

ANNUAL PERFORMANCE PROGRESS REPORT FOR SUSTAINABLE BROADBAND ADOPTION

General Information

1. Federal Agency and Organizational Element to Which Report is Submitted Department of Commerce, National Telecommunications and Information Administration	2. Award Identification Number 46-41-B10548	3. DUNS Number 115077950
4. Recipient Organization Communication Service For The Deaf, Inc. 102 N KROHN PL, SIOUX FALLS, SD 571031800		
5. Current Reporting Period End Date (MM/DD/YYYY) 12-31-2011	6. Is this the last Annual Report of the Award Period? <p style="text-align: center;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>	
7. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.		
7a. Typed or Printed Name and Title of Certifying Official Dave Miller	7c. Telephone (area code, number and extension)	
	7d. Email Address dmiller@c-s-d.org	
7b. Signature of Certifying Official Submitted Electronically	7e. Date Report Submitted (MM/DD/YYYY): 01-30-2012	

PROJECT INDICATORS

1. Does your Sustainable Broadband Adoption (SBA) project foster a particular broadband technology or technologies? If so, please describe this technology (or technologies) (600 words or less).

In addition to Project Endeavor initiative to expand access to broadband technology to our nation's deaf and hard of hearing population, the project is pioneering three separate applications of broadband technology related to this population. The grant has allowed the project to build a state of the art multimedia call center capable of handling video calls with the same functionality as telephone, e-mail or text contacts. This involved merging the latest technology for call center communication management with video call management. This has allowed two things. For the first time deaf individuals can directly contact a call center service and get direct support in their own language without going through and intermediary service (i.e. interpreter, relay operator). Secondly it has opened a new career area for deaf individuals who want to become customer support agents. This new technology is cheaper for both businesses and governmentally funded communication relay programs while affording the deaf individual improved communication access. Secondly, Project Endeavor is demonstrating how to make web and social networking media useable by individuals who rely primarily upon visual communications. This involves augmenting or substituting text and auditory information with signed video communications. It also involves organizing the information in a way to best support visual learners. In terms of educational material much of what's on the web today is unintelligible for a population that relies upon American Sign Language as their means of communication. Lastly, Project Endeavour is introducing to community anchor institutions the use of broadband based Video Remote Interpreting (VRI) as an economical alternative to traditional in person sign language interpreting. With a national shortage of qualified sign language interpreters, particularly in rural areas, the immediacy and portability of the new technology promises to usher in a new era of access for deaf citizens.

2a. Please list all of the broadband equipment and/or supplies you have purchased during the most recent calendar year using BTOP grant funds or other (matching) funds, including any customer premises equipment or end-user devices. If additional space is needed, please attach a list of equipment and/or supplies. Please also describe how the equipment and supplies have been deployed (100 words or less).

Manufacturer	Item	Unit Cost per Item	Number of Units	Narrative description of how the equipment and supplies were deployed
Dell	Latitude E5520 Laptop	834	12	Laptop computer used by field staff to enter enter participant data and communicate via e-mail and video
Dell	Inspiron Notebook	149	140	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Dell	11Z Notebook	149	49	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Samsung	Epic	149	21	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Samsung	Nexus	49	1	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Samsung	Mini Notebook	249	76	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
HTC	EVO	99	43	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Apple	iPad 2	599	3,126	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Apple	iTouch	279	113	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Apple	Mac Pro Desk Top	1,199	2	Computers for Media Department to produce training and outreach materials
Sierra Wireless	OverDrives	49	98	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Motorola	Photon	199	12	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
	Capitel	99	1	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Toshiba	Thrive Tablet	464	100	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Acer	Aspire Notebook	446	1	Subsidized broadband access equipment provided to individual program participants on a cost sharing basis
Totals		5,012	3,795	

Add Equipment

Remove Equipment

2b. To the extent you distribute equipment/supplies to beneficiaries of your project, please describe the equipment/supplies you distribute, the quantities distributed, and the specific populations to whom the equipment/supplies are distributed (600 words or less).

