCs in the designated service area relinquish their designations.⁹⁹

While these may seem like positive regulations at first glance, they are putting tribes that wish to take over the role of telecommunications carriers for their own areas at a disadvantage. In a 2018 investigation, the Government Accountability Office (GAO) found that tribal nations are having trouble jumping through the hoops to become qualified service

⁹² NAT'L CONGRESS OF AMERICAN INDIANS, *Tribal Mobility Fund*, Resolution #MKE-11-016 1 (Jun. 13–16, 2011), http://www.ncai.org/attachments/Resolution_TDMliO-WcRIHSyKzstYcLyNXKdwixHIVZGAROWmpbZeJVQwtjesj_MKE-11-016.pdf [hereinafter NCAI, *Tribal Mobility Fund*].

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.* at 2.

⁹⁶ *Id.*

⁹⁷ *Id.* at 7–8.

⁹⁸ 47 C.F.R. § 54.202. See also, Telecommunications Act of 1996, *supra* note 33, at Title 3, Sec 253(f).

⁹⁹ U.S. GOV'T ACCOUNTABILITY OFF., GAO-18-682, TRIBAL BROADBAND: FEW PARTNERSHIPS EXIST AND THE RURAL UTILITIES SERVICE NEEDS TO IDENTIFY AND ADDRESS ANY FUNDING BARRIERS TRIBES FACE 7–8 (2018), <http://www.gao.gov/products/GAO-18-682>.

providers.¹⁰⁰ The application process requires more time and resources than many tribes have and its language is not easy to understand.¹⁰¹ Overall, the process is not user-friendly and not designed to be inclusive to tribes or other entities that are not already ETCs.

In the course of its report, GAO contacted several tribal officials, tribal associations, and tribally owned broadband providers who provided information about the myriad barriers tribes face in obtaining federal funding to deploy broadband service on tribal lands.¹⁰² The report stated tribes face many regulatory challenges when applying for RUS's grant funding, including (1) preparing existing and proposed network design, (2) demonstrating financial sustainability of the broadband project within 5 years, and (3) obtaining matching funds.¹⁰³ Federal agencies should identify and address regulatory barriers such as these, which may unduly impede broadband deployment.¹⁰⁴

D. Expensive Infrastructure

Broadband infrastructure can be expensive to install, especially in light of the unique challenges that tribal, rural areas offer, such as rough terrain, thick foliage that may interrupt wireless signals, and sacred sites that must be circumvented, among others. Introducing broadband infrastructure to an area requires burying fiber-optic or copper cables, stringing cable on existing poles, or erecting towers for wireless microwave links which send wireless Internet connections between towers.¹⁰⁵ In urban areas, it is the broadband service providers that generally deploy and maintain the infrastructure to connect consumers to the Internet so that they can then provide Internet service to the people in that area.¹⁰⁶ However, in rural areas with lower population density, service providers are not as motivated to invest in laying the foundations for broadband when it would take a long time for them to get their money back, if ever.

The process of installing infrastructure can also be legally taxing. To lay wire or install towers, service providers must obtain permits from government entities with jurisdiction over the land or permission from public utilities to deploy infrastructure on existing utility poles. The process becomes more complicated on tribal lands where there are often multiple land statuses (trust, fee, and others) and the involvement of bureaucratic bodies (e.g. the Bureau of Land Management (BLM)) is required. RUS administers the BIP (authorized by the Recovery Act, which included \$2.2 billion dedicated to deploy broadband infrastructure), and the program funds a total of 247 infrastructure projects.¹⁰⁷

¹⁰⁰ *Id.* at 7.

¹⁰¹ *Id.*

¹⁰² *Id.* at 21.

¹⁰³ *Id.* at 9.

¹⁰⁴ *Id.* at 6.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 9.

The FCC and RUS are currently the main sources of federal funding for broadband infrastructure on tribal lands.¹⁰⁸ Broadband deployment and infrastructure projects are usually included in federal-funding programs as auxiliary components of the project.¹⁰⁹ This means that most of the money going toward broadband infrastructure is coming from grants related to healthcare, telemedicine, or economic growth, not specifically telecommunications.¹¹⁰

E. Hardware

There is another practical piece of attaining peak connectivity in BIE schools that should not be overlooked. Even if the FCC were to grant rural Indian Country all the spectrum in the Universe, and fiber cables were impeccably installed overnight, our students would still not have connectivity without devices that allow them to access the internet. Among the many resources that BIE schools lack, state-of-the-art computers and operating systems are some of the most important.¹¹¹ Access to computers and high-speed internet service is essential in today's classrooms, which are becoming increasingly digital outside Indian Country. This includes textbooks, college prep examinations, educational tools, administrative tools, and other online national assessments all require such access.¹¹² Without an allocation of funding for devices allowing our students to connect, they will be surrounded by the potential to connect without any means to do so; "water, water, everywhere, [but not a] drop to drink."¹¹³ Building healthy economies in tribal communities begins with giving our students the tools they need to succeed, and that includes technology.

