

ARCHIVED REPORT

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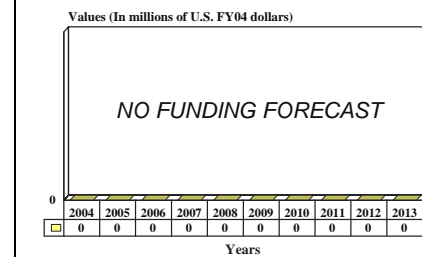
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IR/EO CM Development (Navy) - Archived 12/2005

Outlook

- Funding for ship self-defense development focuses on detection of anti-ship threats
- IRST development an FY98 start
- IRST last funding FY03

Forecast Funding Levels
2004 - 2013



Orientation

Description. PE#0604755N funds most of the U.S. Navy's ship self-defense electronic warfare development efforts. Project U665 (IRST) funds the sensor-related IR/EO countermeasures development work.

Sponsor

U.S. Navy
Naval Surface Warfare Center
NAVSURFWARREN
Carderock Division
White Oak, Maryland (MD)
USA
Tel: +1 301 227 2828

Status. Technology base development.

Total Produced. This is a technology development program only.

Application. The electronic warfare program supports the development of both ground and airborne systems that will deny hostile forces the ability to effectively target and attack surface ships.

Price Range. Indeterminate

Contractors

The contractors change as projects develop.

Technical Data

The Ship Self-Defense Program Element funds a variety of naval protective programs. It was created in FY94 to consolidate ongoing and planned efforts related to ship self-defense. The IR/EO effort focuses on improved

coordination of sensors to increase the probability of detecting low-altitude, low-observable targets. This is to be achieved through the synergism gained from integrating dissimilar sensor sources.

Variants/Upgrades

This program develops technology that can be used to upgrade existing systems.

Program Review

Background. Information is based on the latest Program Descriptive Summary.

PE#0604755N. This program element consolidated ship self-defense (SSD) efforts in FY04. It has been determined based on analysis and demonstration that surface SSD based on a single-sensor detection point-to-point control architecture performs marginally against current and projected Anti-Ship Cruise Missile (ASCM) threats.

The supersonic sea-skimming ASCM reduces the effective battle space to the horizon and the available reaction timeline to less than 30 seconds from first opportunity to detect until the ASCM impacts its target ship. Against such a threat, multisensor integration is required for effective detection, and parallel processing is essential to reduce reaction time to acceptable levels and to provide vital coordination/integration of hardkill and softkill assets.

Project 22649 – IRST (IR Search and Track). This project provided funding for the infrared search and track (IRST) system. The threat from sea-skimming ASCMs

is increasing at a substantial rate and impacting the Navy's force protection and battle space dominance capability. The program bolsters ships' force protection capabilities by providing fully integrated passive detection/declaration of sea-skimming ASCM threats. In addition, IRST provides situational awareness, detection and tracking of surface and low-flying targets that pose threats to ships at-anchor, pier-side or transiting narrow waterways.

Because IRST operates in the infrared portion of the electromagnetic spectrum, it is immune to radar countermeasures, and not affected by atmospheric anomalies such as surface-based ducting. In addition, IRST provides extremely accurate and precise elevation data at the horizon, which allows immediate determination of hostile intent. IRST can also free up search radar resources by providing horizon search coverage where radar performance is marginal. The IRST provides passive augmentation to complement a ship's radar, electronic support measures and visual surveillance systems.

Funding for IRST ended FY03 with US\$4.448 million.

Funding

		<u>U.S. FUNDING</u>							
		<u>FY03</u>		<u>FY04</u>		<u>FY05 (Req)</u>		<u>FY06 (Req)</u>	
		<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>
RDT&E (USN)									
PE#0604755N Ship Self-Defense									
Proj.	2649	-	4.5	-	0.0	-	0.0	-	0.0

All US\$ are in millions.

Recent Contracts

No recent contracts have been identified.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
1Q	FY96	IRST Milestone II decision
4Q	FY96	Phase 1 award
2Q	FY97	Preliminary Design Review
1Q-2Q	FY98	Wallops Island Testing

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
4Q-1Q	FY98/FY99	Self-defense test ship prepared
2Q	FY99	Phase 1 EMD-1 delivery
3Q	FY99	EDM-1, Phase 2 option award
3Q-4Q	FY99	USN-FGN exercise
3Q	FY99	Start of Phase 2
3Q	FY02	In-Process Review #7
1-2Q	FY03	In-Process Review #8
3-4Q	FY03	In-Process Review #9
	FY03	Last RDT&E funding programmed

Worldwide Distribution

This program is primarily a U.S. Navy effort.

Forecast Rationale

This program element funded the Navy's IR/EO technology development, a consolidation of efforts specifically focused on ship self-defense programs. Because of the nature of naval operations, the detection

of incoming threats – heretofore weak, particularly regarding means to detect sea-skimming, high-speed anti-ship missiles – is overtaking countermeasures.

Funding for the IRST work ended in FY03.

Ten-Year Outlook

There is no funding programmed for IRST beyond FY03.

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