I can pull up by the curb
I can make it on the road
Goin' mobile
I can stop in any street
And talk with people that we meet
Goin' mobile
Keep me movin'
—The Who

Goin' Mobile

Leverage wireless infrastructure for instant training, performance improvement.

By Diane Gayeski

You may remember those prophetic lyrics from the 1971 hit "Goin' Mobile" by The Who. Or perhaps you only remember the 1970s from your high school history class. Either way, workplace learning and performance professionals need to pay attention to the mobile communications environment that's quickly enveloping our work and personal lives. Why? Because it presents a built-in infrastructure for providing training, mentoring, and job aids that are appealingly quick and amazingly inexpensive. More important, it's the channel of choice for some key audiences: executives, customer-facing employees, and young people en-

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tering the workforce. Although our need for speed has increased dramatically since The Who sang those words decades ago, the message rings even more true today.

What's in the mobile environment?

The mobile environment consists of three elements:

- wireless transmission systems, such as Wi-Fi and Bluetooth, that broadcast data
- mobile products, such as personal digital assistants, cell phones, and portable computers
- applications that run on mobile products, such as audio files, Internet, and email.

Many organizations have deployed wireless computer networks, allowing their employees to connect to the Internet via laptops and handheld organizers, regardless of their location in the building. In fact, current research indicates that two-thirds of Global 2000 companies—the world's largest companies, as listed by *Forbes* magazine—will launch a mobile data initiative by the end of 2004. To accommodate that market surge, many laptop and handheld computers now come equipped with wireless network reception capabilities that allow users to connect to the virtual world without a phone or high-speed data line.

What's more, you can find wireless "hot spots"—places that allow you to connect to the Internet wirelessly—in an increasing number of locales: airports, coffee houses, hotels, and other locations buzzing with people. Even the Ithaca Yacht Club now has wireless access so that members can conduct business while sitting at the edge of beautiful Lake Cayuga.

The capabilities of the wireless world extend well beyond chatting with friends and surfing the Web; they present significant growth opportunities for the WLP industry. The following five mobile applications hold particular promise for performance improvement:

- mobile needs analysis tools
- real-time, unplugged executive information systems
- portable training and performance support opportunities
- customer-enabling technologies
- location-tracking devices.

All of those high-speed applications enhance business productivity by unburdening employees and helping them to work smarter, not harder.

Mobile needs analysis tools

Picture this: You're conducting a training needs analysis at a manufacturing plant. You interview super-

visors; take a tour of the factory floor; and talk to technicians. All of a sudden, a machine breaks and your interviews come to a screeching halt. Everybody panics while the chief maintenance engineer performs a critical repair. This tool is one of six that the company recently purchased. Speculation arises as to whether the other five will fail. Managers begin to shake with fear because no one except that particular chief maintenance engineer knows how to handle the situation.

How can mobile technologies come to your rescue? If equipped with a mobile digital device, you could capture the analysis interviews and, more important, the critical repair process. The market is full of small, but powerful, PDAs with digital cameras and audio plug-ins that can record interviews and other audio. You could take notes, quickly assemble a job aid that documented the repair, and wirelessly post it to a Website. *Voila!* A workplace performance aid created onsite, with equipment that costs less than US$500.

Executive information systems

While management information systems and online communication tools offer timely data to managers, they also contribute to the unfortunate trend of managers being trapped behind their desks deluged with emails and other online reports—a situation that often decreases supervisory effectiveness by impeding contact with subordinates and customers.

Mobile devices, however, can deliver the same email, revenue and productivity statistics, inventory status reports, and forecasting data that employees receive via their desktops. For example, customer service champions at the casinos run by the Ontario Lottery and Gaming Corporation carry handheld computers that allow them to instantaneously capture examples of excellent customer service. When a customer indicates that he or she has experienced excellent service, the champion immediately documents the good idea and enters the name of the commended staff person into a database. That action ensures that the good idea gets disseminated among other staffers and that the particular staff member receives due recognition.

Other leading casino resorts, such as The Aladdin Hotel, New York New York, the Carson Valley Inn, the Clarion Hotel and Casino, and Mystic Lake, use wireless handheld computers and tracking systems to allow employees to move freely around the casino while still maintaining access to a wealth of information on guests and gaming machines. That portable and immediate information enhances the ability of service employees to focus on customer needs and to appear more confident, knowledgeable, and informed, which in turn enhances customer satisfaction and loyalty.

By having instant access to key business data, executives and first-line supervisors can make better and faster decisions. Moreover, they have more time to complete important work.

Mobile Training in Action

Becton, Dickinson and Company, a medical technology company in Franklin Lakes, New Jersey, has adopted a unique, blended-learning approach for its U.S. sales consultants: It uses handheld personal digital assistants as a training delivery platform.

"Each of the BD sales consultants has a Palm Pilot, so it became a no-brainier to use this platform to deliver training," says Thomas Chabra, senior business partner and Palm application developer for the BD College of Sales.

The real advantage of the Palm platform is that the sales consultants carry their Palm Pilots with them everywhere. They already know how to use the device, so BD just took advantage of that and put training programs on the handheld device. The sales consultants appreciate the convenience and portability—especially the ability to review a training program or look up reference materials while taking advantage of some down time.

The BD College of Sales develops the Palm applications internally using NSBasic/Palm, a Windows-based development tool that allows anyone with basic programming skills to develop rich and interactive programs. The Palm applications are small enough that they can be downloaded from The BD College of Sales Website or sent out to the sales consultants via email.

