

Connecting Soldiers To Digital Apps As Part Of Soldier Systems Modernization

One of the most intriguing concepts emerging in soldier systems modernisation at the moment is the US Army's intention to give every one of its recruits a personal smartphone device, filled with cutting-edge apps to aid military operations.

Michael McCarthy, director of operations at the Brigade Modernization Command, Mission Command Complex, at Fort Bliss, Texas, recently shared his vision with Network World. He explained how testing of commercial smartphones and tablets had been going on at Fort Bliss for several months. Soldiers have been carrying them as they conduct general administrative duties and training, with some even taking them out for field exercises in the site's desert surroundings.

Together with McCarthy, Ed Mazzanti and Marissa Tanner are leading a project the US Army simply dubs 'Connecting Soldiers to Digital Apps'. But before a scheme like this can realistically be rolled out, a huge number of questions will need to be addressed. The predominant issue is security and, according to McCarthy, analysts are already working to determine whether commercial handheld devices could affordably be adapted to meet the Army's specific security and operational requirements.

Essentially, what the US Army wants to know is whether assigned military radio frequencies can be used securely with consumer technology to support a more custom-designed network that could be set up on the go. At the cutting edge of developments in this area are three new wireless platforms, from Lockheed Martin, Oceus Networks and xG Technology, which Army analysts are currently exploring for potential.

McCarthy told Network World that analysts have been particularly encouraged by the apparent scope of xG's 'cognitive radio' equipment, which enables 'frequency hopping' by searching continually for unused channels, effectively reducing the issue of interference between devices. The xG radio gear provides voice and data, supporting roughly 4MB for each user, though functionality depends on the number of users and their distance from a base station.

"Our target going forward is to hit 35km from the base station," McCarthy revealed, suggesting that the Army would need to set up a network of portable base stations on the go. But there is still a major question mark as to whether commercial smartphones can really meet the Army's security and operational criteria. This is what its technical analysts are working to find out, by checking around 1,200 devices – from Apple iPhones and iPads to Google Android phones and Microsoft Windows mobiles – to identify potential partners.

But the plan is not currently to invest in one single provider. One of the avenues currently being explored involves using a software HTML-based framework that US Army developers have engineered to allow for smartphone apps to be written to run on multiple operating systems (OS). "We're trying to stay device and OS agnostic," said McCarthy, explaining how the need to write applications more than once will be eliminated to boost efficiency. He said the overall aim would be to "buy the right phones for the right people, for the right reason". Ultimately, if smartphones do become a fundamental part of military operations, digital apps could essentially be "as important to [personnel] as their weapon", McCarthy believes.

Of course, there are lots of fine details that still need to be clarified. The gloves currently worn by soldiers, for instance, would have to be adapted to be suitable for use with touchscreen devices. And there is still the obvious question of security. The National Security Agency is already working to develop a number of viable security options, such as chipsets for encryption that could be certified for use in smartphones. Nonetheless, there is no reason to believe that, as soon as certain obstacles are overcome, mobile phone apps should not become part of standard issue kit for armed forces personnel globally.

Smartphones and digital apps for the dismounted soldier will be one of the hottest topics in debate at [Soldier Technology US](#) in January 2012, the annual gathering of senior soldier and marine system modernization leaders in Crystal City, Arlington where decisions about future capabilities for the small unit and squad take shape. It is the only place where over **550 government and industry program managers** meet and learn from **Pentagon, Army, Marine Corps and industry leadership** about soldier system modernization requirements and business opportunities to unburden, connect, train and protect ever more lethal small units and squads.

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