F. Mismanagement of Federal Program Funds

While the 1996 Act has done good in rural areas through implementing services to meet these goals, it has also fallen short in many ways. The Office of Inspector General (OIG) of the FCC increased oversight of the Schools and Libraries Program in 2015 because of complaints alleging improprieties within the program, including submission of false claims, failure to comply with appropriate procurement regulations and laws, conflict of interest, forgery, and securities related offenses by government officials.¹¹⁴ Since the FCC transitioned the Lifeline program from

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 4.

¹¹⁰ *Id.*

¹¹¹ BUREAU OF INDIAN EDUC. STUDY GRP., *supra* note 63 at 22. The BIE Study Group noted that the information technology infrastructure (e.g., wiring, routers, etc.) at many BIE schools was insufficient to support well-functioning networks. *Id.* BIE educators were also in need of training in the use of new technologies and online educational tools. *Id.*

¹¹² *Id.*

¹¹³ S. T. COLERIDGE & G. DORÉ, *THE RIME OF THE ANCIENT MARINER* (Dover Publications, 1970) (1798).

¹¹⁴ *Universal Service Fund*, *supra* note 36.

focusing primarily on landline telephones to wireless and broadband internet, improper payments in the Lifeline program rose from \$40.65 million in fiscal 2016 to \$336.39 million in 2017, a more than eight-fold increase.¹¹⁵ In order to maintain program integrity, the OIG now works with local and federal law enforcement entities to investigate the complaints and followup with prosecution where appropriate.¹¹⁶ The OIG has also developed the USF Strategic Audit Plan to provide overall goals and implementation strategies for oversight of this program.¹¹⁷ In short, the Inspector General of the FCC intervened in the administration of the USF because of mismanagement of funds.

VII. The Solutions

A. *The Spectrum Problem*

Gaining access to spectrum is recognized by professionals working on this issue as one of the largest hurdles in expanding broadband connectivity to Indian Country. Because the big service providers are generally holding onto the spectrum licenses that have the potential to connect many of the areas in question, they must be encouraged to either use them and offer affordable service to rural areas, or to let them go to an organization that will. Further, the current rule states that in order to participate in a spectrum auction a company has to offer voice or cable service in addition to broadband service. This means that many broadband-specific service providers who are willing to serve rural areas are not eligible to participate in the auction that would allow them to do so. Both of these issues will likely require a legislative fix.

Both the mechanism for spectrum allocation and its results amount to an evergrowing digital divide for Native Nations. In a 2018 report, GAO found that, while the FCC was taking some steps to enhance tribal access to spectrum, the agency did not collect or communicate key information to tribal entities.¹¹⁸ The GAO went on to say that the FCC plan to allocate spectrum to tribes “may not be a technically feasible solution for all tribal entities, and such spectrum may not have the necessary capacity to handle an increase in users.”¹¹⁹ In order to allow tribes to close their respective digital divides on their lands, the FCC must give them the tools

¹¹⁵ Johnny Kampis, *FCC combats fraud as inspector general finds more than \$300 million in improper payments in Lifeline program*, WATCHDOG (Dec. 21, 2018), http://www.watchdog.org/national/fcc-combats-fraud-as-inspector-general-finds-more-than-million/article_65aa3e4a-0540-11e9-ba77-1f273461f853.html. See also U.S. GOV'T ACCOUNTABILITY OFF., *Additional Action Needed to Address Significant Risks in FCC's Lifeline Program* (2017), <http://www.gao.gov/assets/690/684974.pdf>.

¹¹⁶ *Universal Service Fund*, *supra* note 36.

¹¹⁷ *Id.*

¹¹⁸ U.S. GOV'T ACCOUNTABILITY OFF., *GAO-19-75, TRIBAL BROADBAND: FCC SHOULD UNDERTAKE EFFORTS TO BETTER PROMOTE TRIBAL ACCESS TO SPECTRUM 20* (2018), <http://www.gao.gov/assets/700/695455.pdf>.

¹¹⁹ *Id.* at 23.

necessary to do so. This includes spectrum that meets the needs of each Native Nation and the tribal citizens who reside there.

