CACI CASE STUDY

Seeing Is Believing: Training Soldiers on Advanced Thermal Weapon Sights

A new way to detect and identify adversaries across the battlefield

The combination of advanced night vision devices and weapon-based laser scopes provided U.S. forces with a significant advantage during the conflicts in Iraq and Afghanistan in the early 2000's. Until it didn't. Both technologies proliferated on the commercial global market, allowing our adversaries access to the same capabilities. Worse, because night vision devices can detect lasers and thus their originating location, laser scopes were giving away the location of troops, making them a potential liability.

The delivery of thousands of new advanced thermal weapon sights was expected to quickly solve this issue. Using infrared technology to detect adversaries at a greatly increased target and surveillance range, the new thermal sights were lightweight, compact, operated on commercial batteries, were operational and effective in both night and day, and they could be mounted on a variety of weapons or used as a handheld tool.

However, soldier combat surveys indicated that large stockpiles of thermal weapon sights were sitting on the shelves. Due to limited training and instruction, only about 5% of soldiers were using them, and of those most employed them as only handheld devices and believed the sights could only be operated at night. To ensure soldiers properly understood how to deploy the new sights in combat, the U.S. Army entrusted CACI with developing and implementing a thermal weapon sight training program across the service.

The Challenge: Ensuring soldiers understand their new technology

Under the charter, the Army tasked CACI with incorporating an initial team of five employees that would both develop and teach a program of instruction (POI) to its soldiers across the service. To develop the POI, the team of trainers would need to determine how to best teach others to use the thermal weapon sights, all while considering how the sights would be incorporated into existing soldier systems, such as night vision goggles and laser-aiming devices.

The team also coordinated with the Army to determine who would conduct and receive the training, where it would be held, and in what order for about 500,000 Army soldiers around the world. Additional challenges included clearing up misconceptions: commanders who believed the sights were expensive and that their troops would break them, and soldiers who believed that thermal sights were only a night optic and did not provide the same targeting accuracy as their current daytime optical sights.

800+

METER SNIPER RANGE, DAY OR NIGHT, WITH THERMAL WEAPON SIGHTS

~75k

SOLDIERS TRAINED ON THERMAL WEAPON SIGHTS SINCE THE INITIATION OF THE CACI TRAINING PROGRAM

Zero

DETECTABILITY BY ADVERSARIES, AS COMPARED TO DETECTABLE INFRARED LASER BEAMS

Continued →

The Results: Well-trained, mission-ready force

The CACI soldier training team developed three POIs: for the M4 carbine, sniper weapon systems, and advanced precision targeting systems (laser range-finders, laser designators). Each POI was developed around a "soldier as a system" concept to ensure trainees knew how to integrate them with the other equipment they use in combat. To ensure soldiers felt free to test and experiment with their sights, the training team encouraged both commanders and soldiers to use them, verifying that any damaged units would be easily replaced.

The training programs each comprised one day of classroom instruction and three or four days of live fire testing with a weapon and sights attached. The team decided to begin training those who needed it most: soldiers who were deploying into combat. These soldiers ranged from special operations to the 82nd Airborne to various state National Guards.

As the training team became more established and as its approach proved to be successful, the program branched out to other service units, including cadets at West Point — who themselves began to request training for their troops when they first deployed as new lieutenants. Now, instead of the previous disappointing survey results, there were numerous reports of successful use of the technology in combat.

The Future: Ready to train any soldier, anywhere

Strategically located near customer installations and facilities, CACI has repeatedly invested to ensure it continually and successfully delivers the same high-quality training it provided for the Army's thermal weapon sights. Offering a variety of training solutions such as virtual reality, mobile device application development, and custom curriculum design, CACI provides learners with the opportunity to test their skills in a variety of methods, including simulated environments, for easy transfer of skills when they're needed most.

Developed and led by knowledgeable experts with real-world experience, CACI training solutions include:

- Behavioral training and resources for organizational and workplace skills such as supervisory leadership development and expert facilitation, which difficult expertise to find within government organizations.
- An immersive eXtended Reality offering where learners wear virtual reality goggles and gloves to build widgets and interact with their environments in an augmented reality, doing things like cleaning fiber optic cables or repairing equipment. Repeating these on-the-job tasks in virtual reality helps learners create muscle memory for easier recall.
- Customized instructional systems design (ISD) that provides learners with updated skills and keeps pace with rapidly changing technology. ISD services are all SCORM® and HTML5 interoperability compliant and include specialized authoring tools to create custom backgrounds for scenarios and an action plan and milestones for goal tracking.
- Curriculum development that includes custom student resources and instructor materials, technical manuals, and assessments that test learners' progress. Based on customer input and knowledge, curriculum can range from basic knowledge sharing to in-depth information and interactive multimedia such as 3D renderings.