

# ARCHIVED REPORT

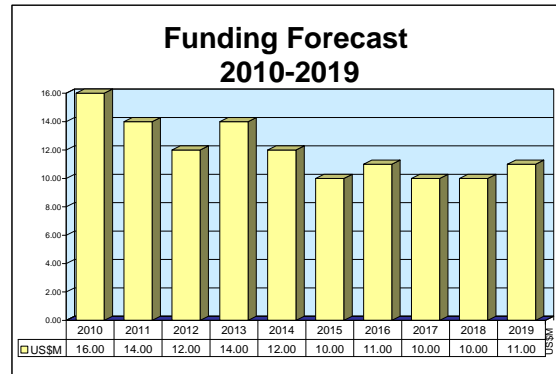
For data and forecasts on current programs please visit

[www.forecastinternational.com](http://www.forecastinternational.com) or call +1 203.426.0800

## Tactical EW Technology (U.S. Army)

### Outlook

- To reduce administrative burden, U.S. Army for FY10 and beyond transferred funding for the effort to PE0602270A/project 906 Tactical EW Applied Research
- Over the next 10 years, \$120 million likely to be spent on program efforts based on a projection of the FY10 defense budget



### Orientation

**Description.** The U.S. Army Tactical Electronic Warfare (EW) Technology project is a part of the U.S. Army EW Technology program. This project funds development and demonstration of equipment to detect, locate, deceive, and jam threats to vehicles, aircraft, and dismounted soldiers.

**Status.** Technology-based development.

**Application.** The project will provide a broad technology base that will support electronic warfare equipment development.

### Sponsor

United States Army  
Army Communications-Electronics Command  
(CECOM)  
Ft. Monmouth, NJ 07703-5000  
USA  
Tel: +1 (201) 532-2534  
Web site: <http://www.monmouth.army.mil>

### Technical Data

PE#0602270A, EW Technology, funds research into and investigation of electronic warfare technologies to improve the U.S. Army's battlespace survivability, enemy targeting capability, and situational awareness for use in the future force. Where feasible, it exploits opportunities to enhance current force capabilities. This program will investigate electronic support measures (ESM) and countermeasures against munitions, missiles, improvised explosive devices, and target acquisition sensors.

The intent is to deny, disrupt, or degrade the enemy's use of the electromagnetic spectrum for offensive or defensive operations. The focus is on detecting threat emitters associated with weapon guidance systems, targeting systems and command, control, communications, computers, and intelligence (C<sup>4</sup>I) systems, and networks. Work covers the spectrum of radio frequency (RF), infrared (IR), electro-optical (EO), and ultra-violet (UV) ranges. It seeks to improve EW sensors and ECM systems to protect high-value ground targets, aircraft, and soldiers from threat

## Tactical EW Technology (U.S. Army)

surveillance/tracking systems, imaging systems, and advanced RF/EO/IR missiles, artillery, and smart munitions.

Improvements to the next-generation EW protection sensors augment the classic intelligence, surveillance, and reconnaissance (ISR) sensors by providing multi-functional capabilities for onboard and offboard situational awareness, targeting, and combat identification.

Finally, this PE will research automated intelligence fusion and automated battlefield assessment management tools. These include warfighter electronic collection and mapping, electronic support for the future force, advanced radar deception and countermeasures, advanced EW sensors, EO/IR countermeasures, sensor countermeasures, fusion-based knowledge, networked sensors, information operations, and Joint Intelligence, Surveillance and Reconnaissance (JISR).

## Program Review

### *Enhancing Vehicles, Aircraft, and Dismounted Troops*

Project 442, Tactical EW Technology, investigates and applies electronic warfare technologies to enhance the ability of ground combat vehicles, aircraft, and the dismounted soldier to survive. This project will apply recent advances in RF, IR, and EO sensors and jammers to detect, locate, deceive, and jam improvised explosive devices (IEDs), radar-directed target acquisition systems, target-tracking sensors, surface-to-air missiles (SAMs), air-to-air missiles (AAMs), top attack weapons, and fuzed munitions.

The ability to neutralize IEDs will be researched with the goal of embedding the maximum capability in projected future force systems to minimize vehicle weight, cost, logistics, and fielding.

