

NIDRR Projects

Research in the New Millennium

RERC on Spinal Cord Injury: Keep Moving: Technologies to Enhance Mobility and Function for Individuals with Spinal Cord Injury, Los Amigos Research and Education Institute, Inc. (LAREI) (H133E020732) led by Samuel Landsburger, ScD and Robert Waters, MD. Kristi E. Wilson, PhD, Project Officer.

Abstract: This RERC improves the lives of individuals with SCI by promoting their health, safety, independence, and active engagement in daily activities. Activities include developing and testing prototype devices that are useful and effective and transferring them to the marketplace. An active Mobile Arm Support for adults allows those with limited arm function greater independence. The shoulder-preserving wheelchair, gait training robotic assist device, and adaptive exercise equipment are all specifically geared to preserve or enhance mobility in individuals with SCI. Find out more at: www.larei.org

Smith-Kettlewell Rehabilitation Engineering Research Center, Smith-Kettlewell Eye Research Institute (H133E001002) led by John A. Brabyn, PhD. Richard Johnson, EdD, Project Officer.

Abstract: This RERC conducts research and development for persons who are blind or who have visual impairments. For individuals who have co-existing disabilities, the project explores new solutions for wheelchair travel and various technologies for wayfinding. It also investigates independent travel technology for those with combined visual and cognitive impairments. For consumers who are deaf-blind, the project develops a new generation of communication devices to expand the functions performed by existing products. An innovative program of vocational and daily living technology development includes intensive interaction with service providers and applications of computer vision. Find out more at: www.ski.org/Rehab

Pocket Accessible Communication Enabler (Pocket ACE): Providing Access to Palmtop Computer Wireless Communication Technologies for Individuals with Mental Retardation, AbleLink Technologies, Inc. (H133S020010) led by Steven E. Stock. Kristi E. Wilson, PhD, Project Officer.

Abstract: Pocket ACE is a multimedia software application designed for operation on Pocket PC Phone Edition palmtop computers to provide a format for independent access to cell phone technology and wireless email for students and adults with mental retardation.

Pocket Money Coach: A Portable Money Management System to Facilitate Community Access for Individuals with Mental Retardation, AbleLink Technologies, Inc. (H133S020013) led by Daniel K. Davies. David Malouf, Project Officer.

Abstract: Pocket Money Coach is a portable system for assisting individuals with mental retardation with money-related tasks necessary for independent living and community access. The system improves independence and self-determination in personal money management for individuals with mental retardation. Find out more about Pocket Money Coach and PocketACE at: www.ablelinktech.com

RehabWire for January greets the new year with a look at assistive technology. This month, industry experts will meet for the Assistive Technology Industry Association Conference in Orlando, Florida.

SafetyNet: Supported Independence and Safety for People with Cognitive Disabilities, CreateAbility Concepts, Inc. (H133S020149) led by Stephen M. Sutter. Richard E. Wilson II, EdD, Project Officer. Abstract: This project demonstrates the technical merit, feasibility, and cost efficiency of combining state-of-the-art, portable wireless technology, Internet services, and sensor technology with an innovative approach to develop the first system designed specifically for people with severe cognitive disabilities that has the ability to detect the status of specific factors in the environment and then dynamically adjust the delivery of task prompts to properly coach the individual with a cognitive disability based on these factors. Find out more at: www.createabilityinc.com

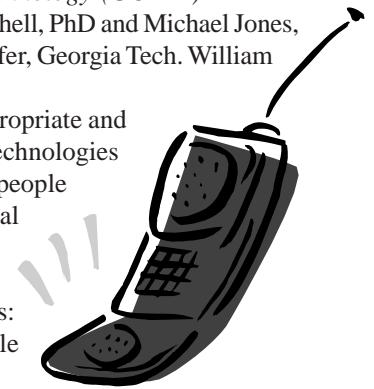
VCAT On-Demand Transcription Services for Individuals Who Are Deaf or Hard of Hearing, CreateAbility Concepts, Inc. (H133S020155) led by Stephen M. Sutter. Bonnie Gracer, Project Officer.

Abstract: This project demonstrates the technical merit, feasibility, and cost efficiency of combining commercially available equipment and wireless services with state-of-the-art software to deliver Virtual Computer Assisted Transcription (VCAT) services. A companion, web-based scheduling system connects the end user with a nationwide pool of captionists and voice writers, maximizing the flexibility and availability of transcription services, independent of location.

Find out more at: www.createabilityinc.com

Rehabilitation Engineering Research Center on Mobile Wireless Technologies for Persons with Disabilities, Georgia Centers for Advanced Telecommunications Technology (GCATT) (H133E010804) led by Helena Mitchell, PhD and Michael Jones, PhD, Shepherd Center and John Peifer, Georgia Tech. William Peterson, Project Officer.