Project Endeavor provides subsidized broadband access equipment to income eligible deaf and hard of hearing individuals. A limited amount of equipment will be given away free to individuals at or below the national poverty level. As of December 31, 2011, equipment had been provided to 3,710 individuals. By the end of the Project we plan to have provided free equipment to approximately 300 individuals and subsidized equipment to 8,700 individuals. Equipment is subsidized at approximately 50% of retail cost. The project provides laptops, notebooks, tablets and smart phones for eligible participants. By far the most popular broadband access device has been tablets. Although unanticipated when the project was launched, the rapid deployment of Wi-Fi and high-speed wireless video is dramatically altering how deaf individuals are accessing broadband services. High-speed wireless video allows a tablet device to replace the deaf individual's wired videophone and home computer if they had one with a single mobile device. Mobilizing the information on the web has tremendous accessibility implications for people with disabilities. For example, a hearing person could ask someone where the nearest gas station is. A tablet provides a deaf individual this same functionality.

3. For SBA access and training provided with BTOP grant funds, please provide the information below. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent calendar year. For each type of training (other than open access), please count only the participants who completed the course.

Types of Access or Training	Number of People Targeted	Number of People Participating	Total Training Hours Offered
Open Lab Access	200,000	92,748	0
Multimedia	0	0	0
Office Skills	0	0	0
ESL	0	0	0
GED	0	0	0
College Preparatory Training	0	0	0
Basic Internet and Computer Use	0	0	0
Certified Training Programs	0	0	0
Other (please specify):	0	0	0
Total	200,000	92,748	0

4. Please describe key economic and social successes of your project during the past year, and why you believe the project is successful thus far (600 words or less).

Chief economic and social successes of the project over the past year include:
 In spite of a downturned economy we have provided employment for over 45 individuals with significant disabilities. Many of these in the call center industry, a career area traditionally not open to deaf workers. As a result of the work experience gained through the BTOP grant, four Project Endeavor employees have already moved to other full time job opportunities within CSD. This process will accelerate as grant activities are completed.
 We have committed approximately \$998,742 in financial assistance to 3710 income eligible individuals to purchase broadband access equipment or service. This access will enhance their social, educational and economic opportunity.
 We have had over 234,180 contacts to our web bases training and social media sites. It is difficult to measure the degree of learning that is resulting from these contacts, but the number and duration of contacts are growing each month. This would indicate we are meeting an educational need within the deaf and hard of hearing community since all the content is geared for this population. We will continue to grow the content of these mediums until the project is completed. Afterwards, CSD will incorporate the content into its web site making it publicly accessible until it becomes dated.

5. Please estimate the level of broadband adoption in the community(ies) and/or area(s) your project serves, explain your methodology for estimating the level of broadband adoption, and explain changes in the broadband adoption level, if any, since the project began.

5a. Adoption Level (%):	Narrative description of level, methodology, and change from the level at project inception (600 words or less).

