Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: Special Technology Support PE 0603704D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0	29.571	19.916	20.138	22.268	22.070	22.595	23.120

A. Mission Description and Budget Item Justification:

Special Technology Support to Intelligence and Light Forces is a classified program. See the Congressional Justification Book for program details.

Program Accomplishments and Plans:

FY 2005 Accomplishments:

- Mission Support $29.571

FY 2006 Plans:

- Mission Support $19.916

FY 2007 Plans:

- Mission Support $20.138

B. **Program Change Summary:** (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY2007
Previous President's Budget	0	19.274	19.468	19.703
Current President's Budget	0	29.571	19.916	20.138
Total Adjustments		+10.297	+0.448	+0.435
Congressional program reductions		-0.703		
Congressional rescissions				
Congressional increases		+11.000		

Other Adjustments	+0.448	+0.435

Change Summary Explanation:

FY 2005: Transferred from Budget Activity 3. $11.000 in Congressional increases. $0.703 undistributed congressional reductions.
FY 2006: Department adjustments
FY 2007: Department adjustments

C. Other Program Funding Summary: Not Applicable

D. Acquisition Strategy: Not Applicable

E. Performance Metrics: Classified

----------Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				R-1 Item Nomenclature: Transformational Training, 0603757D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	2.814	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This program element supports Training Transformation (T2) program as managed by the Deputy Under Secretary of Defense, Readiness (DUSD(R)). In FY03, the T2 Implementation Plan was promulgated as a guiding document for the Department to transform joint training. This plan defines the full range of joint and mission rehearsal capabilities and the associated roles, responsibilities, and timelines to accomplish T2 objectives. The plan called for the Department to study how best to provide a dedicated joint training environment for functional warfighting and complex joint tasks; these funds support that work.

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
President's Budget	2.909	0	0	0
Budget Estimate Submission	2.814	0	0	0
Total Adjustments	-0.095	0	0	0
SBIR / STTR Transfer	-0.082	0	0	0
Reprogrammings	-0.013	0	0	0

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics:
Identified joint training requirements and deficiencies. Developed potential solutions and investment strategy. Developed an interagency roadmap. Developed a Stability and Support Operations joint training plan. Actions completed will result in Joint training policy updates and procedural changes, providing improved joint training to US, coalition, interagency, and intergovernmental partners.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				Project Name and Number Training Transformation, 0603757D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 1	2.814	0	0	0	0	0	0	0
RDT&E Articles Quantity – N/A								

A. Mission Description and Budget Item Justification: This program element supports Training Transformation (T2) program as managed by the Deputy Under Secretary of Defense, Readiness (DUSD(R)). In FY03, the T2 Implementation Plan was promulgated as a guiding document for the Department to transform joint training. This plan defines the full range of joint and mission rehearsal capabilities and the associated roles, responsibilities, and timelines to accomplish T2 objectives. The plan called for the Department to study how best to provide a dedicated joint training environment for functional warfighting and complex joint tasks; these funds support that work.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost ($ in Millions)	2.814	0	0	0
RDT&E Articles Quantity – N/A				

- Identified Joint Urban Operations training requirements and deficiencies and developed potential solutions along with an investment strategy.
- Developed an interagency joint training roadmap that addresses Regional Combatant Commander operational requirements to accomplish effects-based in concert with other government agencies, coalition partners, and non-governmental organizations.
- Developed a Stability and Support Operations (SASO) joint training plan that addresses Regional Combatant Commander operational requirements to conduct these operations.
- Developed a joint training roadmap that identifies Regional Combatant Commanders operational requirements to address asymmetric warfare, focusing on the conduct of counter-asymmetric warfare training.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: SRI International, Menlo Park, CA, Urban Operations, Inter-agency joint training; Camber Corporation, Huntsville, AL, Stability and Support Operations

Exhibit R-2, RDT&E Budget Item Justification						Date: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDT&E: Defense-Wide/BA 6				R-1 ITEM NOMENCLATURE: PE: 0603835D8Z Transformation Initiatives Program (TIP)				
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0	0	10.152	10.203	10.537	10.314	10.538	10.829

(U) A. Mission Description and Budget Item Justification:

