Central Test and Evaluation Investment Program
Threat Systems Projects
updated: March 2012

Anti-Ship Cruise Missile Signal Processor-in-the-Loop Model Development (ASPIL)
Navy Lead

The ASPIL project will provide test ranges with a new test asset by combining Naval Research Lab (NRL) all-digital scene and threat modeling efforts with scene injection and real-time image processing techniques developed at the Threat Signal Processor-in-the-Loop Facility (T-SPIL), Naval Air Warfare Center Weapons Division (NAWCWD), China Lake, CA.

Enhanced Missile Signature Model Improvement Program (E-MSIG)
Defense Intelligence Agency (DIA) / Missile and Space Intelligence Center (MSIC) Lead

The E-MSIG project will provide the Major Range and Test Facility Base (MRTFB) assets with realistic models to use in the development and testing of missile warning sensors. To produce these models, E-MSIG will improve existing E-MSIG models and integrate them with their existing corresponding Threat Model Analysis Program (TMAP) fly-out models.

E-MSIG Missile Hardbody Signature Model Augmentation (E-MSIG HB)
Defense Intelligence Agency (DIA) / Missile and Space Intelligence Center (MSIC) Lead

The E-MSIG HB project will add missile hardbody signatures to the E-MSIG plume signature models developed under the FY2009/FY2010 E-MSIG project. This addition will provide a more complete representation of the threat surface-to-air missile infrared and ultraviolet signature throughout the missile flight envelope, which in turn will provide missile warning system (MWS) and infrared countermeasures (IRCM) system developers and testers with the capability to test new and modified systems against the modeled threat missile after motor burnout. Ultimately, the addition of hardbody signatures to the E-MSIG models will enable higher-fidelity simulations for testing all MWS and IRCM systems currently in development.

Enhanced Missile Signature Plume Size Correction Project (E-MSIG PSC)
Defense Intelligence Agency (DIA) / Missile and Space Intelligence Center (MSIC) Lead

This project will correct E-MSIG model outputs to generate images of the missile plume that are accurate when viewed by systems under test (SUT) along the complete trajectory of the missile flight.

Economical Tactical Ballistic Missile (ET-1)
Army Lead

The ET-1 project will provide ranges with the capability to test operational test and evaluation (OT&E) systems using a TBM-representative threat that provides reduced target cost impact and higher fidelity, configurable threat representation. This capability will allow for increases in the number of OT&E user training opportunities, with added threat realism.

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Improved Advanced Threat Simulator (IATS)
Navy Lead
The IATS project examined an improved threat surface-to-air missile (SAM) system and provided the Navy Electronic Combat Range (ECR), China Lake, CA; the Air Combat Environment Test and Evaluation Facility (ACETEF), Patuxent River, MD; and the Electronic Combat Simulation and Evaluation Laboratory (ECSEL), Point Mugu, CA with a recommendation for the best approach among alternatives to simulate this threat. To accomplish this, IATS investigated intelligence and technical information on emerging SAM threats derived under the Integrated Technical Evaluation and Analysis of Multiple Sources (ITEAMS) project.

Prototype Radar Digital Signal Processor (PRDSP)
Navy Lead
ThePDRSP project will replicate the signal processing and ECCM techniques of a digital threat SAM from the TMAP model into hardware suitable for use in a threat simulator and assess its accuracy. This technology will be used to support the later creation of validated simulators for developmental and operational testing (DT/OT).

Radio Frequency Threat Missile Model Integration (RF TMMI)
Air Force Lead
The RF TMMI project will provide the Navy Electronic Combat Range (ECR), China Lake, CA with Fly-out Models (FOMs) that can be integrated into existing real-time hardware threat system test and evaluation (T&E) capabilities. In order to accomplish this, RF TMMI will apply the methodology developed in the FY2006-FY2008 Threat System Working Group (TSWG) program for RF FOMs. RF TMMI will support F-35 program operational jammer testing in FY2011.

Threat Communications Capability (TCC)
Army Lead
The TCC project will provide a multiband communications capability in threat vehicles, which will enhance the current Army Test & Evaluation Command (ATEC) requirement to support opposing threat forces and the White Cell in operational testing.

Torpedo Proximity Scoring Systems Initiated Shutdown (TPSS-IS)
Navy Lead
The TPSS-IS project will design, develop, assemble, test, and deliver a real time capability to initiate the threat torpedo emulator's shutdown when an Anti-Torpedo Torpedo (ATT) homes within lethal warhead range of the threat torpedo emulator and simulates an ATT warhead detonation.

Wideband Configurable Control Jammer (WCCJ) II
Army Lead
The WCCJ II project will convert the WCCJ prototype into a versatile, range-ready jamming asset to enable safe and effective frequency-notched jamming operations on T&E ranges. The WCCJ provides the capability to transmit notched threat waveforms allowing realistic threat jamming signals without affecting the local communications environment.