Broadband USA Applications Database

Applicant Name: Iowa Communications Network

Project Title: Iowa BTOP Sustainable Broadband Adoption Project

Project Type: Sustainable Adoption

_____**Executive Summary**_____

The Problem: Outdated Technology Supporting Vital Services

Iowa's distance learning and teleconferencing platform, renown for its quality and visited by world dignitaries, is approaching its latest mandatory upgrade amidst a severe global economic slump, followed by several catastrophic and costly statewide natural disasters.

At immediate risk, are services to 730 community anchor institutions (CAIs) who use 570 hours of distance learning and teleconferencing every day. Indirectly at risk are the nearly 3 million citizens in every corner of the state, from all walks of life, who depend on services provided by schools, hospitals, government offices, libraries, national guard sites, corrections facilities, emergency management facilities, and court houses connected to the network.

Limited Funds Halt Broadband Adoption

Of the approximately 2,100 public and private K-12 schools and school districts in Iowa, the ICN currently reaches only 20 percent with broadband circuits. The ICN's inability to upgrade its current platform also prohibits broadband adoption to new subscribers. One alternative is to use desktop-based video conferencing, which requires less bandwidth and startup costs. Some ICN subscribers see strong possibilities with the newer system. But the question remains how 730 legacy video conferencing systems can remain viable, when upgrade costs are prohibitive.

Our Solution: Perform Critical Upgrades & Add Vulnerable Subscribers

The ICN has committed funds for upgrades, but not enough for the large number of subscribers. With financial assistance, ICN can upgrade the legacy MPEG2/ATM based system to an industry compatible H.323/SIP platform to maintain broadband video conferencing services to 730 CAIs currently on the network, and provide services to 270 new K-12 schools in vulnerable areas currently without access. The result is 1,000 CAIs equipped with turn-key, high quality, low cost broadband video conferencing service to serve and sustain all Iowans, anywhere in the state.

The following estimates highlight Iowa's K-12 students with respect to Iowa's BTOP Sustainable Broadband Adoption Project:

• Total K-12 students in Iowa: 487,600

• Students currently attending schools with ICN video conferencing: 149,000

• New students to be reached with BTOP funding: 78,000

• By project completion, total students in schools with ICN video conferencing: 227,000

Benefits of Innovation

Iowa's BTOP Sustainable Broadband Adoption Project introduces several features and innovations previously unavailable, due to technological and cost constraints. These innovations may serve as a model for those with existing systems requiring upgrades, or who may implement new large-scale video conferencing networks.

1. All 730 CAIs currently on the network will have their video conferencing systems upgraded, extending their useable lives, and replaced with more readily available components for future upgrades.

2. An additional 270 vulnerable schools will be equipped with turn-key broadband video conferencing services, a 37 percent increase in broadband adoption in vulnerable areas.

3. Installation of industry compliant H.323/SIP based video conferencing equipment, compatible with other systems worldwide, including Polycom, Tandberg, and LifeSize.

4. Installation of streaming, recording, remote access and storage servers provide built-in functions to enhance distance learning and telecourses.

5. The high quality that ICN video conferencing is known for will be maintained.

6. The upgraded system will be compatible with ICN's newly offered desktop/laptop compatible PerfectMeetings Video (PMV) service. PMV is a low cost, reliable option for some subscribers, especially those who have their own video conferencing system yet do not want to deal with the complexities of managing and trouble shooting.

7. Aggregation of equipment and network to increase efficiency and contain costs.

8. Upgraded components are backward compatible with existing cameras, microphones, monitors to reduce cost.

9. Minimized cost to proprietary video operation and scheduling software (VOSS) that schedules and provides reporting, costs less than two percent of the total budget. VOSS will be upgraded to handle scheduled or on demand sessions.

10. Implementation of a flat rate cost model that encourages use and collaboration.

Extensive Experience Serving Iowans

In its 16 years, the ICN has supported nearly 4.5 million video conferencing hours. This will be ICN's third major upgrade to its video conferencing platform, with each resulting in greater bandwidth efficiency, lowered support costs, and retention of the high quality that distinguishes ICN video conferencing. Previous upgrades were on schedule, and under budget by 30 percent. This proposed upgrade will be greater in scale, but less intensive due to newly available technology, and ICN's prior experience in similar undertakings.

Overall Cost of Proposal

ICN has the required 20 percent match in cash, is ready to implement the project as soon as award status is announced, and confident completion within three years is achievable.

$4.634 million   H.323/SIP video systems for 730 current video conferencing subscribers

$1.526 million   H.323/SIP video systems for 270 vulnerable K-12 schools

$3.094 million   LEC broadband access circuits for 270 vulnerable K-12 schools

$2.726 million   10 Video MCUs, servers aggregated for all subscribers

$175,5100   Upgrade to video operating and scheduling software (VOSS) for all subscribers

$12.156 million Total Proposed Project Cost

$2.431 million   20 percent cash match committed and available from ICN