

ARCHIVED REPORT

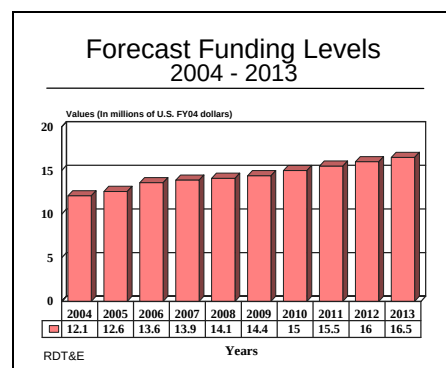
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SEW Surveillance/Reconnaissance Support - Archived 1/2005

Outlook

- Forecast International projects that the U.S. Navy will spend some US\$143.66 million on its SEW Surveillance/Reconnaissance Support program over the next 10 years
- Project Z1034 to continue developing technologies that improve data exploitation, and exploring research sensor awareness/mission planning technologies



Orientation

Description. Space and Electronic Warfare (SEW) Surveillance/Reconnaissance Support is a U.S. Navy program that finances research and development of tactical satellite reconnaissance technology. The program comprises both classified and unclassified activities.

Sponsor

U.S. Navy – Naval Research Laboratory
Washington, DC
USA

Naval Center for Space Technology
Washington, DC
USA

Naval Surface Warfare Center
Dahlgren, Virginia (VA)
USA

Contractors

The Aerospace Corporation
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El Segundo, California (CA) 90245-4691
USA
Tel: +1 310 336 5000
Fax: +1 310 336 7055
Web site: <http://www.aero.org>
(Project R2007)

Status. Ongoing research, development, and technical support.

Total Produced. Not applicable.

Application. Tactical missions performed by the U.S. Navy.

Price Range. Indeterminate

Technical Data

The Space and Electronic Warfare (SEW) Surveillance/Reconnaissance Support program is a highly sensitive research and development effort of the U.S. Navy. It seeks to exploit U.S. national and selected service sensor systems in order to enhance the tactical support

provided to Navy fleet operational commanders. Program efforts are funded under PE#0605867N.

PE#0605867N, Project Z1034. Project Z1034 funds proof-of-concept demonstrations that are typically conducted during Navy fleet operations. Efforts focus

on the detection, location, and classification of targets of tactical interest, and on reducing the time required to deliver tactically useful information. This project was undertaken in response to congressional direction to exploit all available national and service sensor systems in order to enhance the level of tactical support provided to fleet operational commanders.

PE#0605867N, Project R2007. Project R2007 supports a variety of Navy space research and development efforts related to the use of satellites for naval purposes. The project also provides funds to the Naval Space Command for systems testing.

Variants/Upgrades

Improvements in capability are continually being sought in the areas of surveillance and targeting architecture, as well as in navigation.

Program Review

Background. In 1978, the United States armed services were directed by Congress to investigate applications of national intelligence assets to tactical missions. PE#0605867N fulfills this requirement for the United States Navy.

PE#0605867N, Project Z1034. Many of the early efforts conducted under Project Z1034 were classified. Unclassified efforts included the testing and evaluation of a collection management support system and the development of upgrades for the Naval Wargaming System. The following summarizes the recent efforts conducted under Project Z1034.

In 1992, an effort was launched to develop semi-automated data extraction and analysis capabilities. The following year prototype development for the Navy Joint Non-Cooperative Target Identification System began. That effort was completed in 1996. Throughout the early 1990s, experimental sensors were tested on the space shuttle.

During 1997-1999, the Naval Space Technology Plan was modified to address changes resulting from the continued evolution of the SEW concept. Project Z1034 funding was extended to the Theater Ballistic Missile Defense program in 2000.

In 2001, Project Z1034 supported littoral warfare efforts, and in 2002, precision strike activities.

Recent Activity. In 2003, Project Z1034 assisted in Tactical Ballistic Missile Defense program testing. At the same time, research into data dissemination capabilities was undertaken.

In 2004, Project Z1034 will lend support to littoral/expeditionary warfare exercises, and will further the

development of technologies that improve data exploitation. Project plans for 2005 call for participation in the testing of communication/navigation systems, and for the conduct of research into sensor awareness/mission planning technologies.

