

Homeland Defense

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Is Containerization Contributing to the Spread of Terrorism?



Maritime Security
Smart Containers

Critical Communications

By Don Philpott – Senior Executive Editor



Delivering advanced communications in difficult areas is vital for mission success whether it is on the battlefield or a region hit by a devastating hurricane. “This has always been our focus and what drew us into the military arena where communications are critical to mission success even when there is no infrastructure,” said Robert Frisbee, CEO of PacStar, a leading technology-based systems integrator providing total communications solutions.

ments where the military are moving into buildings in Kabul or Baghdad which may have been abandoned and which don't have any communications infrastructure. In Afghanistan and Iraq, there are up to 300 portable PacStar 3500s deployed in battle environments.

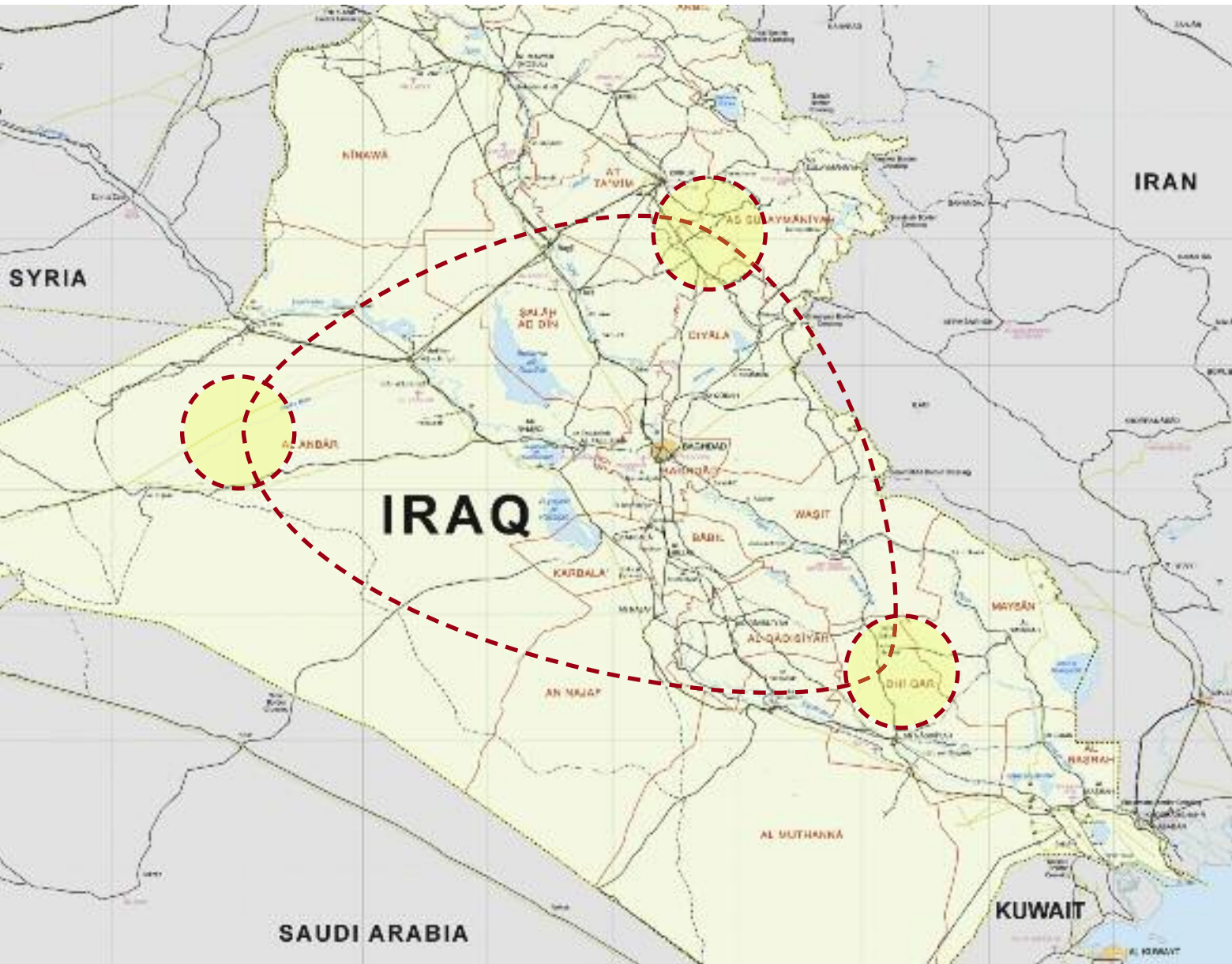
Robustness has been taken to new levels of engineering with a whole new level of shock, vibration and heat management and waterproofing. Equally important is software management. The PacStar 5500 contains seven different devices and five operating

The products can be used in forward operating base environments where the military are moving into buildings in Kabul or Baghdad which may have been abandoned and which don't have any communications infrastructure.

“Over a period of three years and an investment of over \$10 million, we have come up with a series of innovations that really reorient the way communications can be delivered to the field, and these focus on two key areas – new levels of robustness and software management,” he said.

The products can be used in forward operating base environ-

ments – four of them highly complex – and originally had 10,000 pages of manuals. It took a well-trained team of people to run the thing. “But in our appliance-like capacity, we have taken all of these operating requirements and boiled them down to a single ‘on’ button, 17 onscreen gooey-based management wizards and a 100-page, very simple instruction manual,” he said.