"The Palm platform has allowed us to reach out to our U.S. sales consultants with a powerful, yet easy to use blended-learning solution," says Chabra. "We are looking to build on our success in the coming year."

Slick? Mobile devices are slick in terms of business value. Instant performance aids produced and distributed on low-cost hardware easily show striking return-on-investment.

Portable training opportunities

Almost every industry is increasing its use of computer-based training. However, finding the time to install computers and the space to create quiet areas for study are persistent problems. To compensate, organizations are moving away from long courses and moving toward short, performance-oriented learning bytes that employees can access when they need it most. Handheld computers can display training in short, interactive tutorial sequences. Performance-improvement personnel easily can deploy and update those relatively inexpensive tutorials. Several training vendors have released courses formatted for handheld PCs, and some factories already use wireless technology to distribute short video clips that demonstrate best-known practices. By having the video available right at the job, it's easy for employees to mimic effective, efficient, and proven behaviors—thereby, enhancing service and increasing productivity.

A recent example of this increased service and productivity comes from a cleaning crew worker in a large office building. The worker found a damaged air conditioner, used her cellular phone to capture the problem with a digital photo, and transmitted the image to the maintenance department. Almost immediately, an engineer was dispatched. He used his handheld PC to access the repair manual, eliminating the need to find and carry a paper-based manual. In a matter of minutes—not hours, days, or weeks—the problem was solved.

Another powerful example: At The BOC Group—an international global gas company—the service technicians use wearable computers. Outfitted with wrist-mounted keyboards and head-mounted displays, they move among buildings and locations to fix equipment. Sensors monitor gas line activities and provide immediate feedback to the central databases. The wearable computers provide continual visual feedback, and the mobile technicians can observe and resolve problems with their hands free to do the work. The online technical information system enables employees to find and view a user guide, repair manual, or other operational information necessary to complete the job quickly. Further proof of the value of this mobile technology: The plants using this system have achieved double-digit productivity increases.

But the bottom line needn't be the only positive repercussion from the surge in mobile technologies. Mobile devices also enhance communication. In many large companies, it's impossible for operations executives to communicate with their entire staffs on a regular basis, despite numerous research reports that show that frequent and specific communication and feedback from management improves employee performance and lowers turnover rates. With the appropriate mobile technology, an executive can create a daily message that provides specific data, feedback,

and goals to motivate and coach staff. Employees receive those text, audio, or video messages via their cell phones or PDAs. Even employees who don't have office computers can receive this information in a timely fashion, without interrupting their work.

Organizations with multilingual staff and customers also benefit from multimedia devices. Employees can receive and send information pictorially and in several different languages. The U.S. Department of Defense, for example, uses handheld computers with voice recognition software that can understand and translate a variety of common phrases in many languages. The user types or speaks a response, which is then translated and spoken through voice synthesis.

Customer-enabling technologies

Many industries increase their productivity by turning over tasks previously conducted by employees to their customers. For instance, several hotel properties use self-service check-in kiosks or wireless laptop computers. In some hotels and casinos, guests receive a personal digital assistant when they check in. The wireless devise is loaded with gaming activities, special offers, room service menu items, a reservation system for spa and restaurant services, and information on local attractions. Initial trials have shown that those devices increase the average bill, partly because of the novelty effect, but also because they enable impulse buying.

This advanced technology is even more prevalent outside of the United States. Several hotels in Singapore provide guests with an interactive system called Traveler on the Move. Tourists using TOM can access maps, estimate distance and taxi fares, book theater and sporting tickets, and calculate currency exchanges—something that clearly reduces the need for staff and staff training.

Location tracking devices

In the past several years, there's been a surge in the use of global positioning system devices. New cars boast systems that can get a lost and weary traveler back on track, and cell phones now come equipped with GPSs that allow emergency operators to pinpoint the location of a user who dials 911. That same technology can work in the corporate world by tracking customers, property, and employees.

The trucking industry, for example, widely uses GPS devices. Conklin, New York-based Maines Paper & Food Service installed an onboard GPS computer system in all five of its Northeast distribution centers. The drivers' computers have touch screen interfaces that provide a simple way for them to record delivery and duty information. The system delivers constant information about the drivers' speed and expected arrival times. It also allows the drivers to send and receive text messages from the dispatch clerks. Thanks to that instantaneous information, Maines's personnel no longer need to call each customer on a particular route to find a driver—something that inconvenienced the customer and often caused unnecessary worry.

Other location-tracking devices, such as radio-frequency ID tags, can be placed on inventory to prevent theft and increase the speed of locating items such as office furniture, tools, raw materials, and audio-visual equipment.

How to start

The great thing about "goin' mobile" is that the devices and software are relatively inexpensive and easy to use. You can create a simple manual or job aid using standard word processing and slide software. WLP professionals just need to convert those files to a standard file format, such as Adobe Acrobat—which has a freely downloadable viewer for handheld PCs. If you can plug a microphone into the audio in jack on your computer and talk, you can create audio files to attach to email messages.

Slick? Not in terms of production values. But mobile devices are slick in terms of business value. Instant performance aids produced and distributed on low-cost hardware that leverage existing networks easily show striking return-on-investment figures.

Those with a background in instructional design already know the value of the well-known design models. Without abandoning those great ideas, here's another model: the Dick Tracy model of performance improvement. Strap on that wrist computer, digital camera, audio recorder, and cell phone—and get to work! TD

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