

FY 2008: Comparative Testing Office New Projects *
Defense Acquisition Challenge (DAC) and Foreign Comparative Testing (FCT) Programs

Army

<p>FCT:</p> <ul style="list-style-type: none"> ▪ Ceramic Tile Testing and Evaluation for Hard Body Armors—Germany and Taiwan ▪ Three-Dimensional (3-D) Visualization of the Battlespace—Japan ▪ 40MM Extended Range Marking—Germany ▪ Family of Hawkmoor Limited Burners—United Kingdom 	<p>DAC:</p> <ul style="list-style-type: none"> ▪ Omni-Directional Antenna for M156 Magneto-Inductive Remote Activation System (MI-RAMS) ▪ Joint Biological Agent Sensor ▪ Armored Biological Integrated Detection System (BIDS)
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Navy and Marine Corps

<p>FCT:</p> <ul style="list-style-type: none"> ▪ Heat-Resistant Lightweight Matting—Australia and France ▪ Advanced Airborne Expendable Infrared Countermeasures (IRCM)—Israel ▪ Signaling Colored Smoke Grenades (SCSG)—Australia, Italy, Germany & United Kingdom ▪ AK-47 Special Effects Small Arms Marking System (SESAMS) Training System—Canada ▪ M1A1 120MM Multi-Purpose High-Explosive Munition—Germany and Norway ▪ Fractal Antenna Technology for Information Operations Ship Antennas—Spain 	<p>DAC:</p> <ul style="list-style-type: none"> ▪ F/A-18 Aircraft Countermeasures Dispensing System ▪ Mobile Internet Protocol (IP) Interface to Tactical Data Links (TDL) Networks ▪ Assessment of Lightweight Stabilized Weapon Mount ▪ Vaccine and Reagent Refrigeration System (VARRS)
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Air Force

<p>FCT:</p> <ul style="list-style-type: none"> ▪ Transportable Plasma Waste-to-Energy System—Canada ▪ Aircraft Arresting System for F-22 and JSF—Sweden ▪ Global Positioning System (GPS) Jammer—United Kingdom ▪ Hand-Held Laser Welder (HHLW)—Germany and Canada 	<p>DAC:</p> <ul style="list-style-type: none"> ▪ Enhanced Smart Triple Ejection Rack ▪ Collaborative Video Dissemination Service ▪ Conversion of F-15 C/D Analog Heads-Up-Display (HUD) to a Digital HUD
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US Special Operations Command (SOCOM)

<p>FCT :</p> <ul style="list-style-type: none"> ▪ Fire Control System for Special Operations Forces (SOF) Combat Assault Rifle (SCAR) Grenade Launcher—Belgium, Germany, Norway, and Sweden ▪ Programmable High-Explosive Dual-Purpose (P-HEDP) Ammunition—Norway 	<p>DAC:</p> <ul style="list-style-type: none"> ▪ Ruck-Sack Portable Unmanned Aerial Vehicle Geo-spatial Video Exploitation System for Falconview ▪ Sinuous Spiral Antenna for the AN/ALQ-211 EW System ▪ Obstacle Avoidance SONAR for SOF Underwater Recon Vehicle
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* A brief description of each project is available from the Public Affairs Office (media only), (703) 695-0192.

Description of FY 2008 Comparative Testing Office New Projects

U.S. ARMY

Foreign Comparative Testing (FCT) Program

Ceramic Tile Testing and Evaluation for Hard Body Armor—Germany and Taiwan

Tests sintered Silicon Carbide ceramic tiles capability to meet the Army's new specification for light-weight small-arms protective inserts to defeat current/emerging warfighter threats.

Three-Dimensional (3-D) Visualization of the Battlespace—Japan

Tests 3-D stereoscopic Liquid Crystal Displays to provide Force XXI Battle Command Brigade and Below Blue Force Tracking Systems with high-resolution 3-D mapping and tactical data display capability.