Abstract: This RERC develops appropriate and effective applications of wireless technologies that enhance the independence of people with disabilities. With an overall goal of promoting independence and autonomy of people with disabilities, the RERC has two primary aims: (1) ensure equitable access to mobile wireless products and services by people with disabilities of all ages and abilities; and (2) investigate promising applications of mobile wireless technologies in support of employment, independent living, and community integration of people with disabilities. Find out more at: www.wirelessrerc.org



Technology for Independence: A Community-Based Resource Center (TI:CBRC) University of Iowa (H133A021801) led by Peter D. Blanck, PhD, JD. Richard E. Wilson II, EdD, Project Officer. Abstract: The CBRC builds and enhances the capacity of community-based and consumer-directed disability organizations to design, implement, and disseminate research activities and projects that

promote environmental access and use of technology for independence. The project merges the national experience and expertise of ILRU regarding independent living and principles of choice and self determination, with the nationally recognized research expertise of the Law, Health, Policy, and Disability Center at the University of Iowa in the areas of technology access and use, employment policy, and civil rights.

Find out more at: www.its.uiowa.edu/law

Assistive Technology in the Community, Washington University (H133A010701) led by David B. Gray, PhD. Richard E. Wilson II, EdD, Project Officer.

Abstract: This project promotes AT as a means of increasing participation in major life activities by people with disabilities. Project activities include: (1) assessing the use, disuse, injury, and effects that AT has on the participation of people with disabilities in major life activities, to determine what technologies are of the most benefit in community settings; (2) implementing a community-based AT program in collaboration with Paraquad, a nationally recognized Center for Independent Living, to improve the satisfaction of participants in their self-chosen life activities; (3) educating consumers, independent living staff, educators, health care professionals, AT industry leaders, and public policy-makers about the influence AT has on major life activities.

Find out more at: enablemob.wustl.edu/Research/NIDRR/at_community.htm

Community Research for Assistive Technology, California Foundation for Independent Living Centers (CFILC) (H133A010702) led by Tanis Doe, PhD. Dawn Carlson, PhD, MPH, Project Officer.

Abstract: This project increases the capacity of the independent living community to work with its members and stakeholders to collect research data on access and use of AT to improve the lives of people with disabilities. Using a participatory research approach, the California Foundation for Independent Living Centers (CFILC) is using an ecological model to develop cumulative research data on the use of and access to AT by people with disabilities.

Find out more at: www.atnet.org/CR4AT/Press/Intro.NIDRR.Press.Release.html

New Research

Selections from REHABDATA

Lange, M. L. (2002) **Technology and occupation: Contemporary viewpoints: The future of electronic aids to daily living**. *American Journal of Occupational Therapy*, 56(1), p107-109. Accession Number: J43571.

Abstract: Article discusses the relationship between electronic aids to daily living (EADLs), formerly known as electronic or environmental controls, and occupational therapy.

Burgstahler, S. (2002) **Tech talk: Where can I learn about computer technology that might benefit my child?** *Exceptional Parent*, 32(6), 55-56. Accession Number: J44036.

Abstract: Article presents a listing of Internet resources on computers and assistive technology products and programs for children and adults with disabilities.



Topo, P., Jylha, M., Laine, J. (2002) **Can the telephone-using abilities of people with dementia be promoted? An evaluation of a simple-to-use telephone**. *Technology and Disability*, 14(1), 3-13. Accession Number: J44079.

Abstract: Study describes everyday telephone use by people with dementia and their caregivers, and development of an easy-to-use telephone. For this population, the telephone is a means of accessing social support and stimulation, increasing safety, and acting as a reminder. A prototype phone made it easy for subjects with dementia to find and dial numbers. However, most of the general use issues did not disappear with the use of the new phone.

McIsaac, P., Craig, A., Tran, Y., Boord, P. (2002) **The mind switch environmental control system: Remote hands free control for the severely disabled**. *Technology and Disability*, 14(1), 15-20. Accession Number: J44080.

Abstract: Article introduces the Mind Switch environmental control system (ECS) that enables severely disabled persons to activate devices using their brain signals. The research and development of the hands-free ECS prototype, its effectiveness in controlling devices, and implications for a commercial product are discussed.

Butler, S. E., Crudden, A., Sansing, W. K., LeJeune, B. J. (2002) **Employment barriers: Access to assistive technology and research needs**. *Journal of Visual Impairment and Blindness*, 96(6), 664-667. Accession Number: J44246.

Abstract: Article presents an overview on technological barriers to employment for persons who are visually impaired. Discusses legislation, public, and private rehabilitation agency programs, and federal agency programs that have an impact on the distribution and use of assistive technology (AT).

Eggett, C. B. (2002) **Assistive technology needs in public libraries: A survey**. *Journal of Visual Impairment and Blindness*, 96(8), 549-557. Accession Number: J44319.

Abstract: Reports findings from a survey conducted to determine who would use assistive technology (AT) at public libraries, to profile factors influencing its use, and assess the level of awareness of available AT services. Results showed that less than a quarter of the participants reported that AT was available in their public libraries, and more younger people than older people would use it if it were available.

(2002) **TechAccess resource directory: Accessible technology equals opportunity**. HalfthePlanet Foundation Accession Number: R08281.

Abstract: Directory lists programs and initiatives related to technology accessibility and usability for people with disabilities. A summary of services provided, list of partners, contact information, and web site is provided for

each program. Indices list the programs by program/technology type, disability focus, life area focus, state, and federal funding information. Includes a bibliography of publications, including articles from periodicals, reports, white papers, and electronic resources.

Also available online at www.halftheplanet.com/techaccess