



# Lightweight Counter-Mortar Ra

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United States and coalition military forces in Iraq and Afghanistan continue to receive menacing insurgent mortar attacks. Such harassing attacks disrupt operations and kill troops. One system able to identify the location where the mortar fire originated is the lightweight counter-mortar radar system produced by SRCTec, Inc., Syracuse, N.Y.

To quickly produce and deploy the large number of LCMRs needed in the field, Defense Contract Management Agency Syracuse teamed with the Army Communications Electronics Command program manager for radars and SRCTec personnel to ensure sufficient production. By identifying the greatest risks during the production cycle and laboring to avoid these risks, the program has successfully delivered the systems ahead of schedule. As a result, more of the camps are receiving the mortar detection capability needed to protect the troops.

Many small coalition camps have been built in the past year as the surge of additional troops occurred in and around Baghdad. These small posts provided improved visibility and accessibility to the local population but also provided

more targets for enemy mortar crews. Consequently, there was a critical requirement to be able to determine the origin of any mortar fire with precision.

Standard radar systems used by the Army lack the 360-degree detection capability needed for camps surrounded by civilian populations. These systems are too bulky and expensive for the small command operation posts.

The LCMR system, initially developed by Syracuse Research Corporation and used by the Special Operations Command, was capable of meeting this requirement; however, the LCMR was available only in a small quantity. Further, SRC's core competency was in research and development, not production.

To meet the new demand for this radar system, along with another system for detecting improvised explosive devices, SRC established a production company known as SRCTec in October 2006. The crucial question then became, "Can this system be produced in a greater quantity by a new company that has limited production experience?"

To help with the solution, DCMA Syracuse stepped in. Wayne Wall, technical operations team supervisor, and his team of professionals, understanding



Army Lt. Col. Kenneth Copeland, DCMA Syracuse commander, stands next to an LCMR while deployed in Iraq.

the importance of the situation, quickly assessed the risks involved. "Program manager radars and program executive office [intelligence, electronic warfare and sensors] needed to provide these systems to forward operating bases in Iraq on schedule," said Wall. "We focused on high-drivers, production capacity, critical boards issues and immature processes that were the key to a successful outcome."

Based on the decomposition analysis of the performance commitments agreed to by the Army's program manager for radars, DCMA had two significant focus areas. First, because SRCTec's reliability for on-time delivery was questionable, DCMA Syracuse helped ensure the rapid

# DCMA Protects Deployed Troops

implementation of mitigation plans during high-risk processes. Second, DCMA Syracuse carefully monitored the critical processes that would most likely affect successful delivery.

The DCMA Syracuse team documented its analysis using the agency's performance-based management process and DCMA Hartford's electronic workbooks. This methodology created a repeatable approach to influence the supplier to achieve a customer's outcome. While the team had enough experience to know instinctively where to focus, the process allowed them to clearly identify where the particular focus areas were and the specific strategies for addressing them.

"DCMA was able to decompose the contractor's approved procedures and positively influence the program's outcome," said Chuck Sevier, DCMA Syracuse industrial engineer. "We ensured they followed proper and consistent methods. This made certain that the configuration baseline of the product was maintained as components were upgraded or new testing methods developed."

Five DCMA personnel supported the program. The quality assurance specialist, Mary Walker, and the industrial specialist, Paul Chayka, ensured that critical supply chain vendors produced quality products in the time needed. They evaluated SRCTec's production planning, quality of assembly and methods of testing for efficiently producing quality systems. Joe Giannuzzi, a software engineer, and Sevier guaranteed both software and hardware changes were introduced properly in the supplier product baseline. Program Integrator Kevin Reagan was the focal point for maintaining communication between the program manager radars and the DCMA team.

Working with SRCTec, DCMA planned to monitor key aspects involved in this process and correct problems before they caused delays. In five months, DCMA and SRCTec nearly eliminated all risk, and production flow to the customer was on schedule.

To maintain this rapid pace of deliveries, the DCMA Syracuse team reevaluates the supplier risk-mitigation plan weekly and provides its expert analysis

to the customer. Additionally, DCMA, having recognized the importance of certain critical parts SRCTec requires from its different suppliers, sent delegations to these suppliers, minimizing setbacks. "I was extremely impressed with the teaming relationship of DCMA, the [program manager] and the contractor. It is a great example of what can be achieved when everyone is engaged and on the same page," said Army Lt. Col. Kenneth Copeland, DCMA Syracuse commander.

The successes of this program, and the utility and reliability of the LCMR system, have generated additional requests for the radar from the Army, Marine Corps and foreign military forces. It has also led to a follow-on program for an updated model of the system. The newer model — version three — will provide greater range and precision and detect any jamming of the system.

DCMA Syracuse, the Army's program manager for radars and SRCTec are hard at work building a new performance-based management model for the next generation of LCMR, which will have a new set of risks to be managed. **G**

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