



# New Products

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## EDITORS' INTRODUCTION

In this issue, we cover an application that will help the deaf communicate via mobile phones using American Sign Language. We also highlight a navigation application that uses 3D images to help people better orient maps to the environment. We cover a service that helps protect users' privacy from acquaintances and another that supports text messaging conferences. We also present a smart refrigerator, a smart shoe, and a book reader with a rollup display. Finally, we present a wireless hard disk that stores audio/video files and lets you access them from a variety of entertainment devices. Please continue to send pointers to upcoming products with exciting possibilities, your feedback on existing products, and your personal experiences with them (your name will be included with your review). Email us at [pvcproducts@computer.org](mailto:pvcproducts@computer.org).

—Eyal de Lara and Maria Ebling

## APPLICATIONS

### MOBILE SIGNING FOR THE DEAF

The MobileASL project at the University of Washington is developing software that will enable people who are deaf or hard-of-hearing to use their mobile phones to communicate using American Sign Language. The system has the potential to benefit more than one million users in the United States alone. Although modern mobile phones and PDAs are equipped with large screens and high-resolution cameras, the mobile phone network's low bandwidth has so far made it impossible to transmit video with the quality required



Figure 1. The MobileASL project enables people who are deaf to communicate using American Sign Language via mobile phone.

for intelligible ASL. The MobileASL project is developing a new video encoder that exploits the visual nature of sign language. The encoder is designed to track hand, arm, and face movements and encodes the signer's face at a higher quality than the rest of the image to capture subtle but meaningful movements (see figure 1). In addition, the encoder uses a lower frame rate, opting to display fewer but better-quality frames every second.

### 3D GPS NAVIGATION

One of the main factors that complicates following GPS directions while driving is the 2D nature of the maps that existing navigation systems present. UK-based 3Dlabs recently demonstrated a next-generation portable navigation device that provides high-fidelity 3D detail and texture to create lifelike renderings of the location you're looking for (see figure 2). The 3D navigation system provides users with a more realistic representation of their environment including landmarks, landscapes, and individual buildings. The 3D GPS navigation unit is based on the 3Dlabs DMS-02 media processor, which accelerates GPS lock acquisition time and enhances tracking accuracy. The DMS-02 incorporates 24 floating-point processing elements, dual ARM (Advanced



Figure 2. 3Dlabs' next-generation portable navigation device provides lifelike 3D renderings of GPS directions.

RISC Machine) 926EJ cores, and three bidirectional video stream ports. It also includes peripheral interfaces to LCDs, IDE disks, USB devices, flash memory, and audio digital-to-analog converters, among others.

## SERVICES

### ANONYMOUS CELL PHONE NUMBERS

When it comes to your cell phone number, Jangl lets you be anonymous. To share your "number" with an acquaintance, you give out your Jangl ID rather than your real cell phone number. When your acquaintance wants to reach you, he or she uses your Jangl ID to get a number, and you get a number where you can reach them. These fake numbers (or "Jangl numbers") look like normal telephone numbers, but they aren't your actual number. You have complete control over incoming calls, and your outgoing calls look like they're coming from your Jangl number. So, in the event that your acquaintance turns out to be a creep, your privacy is protected. For more details, see [www.jangl.com](http://www.jangl.com).

### SUPPORTING TEXT MESSAGING CONFERENCES

3jam ([www.3jam.com](http://www.3jam.com)) supports text

## NEW PRODUCTS



Figure 3. Whirlpool's centralpark Connection refrigerator will feature an interchangeable interface where you can plug in such devices as MP3 or DVD players or digital photo albums.

messaging conferences among a group of friends or colleagues. The service itself is free, but each message you send or receive counts as one text message as far as your cellular service provider is concerned (even if 3jam then sends that message to five of your friends). You can use a control vocabulary to add friends to a jam, drop out of a jam, end a jam, and the like. 3jam seems to be a simple, logical way to coordinate activities among a group of people.

