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Deafblind Newsletter - Jan-Feb 2008

DeafBlind Communicator - Field Testing Fun

Hopefully, you have been reading our DB Newsletters over the past few months. (If not, check them out on our website at www.humanware.com/en-usa/products/deafblind). You should know by now that HumanWare is working with Washington State ODHH to develop a new DeafBlind Communicator (DBC). One aspect of the development process that becomes particularly exciting is when the product faces the real world for the first time. Will the concept work? Does product do what it's supposed to do? Is it usable? What needs to be improved? This is a scary time, but it's also a fun time. We call it "field testing."

Our first field test involved analyzing the DBC's face-to-face communication capability. (The DBC consists of a BrailleNote mPower with the addition of special DB software connected wirelessly, via Bluetooth, to a cell phone with a QWERTY keyboard and visual display that also contains special DB software). We asked Marlaina Lieberg, a blind BrailleNote user in the Seattle area, to help us out. Her job was to assume the role of a deafblind person and to try to communicate with sighted people in numerous settings using a DBC prototype. A third party, who remained totally uninvolved in the process, observed the interaction to assess any problems that might arise.

Marlaina's award-winning efforts gave our third party observer an extremely accurate look at the strengths and weaknesses of the simulated DeafBlind Communicator. With each new venue, Marlaina would activate the special DB-Phone from her DB BrailleNote. The DB-Phone would show on its visual display and also speak "Hi, I'm deafblind. Please use this device to communicate with me." Marlaina would then hold the unit out and wait for the sighted person to take the unit. She did this on buses, in shops, at Starbucks and Burger King, in restaurants and a number of other venues. The person behind the counter was often confused by the situation, but when this happened, another employee or another customer would inevitably jump in to help. Despite a couple of technical glitches with the prototype, Marlaina was able to successfully communicate in every situation. Some venues took longer than others, but each test ended with smiles and a sense of accomplishment on all sides. Even in its semi-prototype state, the DeafBlind Communicator did its job with the added benefit of revealing the inherent goodness in people.

One interesting discovery we made was that sighted people don't immediately grasp what "deafblind" means, so in later development models, we have changed the initial greeting to "Hi, I'm blind and I can't hear…" This simple change seems to give the average sighted person more time to process the situation. This and other discoveries allowed us to go back and rework a number of prompts and functions so that the product was more intuitive and ready for our deafblind focus group.

With the aid of some fabulous interpreters, Marlaina then trained four members of our focus group on an alpha version of the DBC. This training again revealed more ways to make the DBC more usable and intuitive. After each member of

the focus group had received some basic training, we asked these folks to sit down with over a dozen deafblind people who visited the Lighthouse for the Blind in Seattle. You'll be interested in the results of this first exposure of the DBC to the broader DB community. Deborah Schow, the Communications Consultant for DSHS did a great job of capturing the day in the article I have attached, with Deborah's permission, to the bottom of this newsletter. Enjoy!

Marlaina Conversing with Janie

Marlaina Training RJS

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DSHS Article:

Promises kept and voices heard - ODHH leads the nation with life-changing technology

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The DSHS Office of Deaf and Hard of Hearing (ODHH) is at the forefront of a communication technology upgrade that could make a profound impact on the lives of all DeafBlind people.

At about half the size of a laptop computer,, the "DeafBlind Communicator" (DBC) is considered by its prototype users to be the first truly portable and user-friendly Braille technology system for communication with the larger public.

The new device offers the DeafBlind immediate access to engage people in the mainstream public in direct two-way

conversation, whether in person, over the telephone or via the Internet.

The approximately 200 ODHH clients in Washington who are DeafBlind will be the first to use the DBC when it is released this spring, but other states and agencies are expected to follow the ODHH lead.

"Life-changing" innovation

The result of a partnership between the ODHH and New Zealand assistive technology manufacturer, HumanWare, the DBC is a much-needed evolution from the original Tele-Braille systems, launched in the '80s.

Focus group users who are DeafBlind confirmed that this new assistive technology will allow them greater independence when accessing services and in daily interactions with their hearing and sighted peers. Several said through a sign language interpreter that having the DBC would be "life-changing."

Tele-Braille

"Tele-Braille" was the first product that could incorporate Braille text from Text Telephone (TTY) phone calls, or Telecommunications Relay Service (TRS) phone calls. It was a major breakthrough in telephone access for the

DeafBlind and offered new possibilities for interaction and inclusion.