The FCC should continue working on ways to free up additional spectrum. In January 2011, the telecom company Clearwire agreed to sell off its unused spectrum in order to raise money for company spectrum and to seemingly allow other companies to pick up some unused space.¹²⁰ Private companies should be encouraged to part ways with the spectrum blocks they are not using so that these channels are free for other entities, such as tribes, to use. The FCC should also offer assistance to tribes in navigating the maze of applying for spectrum licenses in tribal-priority windows, or participating in auctions, as this is an increasingly important part of the federal government's trust responsibility to tribes.

The best solution is to recognize spectrum as the natural resource that it is, while also recognizing Native Nations' inherent rights over that natural resource. This would mean that Native Nations would manage their own spectrum within the boundaries of their lands, either using it to connect tribal citizens, or selling the spectrum to service providers that will, as a means of economic development, or a mixture of the two. Because each spectrum license is designated for a specific geographic area, it would not be difficult to allow for tribes to manage the spectrum only in their area. The FCC profits up to \$41.7 billion¹²¹ from selling geographically-based spectrum licenses each year. With 56.2 million acres of tribal land in America,¹²² one must wonder why tribes are not getting their fair share of the profits. Tribes that do not want to manage their spectrum could allow for the FCC to continue managing their spectrum for them, placing any funds from auctioning off tribal spectrum into their tribal trust account. Tribes should do what it takes to take control of the entirety of their natural resources, which has always included spectrum.

B. *Lack of Competition Among Service Providers*

Large service providers should be both encouraged and incentivized to serve rural areas, especially in tribal communities. This practice could mean implementing a "build or divest" rule for third-party spectrum holders on tribal lands as suggested in Congresswoman Deb Haaland's bill, the DIGITAL Reservations Act.¹²³ Further smaller Wireless Internet Service Providers (WISPs) should also be encouraged to enter the tribal, rural market. As an example, thousands of small WISPs provide wireless broadband at speeds of around one Mbps using unlicensed devices (think service boxes), often in rural areas that are not

¹²⁰ Dan Meyer, *Sprint Nextel, Clearwire Attempt to Clear the Air*, RCR WIRELESS NEWS (Jan. 6, 2011), <http://www.rcrwireless.com/20110106/carriers/sprint-nextel-clearwire-attempt-to-clear-the-air>.

¹²¹ FED. COMMS. COMM'N., SPECTRUM AUCTIONS FISCAL YEAR 2018 15 (2017) <http://www.fcc.gov/sites/default/files/spectrum-auctions-program-2018.pdf>.

¹²² *Frequently Asked Questions*, BUR. OF INDIAN AFF., <http://www.bia.gov/frequently-asked-questions> (last visited August 30, 2020).

¹²³ DIGITAL Reservations Act, H.R. 7774, 116th Cong. (2020).

served by cable or wireline broadband networks.¹²⁴ This has proven to be an effective way to get a connection to remote areas before infrastructure can be put into place to provide a faster and more reliable connection. In short, WISPs get the job done. They are often used to extend the reach of a “last-mile”—the distance leading directly to a house or business.

If tribal nations secure spectrum, they have myriad options of how to connect their citizens. They could build or support their own WISPs, or allow their citizens to start their own WISPs, regulated by a tribal spectrum regulatory scheme. Tribal nations could also choose to use their spectrum rights as leverage to attract big telecom companies to tribal lands. This would be easier to do with tribal spectrum rights because the private service providers would not have to spend millions of dollars on spectrum at auction. This would foster healthy competition, resulting in lower prices and higher speeds for citizens on tribal lands. Again, this scenario is contingent upon tribal nations securing spectrum rights over the natural resource on their lands.

C. A Lack of Tribal Resources

Broadband should be classified and regarded as a basic utility such as power and water. In America today, it is absolutely necessary for a community to have an internet connection for students and others to keep up with the fast-paced world, especially during the Coronavirus pandemic that is keeping students and employees at home. Tribes should prioritize financing broadband-infrastructure development within their tribal lands or in the areas where their members live. One expert interviewed for this Comment suggested each community needs “a champion,” someone willing to wade through all of the puzzling information available and figure out how to most authentically and efficiently bring a broadband connection to their area for the benefit of their citizens.¹²⁵ Native Nations should cultivate these community champions and have meaningful conversations about how to move forward with the intent of connecting their members to the world.

Further, NCAI suggests the creation of a separate Tribal Mobility Fund, and for the FCC to set aside a minimum of 30 percent of the Mobility Fund for use in this Tribal Mobility Fund.¹²⁶ These funds could be used to build telecommunications infrastructure such as fiber or cell towers on tribal lands, or to secure spectrum rights for tribal nations.

