



Smart Phones Smart Soldiers

Connecting Soldiers to Digital Applications program aims to use smart phone technology as a training, teaching and warfighting tool.

By Angela Simental

The Army is developing new and is enhancing existing technology to facilitate the lives of Soldiers. Through the Connecting Soldiers to Digital Applications initiative, the Army wants to employ the use of everyday smart phone technology tools that can be used in-garrison, for administrative tasks, in education and, eventually, in combat operations.

The benefit is that Soldiers will have multiple functions consolidated into a very small commercial device that can be operated on the move and have a huge impact for the military in different environments, said Michael McCarthy, director of operations of the Future Force Integration Directorate, Fort Bliss, Texas.

“We want to make sure that wherever that Soldier is in the world, he or she has the ability to continually learn and access training and information that make them more effective Soldiers,” he said.

Master Sgt. Jesus Medina of FFID’s training evaluation division said that as an NCO, having instant access to “technical manuals as well as Army regulations comes in handy when there isn’t a computer available.”

“Many times, there are things NCOs might not know, and having the ability to use Google or use any other search engine gives us the immediate knowledge we need,” Medina said.

The program started in September 2009 as the brainchild of Lt. Gen. Michael Vane, director of the Army Capabilities Integration Center, Fort Monroe, Va. Vane challenged his team to “put the Army in your pocket” and leverage social media.

The initiative, which is presently nearing the end of its first phase, became a combined effort by the U.S. Doctrine Command Analysis Center, Fort Leavenworth, Kan., and ARCIC.

“CSDA it’s all about trying to use commercial technology such as smart phones. Phones have become more than communication devices – they are almost like a computer, and they could become an electronic warfare device,” Vane said. “Perhaps these digital devices will become part of every Soldier’s kit.”

The program currently consists of nine pilots (two of them at Fort Bliss) that began this summer, McCarthy said. “We started a year ago to identify these pilots because we wanted to understand if [smart phone technology] worked or not. Phones can improve the way Soldiers communicate and train as well as enhance their knowledge and understanding.”

There are still many issues that need to be solved and many questions that need to be answered about the use of smart phone technology in the military as the program advances to its second phase in December, McCarthy said.

“We are looking at the phones, the applications that run in the phones and security,” McCarthy said. “How do we protect the information? How do we control phones when they are lost or stolen? We are also looking at the transport lanes. In a city, there is great cell phone coverage, but if you go out to the training areas or Afghanistan – how do we establish a Wi-Fi or cell network that will allow us to operate until some of the systems that are under development come? We are also looking at battery technology and thinking about the Soldiers’ load.”

Command Sgt. Maj. Patrick J. Laidlaw, command sergeant major of ARCIC, said he is optimistic about finding the answers to issues the pilot program presents.

“I believe [challenges] can be overcome or adapted into the program as it matures. We will learn how these devices can be incorporated into our systems and how they could be leveraged to make Soldiers more effective and efficient in their day-to-day missions or tasks,” he said.

This summer, during the first phase of testing, the Army’s Evaluation Task Force, 5th Brigade Combat Team, 1st Armored Division, tested 192 phones, including Google Android phones, BlackBerry phones, Samsung Moment, Apple’s iPhone, HTC Touch Pro II and the Palm Treo Pro.

“Soldiers’ feedback is most important to us,” Laidlaw said. “[Phones] are tested for safety, functionality and utility as well as cost savings. Soldiers provide feedback while equipment is in its train, educate and test phases. AETF does this by going to the field and putting these devices and software in realistic situations. The method of gaining Soldiers’ feedback comes from myriad formats, both written and oral observation reports from testers as well as the developers.”