Tele-Braille systems were cutting edge technology when first put on the market more than 25 years ago. But with few major upgrades since its initial impact, it became outdated in this century. The devices had a short life span as technology was quickly changing and, at a price of $6,500 for most models, they were beyond the reach of most DeafBlind without financial assistance.

As manufacturers deemed the market too small to be profitable for the additional research and development, they stopped making the older Tele-Braille systems. Cost for maintenance and parts skyrocketed.

Subhead: Quality of life issue

Like an old computer or car, the cost of upkeep became impractical or impossible as parts wore out and machines were quickly failing beyond repair. Still, the Tele-Braille system remained a vital door to communication for its DeafBlind clients, and the ODHH continued to patch up the much-needed machines while an alternative was sought.

The Research Laboratory of the Helen Keller National Center for DeafBlind Youths and Adults developed the first Tele-Braille devices. The research laboratory has since been

disbanded, leaving a void in assistive technology research for the DeafBlind. When no agency or organization was willing or able to conduct the research to develop a new product, DSHS and ODHH worked to find a manufacturer to partner with to produce a more compact and lightweight device that fit the specific needs of DSHS's DeafBlind clients. It is part of the ODHH's core mission to provide resources that enable its clients to have equal access and effective communication.

Born out of necessity and with direct input and consultations with DeafBlind individuals, the ODHH and HumanWare created the unique technology and software design used in the DeafBlind Communicator.

Demonstrations of delight

In focus groups with DeafBlind users at the Lighthouse for the Blind last month in Seattle the device was a hit. Users wanted to take the prototype home with them right then as demonstrations of delight filled the room as DeafBlind clients tried it out.

All who participated in last month's trials confirmed that the DBC can open new lines of communication and give them added confidence and independence, especially when traveling or doing errands without an American Sign Language (ASL) interpreter. During the Seattle trials,

DeafBlind product testers broke into broad smiles, shared laughter, and exchanged hugs with their instructors and HumanWare and ODHH staff.

American Sign Language

For many people who are DeafBlind, ASL is their first language. Those who are completely without sight understand ASL by touching letters and words in the hands of another person who knows ASL. They need an interpreter who can sign ASL to have conversations with hearing people.

It is financially and otherwise impractical for most to have the much-in-demand services of a qualified interpreter around the clock. The designers at HumanWare noted that while the DBC cannot take the place of an interpreter, it does open doors to direct accessibility to banking, restaurants, and other amenities that hearing-sighted people enjoy. It can strengthen family bonds and friendships as communication opportunities widen with those not proficient in ASL.

How it works

In phone communications the device converts calls relayed through an operator into Braille characters.

In face-to-face meetings, a recorded spoken greeting explains that the user is DeafBlind. It gives the sighted

person instructions to type on a standard keyboard. Their words will appear on a screen in Braille for the blind user to read. The DeafBlind reply using their choice of Braille or standard keyboard and the message is displayed in words on a screen for the hearing-sighted person to read.

When interviewed after test-run encounters where a DeafBlind person approached hearing-sighted people with the device seeking directions, some people said they were startled at first by the device, but all said they understood how to use it immediately.

Would you like fries with that?

With no buttons to press and widespread familiarity with keyboards in random tests, most people said they had no difficulty operating the device. All who participated said they "felt good" about the interaction. None had had any kind of contact with a DeafBlind person before and all reported that they would stop again if approached by a person with a DBC.

At one fast food restaurant the employee taking orders was confused when the device was put on the counter. He quickly called co-workers over and soon all wanted to take a turn at "talking" to the woman and wanted to take her order. This is a marked difference with other situations where the DeafBlind person only has a card with written words to

present to a counter person and little possibility of interaction.

Essential to independence, employment

The cost of the equipment to DSHS clients is, as with other telecommunication devices, on a sliding scale based on income. Access to assistive technology for those who require it is far more than a convenience; it can be an essential to independence and employment opportunities for our clients.

Funding of the project stems from a telephone tax placed on telephone land-lines. The price per device has not been finalized. It is estimated that most low-income DeafBlind clients will not have to pay anything out of pocket to obtain a DBC and all will get training to use the technology.

A voice heard and a promise kept

The delivery of the new telecommunication device when it is released in the spring will fulfill a promise kept by the DSHS Office of Deaf and Hard of Hearing (ODHH) to their DeafBlind clients.

For people who are DeafBlind, a device that allows for outreach with the entire community adds to a better quality of life. For the sighted-hearing population, it offers the

opportunity to interact with a vital group of people who have been isolated from the greater world far too long. With the aid of fresh technology and communities that embrace diversity, the DeafBlind will be a tool that will give them a voice in the mainstream.