

Broadband USA Applications Database

Applicant Name: NTCH, Inc.

Project Title: NTCH (Cleartalk) Central Illinois Broadband Wireless Last Mile/Middle Mile application

Project Type: Last Mile Non-Remote

Executive Summary

NTCH (Cleartalk) Central Illinois Broadband Wireless Last Mile/Middle Mile application OPPORTUNITY: Through this Broadband Infrastructure Program (BIP)/Broadband Technology Opportunities Program (BTOP) infrastructure application, Cleartalk aims to bring the benefits of improved broadband deployment to underserved rural areas of Central Illinois. This proposal is designed to further the goals that NTIA must meet as part of the BTOP program, in spurring job creation, stimulating long-term economic growth and opportunity and narrowing gaps in broadband build out and adoption. Central Illinois residents in underserved rural areas will benefit from the economic, health service, educational and social program access that will come with affordable broadband access. In a report by Connected Nation released in 2008, "The Economic Impact of Simulating Broadband Nationally," found that increased broadband adoption in Illinois could create more than \$6 billion in direct income growth and create or save more than 105,000 jobs. Our surveys also show that broadband adoption rates in rural Central Illinois are approximately 30% below the national average. To address the digital divide in underserved rural areas of the state, this application together with the BTOP Sustainable Broadband Adoption application & BTOP Public Computer Centers application (subsequent round submission planned) that will adopt our vision & will collectively fully address the goals of BIP/BTOP for expanding the access to and quality of broadband service in rural counties of Central Illinois Cleartalk proposes deployment of a 3G wireless network and an open middle mile high bandwidth IP backhaul network. This 3G (EVDO Rev A) network will be priced at \$35 per month with a 25% discount to Critical Community Facilities. The network will be deployed on a new generation of software defined base station that will allow for the deployment of 4G (either LTE or WiMAX with speeds up to 100 Mbps) wireless technology on the same network at minimal cost. Cleartalk will deploy the enabling technology and work with the referenced BTOP Sustainable Broadband Adoption applications to follow this deployment into rural areas of Central Illinois and provide digital literacy training to residents at any place chosen on a readily available mobile computing platform. Cleartalk is working with the state library system to then provide for a free lending program, with portable computers to be checked out through schools, libraries, and public safety locations. Importantly, both the training and the computers made available for use will all be on the same best in class platform used by mobile executives across our nation. In addition to fixed location distribution, Cleartalk will either submit (in this round or the next) or facilitate the submission of a proposal to have at least three "Netbook-Mobiles" that will travel throughout the area and bring the availability to check out a laptop or notebook computer as well as learn about and acquire other technology directly to the rural areas. This will allow for remote health care, distance learning and business facilitation on the internet to be accomplished by everyone in

Central Illinois regardless of income level or rural location. The program we envision will allow Netbook computers to be checked out in exactly the same way library books have in the past from libraries and bookmobiles. The broadband network deployed will use owned or leased federally licensed PCS and/or AWS spectrum, local switching, available and industry standard infrastructure and devices, and a high percentage of true domestic manufactured/intellectual property for the equipment chosen. The Cleartalk backhaul network will bring high bandwidth of over 100mbps to within reach of any area in Central Illinois. GENERAL DESCRIPTION: Cleartalk's proposal offers a cost-effective way to offer broadband to many of Central Illinois' un-served and underserved communities. Cleartalk has also considered a comprehensive statewide coverage plan which we may seek funding for in subsequent rounds. This current proposal will bring the benefits of broadband to 260 census designated communities, 388,606 households, 34,825 businesses and 4,483 community anchor institutions. PROPOSED SERVICES: Cleartalk will serve these communities and its business and community anchor institutions with wireless high-speed broadband provided over an EVDO Rev A 3G network offering speeds in excess of 2.5 Mbps downstream and 700 kbps upstream. These are actual speeds provided in Cleartalk's existing deployments. Cleartalk's wireless infrastructure is ready for next generation wireless technology that will offer these communities speeds up to 100 Mbps at minimal cost when 4G wireless equipment and customer premises equipment (CPE) become available. This service will be available to both fixed and mobile users on standard low cost devices used by the large national carriers. NONDISCRIMINATION AND INTERCONNECTION: Cleartalk is committed to following all of the nondiscrimination and interconnection obligations of the Recovery Act. Cleartalk believes in the benefits of an open internet and competition. We are committed to providing service to our subscribers on a non-discrimination basis subject to generally accepted network management practices to ensure acceptable levels of services to our customers. Cleartalk also welcomes other companies to resell all our products and will provide wholesale rates for this purpose. Cleartalk will actively sell bandwidth and transport on the installed backhaul network from this deployment to other carriers. BROADBAND SYSTEM: Cleartalk's broadband system employs state of the art wireless infrastructure technology that is ready for future wireless standards to allow its customers to benefit from technology leaps on an incremental cost basis. The software-defined base stations deployed can provide for CDMA, GSM, HSDPA, EVDO and the 4G technologies that have been chosen by the major carriers, WiMAX and LTE. These radios will also accommodate deployment of a long planned public safety interoperability network at 700 MHz. This is a split architecture base station deployment, which uses fiber instead of coax to carry the signal up the tower, and the latest antennas. This provides for up to a 5 db improvement in RF performance and expands coverage on a given site up to 5 miles farther than the traditional networks. These are not theoretical but actual results from our country's first market deployment of this technology done by Cleartalk in Grand Junction, Colorado. Cleartalk's network is enabled through a soft-switch core and software-defined base stations manufactured by Huawei Inc., a worldwide technology company doing over \$23 billion in annual sales last year. These base stations will be matched with native IP backhaul radios from Trango Systems, Inc., a Poway, California-based manufacturer of high capacity, carrier microwave radio systems with proven performance in some of the most difficult environments operated by Cleartalk. Middle mile service will use a combination of microwave backhaul and fiber networks. Cleartalk will choose aggregation equipment that works best with the fiber networks of its backhaul providers. Cleartalk will make full use in our backhaul and middle

mile design of all stimuli funded and publicly owned networks that allow access at a competitive price.

QUALIFICATIONS: Cleartalk currently operates and provides broadband services commercially on the same network infrastructure as proposed in this application. Clear Talk started in Grand Junction Colorado and has been focused on rural communities in over 10 states for over ten years and has never gone beyond its operational or financial capabilities. Cleartalk is the rare wireless company that has built itself through service and entrepreneurship from an original MESBIC funding of \$6,000,000 to its current operations. Cleartalk has always honored its obligations and provided excellent returns to its investors as it has grown. Cleartalk is virtually debt free and is a respected relationship for the equipment vendors and tower companies that are needed to facilitate its success in this business. Cleartalk is vertically integrated and performs most of its construction with internal staff. Cleartalk also has a history of public service, cooperation & working with small local companies across the 10 states where they operate. <http://cleartalk.net/community.php>. This proposal features multiple revenue streams including data subscribership, voice revenue, 3G and 4G roaming and machine to machine applications. The scope of the deployment will attract many roaming partners from small carriers seeking targeted roaming to large carriers seeking coverage expansion to rural areas. We can connect to other carriers through one central switch and also provide switching services to other small carriers for this purpose. The key to sustaining the deployments funded in this program is to make these rural deployments accessible to become part of the big carriers networks because it is easy to connect to them and it is financially beneficial.

COST: The overall infrastructure cost would be approximately \$58,639,000 or \$62 per person covered.

JOBS: Based on the connected nation study referenced in the first paragraph and the number of persons covered by this application this deployment will create or save over 7,756 jobs.