

# Signal Center of Excellence Students using Quick Response Codes technology

By Bonnie Heater

The General Dynamics LandWarNet School at Fort Gordon is developing mobile training content which uses technology referred to as "Link Code" to train our Soldiers.

There are several different types of these codes, and "QR" or Quick Response code is the most popular now, according to Thomas Clark, LandWarNet School, General Dynamics, C4 Systems business manager.

"Quick Response codes are used with a mobile device such as a smart phone," said Clark. "The code can be placed on any flat surface and translates to a small amount of text such as web link. Instead of typing, you can scan a QR Code with the smart phone's camera. The link takes you to useful information about whatever it is you are working with.

"The code can be used in any situation to bring up information



on the spot," said Clark. "A QR Code on a piece of [military] equipment can link to a user's guide, maintenance manual, or howto video." This is particularly helpful to a deployed Soldier.

Quick Response codes can be read by using an application on the mobile device, called a barcode scanner. Normally, one can download the application in about a minute. "The application starts the camera, and then aims the camera at the QR code, and you get a link to where the information is stored," explained Clark. "In our case at the [LandWarNet] school it is on our training server."

At the schoolhouse Soldiers training in Military Occupation Specialties: 25S, Satellite Communications Systems Operator- Maintainer, and 25Q, Multichannel Transmission Systems Operator- Maintainers, are learning to use the AN/TSC-185 Satellite Transportable Terminal. They use a Motorola Zoom 10 inch Android 3.0 WiFi based tablet to read the QR Code on the AN//TSC-185 STT. This permits Soldiers to access learning modules, reference material such as technical manuals, maintenance and parts manual for the AN/TSC-185 Satellite Transportable Terminal at the school and anywhere they are deployed to.

This equipment gives Army Signal Corps Soldiers the means to send a signal from the AN/

TSC-185 SST at one location to a designated satellite in space and transmit the signal back to earth to another AN/TSC-185 SST located in different area. Since the AN/TSC-185 SST uses these applications: Command and Control Reachback and Range Extension at Unit level or high, voice, data, video, Everything over Internet Protocol and Voice-Over- Internet Protocol all forms of communications can be established in any combat area.

"The same modern communication technology used in civilian communities is now available to the Army in the field with this equipment," said Michael Wilson, an instructor at the Fort Gordon LandWarNet school. "The advantage to this system [AN-TSC-185 STT] is it's highly mobile. We can pick it up and take it to any combat situation.

"Our Soldiers are able to support Joint Network Node at brigade and division, battalion command post node at battalion, and WIN-T network with it," added Wilson.

Quick Response Codes, such as the one used on the AN/TSC-185 SST, allows the Army to obtain instant information and follow links. The modern-art-looking little box can store about the same amount of information as a Tweet, which is about 140 characters. It can be stored in the form of a web link, e-mail address, phone

number or Short Message Systems message, or typical business card contact information.

“A QR code stores its information in a pattern of small squares,” said Clark. “More information means a larger code with smaller squares that eventually becomes hard to decode.”

According to Clark there are several advantages to using QR Codes. “A QR Code attaches to the physical world- something you can lay your hands on, such as a satellite terminal or a router,” explained Clark. “The QR Code connects to the virtual world where you can learn more about the router. In a way, your equipment will talk to you if you can listen.”

What is needed to listen is an application. “We use barcode scanner apps that are easily found in Apple and Android app [application] markets,” continued Clark. “We use barcode scanner apps that are typically found on handheld websites.

“At the LandWarNet school we are currently using barcodes to give our students access to the cut-sheets used in configuring the WIN-T systems along with all reference materials to include videos or simulations products,” said the C4 Systems business manager. “We are even using the QR Codes on our business cards that contain all of our contact information, so just by scanning the QR Code it will download our contact information and then ask if you want it saved in your contact information.”

The use of such codes according to Clark is becoming more and more common in industry and we would expect the Army to follow.

“This code makes it easier to



**PFC Jonathan Fancher, a 25Q, Multichannel Transmission Systems Operator-Maintainer, uses the Motorola Zoom Android based tablet to read the Quick Response Code, on the AN/TSC-185 STT.**

access information without doing a search or typing in a long Uniform Resource Locator such as <http://www.boutell.com/newfaq/definitions/url.html>. The Army is moving towards a learner-centric environment where quick access to information is vital. Any tool such as the QR Code that enables the flow of information will quickly catch on.”

Although there are many advantages to using QR Codes there are also a few disadvantages to its use. One of the downfalls is you can't tell what it says, or even who put it there. “A spoofer can get you to click on a QR Code to a malicious link,” explained Clark. “The Soldier sees a harmless looking webpage that might actually be running

Internet exploits such as malware [which is a harmful software such as a computer virus or Trojans designed to cause damage or disruption to a computer system]. That why we stress to them how important it is to ensure the QR Code is coming from a trusted source.”

Whether there are some concerns with using a QR Code the risks associated with it use can be reduced. The QR Code app will show the link information, allowing a Soldier to make sure it is reasonable before connecting to it.

**Bonnie Heater is a writer/ editor for the Fort Gordon Signal Newspaper.**