PE#0605867N, Project R2007. Project R2007 provides resources to the Naval Space Command (NAVSPACECOM) for systems testing. Early efforts under this program were classified, and only in the early 1990s did project activities begin to be disclosed. Reported activities are summarized below.

In 1992, technologies were evaluated for potential application to the NAVSPACECOM Directed Search Satellite System concept exploration. In 1994, prototyping of equipment that would provide the most cost-effective C² and data distribution architecture for space systems support to the Navy fleet began. Prototyping was completed in 1995. The test and demonstration phases of the prototype equipment were initiated in 1996 and completed in 1997.

In 1998, advanced processing techniques were developed using multi-spectral/hyper-spectral imagery (MSI/HSI) data. These new techniques were then demonstrated against orbit predictions.

Project R2007 provided engineering and technical support to the Space-Based Infrared System effort in 2000. From 2001-2007, the project lent support to the implementation of the Multi-Mission Mobile Processor (MMMP), a component of the Space-Based Infrared System.

Recent Activity. The U.S. Department of Defense provided no funding for Project R2007 in 2003, and the project has come to a close.

Funding

		<u>U.S. FUNDING</u>							
		<u>FY03</u>		<u>FY04(Req)</u>		<u>FY05(Req)</u>			
		<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>		
RDT&E (U.S. Navy)									
PE#0605867N		-	11.84	-	12.09	-	12.57		
		<u>FY06</u>		<u>FY07(Req)</u>		<u>FY08(Req)</u>		<u>FY09(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 (U.S. Navy)									
PE#0605867N		-	13.62	-	13.87	-	14.12	-	14.37

All US\$ are in millions.

Source: U.S. Department of the Navy FY2004/2005 Descriptive Summary

Recent Contracts

No recent contracts have been identified for the Space and Electronic Warfare (SEW) Surveillance/Reconnaissance Support program.

Timetable

<u>Year</u>	<u>Major Development</u>
FY82	Funding begins under PE#0605867N
FY91	Development of Phase I Composite Tactical Display
FY94	Navy Joint Non-Cooperative Target Identification System prototype completed and demonstrated
FY95	Technology supplement for evolution of SEW concept completed
FY96	Exploration of advanced data processing and electronic dissemination begins
FY97	Update to Naval Space Technology Plan commenced
FY98	Development of advanced processing techniques using MSI/HSI data
FY99	Development of low-data-rate SATCOM alternatives
FY00	Project R2007 provides engineering and technical support to Space-Based Infrared System activities
FY01	Project Z1034 provides funds to littoral warfare activities
FY02	Project R2007 lends support to implementation of Multi-Mission Mobile Processor
FY03	Project R2007 comes to a close
FY04	Project Z1034 to provide support for littoral/expeditionary warfare exercises
FY05	Project Z1034 to support the testing of communication/navigation systems

Worldwide Distribution

This is a U.S. Department of Defense program. Overall program management is the responsibility of the U.S. Navy.

Forecast Rationale

Space and Electronic Warfare (SEW) Surveillance/Reconnaissance Support is a U.S. Navy program that finances research and development of tactical satellite reconnaissance technology. The program comprises

both classified and unclassified activities. Many details on program activities are still classified as top-secret.

As indicated by the **Ten-Year Outlook** chart, Forecast International projects that the United States Navy will spend approximately US\$143.66 million on its SEW Surveillance/Reconnaissance Support program over the next 10 years. The U.S. Navy's need to effectively collect and disseminate information is driving program spending.

The U.S. Department of Defense created the SEW Surveillance/Reconnaissance Support program to exploit all available national and service sensor systems

in order to enhance the level of tactical support provided to Navy fleet commanders. Forecast International expects the program to be well funded during this decade and into the next.

Achieving information superiority over an adversary is critical to winning any battle or war. The work conducted under the U.S. Navy SEW Surveillance/Reconnaissance Support program will assure the Navy achieves information dominance over its adversaries.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR FUNDING (\$ in millions)													
Designation	Application	Thru 03	04	<u>High Confidence Level</u>		07	<u>Good Confidence Level</u>		10	<u>Speculative</u>			Total 04-13
				05	06		08	09		11	12	13	
SEW SURV/RECON SUPPORT	COMMAND AND CONTROL (U.S. NAVY)	206.73	12.09	12.57	13.62	13.87	14.12	14.37	15.06	15.52	15.99	16.45	143.66