#### DEVICES

##### SMART FRIDGE SUPPORTS FAMILY COMMUNICATIONS

The refrigerator has long been the center of family communication. People attach everything from phone messages to calendars to children's art to this cen-

tral appliance. Whirlpool recently announced the latest advance in refrigerators: the centralpark Connection (see figure 3). Expected to be available later this year, this fridge will feature an interchangeable interface that lets you pop in a DVD player, a CD player, a digital photo album, or an MP3 player as well as a Web tablet, message board, and digital calendar. The centralpark Connection could turn the refrigerator into the focal point of kitchen entertainment.

##### SMART SHOES HELP FAMILY CAREGIVERS

GTXC unveiled the latest in location-tracking apparel at the World Shoe Association Trade Show in February. Called the Explorer, this shoe contains the latest in embedded GPS technology (see figure 4). Caretakers can monitor their



Figure 4. The GTXC Explorer "smart shoe" uses GPS technology to let caretakers monitor their charges' whereabouts.

charges' whereabouts using an innovative "set it and forget it" Dual-GeoFencing feature. Caretakers preset the perimeters of safe and unsafe zones and receive cell phone alerts if the wearer breaches a perimeter. Although not a shoe for the masses or privacy zealots, the Explorer will likely be an indispensable tool for people who must care for an Alzheimer's patient because it's embedded in a piece of everyday clothing. Although the embedded technology is available, GTXC is still negotiating with manufacturers and hopes to see shoes containing this technology commercially available later this year. GTXC expects to have an external self-contained device available in the same price range even sooner. One could argue that, having woven a critical tool for caretakers invisibly into the fabric of everyday life, GTXC has achieved Mark Weiser's goal of invisible computing.

##### BOOK READER WITH ROLLABLE DISPLAY

Polymer Vision's RADIUS is the first commercially available mobile device to incorporate a rollable display that's larger than the device itself (see figure 5). The 5" diagonal display (which has a 4:3 aspect ratio) is mounted on top of a rigid surface but has hinges that bend to let it wrap around the device. This compact form factor is similar to those of existing smart phones. RADIUS displays 16 scales of grey at a quarter VGA resolution with high contrast and high reflectivity for a paper-like reading experience,




**Figure 5.** Polymer Vision's Redius book reader incorporates a rollable display that's larger than the device itself.

even in bright sunlight. Redius provides 4 Gbytes of storage capacity and supports RSS feeds, PDFs, e-books, email, and other text files. Users can download content over USB or a broadband mobile phone connection. The device sports an impressive 10-day battery life. Telecom Italy plans to introduce the Redius in Europe sometime in 2007.

## COMPONENTS

### DIGITAL AUDIO VIDEO EXPERIENCE

Seagate recently introduced a wireless hard disk drive called Digital Audio Video Experience. DAVE uses a Bluetooth or Wi-Fi connection to provide access to digital files from other wireless-enabled devices, such as cell phones or laptops. It stores 10 to 20 Gbytes of data. Its footprint is the size of a credit card and it weighs only 2.5 ounces, but it's approximately half an inch thick. Its battery provides 10 hours of active use with about 14 days of standby time. It can communicate to devices up to 30 feet away. DAVE allows interesting possibilities, from having all audio/video files stored on a single device that permits access from any handy entertainment device to facilitating upgrades from one mobile phone to another. Furthermore, according to the product press release, the mobile storage platform is open source. Seagate expects it to be available in Q2 2007 to mobile phone manufacturers and telecommunication companies. 

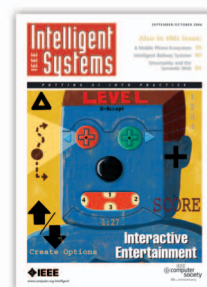
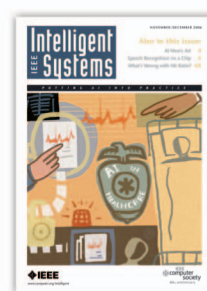
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