Applicant Name: CAPTION COLORADO TV, L.L.C.

Project Title: Capturing and Utilizing A/V Content for Enhanced Classroom Accessibility

Project Type: Sustainable Broadband Adoption

_______________________ Executive Summary _____________________

Problem and Need: Caption Colorado (CC) has developed a totally new, innovative broadband-based technology with profound implications for student learning and achievement, especially but not exclusively among students who are deaf or hard of hearing (D/HH), who have specific learning disabilities (SLD), or who have language difficulties - all conditions that seriously undermine their access to education and/or their literacy, learning and achievement. While based on captioning, CCART and Recap represent quantum expansions of technological versatility and applications, including the ability to navigate and search audio and video (A/V) content of recorded classes and other media while delivering instruction and content to laptops and mobile devices. CC will use the Sustainable Broadband Adoption program to introduce and roll-out the technologies among a band of early educational users and adopters in schools and colleges. Broadband has spurred this revolution of real-time and recorded live classroom audio (CCART) and video (Recap) synchronized with accurate verbatim transcriptions thereby making those recordings fully retrievable and searchable in granular detail, accessible on the Web anywhere, anytime. While there are developments in automatic captioning systems, the results are crude and inaccurate, therefore unsuitable for educational use and inadequate for serious content search. The Project proposed thus expands educational access, increases broadband adoption and use around the country for educational institutions, and opens 98 new jobs across the country providing captioning and other educational services. CC currently employs over 150 remote captioners around the US and will increase beyond through this Project. The educational problems and needs upon which these new robust technologies will be brought to bear in the proposed Project and some of the benefits that will bring about include: 1) make burgeoning A/V educational content accessible to DHH students in special schools and regular classrooms; 2) make educational content more comprehensible to other populations of vulnerable learners such as those with SLD and attention deficit disorders (ADD) or for whom English is a second language (ESL), students who need remedial instruction to succeed in postsecondary educational (PSE) settings; 3) redress the paucity of services for special needs students in rural and remote areas; 4) make A/V educational content retrievable, searchable, and reusable by students and educational institutions; and 5) provide educators with flexible teaching tools that can be used to match the varied learning styles and capabilities among students. CC's CCART and Recap technologies and services are not a panacea for all educational challenges. They are, however, the most advanced, flexible and cost effective tools available for tackling select access needs and disabilities through repurposed and repeatable classroom instruction. Over the next decade if even one quarter or one third of the 13,000 K-12 schools and 5,000 PSE institutions in the U.S adopt these educational tools and sustain their use, the project has the potential of reaching several hundred thousand children and
youths each year. Overall Approach and Innovation: CC will direct the Project, train and provide captioners, and train school officials in the application and use of its CCART and Recap live classroom technologies and services in collaboration with special education teachers and technology specialists. First, in discussing applications in K-12 education, it must be emphasized that effective captioning via A/V searchable indexing requires a suitable level of reading literacy on the part of the student which is attained approximately by the fourth grade. While reading and comprehension levels among D/HH students in the U.S is significantly lower than peers, D/HH students who use captioning considerably improve their reading skills, an effect noted, too, among SLD and ESL students. For all students, multi-sensory learning and repetition, the ability to revisit and review instructional material ' key to CC's technology ' improves learning. For current purposes the Project will concentrate its efforts in: residential and day schools for D/HH students; public schools that mainstream special needs children, and schools in rural or remote areas lacking programs. Our partners for K-12 introduction are organizations with national, state and local constituencies of schools, professionals, and parents attending to children with special educational needs. Second, CC will partner with three PSE institutions in Ohio: to expand captioning to new institutional settings, educational levels, and display devices; to apply captioning technologies to improve student retention/perseverance in a highly diverse student population at an urban community college; to try captioning in a fast-paced real-time simulation program at a state university; and to develop courseware management search and retrieval applications for various digital formats in partnership with a technology savvy research university. CC will also work with organizations that represent national and state expertise in education of vulnerable groups, and with national and local units of organizations that represent D/HH and other individuals with disabilities. CC's partnered approach is innovative in 1) identifying an array of vulnerable and underserved learning populations and settings in which to use broadband to deliver services; 2) measuring the effectiveness of CCART and Recap among different student groups; 3) developing new educational services tailored for the general student population as well as students with disabilities and ESL learners; 4) stimulating educational course development and management enabled by broadband, and 6) adapting technologies and instruction for use on mobile devices. These efforts are scalable and expandable to broader adoption. Areas, Populations, Demographics, and Numbers: This technology is so recent we will use the SBA to educate and introduce it to educators. The areas to be targeted are roughly calculated to be in Colorado, other mountain and plain states, and Ohio, although at this writing residential schools for the deaf in Washington and Texas wish to be among the pioneers. The targeted populations in grade school children in primary schools who are D/HH, SLD and ESL learners and students at three PSE institutions in Ohio will represent different applications, including remediation programs for poorly prepared and disadvantaged students in a community college. The subscribers will be largely institutional or at the school district level for K-12. The programs will be sustained and increased at the end of SBA funding with expansion to additional primary and secondary schools, and to a broad cross section of PSE institutions, especially community colleges. Since disabled and ESL students are drawn disproportionately from economically disadvantaged and minority populations the Project is weighted to serve educationally disadvantaged students among the 3000 to be served. Qualifications: CC is the largest real-time caption company in the U.S representing nearly all the major television ownership groups in the country, and is the largest provider of real-time transcription and streaming services on the Internet to schools, government agencies, and corporate entities. The company employs IT and
software development staff to support its technologies and clients, trains and employs captioners throughout the U.S., and can swiftly scale its operations to accommodate growth. Jobs: The Project will create approximately 98 new captioning and caption training jobs throughout the U.S. and enlist employees especially from small towns and rural areas. It will create 10 new jobs at CC in IT, software development, training, and project administration. Indirectly the Project will reinforce job security for 50-100 special education and classroom teachers, and secure or expand payrolls for those who install, operate and support the equipment and services in school districts and at institutions. Overall Project Costs: Budgeted costs include federal and matching funds required for hiring, training, and employing a cadre of highly skilled captioners and support staff, purchasing laptops, A/V equipment and software applications, educational and marketing materials to support the service initiatives described in the scope of the Project. The two year budget is $21,411,430 including $14,959,830 of federal funds and $6,451,600 provided by in-kind services and cash contributions from CC, schools and participating evaluation companies, and expertise from financial stressed school districts and institutions.