ziply™
fiber

Via FCC Auction 904 Long Form Application Portal

February 15, 2021

Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: Engineering Certification of Network Design Frontier Communications Northwest, LLC ("FCN")

Greetings:

I am the Vice President – Network of Northwest Fiber, LLC dba Ziply Fiber. I am an experienced and qualified telecommunications and data network engineer. My curriculum vitae is attached as Exhibit A to this letter.

I have reviewed the maps, designs and equipment specifications (the "Network Plan") for FCN for its proposed network to be constructed under the FCC's Rural Digital Opportunity Fund ("RDOF") in each of the States of Idaho, Oregon and Washington.

I certify that the network to be built under FCN's Network Plan is capable of delivering, to at least 95% of the required number of locations in each of the States of Idaho, Oregon and Washington covered by the Network Plan, voice and broadband service that meets the performance requirements set forth in FCN's Long Form application, including the delivery of up to 1 gig broadband service.

Sincerely,

John van Oppen

John van Oppen

Highly effective telecommunications executive and entrepreneur with 20 years' experience managing all aspects of technical and business operations for multiple broadband providers. Strong passion for building networks that scale with the business and provide modern, cost effective and best in-class-service to all users.

Achievement Highlights:

- 10+ years of experience managing networks that support over 100,000 customers.
- Built a new backbone network to take over nearly a terabit of internet traffic in support of the NW Fiber (DBA Ziply Fiber) acquisition of Frontier.
- Founded and sold two telecommunications companies in the last 15 years, staying after both acquisitions to oversee the network architecture and engineering operations of the acquirers.
- Planned 30-million-dollar infrastructure upgrade of Wave Broadband's network, including the design of electrical systems within headend facilities and DWDM and IP/MPLS hardware specifications.
- Planned technical specifications and network design strategies for what is still the largest millimeter wave network deployment in the Pacific Northwest.
- Launched first gigabit internet speed offering in Seattle, WA in 2008.

Technical Skills

- Peering and transit negotiations and strategy.
- IP routing protocols, including BGP, OSPF, and ISIS.
- MPLS deployments and designs in large service provider environments.
- Extensive experience in finding and isolating platform specific bugs, including the follow-on vendor action plans.
- Hardware experience with many platforms found in a service provider network.
- Extensive experience coordinating with the American Registry of Internet Numbers (ARIN) for allocation of IPv4 address space, as well as transferring space purchased on the open market.
- Linux and active directory administrative experience, including critical service fail-over planning.
- DDOS mitigation planning and emergency response.
- Large scale Wi-Fi planning and execution.
- Microwave and Radio Frequency planning and data transport system design.
- Experience scaling service provider scale DNS infrastructure.
- Critical Facilities, including power system design, disaster preparedness, and cooling infrastructure.

Professional Experience

Wholesail Networks/Ziply Fiber   January 2019 – Present
CEO/VP, Network

- Responsible for all network and access engineering, including strategy, planning, provisioning, implementation, and leadership for a network that includes 20,000+ active components.
- Oversee all critical facilities infrastructure, including batteries, generators, and redundancy planning.
- Responsible for all network capacity planning functions, including both technical and financial metric reporting.
- Mange all peering and interconnection agreements for the IP backbone.

- Manage all trades, swaps, and fiber IRUs including all agreement terms and negotiations.
- Manage capital planning and forecasting for network equipment and growth.
- Oversee of all off-net costs.
- Provide technical oversight for implementation of new products and services.
- Responsible for all custom customer projects, including both technical and financial approval.
- Responsible for the planning, implementation, and management of 200+ new core routers to support stand up operations for the Frontier acquisition.

Wave Broadband   September 2013 – December 2018
SVP, Network Architecture
- Managed peering agreements, including all legal, technical, and financial aspects of those agreements.
- Performed technical due-diligence evaluations for potential acquisitions including capex forecasts to bring them up to company standards.
- Modeled and explained network costs and benefits to executive leadership and C-level team in support of capital spending plan.
- Performed fiber acquisition and swaps to build regional dark fiber networks within cable territories to control the cost-per-bit of backbone growth as per customer traffic grew.
- Performed internal capacity planning for all portions of the backbone network, including annual capital budgeting to support the forecasted growth.
- Handled cost justification and support for large commercial projects, as well as bidding support for major customers.
- Managed implementation of Spectrum Networks Anycast DNS platform to support entire Wave Broadband footprint.
- Designed plans to migrate customers from a 500+ device legacy switched network to modern MPLS network.

Spectrum Networks LLC (acquired by Wave Broadband)
Owner/CTO/CEO   April 2007 – September 2013
- Founded a new regional ISP network for provisioning of wholesale IP services.
- Negotiated transit agreements, all of which were 10G or multiple 10G.
- Designed and built metro network on top of dark fiber infrastructure, including both IP network and underlying DWDM.
- Implemented BGP based network using community strings for all route announcement control.
- Scaled network to hundreds of BGP speaking customers.
- Implemented open-source software for management of network.
- Founded and helped grow our condointernet.net subsidiary into one of the largest MDU specific broadband providers in the country (nearly 200 buildings in Seattle).
- Planned and deployed hundreds of microwave links.
- Helped our developer to implement several soft switches for VOIP interconnections with major providers, including Verizon, 360 and Qwest.
- Worked on marketing and sales, growing the network to a total traffic load in excess of 100 gigabit per second peak of day.
- Built 40+ mile fiber network for several anchor customers in rural Washington. Sold network shortly after construction and lighting of anchor customers.

PocketiNet Communications   September 2002 – March 2007
Network Engineer
- Migrated most hosted services to Linux based solutions to enhance reliability.
- Built an 11 server Qmail cluster for email service using MySQL back-end to support nearly 10,000 mailboxes with virus scanning, spam filtering and web access.

- Redesigned state-wide network for maximum reliability and capacity including redundant routers at most sites.
- Went from less than 10 megabit per second of sustained usage through a single provider at the beginning of 2003 to more than 150 megabits per second sustained usage with three providers and many public peers at the Seattle Internet Exchange.
- Moved the entire network from static routing to a BGP/OSPF core (BGP for customer and external routes, OSPF carrying BGP loopback reachability info). The network went from three routers to more than 50, all of which spoke BGP and OSPF.
- Managed research and initial negotiations for all IP transit and point to point backbone links.
- Handled all IPv4 justifications to move to provider-independent IP address space.
- Helped develop product offerings for other service providers, including dedicated IP access that was delivered over licensed microwave DS3 links.

Education

BA, Politics, Whitman College, Walla Walla, WA, June 2005

Professional Affiliations & Memberships

North American Network Operators Group (NANOG)
Active Member, May 2005 – Present
Programming Committee, February 2012 – February 2016

Seattle Internet Exchange (SIX)
Board Member, April 2019 – Present

Toronto Internet Exchange (TORIX)
Board Member, April 2018 – Present