This new program is intended for exclusive use by Combatant Commanders to pursue unforeseen, but potentially high-payoff joint transformation initiatives/ opportunities during the year of execution. Transformation initiatives will be submitted by the Combatant Commanders and reviewed and either approved or disapproved by the Director for Force Transformation. Transformation initiatives or opportunities are intended to yield transformational effects such as major leaps in military capabilities. Transformation initiatives/ opportunities are expected to be time-critical and present themselves as opportunities to co-evolve operating concepts and technologies in contingencies, joint operations, exercises or experiments. Such effects are expected to occur during transformational discovery, innovation, and exploration through the execution of operational concepts and technologies, prototyping, experimentation, and war gaming. Funds will only be made available to Combatant Commanders and will only be approved by the Director for Force Transformation. Funding for this program will provide a modest means to gain the direct and active participation of the Combatant Commanders in the transformation process. It will provide a mechanism to fund transformation projects initiated by the Combatant Commanders during the year of execution permitting real-time preparation and testing of novel technologies or concepts that, if proven, will add to a force's capability in a significant way. In general, this program is expected to enhance:

- Combatant commanders ability to quickly pursue unforeseen, but potentially high-payoff, joint transformation initiatives during the year of execution.
- Inclusion of the combatant commands in the transformation process by funding initiatives that are time-critical and present themselves as opportunities to co-evolve operating concepts and technologies in contingencies, joint operations, exercises or experiments.
- Increased infusion of transformational ideas into the transformation process.
- Increased experimentation of transformational ideas using operator/warfighter expertise and organizations.

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E: Defense-Wide/BA 6	R-1 ITEM NOMENCLATURE: PE: 0603835D8Z Transformation Initiatives Program (TIP)

(U) B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget:	0.0	9.977	9.921	9.935
Current BES:	0.0	9.977	10.152	10.203
Total Adjustments:	0.0	-9.977	0.231	0.268
Congressional program reductions:	0.0	-9.977	0.0	0.0
Congressional rescissions:	0.0	0.0	0.0	0.0
Congressional increases:	0.0	0.0	0.0	0.0
Reprogrammings:	0.0	0.0	0.0	0.0
SBIR/STTR Transfer:	0.0	0.0	0.0	0.0
Other Adjustments:			0.231	0.268

(U) C. Other Program Funding Summary: Not Applicable.

(U) D. Acquisition Strategy. Not Applicable.

(U) E. Performance Metrics: This is a new start; therefore there are no performance metrics to permit an assessment. However, an Office of the Secretary of Defense Memorandum will be in place that establishes a reporting process that will assess the outcome of each project in relation to the goals and objectives that were initially stated and were the basis on which the project is approved by the Director, Office of Force Transformation (OFT). All projects will be closely associated with the transformation goals of the Department, and will reflect capability gaps identified through reports, such as the Strategic Transformation Appraisal that the Director, OFT delivers to the Secretary of Defense annually.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 6				R-1 ITEM NOMENCLATURE UNEXPLODED ORDNANCE DETECTION & CLEARANCE			PE 0603858D8Z	
COST ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0.000	4.885	0.000	0.000	0.000	0.000	0.000	0.000
PROJECT RENEW	0.000	4.885	0.000	0.000	0.000	0.000	0.000	0.000

A. Mission Description and Budget Item Justification:

Project RENEW is an integrated mine-action program launched in August of 2001. Project RENEW has provided victim assistance and Mine Risk Education (MRE), and has produced a Level One Survey in Trieu Phong District as well as a Knowledge-Awareness-Practices (KAP) survey and victim survey providence-wide. Project RENEW has established a Coordination Office for all area-wide mine-action projects, and the local government expects this role to eventually expand providence-wide.

- Explosive Ordnance Disposal: project RENEW will expand the recruitment, training and deployment of Explosive Ordnance Disposal (EOD) teams that will employ Vietnamese nationals to be trained and equipped to perform EOD.
- Community Mine Awareness: will expand its partnership with the Youth Union to train Youth Union Members in Mine awareness to educate their families and communities of the danger of landmines and UXO.
- Public Awareness Campaign: Project RENEW will continue and expand its highly effective UXO public awareness campaign broadcast on Quang Tri Television (QTV).