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<p>42</p>	<p>We based our initial estimate of the adoption rate on the 2010 FCC Broadband Adoption & Use in America Survey. This report estimated that the adoption rate among people with disability was approximately 42%. As stated in our application there was no research indicating the specific adoption rates of sub groups within the disabled community, i.e., deaf and hard of hearing. We have now found that the adoption rate within the deaf community was significantly higher than thought. Over the past decade, companies that provide federally funded Video Relay Services (VRS) have distributed free videophones to deaf/hh customers with the requirement that they subscribe to high-speed Internet services. Without this subscription, VRS companies would not install the videophone equipment. As a consequence, many deaf and hard of hearing people needing video communication to function in daily activities opted to subscribe to broadband services. The migration from the text-based TTY to videophone was rapid because this service allowed deaf/hh individuals to communicate using American Sign Language (ASL) for the first time. We underestimated how pervasive adoption of broadband service was in the deaf community. What we found is that many of these subscribers were only using their broadband access for video communication and not availing themselves of the full functionality of broadband. Frequently the equipment they had was only a videophone. For financial and educational reasons many deaf individuals were subscribers but not broadband users. We feel the project's major impact will be moving these subscribers to full-fledged users of broadband services. In our program evaluation we are measuring both pre and post adoption and utilization of broadband services by program participants. Our final report will provide qualitative data concerning movemone on each axis.</p>
<p>6. Please describe the two most common barriers to broadband adoption that you have experienced this year in connection with your project. What steps did you take to address them (600 words or less)?</p>	
<p>For our target population, deaf and hard of hearing individuals, the two primary barriers to broadband adoption/utilization are cost and lack of accessible information about broadband services. In 2002 the FCC started to provide free video relay services (VRS), in the United States. This induced the vast majority of deaf individuals to obtain broadband service in order to make video phone calls. VRS providers gave free video phones away. For many this was the extent of their broadband use because they couldn't afford another access device or because the web, from a language viewpoint is an alien unfriendly environment for them. Deaf and hard of hearing communities, like most other disability groups, have significantly more unemployment and under employment than the general population. As a group this gives them less disposable income to spend on technology. Project Endeavor is trying to bridge the income gap by providing financial assistance to deaf and hard of hearing individuals to purchase computing equipment that address both their video communication needs as well as access the internet at an affordable level they can sustain after the project. Secondly, the project is trying to bridge the language barrier by developing a web based video library of training materials on broadband services. The training materials are captioned and presented in American Sign Language. The goal is to try to give the deaf community access to the same level of information that the average citizen picks up through mainstream media. Technology products and services are evolving so rapidly that there is no end to this process.</p>	
<p>7. To the extent that you have made any subcontracts or sub grants, please provide the number of subcontracts or sub grants that have been made to socially and economically disadvantaged small business (SDB) concerns as defined by section 8(a) of the Small Business Act, 15 U.S.C. 647, as modified by NTIA's adoption of an alternative small business size standard for use in BTOP. Please also provide the names of these SDB entities. (150 words or less)</p>	
<p>No sub contracts or sub grants have been made.</p>	
<p>8. Please describe any best practices / lessons learned that can be shared with other similar BTOP projects (900 words or less).</p>	
<ul style="list-style-type: none"> When studying special populations, particularly groups that historical have a lower English literacy rate, Informed Consent is more than obtaining a signature on an Informed Consent (IC) form. A study by Passche-Orlow, Taylor and Brancati (2003) examined the informed consent forms used in more than 100 medical centers in the United States and found they were written at a 10.6 grade level. The average reading level of deaf individuals in the United States is approximately fourth grade level. The Center for Deaf Health Research at the University of Rochester (2011) has been concerned about barriers to informed consent as well as research on the deaf/hh population (Pollard, 2002). To address this problem Project Endeavor has created accessible IC forms. This is not a common practice in the field because it is labor intensive. IC forms were developed based upon universal design but provided in multiple, accessible formats: text, voice translated text, video American Sign Language (ASL), and captioned video. All Project Endeavor online surveys begin with this expanded explanation of IC, and after confirming agreement to participate, respondents are directly connected to the survey. We believe these techniques could be adapted and used with other vulnerable groups that have cognitive or communication challenges. Many individuals with language, cultural, communications or intellectual challenges are failing to adopt broadband technology because mainstream media doesn't provide them enough accessible information, support or motivation to take the next step. These groups are outside the mainstream for a reason. So to effect change with these groups you must identify the reasons and adapt your training materials to your targets population's life situation. For example, we found adequate employment resources for higher educated deaf individual on the Internet but there were very limited resources for "blue collar" deaf individuals. So Project Endeavor is developing a self-paced, interactive, online learning tool in American Sign Language for non-college bound deaf and hard of hearing individuals who are interested in entering the workforce or looking to change jobs. The online learning tool will be web-based utilizing interactive signed videos, games, puzzles, and real life situations to engage learners. These are well documented successful teaching strategies for 	

individuals who are visual learners or for whom English is their second language. At the same time, participants are encouraged to apply English/grammar skills to employment related learning activities. Each activity has a measurement tool for the participant to gauge their understanding. Advanced employment related resources or "web links" are embedded in the curriculum so learners can independently progress their learning depending upon their skill level. We believe there is "no one size fits all" in terms of developing digital literacy training. It must be adapted to the culture, language and learning style of the target population.

- Although our project will meet our goals in terms of the number of individuals served we have failed to engage the hard of hearing community at the same level as the deaf community. We believe that the lesson learned is that these are not homogeneous populations in terms of demographics, preferred mode of communications, access barriers, solutions and outreach strategies. Although the deaf community faces significantly more complex barriers to broadband access, considering the much larger size of the hard of hearing community a project devoted exclusive to addressing their challenges is probably necessary and a wise investment. Advances in broadband health monitoring is going to be critical to safely supporting the rapidly growing elderly hard of hearing population in our communities.