



A More Compact Solution

PROGRESS IS BEING REPORTED TO DEVELOP MORE CAPABLE MOBILE DEVICES FOR DoD LEARNING.

**By Kenya McCullum, MT2
CORRESPONDENT,
MCCULLUMK@KMIMEDIAGROUP.COM**

Handheld devices can be a compact solution to the enormous job of training servicemen and women, and giving them access to all of the information they need to successfully complete missions. But in order to do that, the military must find the right products.

The 82nd Training Wing at Sheppard Air Force Base is currently working on a learning project called an advanced learning technology demonstration in order to leverage the convenience of handheld technology and find the best operating systems—for netbooks, smart phones, and MP3 players—that will allow them to easily get content into students' hands.

“The advanced learning technology demonstration is one in a series of demonstrations that we hope will lead us

into a fully-integrated and blended learning environment,” said Major Paul Abair, deputy director of Operations, 82nd Training Wing, at Sheppard AFB. “Using a mobile device gives us a lot more utility, where we can actually bring that device out to a piece of equipment and work on it. There’s a lot of opportunity that we hope to take advantage of in the next year or two.”

The 82nd Training Wing is currently in phase one of the advanced learning technology demonstration, which entails comparing possible operating systems and hardware to ascertain which will best suit its training needs. In addition, the training wing is also repurposing its course materials during this phase, and according to Abair, this part of the project is scheduled to be completed in June.

Subsequently, the training wing will begin phase two of the demonstration, which will consist of developing content through student-centered, self-directed applications designed to immerse students in their class curriculums. Among the materials Sheppard wants students to have access to on handheld devices are Power Point presentations that instructors use during class and study guides that are given to trainees.

Through this extensive vetting process, Sheppard expects to find the hardware and software that will meet its requirements—although Abair admits that this will be a tall order.

“Mobile devices and mobile learning still have some significant challenges when you talk about technical training—the amount of encryption security and the robustness of the oper-

ating systems that are required—being utilized to its full capacity,” he said.

Likewise, the U.S. Army Research, Development, and Engineering Command (RDECOM) is exploring devices that will help it develop a ground soldier system. To that end, simulation experts are experimenting with different handheld devices that will best meet the Army’s training requirements. Although there are many applications and devices out there to choose from, Angel Rodriguez, division chief for Ground Simulation Environments at RDECOM, said that there are certain limitations to handheld devices that the Army must overcome, such as size, weight, and power restrictions. He added that the military is currently working to find devices that do not suffer from such limitations.

“The things that people come across when they use their cell phones with the applications are the same limitations we’re hitting also,” he said. “More experimentation is needed, but it’s very promising.”



Angel Rodriguez

angel.luis.rodriguez@us.army.mil



Handheld devices are being built to deliver training 24/7—anytime, anywhere. NGRAIN uses a ruggedized PDA for one application. [Photo Courtesy of NGRAIN]

LANGUAGE TRAINING HANDHELD SOLUTIONS

The VCommunicator Mobile 2.0 is a handheld device made by Vcom3D Inc. that gives soldiers access to the language and cultural information that they need to navigate their way through the Middle East. The military uses this product to train students on tactical words and phrases they should know when they are deployed, and is also used by soldiers when they are in theater and need to translate something on the fly. The product also can be customized to include the words that a soldier commonly uses and can be switched from one language to another. It also has a speech recognition component that allows users to say a word or tactical phrase and receive the translation instantly. In addition, the product is flexible enough to recognize variations of the same phrase.

“For example, I could say ‘open the hood,’ but I can also say ‘pop the hood.’ The engine actually has the flexibility and capability to understand synonyms and scramble words, so the way you say something doesn’t have to be exact,” said Ernie Bright, the company’s product manager.

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Ernie Bright

ernieb@vcom3d.com

The VCommunicator Mobile 2.0 also trains users on the non-verbal communication that accompanies the language, which is a huge part of communicating when deployed.

“A lot of people don’t understand that in the Middle East, gestures are extremely important during conversations,” said Matt Fair, Vcom3D’s vice president for Programs and Business Development.



Matt Fair

mattf@vcom3d.com

Similarly, Alelo Inc. manufactures a language and culture training platform for handheld devices called uKu, which the company has just begun rolling out for military use. Through the program, students have access to videos and cultural notes that explain the practices and norms that they will experience during missions in foreign countries.

The uKu also has applications for PCs, so trainees can begin working on modules in the classroom and continue their learning on the handheld counterpart outside of the classroom. For example, Lewis Johnson, Ph.D., president and chief scientist at Alelo, is working with the Marine Corps to decide on how to best use the product with its trainees. He said that the usage may look like this:



Lewis Johnson

ljohnson@alelo.com

“The way the Marine Corps envisions employing this is to start out with the initial training in computer labs at the base, and once the students have completed that, each Marine will be issued an iPod with the training content on it,” he said. “They can then continue practicing and proceed to mission rehearsal training exercises prior to deployment, and then they can take the iPods with them as an ongoing refresher.”



George Stone

gstone@alionscience.com

NGRAIN makes a virtual task trainer product that the military uses with PDAs for maintenance training and performance support. Through this software, which is widely used throughout the military services, students learn how to execute specific tasks by watching 3-D demonstrations

that illustrate the steps of how to fix specific pieces of equipment.

“Traditionally, students would have a manual of some sort that they’re referring to. With NGRAIN, there is a 3-D simulation that would be showing them just how to do the procedure that they’re about to do,” said Josie Sutcliffe, senior director of Marketing at NGRAIN.

This virtual task trainer, which NGRAIN released a new version of this January, also can help students familiarize themselves with their coursework before a class begins, as well as keep their skills fresh after the course has ended.

Another promising handheld device on the market is the electronic Collaboration Capabilities (eC2) program—which can be used with the iPod or iPod touch—developed by Alion, said George Stone, the company’s vice president, Program Management, and Modeling and Simulations senior scientist. The military is currently evaluating the product, which has the capability to be used by servicemembers for training, education, testing and experimentation. With eC2, videos and other media are used to portray and present live, virtual and constructive simulation 2-D and 3-D imagery, and other data during a training event. ★

For more information, contact MT2 Editor Marty Kauchak at martyk@kmmidiagroup.com or search our online archives for related stories at www.mt2-kmi.com.



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For more information, contact:

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Alelo, Inc. 12910 Culver Blvd., Suite J Los Angeles, California USA 90066 Tel: 1-310-574-7500