40MM Extended Range Marking—Germany

Tests a 40mm blunt-trauma impact round with a visible/infrared-marking capability. The round will deliver non-lethal effects against human targets along with marking against personnel and materiel for tracking purposes when fired from the M203 grenade launcher at extended ranges.

Family of Hawkmoor Limited Burners—United Kingdom

Tests a modular, low-power, 60k Btu/hour burner for Army Assault Kitchens with potential application to the U.S. Marine Corps Tray Ration Heating System, and the Air Force Single Pallet Expeditionary Kitchen.

Defense Acquisition Challenge (DAC) Program

Omni-Directional Antenna for M156 Magneto-Inductive Remote Activation System (MI-RAMS)

Tests an omni-directional antenna so Army SOF and combat engineers may place their M156 MI-RAMS initiators on demolition charges. Allows any attitude (up, down, sideways) instead of vertically only, reducing time on target and increasing operational reliability in challenging environments (underwater, urban, littoral, and night operations).

Joint Biological Agent Sensor

Tests an automated off-the-shelf biological agent sensor for performance and cost advantages to support the warfighter in high-threat areas, with between one to three orders of magnitude increase in sensitivity than other fielded sensors.

Armored Biological Integrated Detection System (BIDS)

Tests the Armored Biological Integrated Detection System in the M1083A2 Armored Medium Tactical Truck, restoring the Army Chemical Company mission in high-threat areas, meeting the standard for armor crew protection and providing a platform for an improved communications suite.

U.S. NAVY & MARINE CORPS

Foreign Comparative Testing (FCT) Program

Heat-Resistant Lightweight Matting—Australia and France

Tests a heat-resistant, expedient, and lightweight landing surfacing system to meet V-22 fielding requirements due to its high heat signature.

Advanced Airborne Expendable Infrared Countermeasures (IRCM)—Israel

Tests the effectiveness of expendable infrared countermeasures to counter emerging advanced Infrared Man-Portable Air Defense Systems.

Signaling Colored Smoke Grenades (SCSG)—Australia, Italy, Germany and United Kingdom

Tests less-toxic, less-hazardous, less-expensive, and increased-performance smoke grenades to meet operational requirements for ground-to-air and ground-to-ground signaling.

AK-47 Special Effects Small Arms Marking System (SESAMS) Training System—Canada

Tests an AK-47 SESAMS Training System to meet requirements for improved realism in Military Operations on Urban Terrain training by increasing warfighter threat recognition through awareness of auditory and visual signatures of the enemies' primary weapon.

M1A1 120MM Multi-Purpose High-Explosive (MPHE) Munition—Germany and Norway

Tests 120MM MPHE rounds to replace current 120MM M830 and M1028 rounds. The multi-purpose capabilities (point detonating, delay, and airburst) of the MPHE will increase ammunition effective range, provide improved blast fragmentation, and reduce the logistical burden, while maximizing the M1A1's ammunition load.

Fractal Antenna Technology for Information Operations Ship Antennas—Spain

Tests a fractal antenna aboard a U.S. Navy warship. If successful, this FCT project will reduce flight safety hazards afloat, reduce ship radar cross section, increase performance over current "whip" antenna and provide significant operations and support cost savings.

Defense Acquisition Challenge (DAC) Program

F/A-18 Aircraft Countermeasures Dispensing System

Tests a lower-cost, longer-duration countermeasures dispensing system, improving survivability and extending the time an F/A-18 aircraft can remain on target.

Mobile Internet Protocol (IP) Interface to Tactical Data Links (TDL) Networks

Tests an automatic network interface between TDL and Automatic Digital Network System networks, allowing near real-time reaction to a changing tactical environment. Supports automatic re-allocation and re-tasking of combat assets eliminating manual reconfiguration of the network.

Assessment of Lightweight Stabilized Weapon Mount

Tests new stabilization technologies adopted from advanced film equipment for mounting weapons. The mount will provide better 3-axis stabilization and reduces weight over current mounts.

Vaccine and Reagent Refrigeration System (VARRS)

Tests a lightweight, field-rugged refrigeration system to transport and store life-saving vaccines and reagents. This new system will replace the current larger, heavier commercial refrigeration systems that are failing at a rate of 90% within one to three months in the field.