The funds that Congress currently appropriates for tribal projects must be properly managed and accounted for. Tribes should advocate for themselves by reaching out to inspectors general, the Assistant Secretary of Indian Affairs, lobbyists, NCAI, and their members of Congress in order to hold the FCC accountable to use funds to benefit tribal citizens.

¹²⁴ *Types of Broadband Connections*, FED. COMMS. COMM’N., <http://www.fcc.gov/general/types-broadband-connections> (last visited Feb. 15, 2020).

¹²⁵ Personal Interview with Debra Socia (Feb. 26, 2019).

¹²⁶ NCAI, *Tribal Mobility Fund*, *supra* note 92.

Tribal leaders have a lot to consider when they are deciding whether to spend valuable tribal funds on a broadband project. They must consider potential negative effects of broadband access as well as the potential benefits. Will internet access further the assimilation and colonization of tribal citizens? Will it put youth at risk of accessing inappropriate content? Will it be divisive to the community? Each tribal leader will have their own answers, but we must make sure to ask the right questions and give tribal leadership the information and tools they need to make informed decisions on behalf of their citizens. With this forethought and consent, tribes will reap the benefits of a healthy and sustainable relationship with sovereign community networks.

D. *Expensive Infrastructure*

While broadband network technology is becoming increasingly affordable, Native Nations must be strategic and budget for infrastructure builds on their lands. Government grants that are specifically intended for infrastructure should be utilized when they are appropriate. Additionally, the E-Rate program should be reformed to allow tribal communities without libraries to designate a tribally owned institution (i.e. a chapter house or community center) as eligible to apply for E-Rate support so that these communities are still eligible for the Schools and Libraries funds through E-Rate. This would offer another funding avenue, bringing fiber closer to communities where a Native Nation could potentially install the “last mile” with its own funds.

Community leaders should take the time to stop and evaluate what the community’s needs are, where they would like connectivity, and where they do not want infrastructure built. For example, the Havasupai Tribe (at the bottom of the Grand Canyon) extended broadband service to their citizens after partnering with a nonprofit to create a network plan that worked for their community. They did this with very simple technology and minimal negative environmental impact. Best of all, the cost was less than \$40,000 and each citizen receiving service pays around \$25/month. Some communities do not need the biggest, fastest broadband package immediately, and would immediately benefit from a connection that at least allows members of those communities to complete a school assignment or apply for a job online. These systems can always be updated later when a network is planned appropriately.

E. *Hardware*

Hardware would be another appropriate use of federal funding. Tribal funds should also be allocated as available to make sure that smartphones, tablets, and computers are accessible to tribal community members. Once a connection to a community is made, the public should then turn their attention to putting pressure on leaders to help them access computers, tablets, and smartphones. Even though this is one of the last steps of the project, it is just as important as the others and should not

be forgotten. Leaders should be encouraged to provide their people with access to tools and means of connection.

F. *Mismanagement of Federal Funds*

Because the FCC has proven poor at managing funds meant for tribal purposes, there should be more oversight of how they are managing these funds. First, they should be required to place the funds within the United States treasury. The OIG and the FCC should look into whether filtering funds through an outside organization is an appropriations violation. There should be strict records and accountability for these funds. The FCC should develop performance goals and measures to track progress on achieving the strategic objective of the Commission of ensuring, at the very least, that Tribal libraries, hospitals, and schools have affordable internet access and telecommunications services. The FCC should also be held accountable to the federal government's trust responsibility to act in the best interest of tribes, a job that should not be taken lightly.

Conclusion

People who live in rural tribal communities are disproportionately affected by the digital divide, which refers to the disparity in broadband Internet access between low-density and high-density population areas in the United States.¹²⁷ More than 24 million American cannot access the Internet to apply for a job, complete a school assignment, or start a business online.¹²⁸ For tribal communities, this often means that entire tribes and individual tribal citizens are missing out on a wealth of opportunities for economic development through Internet use. While there are many challenges, these can be overcome by prioritizing broadband initiatives in tribal governments, enforcing the trust responsibility of the United States, directing the FCC to allocate spectrum licenses for tribal use, and utilizing all of the resources currently available as a result of past telecommunications legislation. Broadband Internet service is a basic utility service and should be expanded to rural, tribal areas for the benefit of economic development, which then extends to the success of a community's healthcare, education, and overall wellbeing.

¹²⁷ GAO-18-630, *supra* note 1.

¹²⁸ In re Improving Comms. Servs. for Native Nations, *supra* note 16.