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	0.000	0.000	0.000	0.000
Current FY 2006 President's Budget Submisison:	0.000	4.885	0.000	0.000
Total Adjustments	0.000	+4.885	0.000	0.000
Congressional program reductions:		-0.115		
Congressional rescissions:				
Congressional increases:		+10.000		
Reprogrammings:		-5.000		
SBIR/STTR Transfer:				
Other				

C. Other Program Funding Summary:
Not Applicable

D. Acquisition Strategy:
Not Applicable

E. Performance Metrics:
Quarterly program reviews will be conducted between the Project Manager and the program execution team. Metrics to be assessed will include the number of Explosive Ordnances Disposal (EOD) teams established and operational, the number of individuals reached through the mine awareness campaign and the number of EOD actions completed.

Exhibit R-3 Cost Analysis (page 1)								Date:	February-2005				
DEFENSE-WIDE BUDGET ACTIVITY 4			Program Element PE 0603858D8Z										
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	2006 Cost	2006 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development												
Ancilliary Hardware Development												
Systems Engineering												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development												
Remarks:												
Development Support												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support												
Remarks:												

Exhibit R-3 Cost Analysis (page 2)							Date:	February-2005				
DEFENSE-WIDE BUDGET ACTIVITY 0			Program Element PE 0603858D8Z				Project Renew					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 2001 Cost	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	2006 Cost	2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT												
IOT&E												
Subtotal T&E												
Remarks:												
Contractor Engineering Support						4.885						
Government Engineering Support												
Program Management Support												
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management						4.885						
Remarks:												
Total Cost			0.000			4.885						
Remarks:												

Exhibit R-4, Schedule Profile																																			
																																		Date: February 2005	
Appropriation/Budget Activity DEFENSE WIDE RDT&E/B.A. #4									Program Element Number and Name PE 0603858D8Z																				Project Number and Name Unexploded Ordnance Detection and Clearance							
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009				2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Project Start												▲																								
Concept Definition													▲																							
Phase 1 Execution															▲																					
Phase 1 Final Report																	▲																			

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 6				R-1 ITEM NOMENCLATURE Capital Asset Management Systems -Military Equipment Evaluation (CAMS-ME)			PE 0604140D8Z	
COST ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0.000	0.000	4.812	5.648	6.149	0.000	0.000	0.000

A. Mission Description and Budget Item Justification:

CAMS-ME has been approved by the Finance and Accounting, Logistics, and Acquisition Domains as the Mid-Term Systems Solution for reporting the value of military equipment (ME). As part of the Department's enterprise system solution for valuing and reporting ME, CAMS-ME will maintain the work in process (WIP) cost, calculate the value of ME, and depreciate delivered ME end items over the course of their useful lives. CAMS-ME will be developed by the Department of the Navy working with OUSD(AT&L), and with Air Force and Army assistance, to ensure that all ME valuation requirements are met.

Implementation of CAMS-ME will:
Provide reliable and accurate information to decision makers

- Total acquisition cost of assets will be consistently determined
- Decision makers will get comparable information over time and between programs
- It will allow better investment planning for replacements

Increase public confidence in the Department's ability to account for its assets and help achieve a clean audit opinion.
Bring the Department into compliance with the Chief Financial Officers Act of 1990 and the Federal Financial Management Improvement Act of 1996.

The RDT&E budget funds business process modeling & analysis, configuration management, system engineering, reports design, hosting implementation, and software development costs for the CAMS-ME DoD-wide Enterprise Solution.

PROGRAM ACCOMPLISHMENTS AND PLANS

FY 2004 Accomplishments: N/A

FY 2005 Plans: N/A

FY 2006 Plans:
Capital Asset Management System-Military Equipment (CAMS-ME)

- Migrate from the baseline valuation tool release 1 to release 2
- Primary purpose is to change from calculating asset values at the program level (phase 1) to a contract level (phase 2)
- Will be used by the P&E Policy Office, and DoD Components for maintaining and updating the baseline and for valuing military equipment assets delivered under contracts awarded post 10/1/06
- The system will include the functionality described in phase 1 and will have added capabilities to calculate asset and program Work-In-Process values using data obtained from the contract (e.g., asset values calculated using average contract value) and values for certain identifiable Government Furnished Property items embedded in the military equipment end items.
- Will have the capability to exclude (e.g. spares) or separately account for (e.g. ground support equipment) ancillary ME items
- The automation of the system will be limited to a number of interfaces to receive disbursement data at the contract level

FY 2007 Plans:
Capital Asset Management System-Military Equipment (CAMS-ME)

