



CDT/SV in action

Stryker Vehicle

The Common Driver Trainer (CDT) Product Line

- CDT/Stryker Variant (CDT/SV)
- CDT/Mine Resistant Ambush Protected (MRAP) Cougar Variant (CDT/MCV)
- CDT/Abrams M1A1 Tank Variant

A Common Driver Trainer Simulator for Military Vehicles

Military tracked, wheeled, and heavy equipment vehicles have unique functions and modes of operation. Soldiers who operate these vehicles must be trained in a cost-effective and efficient manner to ensure their mobility, survivability, and success. The Science Applications International Corporation (SAIC) team developed a simulator product line architecture framework (PLAF) for the Common Driver Trainer (CDT).

The CDT PLAF

The PLAF includes hardware and software components that establish a flexible baseline for all future driver trainer variants. It can expand to meet evolving requirements and help to ensure maximum reuse of products and components.

The PLAF features the following capabilities:

- Complies with high-level architecture and distributed interactive simulation protocols
- Provides commonality among the operational and training communities
- Supports multiple vehicle variants with high reliability and minimal need for spares
- Complies with the Synthetic Environment Core program (SE Core)

Major Components of the CDT System

There are six major components of the Common Driver Trainer System: the CDT system, the instructor-operator station, the synthetic environment, the visual display unit, the after-action review, and the military vehicle cab variant. The CDT military cab variants are mounted on a six-degree-of-freedom motion platform that provides realistic motion cues to soldiers in executing training scenarios. The CDT platform provides for interchangeable vehicle cabs, which can save training time and money.

The CDT/SV was the first simulator delivered by SAIC under the CDT. This simulator is designed to enable drivers to train on critical driving tasks in all versions of the Stryker with or without slat armor.

The CDT/MCV uses the physics and dynamics of a heavy 6x6-wheeled vehicle. The CDT/MCV cab can also be used to model a 4x4 driver cabin with minor differences. Having established the MRAP Cougar cab baseline for the CDT platform, it is adaptable with incremental effort, to various vehicle configurations, such as troop carrying, explosive ordnance disposal, command and control, artillery movement, recovery, ambulance duty, and other configurations. SAIC's custom engineering can adapt the baseline software, scenarios, inputs, and outputs to reflect the weight, number of wheels, physics, and dynamics of each new vehicle configuration.

The CDT/SV and CDT/MCV are part of SAIC's virtual simulator product line. SAIC virtual simulators provide efficient, cost-effective, flexible, and trackable simulation training for warfighters. The product line trains soldiers on inherently dangerous tasks in a safe, controlled environment and measures their performance against established standards. The CDT simulators also help reduce training costs and lower fuel and maintenance expenses associated with using actual vehicles.

Effective driver training is crucial to battlefield mobility, survivability, and success. With CDT/SV, CDT/MCV, and the Abrams M1A1 Tank variant, SAIC is helping drive vehicle training into the future.



CDT/MCV in Action (top), MRAP Vehicle (bottom)

Key Capabilities

- Provides training on critical driving tasks associated with a particular military vehicle in diverse environments, times of day, and weather conditions
- Through its geotypical terrain database, allows soldiers to operate in urban, mountain, desert, plains, and village regions
- Provides training on unique driving skills, such as loading and unloading ships, airplanes, rail cars, and heavy equipment transporters
- Includes 100 preprogrammed, high-fidelity, operationally relevant scenarios designed to enable users to develop a curriculum specific to their respective training needs
- Provides utilities for users to create their own scenarios to train on new tactics, techniques, and procedures as the operational environment evolves
- Records all driver actions and makes the information available for review or during the exercise and in the after-action review process
- Through automated scoring, compares driver performance against relevant tasks, conditions, and standards and helps to identify any required retraining

For More Information

Mike Kerrigan

Product Line Manager

407-243-3618 P

michael.f.kerrigan@saic.com



Visit us online at www.saic.com

Energy | Environment | National Security | Health | Critical Infrastructure