# Common Instructor Operating Station for Precision Gunnery



### Overview

In conjunction with the UK Ministry of Defence, CAE has developed a Common Instructor Operating Station for Precision Gunnery (CIOS-PG) to support a range of direct fire gunnery trainers. CAE's CIOS-PG is a scalable, flexible and cost-effective solution that can be used to support direct fire training requirements. The desktop gunnery trainer is connected to the CIOS-PG to provide an instructor with the facilities to run structured courses with automated scoring of the critical elements used to determine overall performance of precision gunnery tasks. Commercial-off-the-shelf (COTS) personal computer hardware, real-time simulation software based on CAE's established gunnery training software suite, the latest generation image generator and associated terrain database and target models are all included as part of this comprehensive solution. CAE's CIOS-PG is based on open

source software that may be integrated with legacy and future systems. The system allows a single instructor to control up to six simulated turrets simultaneously. In addition, the CIOS-PG includes a Precision Gunnery Scoring Module (PG-SM) to ensure accurate recording of training events and the objective assessment of trainees in all direct fire gunnery techniques.

### Experience

The CIOS-PG and PG-SM is in-service with the UK Armoured Fighting Vehicle Gunnery School and other fielded armour units. It has been designed and integrated with the in-service Warrior Gunnery Turret Trainer and Warrior desktop trainers used by the British Army. The UK MOD is mandating the use of the CIOS-PG and PG-SM on all current and future precision gunnery training systems.

## **System features**

The CIOS-PG system has an automated commander voiceover that is familiar to gunners in order to complete engagement sequences. The CIOS-PG allows an instructor to enter individual details, select pre-designated employment or continuation training exercises and provide coaching and debriefing as required. A variety of exercises are pre-scripted with simulated commander voice prompts that are required for observation and engagement techniques to be completed. All information entered including exercises conducted is automatically recorded within the system and can form part of any Training Management Information System (TMIS). Exercises are scored automatically and include target acquisition time, laser accuracy and firing accuracy. This detailed information allows instructors to provide objective rather than subjective coaching and debriefing.







# Other features of CAE's CIOS-PG include:

- Software features;
- Trainee management;
- Commander voiceover for pre-designated exercises;
- Drive through capability and "fire on the move";
- Accurate ballistic simulation;
- Library of geo-specific and geo-typical terrain areas available;
- Summer and winter scenes;
- Interactive tactical map;
- Scalable computer-generated forces;
- Variable weather conditions;
- Dawn/dusk transitions;
- Variable visibility.

## System benefits

The use of a common interface across all precision gunnery training systems minimizes the instructor training overhead and aids instructors in operating multiple training systems. The system allows the instructor to monitor and interact with trainees for instruction and debriefing purposes. Importantly, the CIOS-PG and PG-SM is a comprehensive solution that helps ensure an accurate recording of events to support objective rather than subjective measurement and output. Other benefits of CAE's CIOS-PG and PG-SM include:

- Providing constructive debrief details;
- Open architecture for Integration to other systems;
- Deployable system;
- Allows building managers easy access to hours run figures;
- Discriminates between training time and idle time.







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