Broadband USA Applications Database

Applicant Name: University of Utah

Project Title: Utah Anchors: A Community Broadband Project

Project Type: Middle Mile

_____Executive Summary_____

We are pleased to present Utah Anchors: A Community Broadband Project for the NTIA BTOP Infrastructure Program on behalf of the Utah Education Network (UEN), a state non-profit K-20 network consortium of public and higher education. This project is a Middle Mile request to improve inadequate or non-existent broadband connections at 130 elementary and charter schools, public libraries, and head start centers in underserved and unserved areas statewide. 63 of the community anchor projects in this proposal are "shovel-ready," approved by the Universal Service E-rate program for eligible support, and can be commenced immediately upon funding. The goals of this project are commensurate with the statutory purposes of ARRA of immediately creating and sustaining jobs; building broadband infrastructure for education, communities, and economic development; assisting and training vulnerable and unserved populations on broadband education and use; and increasing broadband access to unserved and underserved communities. UEN has worked closely with both the public and private sector in planning this BTOP grant project. UEN's partners include: the Governor's Office of Economic Development; Govenor's Office of Planning and Budget; State Division of Technology Services; State Library Division and Public Libraries; Utah State Office of Education; Utah Telehealth Network (UTN) University of Utah; University Office of Information Technology; Utah Center for High Performance Computing; Higher Education Institutions; Public School Districts; Charter Schools; Head Start Centers; Regional Education Service Centers; Qwest Communications, OneTel, Frontier Communications, and the Utah Rural Telecommunications Association. UEN's request for this BTOP grant is a continuation of a critical community anchor project that UEN began two years ago in building out broadband Ethernet connections to elementary, charter schools, public schools, and head start centers that assist economically disadvantaged families. UEN has a strong track record of successful broadband implementation in both middle mile and last mile projects combined with successful filings with the Universal Service Fund E-rate program for schools and libraries. UEN now receives over $10 million annually in E-rate support on eligible Internet and Telecommunication services. In 2001, with support from the State Legislature and the Governor, UEN began working on a strategic vision and plan to extend broadband capacity to upgrade the state's Wide-Area-Network (WAN) backbone infrastructure and circuits into colleges and Universities, school district offices, many public libraries, high schools and middle schools from T-1 or less network capacity to Gigabit (1000MB) fiber-based Ethernet connections. UEN and our telecommunications partners have successfully implemented broadband Ethernet connections at all 300+ secondary schools (high schools and middle schools) and all school district offices. UEN also upgraded its core central backbone with redundant rings last summer to 10GBps and aggregate Internet capacity to 10GB to ensure future capacity for this project. UEN's overall vision is to

leverage existing network resources to build and share fiber infrastructure for all community needs—education, business, health care, public safety, library resources, and supporting head start programs for economically disadvantaged families and children. The State Department of Technology Service has worked with UEN to identify key strategic public safety and governmental organizations that can benefit from fiber built with this BTOP project. UEN is also working closely with the Utah Telehealth Network (UTN) on the Utah ARCHES Project: a $9 million dollar project awarded to UTN by the Rural Health Care pilot program for hospitals, clinics, and care providers utilizing telemedicine and health information technology, to share resources and provide critical access to the national advanced research networks, Internet2 and National Lamba Rail, for improved quality of care and life. Utah's public schools, colleges, universities and libraries depend on the UEN network to perform their missions each day. UEN is the Internet and Wide-Area-Network provider for the state connecting every public school and institution through the UEN Wide-Area-Network; UEN manages a statewide IP video conferencing system for education and training with over 400 interactive school classrooms; hosts enterprise-level software applications for our public and higher education partners; offers instructional programming through KUEN, a 24/7 television station; supports a growing range of rich educational resources at UEN's Web site, www.uen.org; and supports the technology professional development needs of Utah teachers. Summary of BTOP Project Highlights 1. Opportunity the proposed system seeks to address. UEN intends with use of this grant funding and contracts we have entered into with our telcom partners to: - Extend fiber-based 1000MB Broadband to 62 Elementary Schools - Extend fiber-based 100MB Broadband to 26 Charter Schools and 35 Public Libraries - Extend broadband Ethernet (both fiber and copper) to 7 Head Start Centers 2. A general description of the proposed funded service areas (location, number of communities, etc.) Rural and urban areas of Utah, both unserved and underserved 59 Cities, 130 community anchor locations (see maps attached to supplemental information) 3. Number of households and businesses passed. 35,160 Households (see list by city in supplemental information) 28 Businesses in unserved proposed areas 123 Businesses in underserved proposed areas 158 Businesses in served areas 4. Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project (e.g., health care, education, libraries, etc.). 130 Community Anchor Sites; 300 + public safety entities 5. Proposed services and applications for the proposed funded service areas and users. Combined with our Sustainable Broadband Adoption proposal, UEN will target certain underserved populations by providing training and education. Equal access to educational resources is a major priority of this project. Students in Box Elder County, a rural district with large expanse, will have access to UEN's on-line resources (E-Media, Pioneer Library, on-line testing, etc.) and the UEN IVC video conferencing system for teacher professional development, collaboration and learning. Preschoolers and families who receive services at head start centers, adults retooling to keep and find jobs in rural and urban communities, and those seeking jobs in new industries will have equal access to rich online content, outreach, support, and training through local libraries and training provided. 6. Approach to addressing the non-discrimination and interconnection obligations Please refer to detailed response in Item 22. 7. Type of broadband system that will be deployed (network type and technology standard). - Fiber-optic 1000MB Gigabit Ethernet for Elementary Schools, 1 Head Start - Fiber-optic 100MB Metro Ethernet for Charter Schools, Public Libraries, 1 Head Start - Fast 10MB DSL over Copper for 5 Head Starts Centers 8. Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband

services provider. The Utah Education Network (UEN) has for over 30 years provided critical distance learning and educational opportunities for learners of all ages in Utah. UEN manages critical telecommunications, Internet, and educational systems to deliver applications and interactive services to and from schools, colleges, universities and leading national and international education materials providers to students, teachers, faculty, and parents each day. Over the past five years, with support from the State Legislature and the E-rate program, UEN has successfully managed an aggressive broadband build-out project to complete the migration of over 300 public education secondary schools and 41 school district offices, colleges, universities, and higher education facilities from basic copper T-1 services to fiber-based broadband Gigabit Ethernet services, including the building and completion of a statewide Gigabit Ethernet backbone running almost 400 miles of the state from Logan (North) to St. George (South) and to all rural communities of the state. UEN worked with Qwest Communications and nine (9) independent rural telephone companies and a national digital microwave provider on these important projects. UEN has a core team of (C.C.I.E.) Network Engineers, Field Engineers, and Network Operation and Security professionals supporting UEN's network. Last summer, in less than three months, UEN successfully deployed a 10-Gigabit core diverse ring within the state's central WAN network with Qwest to keep up with growth and demand on the UEN backbone. This past fall, UEN began the process of deploying broadband Ethernet connections to elementary and charter schools and many public libraries. Due to severe state funding shortfalls, we are applying for this project. 9. Overall infrastructure cost of the broadband system. The overall infrastructure cost of the projects in this application is projected to be $14,624,000. This is based on precise engineering studies. This includes outside plant construction fiber and conduit installation, aggregation equipment, facility entrance conduit and fiber installation and on-site construction where required. 10. Overall expected subscriber projections for the project. 963,900. This is based on actual school enrollments, faculty and staff, and populations served in libraries and head start centers.