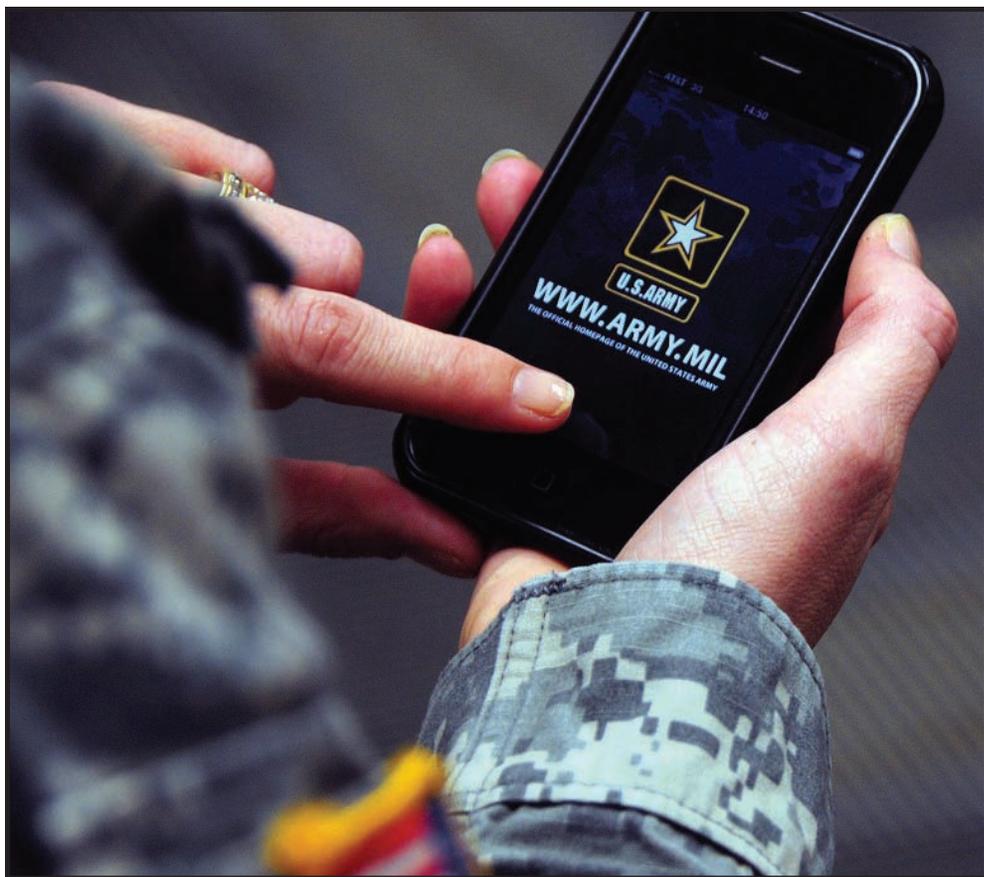
Laidlaw added that Soldiers who tested the phones during Phase 1 were able to write better field observations spot reports. “They are getting more information ingrained,” he said.

Spc. Michael Torrez, who tested the Samsung Moment, said using smart phone technology can be useful to access information. But, there are still many issues.

“It is hard to get any signal in the training range. But, if it worked, I think it could be a great tool for us to use,” he said.

Sgt. Andrew Yoder, who tested the same phone, said the ability to access things, such as field manuals, and being able to communicate with his unit could prove very useful in the field.

The second phase, which begins evaluation Dec. 10, will examine the effectiveness of smart phone technology and phone applications in the operational environment. The goal is to eventually integrate this technology with tactical radios and battle command systems, but it is yet to be determined how, McCarthy



This illustration shows the Army iPhone application. ThArmy iPhone app is a free app that keeps Soldiers updated on the latest news, and connected to the Army Flickr account, Army Live Blog and other social media sites. It can be downloaded from iTunes.

said.

Phase 2 will concentrate on apps that enhance situational awareness – being able to locate adjacent forces and give Soldiers information on the enemy. It is projected that Soldiers downrange will be able to use apps for peer-to-peer conversations or for individual or collective training.

“We want to make sure that the applications perform the way they are supposed to,” said Command Sgt. Maj. Antonio Dunston, 5th BCT, 1st Armored Division, command sergeant major, who is in charge of validating the training.

The apps being tested will allow any Soldier to use their smart phone to do such things as track other Soldiers and send instant messages, he said.

“And, there is also a biometric app. If the Soldiers are in-theater at a checkpoint and they think there is a bad guy, they can take a picture and send it to a database. They will instantly know if he is a bad guy or not, as opposed to calling on the radio and transporting the suspect 20 miles. It saves a lot of time.”

Dunston explained that with these applications, NCOs will know exactly where their Soldiers are at all times, whether in-garrison or downrange.

“If your company is supposed to be at the motor pool, you would be able to say, ‘Hey, why are there three guys over at the PX?’” he explained.

CSDA is also testing language software that will allow Soldiers to communicate effectively with people who speak languages other than English.

