



Live Training

Full-spectrum range instrumentation and Tactical Engagement Systems (TES)

Live Training Products and Systems



A tank unit is maneuvering through grasslands. An infantry squad is clearing rooms in an apartment building. A platoon leader is maneuvering his forces through a desert in the dead of night. All are training — on different parts of a training range — and all are part of the same coordinated strategy. Live training range products and communication systems integration through Science Applications International Corporation's (SAIC's) innovative technology captures field voice, video, and data communications to enable the preparation of comprehensive after action reviews of the exercise.

To demonstrate the power of completely integrated training, from sensors to shooters, SAIC has created an end-to-end, networked, live training communications solution. SAIC provides the required live training range products, communications infrastructure systems, and the instrumented participant voice, video, and data communications systems.

Observer-Controllers in the Training Exercise

SAIC provides an encrypted, P-25 standard voice communications radio solution to meet the stringent demands of Observer Controller Communications System (OCCS) requirements. SAIC has provided the OCCSs for the U.S. Army National Training Center (NTC) at Fort Irwin and Joint Readiness Training Center and we are providing the OCCS for the new Exportable Training Capability (ETC) range.



Instrumented Soldier and Vehicle Platforms

SAIC's Range Data Management System (RDMS) provides accurate GPS position data and a two-way digital data link for handling real-time data from Multiple Integrated Laser Engagement System (MILES) sensors or centralized area weapons effects and combat assessment systems. The SAIC NTC RDMS is being enhanced to handle up to 10,000 live exercise participants, giving it the world's largest combat training center (CTC) player and platform tracking capability.



NTC RDMS Digital Communication Interface Unit (DCIU)



RDMS Vehicle Player Unit Kit

Tactical Engagement Simulation Systems (TESS)



SAIC TESS MILES products are fourth-generation wireless systems with common components and interoperability throughout dismounted and mounted systems. The lightweight, low-power, and self-powering components minimize interference with training and weapon systems, especially for the dismounted warfighter, enabling them to train as they fight.

Additional SAIC TESS MILES products available include the Combat Vehicle System (CVS) Common Kit, and adapter kits for the Abrams Main Battle Tank and the Bradley Fighting Vehicle, the MK-19 Simulator Player, RPG-7 Simulator and the Small Arms Transmitter (SAT). The CVS vehicle adapter kits can be modified for use with European Union (EU) tanks and combat vehicles.

Training Capabilities

Instrumented Range Training Area

SAIC provides high-capacity fiber optic backbone communication nodes, as well as point-to-point and point-to-multipoint digital Internet Protocol (IP)-based, encrypted, microwave communication nodes, to help assure real-time capture of all field voice, video, and digital training data. SAIC has also installed a WiMAX 802.16e communication at the NTC to provide voice and IP communications to/from the urban village training sites.



NTC Fiber Optic Network Cable Installation

Exportable Training Capability – Instrumentation System (ETC-IS)

SAIC is delivering communications infrastructure technology in the new mobile CTC for the U.S. Army, called the ETC-IS. SAIC is providing the P-25 based OCCS voice radio network and digitized video and tactical voice collection and retransmission equipment in this new end-to-end, integrated live training communications solution.

The communications equipment is housed in a series of mobile trailers and shelters which can move easily and flexibly to different Army home stations across the U.S. to meet live force-on-force training exercise needs. The new ETC-IS will be home-based at the NTC at Fort Irwin, Calif.

Modern warfighters take advantage of many training opportunities, but nothing comes as close to the battlefield as live training. Increasing training capacity in realistic environments for warfighters helps to accelerate deployment, enable survivability, and support mission success. SAIC applies innovative communications technologies to help build the ultimate, live ground forces training range at the NTC and other combat training ranges.

SAIC's Live Training Commitment

Capabilities

- Enables realistic, live training exercises
- Integrates range communications systems, end-to-end
- Provides a collaborative training environment for military units
- Develops and installs fiber and radio frequency infrastructure to support the high bandwidth communications needs of today's training environment
- Performs pre-exercise, exercise, and post-exercise tasks
- Enables GPS positioning and data communications for large numbers of exercise participants
- Integrates indoor positioning technologies for military operations in urban terrain
- Provides a virtually limitless variety of training exercise environments, military units, individual entities, behaviors, and scenarios for world-class training

Core Range Systems Expertise

MILES laser-based TESS

GPS based real-time tracking systems

Real-time multi-player data link systems (up to 10,000 players)

Aircraft, ship, vehicle, and man-worn range instrumentation packages

Range voice, video, microwave, and fiber-optic communications systems

Real-time data processing, weapons simulations, and database software

Large, complex system integration, checkout and test

Range operations and maintenance

SAIC has been producing military training and test range instrumentation systems for over 40 years and has over 28 years experience with the U.S. Army NTC Instrumentation Systems. SAIC designed, installed, connected, and wired the NTC's fiber optic network. The company also has extensive fielding and non-line-of-sight geometric-bearing (GB) technology experience at a number of U.S. Army training bases, and has successfully embedded training products inside vehicles.

SAIC applies its deep systems integration expertise to every aspect of developing live training systems and range instrumentation, from large scale combat training centers to smaller, flexible training systems that meet the rapidly changing requirements of today's world and conflicts. Our goal is to deliver flexible, cost-effective, fully integrated live training and range instrumentation systems to meet the live training requirements and challenges of today.

Contact SAIC Today to Learn About

- Our capabilities as range instrumentation systems integrators
- The capability of the P-25 OCCS radio system
- The architecture of the NTC RDMS player unit instrumentation hardware
- The scope and depth of our range communications infrastructure capability—from IP-based microwave radio to high-capacity fiber optic range networks
- The new mobile communications infrastructure technology solution in the ETC-IS

For More Information

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