

SHORT-RANGE AIR DEFENSE GUNNERY TRAINING

ADVANCED MOVING TARGET SIMULATOR (AMTS)



AAI Corporation has provided gunnery training solutions for thousands of U.S. and international air defense gunners for more than 30 years, utilizing the most modern computer and visual simulation technologies available.

Our 3rd generation display system technology provides a fully immersive, virtual, computer-generated environment that enhances battlefield awareness.

AAI's Advanced Moving Target Simulator (AMTS) is a non-developmental item (NDI) product that utilizes cost-effective commercial-off-the-shelf (COTS) components and open software standards.



Features and Benefits

Performance Area	AMTS Features	User Benefits
Display System	<ul style="list-style-type: none">■ 3rd generation display system technology■ PC-based image generation■ Dome high-resolution COTS video projectors■ Simulated binoculars■ Open architecture design■ Camera-based, semi-automatic display alignment■ Scalable display field of view■ Scalable resolution■ Up to 24 targets	<ul style="list-style-type: none">■ Full-featured, simulated environment with large number of targets, special effects, and dynamic weather provides superior battlefield awareness■ Entirely COTS-based from leading manufacturers■ Balances exceptional performance with affordability■ 1/4 cost of competing proprietary IG solutions■ Real-time performance better than competing systems■ Open architecture, easy to upgrade, and multiple vendor support■ Precise and fast display alignment
Scenario Generation and Instruction Control	<ul style="list-style-type: none">■ PC-based processing■ Windows-based■ Intuitive and fully integrated■ HLA compatible	<ul style="list-style-type: none">■ Powerful and easy to use, allows instructor/operator to create flight paths, scenarios, and lesson plans that meet evolving training goals and needs■ Entirely COTS-based from leading manufacturers

Operational Advantages

Training Area	Operational Advantage
Training Effectiveness/Battlefield Awareness	<ul style="list-style-type: none">■ Full-dome CGI computer graphics provide realistic full-color aircraft, and terrain, and cloud masking/occlusion■ Up to 24 simultaneous targets for realistically intense warfare■ Full weather effects: fog, rain, snow, smoke, dynamic, moving weather■ Full time-of-day effects: day/night, sunset/sunrise■ Realistic target masking■ Large area, correlated environment■ Ability to evaluate entire training environment with unique situational awareness display capabilities
Advanced Scenario and Database Generation	<ul style="list-style-type: none">■ Scenario generation■ New/modified flight trajectories■ Terrain scenes (photographic or computer-generated)
Logistical Support Mission Debrief Capabilities	<ul style="list-style-type: none">■ No moving projectors■ Fewer unique spares, less maintenance and training required■ Commercial off-the-shelf equipment■ Open architecture■ Full-dome CGI computer graphics allow easy addition of new locations, aircraft types, and flight profiles
Mission Debrief Capabilities	<ul style="list-style-type: none">■ Mission replay, gunners' actions, and weapons status■ Enhanced gunner evaluation

System Description

AAI's AMTS is a multi-weapons trainer with the capability to train with man-portable, self-propelled, and towed missile systems and self-propelled and towed gun systems. AMTS incorporates the most advanced technologies in computer graphics and visual simulation, which provide computer-generated, virtual environments to immerse air defense students in training settings as realistic and challenging as an actual battlefield.

The AMTS is a non-developmental item (NDI) consisting of commercial off-the-shelf (COTS) components and open software standards. It supports procedural, familiarization, proficiency, and team tactics training. The AMTS provides a large, correlated environment for target and terrain presentation, simultaneously viewable by crew chief and gunner, to facilitate training of target search and

detection, acquisition, and handoff. It provides an environment in which both gunner and crew chief can be effectively trained and evaluated. This environment consists of digitized computer-generated background video images and a computer scenario generation and terrain modeling workstation for modeling air defense encounters, mission planning, and rehearsal.

These capabilities enhance new requirements required by air defense forces for operational proficiency by providing rapid, effective, real-world training prior to deploying into potential combat situations. This computer-generated environment capability is needed to support real-world conditions and to be able to quickly re-orient training scenarios for mission rehearsal and tactical planning.

For more information, please contact:

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