“We are not talking about a ‘pick a phrase’ type of thing, but to be able to talk and ask questions,” McCarthy said. “One of the software packages we are looking into incorporates voice recognition technology – where you speak into the smart phone and it translates your phrase into another language. It speaks that phrase. We looked at languages such as Spanish, Russian, Arabic, Dari and Pashto, which are languages that are commonly spoken in the areas we are involved in.”

This software will also give Soldiers the ability to recognize important information or documents, facilitating their missions.

“In the past, when Soldiers went on patrol, they collected documents and had no idea what they said. They had to wait until they got back to a secure area and turn it over to people that could decipher it,” McCarthy explained. “With the technology today, I can read it [on the spot]. Maybe I’ll have a 75 percent translation, but that is enough to know if it is somebody’s grocery shopping list or something important. I can instantly send a picture and translation to someone who can analyze it further and tell me whom else I can talk to get more information. We have shortened that process.”

With this technology, CSDA also seeks to help Soldiers’ families by providing them with instant access to information at home.

“For example, the wife can use the phone if they are moving and she wants to know what the schools are like or what the living conditions in that area are,” Laidlaw said. “When they take the phones home, their family interacts with them. Now, apps add another dimension when building an Army team at work and at home.”

Laidlaw explained that because technology evolves at such a fast pace, the CSDA program is constantly changing and exploring new, up-to-date technology and applications.

“We see technology getting better every day, and the more a device can carry, the better,” he said. “Integrating this technology with the Soldier is a very powerful combination, but we need to constantly be adapting.”

Learning and training with apps

CSDA aims to create a persistent learning environment in which NCOs and Soldiers can train and learn even while waiting in line for coffee.

“We found we could reduce the time to train if we had the smart phones,” McCarthy said.

By using smart phones, Soldiers will not always have to be relocated or pulled out of their brigade to receive training because they can access their training material on their phones, he said.

Although apps are being created at the U.S. Army Signal Center, Fort Gordon, Ga., the Army is also looking for Soldiers’ input.

“For [creating apps], we certainly could use every Soldiers’ thoughts and ideas,” Laidlaw said. “The wisdom of the crowd clearly applies when it comes to digital applications on smart phones.”

In March, the Army launched a contest called “Apps for the Army” that asked Soldiers and Army civilians to submit mobile apps that would help or enhance the lives of Soldiers.

John Pedroza, an FFID civilian employee, submitted an application and was awarded an honorable mention at the Land War Net Conference in August.

Pedroza created a casualty-assistance application that helps families handle the loss of their Soldier. The application, which operates on all phone systems, provides information on collecting Social Security benefits and arranging funeral services.

There are many phone applications, some free, targeted at Soldiers that can be downloaded from sites such as iTunes and the Signal Center Web page as well as on the Army Training Network and the U.S. Army Combined Arms Center websites.

Laidlaw added that the applications being developed should support training, individually and collectively, in a “virtual, constructive and immersive environment.”

Eventually, the Army wants to open a website that is a one-stop shop where Soldiers can access the myriad apps available instead of having to visit multiple sites. More than 50 applications are currently being assessed for this site.

Soldiers in Initial Military Training are already being immersed in new technology with the Army Blue Book app, an introductory guide modeled on the Baron von Steuben’s original book that helps new Soldiers with their transition into the Army.

“Imagine you are a person wanting to know what the Army was like and the expectations of meeting your drill sergeant for the first time. With this app, you can get yourself mentally and physically prepared before you arrive at basic training,” Laidlaw said.

Using this app during Advanced Individual Training also helps Soldiers get familiar with their equipment and learn how it applies to their military occupational specialty.