- The primary purpose is to automate the interfaces necessary for calculating the 'full cost' of an asset on a per/individual asset basis
- Data exchanges/interfaces utilizing Wide Area Work Flow, Unique Identifiers, and service logistics systems will be leveraged to compute transaction level asset valuations, as appropriate
- This system will be used until long-term Service-specific solutions (phase 4) are developed, tested and fully implemented

-

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget:	0.000	0.000	0.000	0.000
Current FY2006 President's Budget Submission:	0.000	0.000	4.812	5.648
Adjustments to Appropriated Value:			+4.812	+5.648
Congressional Program Reductions:				
Congressional Rescissions:				
Congressional Increases:				
Reprogrammings:				
SBIR/STTR Transfers:				
Other:			+4.812	+5.648

C. Other Program Funding Summary:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Procurement	0.000	0.000	3.515	3.521	3.527	3.531	3.535
O&M	0.000	0.000	2.600	3.300	3.200	1.300	1.300

D. Acquisition Strategy. N/A

Performance Metrics. The outcome goals for the Military Equipment Valuation project and CAMS-ME are to implement a system (CAMS-ME) that will provide reliable and accurate information to decision makers so that total acquisition cost of assets will be consistently determined; decision makers will get comparable information over time and between programs; and to allow better investment planning for replacements. In addition, CAMS-ME will help increase public confidence in the Department's ability to account for its assets and help achieve a clean audit opinion. It will also bring the Department into compliance with the Chief Financial Officers Act of 1990 and the Federal Financial Management Improvement Act of 1996.

Systems Engineering	MIPR	SSC SD	0	0		3.609	Q1	4.236	Q1	4.612		
Liscenses												
tooling												
GFE												
Award Fees												
Subtotal Product Development	0	0	0	0	0	3.609	0	4.236	0	4.612	0	0

Remarks: The product development budget funds the core development of the CAMS-ME DoD-wide Enterprise Solution. Systems engineering support will be rolled out in multiple phases (spiral development) and is necessary for configuring the software to meet the function, technical, and Information Assurance requirements. Activities within the phases include requirement gathering, data mapping, data conversion, developing system interfaces, compatibility testing, establishing a development environment, and providing necessary documentation (e.g. Acquisition Strategy, Test and Evaluation Master Plan, and Test Plans).

Exhibit R-3 Cost Analysis ($ in millions)							Date: February-05					
RDT&E Defense-wide		PE Code: 0604140D8Z					CAMS-Military Equipment Evaluation					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total Pys Cost	CY Cost	CY Award Date	BY1 Cost	BY1 Award Date	BY2 Cost	BY2 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Support	MIPR	DFAS-Columbus	0	0		144.36	Q1	169.44	Q1	184.47		
Software Development												
Training Development	MIPR	DFAS-Columbus	0	0		336.84	Q1	395.36	Q1	430.43		
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support	0	0	0	0	0	481.2	0	564.8	0	614.9	0	0

Remarks: The development support budget funds DFAS-Columbus to establish a secure hosting environment for the CAMS-ME DoD-wide Enterprise Solution. Development support will include server migration to DFAS, along with hardware and software configuration. The training development funding will be used to develop a training program for end users and a call center to provide operational and technical valuation support for Component users located throughout CONUS. This will include training plans for each wave. Additionally, equipment and training of superusers, standard users and help desk personnel. The documentation and training materials will be an integral part of this effort. Preparations for both live facility and virtual training will be needed to deploy each release.

Exhibit R-3 Cost Analysis							Date: February-05					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total Pys Cost	CY Cost	CY Award Date	BY1 Cost	BY1 Award Date	BY2 Cost	BY2 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT&E	MIPR	SSC-SD				288.72	Q1	338.88	Q1	368.94		
OT&E	MIPR	DFAS-Columbus				433.08	Q1	508.32	Q1	553.41		
Tooling												
GFE												
Subtotal T&E	0	0	0	0	0	721.8	0	847.2	0	922.35	0	0

Remarks: The T&E budget funds the developmental and operational testing of the CAMS-ME DoD-wide Enterprise Solution. Development Test & Evaluation funds support unit, string, stress, and integration testing. Operational Test & Evaluation budget funds support user acceptance testing and quality assurance testing. The mentioned tests are necessary for system Certification and Accreditation (CA) and for the Initial Authority To Operate (IATO).

