Cognitive Prosthetics

A Newsletter of the Consortium for Handheld Technologies at the Partnership for People with Disabilities, Virginia Commonwealth University

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PDAs for Brain Injury or Autism

Handheld computers help students, businessmen and busy homemakers manage their daily activities. A new program at the Partnership for People with Disabilities aims to introduce this technology to individuals with brain injury or autism spectrum disorder to help them do the same thing.

Under a grant from the Commonwealth Neurotrauma Initiative, over the next 3 years this program will match at least 50 individuals across the state of Virginia with electronic handheld computers. Participants will be trained in how to use the devices, and functional outcomes and satisfaction surveys will be tracked to see how well they work.

Program director Tony Gentry, OTR/L has used portable computers in his work with the brain injury population for several years. He has found that the time and task management features of these devices can play a key role in helping people gain control of their days. "Probably the most useful feature is the reminder alarm. You can program as many alarms as you need in a day, and when the alarm sounds, the screen can show you exactly what you need to do. You can program in written notes, recorded messages, drawings, maps, pictures, even mini-videos on the reminder screen." You can even program the devices to serve as cognitive-behavioral management tools. "For instance," Tony says, "you can set up behavioral scripts, so when a person gets in a jam, he can look up what to do and follow the directions successfully, without having to ask anyone else."

Under the supervision of principle investigator Joey Wallace, PhD, Tony will take on the role of assessing the needs of each participant, choosing the right device, building in the features that work best for the user and providing training and follow-up troubleshooting to make sure the system works as planned. Participants must be at least age 14, with a brain injury or an autism spectrum disorder and deficits in the performance of everyday functional tasks. Other criteria apply. If you are interested in participating in this project, please phone Tony at (804) 828-7049 or email him at logentry @vcu.edu.

"My whole life is in my palm pilot. I couldn't get up in the morning without it."

What is a Cognitive Prosthesis, anyway?

Any tool that helps you remember things or think better may be called a cognitive prosthesis. Your alarm clock and your calculator are cognitive prostheses. For that matter the stickie notes on your refrigerator, your "honey-do" list and the string tied around your finger are, too.

With the advent of miniaturized computing over the past decade, thinking tools have become more compact and powerful. For $15 or less, you can buy a device that serves the purpose of all the items just listed, with an address book and time zone clock thrown in. Your desktop computer probably came packaged with dynamic task management software, such as Microsoft Outlook or Apple's iTools. All the information included there can be easily downloaded to a handheld device with the click of a button. The field of cognitive prosthetics evolves and changes everyday. Better living through augmented thinking!

Mother's Little Helper: PDAs & MS

Lorri Higgins is a busy college professor. A mom with three kids, she teaches computer skills at Lynchburg College in central Virginia. And she has Multiple Sclerosis. The disease makes every day tough. "I'm tired from the moment I wake up," Lori says. But worse than the fatigue is the way M.S. has affected her memory. "You can tell me something, and five minutes later, I may not even remember meeting you." Facing such challenges, how does Lorri manage her career and home? "My whole life is in my palm pilot. I couldn't get up in the morning without it." Lori uses the device to set medication alarms, log appointments, keep track of her family's hectic schedules and her students' grades. "When that little beep goes off, I jump to it. Nobody even knows my memory is shot. It's like my extra brain."

Partnership for People with Disabilities
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Featured Device: The Timex Datalink Watch

One of the simplest and most readily useable cognitive prostheses is the Timex Datalink watch. Initially marketed in 1998, the Datalink comes in a variety of styles for men and women. Now that Timex has begun to phase them out, in preparation for a more powerful PDA watch due in 2003, you can buy them quite cheaply ($50) on the Timex.com website and for less than that on the auction websites.

Using the Datalink: You need to have a home pc in order to program the watch, and your operating system must be a pre-Microsoft XP version, but downloading the program using the enclosed disk is a snap, and the computer screen interface takes you through each step of the process for loading information into your watch in a logical and easily followed sequence. You can program in task reminders and to do lists, linked to alarms, along with phone numbers and other information.

To download, you simply press a button, hold the watch up to the computer screen and wait while it all beams over automatically. Amazing! When your reminder alarm goes off, your printed message scrolls across the watch-face ("take your blue pill", for instance).

One of the most welcome features of the Datalink is that it's a watch. Forgetful users might misplace a handheld device, but it's hard to lose something that's strapped to your wrist. Another strength is that the Datalink isn't overloaded with functions, so it's easy to navigate those it does have. And for many people with cognitive impairments, it's the reminder alarm that means the most. Also, since you program the watch from your computer keyboard, you don't get cramped fingers trying to enter information on a tiny screen, as with many of the other electronic personal organizers on the market.

For many people with cognitive impairments, the Timex Datalink watch is a terrific, inexpensive solution to everyday forgetfulness. Though a newer, more complicated version is due this year, you may find that the good old Datalink has all the features you need to stay on schedule and on top of your game.

Datalink watches can be purchased at department stores and online at www.timex.com.

You simply press a button, hold the watch up to your computer screen, and the information beams over automatically. Amazing!

Partnership for People with Disabilities

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We're on the Web!

See us at:

www.vcu.edu/partnership/pda

Useful Websites:

www.vcu.edu/partnership/pda

Consortium for Handheld Technology webpage.

www.cerebreon.com

Free online courses on using cognitive prostheses.

www.biausa.org

Helpful online catalog of available electronic cognitive prosthetics

www.vacni.org

Commonwealth Neurotrauma Initiative.

www.tech-dis.ac.uk

British website devoted to PDA users with disabilities.

Linking people. Changing lives.

About Our Organization...

The Commonwealth Consortium for Handheld Technologies is a research and disability service program at the Partnership for People with Disabilities of Virginia Commonwealth University. Our mission is to expand opportunities for individuals with disability through the use of emerging portable computer technology. The Consortium is sponsored by a program development grant of the Commonwealth Neurotrauma Initiative (CNI) Trust Fund. The contents are the sole responsibility of the authors and do not necessarily represent the official views of the CNI Trust Fund.

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