APPLICATIONS

END OF VOICEMAIL?

Interest is growing in a service Spin-Vox offers in the UK that converts voicemail messages into text and email messages. This frees users from having to navigate their way through voice messaging systems, straining to listen to voice messages in noisy environments, or replaying the same message multiple times to hear important details. The key to such a service is the voice-to-text translation’s quality; from various reports, it appears that Spin-Vox’s service does a reasonable job. Moreover, each text message includes a tag that makes it simpler to access the original voice message. The SpinVox service works with landlines as well. In the US, AdmiralOne offers a similar service called Dictomail.

FAMILY TRACKING

uLocate Communications offers a family finder service that uses the GPS chipset included in newer mobile phones. You can view the locations of family members on the Web or on a handset, view a map of your location on your handset, receive alerts when family members arrive at or depart from specific locations, or review the locations they visit during a specified time frame. The service is based on a small Java application that runs on the phone. It reads the GPS information and transmits the latitude and longitude information every two minutes to uLocate servers. The servers transmit this location information only while the phone is idle and its power is on. The application also makes this information available to software running on the phone. The service works with select Motorola phone models on Nextel’s and Southern LINC’s networks.

BEEP … BEEP … SCORE!

In this year’s under-17 world championship games, FIFA (Fédération Internationale de Football Association) plans to test a soccer ball designed to wirelessly signal the referees when the ball crosses a goal line. When it crosses a goal line, the ball sends a signal to a watchlike device the referees wear, which then vibrates or beeps. The ball was made in part by Adidas. We wonder whether this test is just the first step toward intensive automatic monitoring of sport games.

MULTIMEDIA MESSENGER TERMINAL

Sanyo has licensed the IXI Mobile OS for a planned set of application-specific devices that use a mobile phone or network device as a bridge to the Internet. The first device, called the WiPoQ, is a pocket-sized multimedia messenger terminal approximately 16 mm thick (see Figure 1). It offers a large screen (Sanyo hasn’t released the size), qwerty keyboard, and Bluetooth radio. The WiPoQ will provide such applications as short message service, email with attachments, Web browsing, and calendar. Coupling the device with a Bluetooth-enabled mobile phone or access point provides Internet access. While a similar device, the Ogo, was brought to market last year by IXI Mobile and AT&T Wireless, the WiPoQ won’t have an integrated GSM/General Packet Radio Service radio. Therefore, it’s smaller and more readily integrates with the mobile phones many people have.
continuously carry. Sanyo plans to release the WIPOQ in Europe in the third quarter of 2005; they don’t have plans yet for a US release. Future products include a media player and a TV.

**BLUETOOTH MOTION CAMERA**

Sony Ericsson has introduced a Bluetooth camera that users can control wirelessly using a phone’s keypad or a joystick. The Mobile Cam ROB-1 (see Figure 2) has three wheels and can move forward and backward and pivot on the spot. The camera can tilt up 70 degrees and down 20 degrees, and it can take pictures in the dark with the aid of an included light mounted on the front of the device. It streams the video back to the phone’s display, letting the user see exactly what’s in the camera’s field of view. Users capture the images on the phone in the same way that they’d take a normal picture. They can also store images in the device’s onboard memory for later transfer to the phone or to a PC via the supplied USB cable. The device can rove up to 50 meters from the user. It can travel up to 0.2 meters per second. It’s based on a 200-MHz ARM-9 Dragonball processor and has a VGA resolution camera and 2 Mbytes of RAM. The Motion Cam ROB-1 will be available in the third quarter of 2005. Unfortunately, it’s 11 cm in diameter, weighs 2.2 lbs, and thus seems ill suited to pervasive applications.

**PHONE WITH SEVEN-MEGAPIXEL CAMERA**

Samsung has announced a mobile phone with a seven-megapixel camera—the first such phone, according to Samsung. The camera included in the SCH-V770 (see Figure 3) offers capabilities found in only the more expensive digital cameras, including aperture-priority, shutter-priority, and full-manual modes and a flash that’s much more advanced than the typical low-luminosity flash found in today’s camera phones. It offers a minimum shutter speed of 1/2000th of a second, $3 \times$
optical and 5 × digital zoom, and add-on lenses. The two-inch phone display is a 16-million color QVGA thin film diode LCD and can record 320 × 240 video in QVGA resolutions at 15 to 30 frames per second. The phone also includes an MP3 player and a TV output. It’s initially planned for code division multiple access networks in the Far East. The camera has 32 Mbytes of RAM and a multimedia card micro memory slot. It measures 12.7 × 5.2 × 2.7 cm and weighs 180 g. Given the camera’s pixel count, we’re surprised Samsung didn’t incorporate a micro drive.

**DETAChABLE DISPLAY**

Toshiba has developed a prototype notebook computer with a display that users can detach from the base and still use as if it were attached (see Figure 4). When detached from the base, the stylus-operated touch screen can interact with the software running on the base. User inputs and screen updates are sent over a wireless connection and processed in real time. The prototype, shown at the CeBIT trade show in March 2005, had a 12-inch thin-film transistor LCD screen and used an 802.11b radio to connect the base and display. The display, when detached, is 18 mm thick, weighs approximately 500 g, and has a battery life of approximately one hour. Toshiba anticipates bringing a product version to market within three years.

**WIFI INTEGRATION**

Signaling the continuing integration of WiFi into consumer products, Kodak introduced the Easyshare-One earlier this year. It’s a digital four-megapixel camera with a novel feature: you can add a secure digital I/O WiFi card to it, which lets you upload photos to the Web, send them by email, or display on your camera photos that are stored on the Ofoto Web site. The camera includes 256 Mbytes of RAM built in and has wireless-specific and general-purpose secure digital slots so you can use a secure digital memory card and the WiFi card at the same time.

**COMPONENTS**

**MICRO DRIVE**

Toshiba has announced that they’ve begun shipping their two-Gbyte, 0.85-inch hard drive (see Figure 5), which they’re targeting at mobile applications such as phones. The two-Gbyte drive weighs under 10g, spins at 2,600 revolutions per minute, contains a single platter, and runs off three volts. It can tolerate an operating shock of 1,000 g and twice that amount if it’s not operating. Toshiba also announced that they’ll ship a four-Gbyte version by mid-year. The four-Gbyte model will include a second platter. The two-Gbyte model measures 3.2 × 2.4 × 0.3 cm, while the four-Gbyte model will be 0.5 cm thick.

**PERVASIVE SOUND**

S3i Sound offers novel technology that can turn a hard, flat surface into a speaker. The Omnivox and Whispering Window products are based on a material called...
Terfenol-D, which a number of companies developed for the US Navy for use in sonar applications and has since been declassified. The Omnivox mobile sound system (see Figure 6) is based on a device the size of a hockey puck that can produce up to 80 decibels of sound, reproducing sound from 200 Hz to 16 KHz. Users can connect it to laptops, projectors, CD players, and so on. The Whispering Windows product evenly distributes sound across any solid surface, such as a large plate-glass window. It comprises two transducers that easily bond to a surface (such as a pane of glass) and a specialized amplifier, which can be driven from any sound source. The transducers are chrome finished and about the size of a hockey puck.

Figure 6. S3i Sound’s Omnivox mobile sound system.