U.S. AIR FORCE

Foreign Comparative Testing (FCT) Program

Transportable Plasma Waste-to-Energy System—Canada

Tests a Plasma Resource Recovery System that can convert hazardous, non-hazardous, and medical waste into energy with inert aggregate as the by-product. System will provide energy for air-base demands, while reducing landfills, open burning, and exposure to pathogens.

Aircraft Arresting System for F-22 and JSF—Sweden

Tests a computer-controlled caliper-disk aircraft arresting system that increases functionality and capability to arrest both heavy and lightweight U.S. Air Force fighters.

Global Positioning System (GPS) Jammer—United Kingdom

Tests a GPS jammer's ability to emulate adversary threats to provide realistic weapons system positioning, navigation, and timing denial testing. The jammer will provide realistic operational training and support tactics, techniques and procedures to counter growing threats.

Hand-Held Laser Welder (HHLW)—Germany and Canada

Tests a portable laser welder for use at operational bases that can reduce maintenance footprint, reduce risk of heat and/or electrical damage to structures, and increase asset use by taking the repair solution to the problem.

Defense Acquisition Challenge (DAC) Program

Enhanced Smart Triple Ejection Rack

Tests a modification to the Triple Ejector Rack that will enable the F-16 to carry 6 Joint Direct Attack Munition bombs (instead of current limit of 2), while retaining unguided weapons capability.

Collaborative Video Dissemination Service

Tests a Collaborative Video Dissemination Service that provides the end-user with the ability to record, analyze, fuse or otherwise manipulate video backhaul from Unmanned Aerial Systems.

Conversion of F-15 C/D Analog Heads-Up-Display (HUD) to a Digital HUD

Tests a digital HUD for the F-15 C/D that will reduce mean time between failure, reducing maintenance costs, and increasing mission reliability.

U.S. SPECIAL OPERATIONS COMMAND (USSOCOM)

Foreign Comparative Testing (FCT) Program

Fire-Control System for Special Operations Forces (SOF) Combat Assault Rifle (SCAR) Grenade Launcher—Belgium, Germany, Norway, and Sweden

Tests fire-control and ammunition programming systems for the Enhanced Grenade Launcher Module affixed to the SCAR. Improves the effective range of the grenade launcher from 200 to 600 meters, effectively suppressing rocket-propelled grenade hostile fire and other threats.

Programmable High-Explosive Dual-Purpose (P-HEDP) Ammunition—Norway

Tests a 40mm high-explosive dual-purpose round for the Advance Lightweight Grenade Launcher MK47 Weapon System, delivering air burst and armor penetration capability in one round for Special Operations Forces.

Defense Acquisition Challenge (DAC) Program

Ruck-Sack Portable Unmanned Aerial Vehicle Geo-spatial Video Exploitation System for Falconview

Tests software capable of extending the functionality of the Falconview Mapping System to exploit geo-spatial video collected by Ruck-Sack Portable Unmanned Aerial Vehicles and ground-based video camcorders. This will enhance tactical situational awareness for commanders and troops on the battlefield, assisting them with mission planning, threat analysis, and route selection.

Sinuuous Spiral Antenna for the AN/ALQ-211 EW System

Tests a new detection antenna for the ALQ-211 Suite of Integrated Radio Frequency Countermeasures (SIRFC) currently being fielded on the MH-47G and CV-22. Significantly enhances the detection of ambiguously detected threats and enables SIRFC to better correlate the received signal with its order-of-battle database, leading to quicker identification and jamming of threats.

Obstacle Avoidance SONAR for SOF Underwater Recon Vehicle

Tests an Obstacle Avoidance Sonar for the Semi-Autonomous Hydrographic Reconnaissance Vehicle (SAHRV), an unmanned underwater vehicle used by Naval Special Warfare in shallow water intelligence. This SONAR will significantly increase SAHRV's ability to operate effectively in ill-defined waters.