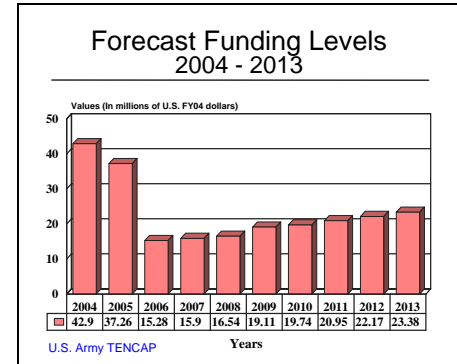


TENCAP (U.S. Army) - Archived 5/2005

Outlook

- Forecast International projects the U.S. Army to spend some US\$233.23 million on its Tactical Exploitation of National Capabilities program over the next decade
- In 2004 expect Project 907 to develop technology that “polishes” the TENCAP common baseline
- In 2005, look for Project 957 to begin system development of TES Forward for the First United States Army Corps



Orientation

Description. The Tactical Exploitation of National Capabilities (TENCAP) program is a United States Department of Defense research and development effort. The program integrates U.S. space system capabilities into the tactical decision-making process of the U.S. military. In 1977, the U.S. Congress ordered all United States military services to establish their own TENCAP program based on the Army's model. This report focuses on the U.S. Army TENCAP program.

Status. Ongoing research and development.

Total Produced. Not applicable.

Application. Command, control, communications, computing, intelligence, surveillance, and reconnaissance (C⁴ISR).

Price Range. Indeterminate

Sponsor

United States Army
U.S. Army Space Program Office
7701 Telegraph Road
Fairfax, Virginia (VA) 22315

Contractors

Northrop Grumman Corp, <http://www.northropgrumman.com>, 1840 Century Park East, Los Angeles, CA 90067 United States, Tel: 1 (310) 201-3000, Fax: 1 (310) 201-3023, RDT+E Defunct

Technical Data

The United States possesses satellite systems capable of performing worldwide reconnaissance and surveillance. The U.S. Army TENCAP program researches and develops technologies that enable Army commanders to take advantage of these systems for strategic decision-making. Some of these technologies include surveil-

lance, targeting, and advanced intelligence gathering systems. The program is congressionally directed and requires a close liaison with the intelligence community and the program's developers to track highly sensitive activities.

Variants/Upgrades

The U.S. Army TENCAP is a research and development program that is constantly being upgraded and enhanced. There are no identifiable variants in the sense of a baseline product.

Program Review

Background. In 1973, the U.S. Army established the Army Space Program Office (ASPO) to execute the Army Tactical Exploitation of National Capabilities (TENCAP) program. ASPO duties included serving as the technical and fiscal interface to the other Army national program offices and managing the TENCAP material acquisition for the entire U.S. Army. ASPO's approach was so successful that the U.S. Congress ordered all U.S. military services to establish their own TENCAP program based on the Army's model in 1977.

The U.S. Army TENCAP program provides the Army commander immediate access to satellite systems and the information they provide. Without TENCAP technology, the U.S. Army commander must be force-fed national-level intelligence from other levels of command. With a TENCAP system, the tactical commander is able to pull the data he requires when he needs it.

PE#0604766A, Project 957, and PE#0603766A, Project 907, fund U.S. Army TENCAP activities.

PE#0604766A, Project 957. Project 957 supports engineering development of the Tactical Exploitation System (TES) and Division TES (DTES). The TES is the Army's TENCAP migration system that combines and downsizes the TENCAP functions into an integrated common baseline. TES brings all of the existing and emerging Army TENCAP capabilities into a single system.

TES satisfies the intelligence, surveillance, and reconnaissance (ISR) needs of the Army commander by processing information gathered from satellite and aircraft tactical sensors. From any workstation, TES operators can perform multiple imagery intelligence (IMINT), signal intelligence (SIGINT), or dissemination functions. Moreover, TES provides extensive communication capabilities, including UHF and Ku radio frequency band communications.

The TES is configured in two segments – Main (TES-M) and Forward (TES-F). Both can drive on and off a C-130 or larger aircraft. The forward segment is able to land with the initial entry forces to provide the

tactical commander with immediate national- and theater-level intelligence support. The main segment has been designed to operate behind the initial entry forces.