Additionally, this project will research how EO and countermeasures technologies can be applied against laser-aided and electro-optically directed gun or missile systems. The electronic support for the future force effort will design and evaluate a lightweight, low-cost ESM capability for unmanned aerial vehicles (UAVs) and unattended ground sensors (UGSs), enabling the collection, identification, location, and tracking of "hard-to-detect" communications and radar emitters not addressed by space, airborne, or ground-based intelligence systems.

This project encompasses several programs. The Tactical Aircraft Self-Defense program seeks to develop new EW technology that can be used to deceive an enemy's radar-based sensors and neutralize their ability to locate, target, and guide weapons against early-entry forces and the future force. Cost-effective sensors for use in missile warning systems (MWS) will be investigated with the goal of protecting Army ground combat vehicles and aircraft from gunfire, rocket-

propelled grenades (RPGs), SAMs, top attack weapons, and anti-tank guided missiles (ATGMs).

### *Multifunctional On-the-Move Capability*

The Electro-Optic/Infrared (EO/IR) Countermeasures program seeks to develop active and passive devices to protect aircraft and ground vehicles with conventional and suppressed signatures from EO- and IR-guided threats. The Sensor Countermeasures for the future force effort will conduct research into a multifunctional on-the-move (OTM) capability to detect, locate, deceive, and jam enemy-netted ground and airborne sensors, communications, IEDs, artillery fuzes, and battlefield surveillance radar.

A substantial amount of work will be accomplished under the Technical Cooperation program and by the Electronic Warfare Systems Panel, and through cost sharing under project arrangements between the U.K. and Australia. This program will look at those electronic support technologies used against non-communications signals for targeting and tactical situational awareness.

In FY07, the program began the development of integrated personnel detection/concealed weapons detection/concealed explosive detection systems with long stand-off range and increased probability of detection.

The Multispectral Threat Warning effort in FY09 developed and evaluated new algorithm techniques to exploit signals in background clutter to increase detection, identification, and threat classification capabilities.

In an attempt to "reduce administrative burden," as stated in the budget, for FY10 and beyond, funding for the effort was transferred to PE0602270A/project 906.

Tactical EW Technology (U.S. Army)

Funding

U.S. FUNDING								
	FY09 QTY	FY09 AMT	FY10 QTY	FY10 AMT	FY11 QTY	FY11 AMT	FY12 QTY	FY12 AMT
<b>RDT&amp;E (U.S. Army)</b>								
PE# 0602270A EW Technology								
906 Tactical EW Applied Research								
	-	9.4	-	16.1	-	-	-	-
	FY13 QTY	FY13 AMT						
<b>RDT&amp;E (U.S. Army)</b>								
PE# 0602270A EW Technology								
906 Tactical EW Applied Research								
	-	-						

All \$ are in millions.

Source: FY2010 U.S. Budget Documents (amounts for FY11-FY13 not provided in FY10 budget).

Worldwide Distribution/Inventories

This is a **United States Army** project.

Forecast Rationale

With the expanding use and sophistication of electronics in the weaponry used by America's adversaries, the development of electronic countermeasures to thwart these devices has taken on greater importance. The Tactical EW Technology RDT&E project funds the development of these countermeasures. The crucial nature of the Tactical EW Technology project's mission ensures that it will continue to receive support over the next 10 years.

Based on a projection of the FY10 U.S. defense budget, the project is expected to receive \$120 million through 2019. In FY10, the Pentagon aimed to reduce the administrative burden of running the program. To achieve this, the project 442 Tactical EW Technology effort was transferred to project 906 Tactical EW Applied Research in FY10 and beyond.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR RDT&E FUNDING (in millions \$)												
Designation or Program	High Confidence					Good Confidence			Speculative			Total
	Thru 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
MFR Varies												
<b>Tactical EW Technology (U.S. Army) &lt;-&gt; United States &lt;-&gt; Army</b>												
	41.72	16.00	14.00	12.00	14.00	12.00	10.00	11.00	10.00	10.00	11.00	120.00
<b>Total</b>	41.72	16.00	14.00	12.00	14.00	12.00	10.00	11.00	10.00	10.00	11.00	120.00