Emergency Preparedness

“Our core approach has always been how to deliver robust and very easy-to-manage broadband communications into infrastructure-barren environments. As a result, there has been a great uptake in the military and their requirements are very similar to those of emergency preparedness crews in any of a broad range of disasters – from tsunami and earthquake to flood and wildfire.

“In these sorts of large-scale disasters, you have a setting that is very similar to a war zone. There may be no communications at all with cell phone and radio towers down, phone systems out of action and no power. In this environment, access to high-bandwidth communications for command and control, GIS mapping, video from the scene and so on is critical for mission success and saving lives.

That is why we have started to target this market starting with the National Guard because our products already meet all their military security certifications. The Army National Guard

in Texas uses the PacStar 5500 because of its scalability and mobility to convert any location into a communications and command center in an emergency. They can do this without overspending, and that is a real treat for the municipalities. They are able to maximize their preparedness without completely going beyond what the public feels should be invested.

Orange County in California has combined with six municipalities to maximize their preparedness for uncertainties while minimizing investment by purchasing 5500s and 3500s. By pooling regionally, the devices can be moved to wherever they are needed to create a large-scale communications hub.

PacStar is also working with partner LGS to provide the U.S. Army Reserve Command (USARC) based at Fort McPherson, Ga., with a rapid response cellular solution to support a number of its posts across the country for Disaster Relief and Continuity of Operations, as well as a portable mobile system to support both forward-deployed operations and communications capability during a man-made or natural disaster support efforts.

“We needed a reliable solution that allowed us to continue to

use our mobile phones even if there was a total communications outage,” said Lt. Col. Lenell White, Signal Operations Chief, USARC. “LGS and PacStar were able to provide us with a ‘deployable network system with full cell phone capabilities’ that gives us the vital back-up we need to accomplish our missions.”

USARC provides trained and ready units and individuals to mobilize and deploy in support of the national military strategy. USARC comprises over 20 commands, each with an individual mission and function that contributes to the accomplishment of USARC’s overall mission.

“It is our goal to extend our capabilities into homeland security and disaster preparedness in the U.S. We know they need our technology, so one of the things that we are doing is working with various state and regional governments to help them tap the various federal grants and other funding opportunities,” Frisbee said. Many of these organizations are not flush with funding, but there is quite a lot of grant availability from FEMA and the like, and so one of the things that we are doing is helping our prospective customers to get these grant applications in. We actually have an active group that just helps people write and submit grants,” he said.

A less-rugged (non-military specifications), much-cheaper model is being developed for use in areas where there is no established communications infrastructure. It could be available in the next 12 to 18 months. ■



Case Study

Texas Army National Guard

“The biggest thing out of the box that the PacStar 5500 has that no one else is doing right now is its flexibility in several different applications. Most of the commercial off-the-shelf data packages we have looked at are in the category of rack and stack, and they are usually built, set up and integrated for a particular application. The 5500 has already passed all the support tests that the DoD requires to operate on any .mil domain or military network, so they have passed the biggest hurdle,” said Major Clay Wheeler, G6 Officer, Texas Army National Guard.

“A lot of other companies just don’t do this. They would rather build a custom design system for me and then make it pass the test or they require me to make it pass the test. PacStar has done their homework, and they know what it actually takes to put it out there in a format that is easy to use, easy to pick up and easy to apply to a lot of different situations.

“For us the 5500, more often than anything else, is a surge-capacity extension for my wide-area network. A hometown unit National Guard armory usually has only three or four people assigned full time Monday to Friday. But, in a state emergency or if we are supporting a civil authority mission, I may want to put an entire HQ task force in that armory, and all of a sudden I don’t have the capacity or even the wiring to put 100 computers in there or any kind of telephone service.

“I would have no way to surge in the very short period of time that I would need to. The 5500 allows me to do that because it has an onboard call manager and call utilize voice over IP systems and so on. I simply have to plug it in, hit the one red ‘on’ button, and it comes online and initializes itself based on the application that I want. I can be up in 15 min-

utes with wireless to start with and then expand my headquarters out using CAT5 cable and other wireless access points.

“We can also use the 5500 to link into our satellite-based systems which gives me connectivity when our wide-area network is knocked out either because there is no power or the system is down. Satellite-based systems are usually designed for very small task force headquarters, perhaps 10 computers and 10-20 phones. They don’t give me the robust expansion capability that I need in a large-scale emergency because I can’t scale up as the emergency scales up. At that point, I can plug in the 5500 and use that same satellite reach-back capability to plug in 100 devices. We have been working with PacStar, and they have incorporated some of our needs into later versions of the 5500, and they have been very eager to add the functionality that we need. That is the kind of vendor partner that we want.

“Also I never know what kind of operator or support person I am going to get – it is whoever is available and can load up quick and go with us. Most IT soldiers have a base knowledge, but they can’t know all the systems out there. PacStar has created software on the front end that is easy to use. I can train someone to use it in all its functionality in just a few hours.

“During Operation Lone Star – to test plans for a hurricane-related evacuation of the Rio Grande Valley – it allowed us to have about 60 users in the HQ all connected to the network 100 percent of the time. It worked great and everyone had great service.

“The 5500 is the right solution for us with task force headquarters and surge capability in mind. The 3500 is geared towards fewer users at the initial entry site. It is for the people with their eyes and ears on the ground, and they can use it from a truck, a hotel room or the back of a pickup tailgate. And because it is suitcase mounted it is very portable.”