The DTES will provide the capability to receive raw and processed imagery IMINT, raw and processed measurement and signature intelligence (MASINT), and SIGINT information. The DTES will provide up to two operator workstations. It will be C-130 transportable and capable of stand-alone operations.

In 2001, Project 957 began developing a miniaturization prototype of the Semi Automated Imagery Processor (SAIP). Project 957 also completed engineering development of TES #2 (Forward and Main).

In 2002, Project 957 conducted activities to ensure TES joint interoperability with current and future sensors (e.g., the Global Hawk, Future Imagery Architecture). The project also continued development of the miniaturized SAIP prototype in 2002.

In 2003, Project 957 upgraded software for TES Forward and TES Main (TES #2). The project also upgraded software for DTES in 2003.

In 2004, look for Project 957 to begin TES Lite development, integration, and evaluation. In 2005, the project should begin system development of TES Forward for the First United States Army Corps (I Corps).

PE#0603766A, Project 907. Project 907 of PE#0603766A finances the demonstration and evaluation of the TES and DTES. Capabilities developed under Project 907 will be incorporated into the TES and DTES.

In 2002, Project 907 enhanced special technologies associated with the TES (technologies included emitter mapping and phased array communications). In 2003, Project 907 continued to refine these technologies. In 2004 and 2005, expect the project to develop technology that "polishes" the TENCAP common baseline.

Funding

		U.S. FUNDING							
		<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 (U.S. Army)									
PE#0604766A									
Project 957		-	55.46	-	26.02	-	21.82	-	0.00
PE#0603766A									
Project 907		-	16.11	-	16.88	-	15.44	-	15.28
		<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>		
RDT&E (U.S. Army)									
PE#0604766A									
Project 957		-	0.00	-	0.00	-	0.00		
PE#0603766A									
Project 907		-	15.90	-	16.54	-	19.11		

Source: FY 2005 U.S. Army RDT&E Descriptive Summary

All US\$ are in millions.

Recent Contracts

The U.S. Army TENCAP program is congressionally directed and requires a close liaison with the intelligence community and the program's developers to track highly sensitive activities. Consequently, no recent contracts have been identified.

Timetable

<u>Year</u>	<u>Major Development</u>
1973	The U.S. Army establishes the Army Space Program Office (ASPO) to execute the Army Tactical Exploitation of National Capabilities Program (TENCAP)
1977	The U.S. Congress orders all U.S. military services to establish their own TENCAP program based on the Army's model
1997	The U.S. Army fields Advanced Electronic Processing & Dissemination System (AEPDS)
2001	Project 957 completes engineering development of the TES #2 (Forward and Main)
2002	Project 907 refines special technologies associated with the TES
2003	Project 957 upgrades software for TES Forward and TES Main
2004	Expect Project 907 to develop technology that "polishes" the TENCAP common baseline

Worldwide Distribution

This is a **U.S. Department of the Army** program.

Forecast Rationale

The U.S. Army Tactical Exploitation of National Capabilities (TENCAP) program develops technology to provide the Army commander immediate access to satellite systems and the information they provide. Without TENCAP technology, the U.S. Army commander must use national-level intelligence from

other levels of command. With a TENCAP system, tactical commanders are able to pull the data they require when they need it.

As indicated by the **Ten-Year Outlook** chart, Forecast International projects the U.S. Army to spend some US\$233.23 million on its Tactical Exploitation of National Capabilities program over the next decade. The United States Army's need to achieve information superiority over U.S. enemies is driving Army TENCAP program spending.

The United States possesses national satellite systems capable of performing worldwide reconnaissance and surveillance. As a result, these systems can provide useful intelligence to tactical commanders. Via technological development, the TENCAP program seeks to integrate current and emerging U.S. satellite capabilities into the U.S. Army commander's tactical decision-making process.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR FUNDING (\$ in millions)													
Designation	Application	Thru 03	<u>High Confidence Level</u>				<u>Good Confidence Level</u>			<u>Speculative</u>			Total 04-13
			04	05	06	07	08	09	10	11	12	13	
TENCAP	INTELLIGENCE GATHERING - RDT&E (U.S. ARMY)	366.34	42.90	37.26	15.28	15.90	16.54	19.11	19.74	20.95	22.17	23.38	233.23