Smart phone technology will also extend to the classroom

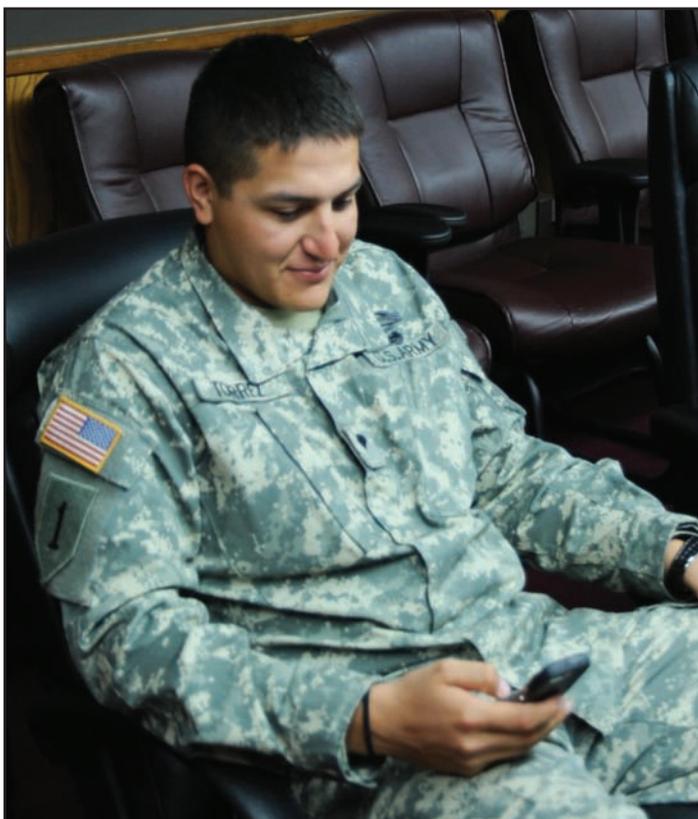


Photo by Angela Simental

Spc. Michael Torrez, who is part the Army Evaluation Task Force, tested the Samsung Moment during Phase 1 of the CSDA program.

next year with a pilot for the Advanced Leader Course.

“This will allow NCOs to take the 90-day [common core] course via their phone,” Laidlaw said. “It will be accessed through their personal phones.”

Laidlaw added that having Internet access available on cell phones will make it easier for Soldiers to search materials for their courses, study and retain information.

Generation gap

A new generation of technology-savvy Soldiers is coming into the Army, bringing a different approach to learning and training.

One of the challenges CSDA faces is whether all generations in the Army will be motivated to learn and train with a smart phone.

“This is far from when I was on active duty in the 1970s,” McCarthy said. “In 1995, it took us about three days to teach rudimentary computer skills. Five years ago, we were proud because we would get it done in one day. During an exercise here about two months ago, we gave Soldiers smart phones with three applications and 30 minutes of instruction. They went and used those three applications in an operational context and figured out how to track each other. Using Web-based applications is second nature to many young Soldiers. CSDA wants to take advantage of how they learn and communicate, and provide them with technology.”

“We are actually just catching up with this generation that has been doing this for some time,” Laidlaw said. “There is a dynamic we [older generations] don’t fully understand about social networking. We don’t spend that much time texting and using social networks [like Facebook and Twitter]. We don’t understand how much a young person today relies on texting.”

Laidlaw added that if the Army can provide communication to young Soldiers in an isolated forward operating base, for example, it can improve morale, welfare, trust and confidence at the small-unit level.

“If a young Soldier is operating in an isolated forward operating base, and he or she has been used to communicating with friends and family, imagine the effect when you take that way,” he said. “There are no newspapers being delivered to FOBs. There’s no TV. With these devices we can keep our Soldiers connected to their families and current on the culture, language and the environment he or she is operating in.”

The future

Although CSDA is still in its early stages, the program holds a lot of promise because it has the capacity to expand collaboration and provide instant, reliable communication.



Photo by Angela Simental

Command Sgt. Maj. Antonio Dunston checks messages on his BlackBerry phone. He is in charge of validating training Phase 2 for the CSDA program.

“Anytime you can enhance warfighters with something like this on the battlefield, it keeps them safer and provides them with a tool that can help them make informed decisions,” Dunston said. “I think this program is necessary, and it is coming at the right time. I would like to see it come to a point that Soldiers coming out of basic training could join their unit with their phone and get plugged directly into their units’ network.”

In time, CSDA wants to issue a smart phone to every Soldier.

“It could be when the Soldier comes to the Army at basic training, or before at the recruiter’s station or when the Soldier’s commissioned in the Army as an officer. There is a point somewhere where we have to figure out how we will do that,” Laidlaw said.

Future projects include providing Wi-Fi in barracks and classrooms to assist Soldiers in getting more training after duty hours.

“What lies ahead for the future of military apps is efficiency of use and increased speed by which an application can get things done for Soldiers and leaders in today’s complex warfighting environment,” Laidlaw said. 

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