

Expandable HP iPAQ Pocket PC provides flexibility for software developer



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On some days, most of us could benefit from friendly prompts to remind us of important tasks. For people with cognitive disabilities, however, these prompts can be essential for independence.

Developing and providing these reminder tools is 4M Automation of Cincinnati, Ohio, a six-employee software development company specializing in mobile computing, handheld devices and developing applications focusing on mobile commerce for businesses.

Expanding on its core business and partnering with several organizations, 4M has developed Kiwi, a software application — named for the adaptive Kiwi bird — that runs on the HP iPAQ Pocket PC. The Kiwi program includes life skills management modules that deliver task prompts to help people who have cognitive disabilities.

Technology enhances job performance, satisfaction

One of 4M's projects is with Cincinnati Children's Hospital, helping hospital employees who have cognitive disabilities. The majority of the 17 employee participants using the iPAQ Pocket PC and Kiwi software have Down syndrome or cerebral palsy. A grant from Mitsubishi Electronics of America is funding the project.

"The program is a job-performance enhancement tool and includes a calendar," says Tim DeMarks, business development director of 4M Automation. "It gives employees in-process or on-demand job coaching, telling them how to do their jobs."



The job prompts can be delivered several different ways: with step-by-step instructions; with an overview map of the job and each task, tracking the sequence of events; and with audio, video or pictorial cues for job tasks.

One employee using the program has Down syndrome and has worked at the hospital for seven years, assembling surgical trays. She used to carry around a binder with her job instructions. Now she carries an iPAQ Pocket PC, which contains all the information she needs. She can check her schedule and look for new messages when she syncs to the hospital's server twice a day. Additionally, she can refer back to the job prompts if she has any questions while she's assembling trays.

"All of the participants are extremely excited about the iPAQ Pocket PC," says DeMarks. "They are using a fully multimedia-enabled networked Pocket PC. The cool and wow factor associated with the iPAQ has benefited them as well. It bolsters their self-esteem. It makes them happy. Hospital departments are noticing an improvement in the quality of work from these employees and an improvement in their job satisfaction."

While the Cincinnati Children's program is still in the research phase, DeMarks hopes it will eventually expand to about 70 employees.

Expanding to autism, with HP's help

In August 2003, DeMarks met Michael Takemura, director of the HP Accessibility Program Office. From that meeting, 4M launched an effort to help children with autism and autism-like Asperger syndrome.

"4M was developing a product for the iPAQ Pocket PC called Life Style Calendar," says Takemura. "At the same time, another company had contacted me about a similar product it was developing. It was obvious the two needed to meet."

With 4M's technical assistance, that company put together a grant application for a project that, if funded,



will provide a group of middle and high school students who have autism or Asperger syndrome with HP iPAQ Pocket PCs running the Kiwi program.

Why HP

Color resolution, brightness and screen size of the iPAQ Pocket PC help make the Kiwi program more appealing to users, says DeMarks. "We are using the HP iPAQ Pocket PC h2210 at Cincinnati Children's because we like the processor speed, the size of the unit and the fact that it has the integrated Compact Flash storage."

"Expandability is another key factor," says DeMarks. "We can put a scanner, a card reader and even up to five gigabytes of off-line, off-board memory on the iPAQ. That's plenty of memory, even if we have a fully video-enabled module. It's amazing. It also allows us to do Wi-Fi connectivity and wide area network wireless connectivity."

HP helps assistive technology companies

Through its Developer & Solution Partner program (DSPP) and Accessibility Program Office, HP has supported numerous assistive technology vendors such as 4M. That assistance can help independent software vendors, developers and system integrators create unique solutions for the broad spectrum of HP's platforms and operating systems.

"Of the large computer companies, I don't know any doing more than HP to support companies like ours that are focused on helping people with disabilities," DeMarks says. "That support has the potential to help small companies produce better solutions sooner than they might otherwise be able to do."

At a glance

Company: 4M Automation

Headquarters: Cincinnati, Ohio

Employees: 6

Telephone: 513-792-0045

Primary business: software development company specializing in mobile computing, handheld devices and developing specific applications focusing on mobile commerce for businesses. 4M Automation = Mobile Marketing, Merchandising, and Methodologies



Challenge

- Providing easy-to-learn, easy-to-manage adaptive accessibility tools for people with disabilities
- Expanding business into the accessibility market

Solution

- Kiwi software modules
- HP iPAQ Pocket PC

Results

- Fine-tuned software package that can be used by people with cognitive disabilities
- Expansion of 4M's core business and development of new projects

For more information on how working with HP can benefit you, contact your local HP service representative, or visit us through the Internet at our world wide web address:
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