Exhibit R-3 Cost Analysis							Date: February-05					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total Pys Cost	CY Cost	CY Award Date	BY1 Cost	BY1 Award Date	BY2 Cost	BY2 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support												
Government Engineering Support												
Program Management Support												
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Overhead												
Subtotal Management	0	0	0	0	0	0	0	0	0	0	0	0

Remarks: The management support funding is provided by a different appropriation.

Total Cost	0	0	0	0	0	4.812	0	5.648	0	6.149	0	0

Remarks:

Exhibit R-2, RDT&E Budget Item Justification							Date: Feb 2005	
Appropriation/Budget Activity RDT&E/Budget Activity 6				R-1 Item Nomenclature: PE 0604774D8Z Defense Readiness Reporting System				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	14.820	19.335	13.475	10.162	3.035	3.033	3.146	3.220

A. Mission Description and Budget Item Justification:

This funding supports developing guidelines and procedures for a comprehensive readiness reporting system that evaluates readiness on the basis of the actual missions and capabilities assigned to the forces. The Defense Readiness Reporting System (DRRS) establishes a capabilities-based, adaptive, near real-time readiness information system for the DoD. This system is being designed to measure the readiness of military forces and supporting infrastructure to meet missions and goals assigned by the Secretary of Defense. DRRS also hosts information and applications used to support Joint Forces Command (JFCOM) in their role as the Joint Force Provider.

The transformation of readiness reporting into a new comprehensive readiness system presents a number of significant challenges. First, there are thousands of new potential reporting entities to include in DRRS, such as Active and Reserve component units, agencies, Combatant Commanders, installations, depots, ports, and major elements of the industrial base. These new entities must not only define and implement reporting based on specific readiness metrics, but they must make their readiness status continuously available in near real time to DRRS. Second, the current National Military Strategy (NMS) makes substantially more complex demands on readiness reporting. Instead of basing readiness on traditional MTW-based scenarios, the NMS asks us to contemplate readiness for an entire range of operational forms, and to design DRRS to assess global readiness impact based on our integrated ability to project and sustain a mix of constructed forces in simultaneous engagements. Finally, OIF/OEF sourcing challenges mean that force managers need applications that will query the entire Department for suitable, available organizations to meet current needs. The need for these applications and the underlying data are a top priority for the DRRS project.

The realization of DRRS requires integrating a host of key technologies in order to achieve an information system that supports distributed, collaborative, and dynamic readiness reporting in addition to continuous tool-based assessment. The primary technical goal is the creation of a highly reliable and securely integrated readiness data environment to leverage and extend current readiness information systems. This system is based on intelligent agents, dynamic databases, semantic middleware, and publish/subscribe concepts; providing a logically uniform view into the multiple databases and information sources that feed DRRS. Crucially, through this type of advanced information environment, we dramatically expand the range of readiness queries that DRRS can able to handle. This environment supports a suite of analysis tools that allow users to explore the consequences of readiness deficiencies in terms of the ability to generate forces and assess transportation feasibility as it pertains to specific scenarios. These tools and tool suites harness the power of the information environment to make possible the kind of quick-turnaround, excursion-driven readiness assessment that is at the heart of DRRS.

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	15.336	19.691	13.171	9.942
Current FY 2006 President's Budget	14.820	19.335	13.475	10.162
Adjustments to Appropriated Value				
Congressional program reductions	none	none	none	none
Congressional rescissions	none	none	none	none
Congressional increases	none	none	none	none
Reprogrammings	none	none	none	none
SBIR/STTR Transfer	none	none	none	none
Other	-0.516	-0.356	0.304	0.678

C. Other Program Funding Summary: None.

D. (not required)

E. Metrics:

The FY 2006 DRRS metrics are:

- Organizations from the Component Commanders down to tactical-level units are registered and conducting METL assessments
- Comprehensive resource, location, and force structure information for each Service are available via web services
- JFCOM uses DRRS applications in support of their Joint Force Provider role

	Exhibit R-2a, RDT&E Project Justification						Date: Feb 2005	
Appropriation/Budget Activity RDT&E. Defense-wide BA 6				PE-0604774D8Z Defense Readiness Reporting System				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
	14.820	19.335	13.475	10.162	3.035	3.033	3.146	3.220

This funding supports developing guidelines and procedures directing the Department of Defense (DoD) components to develop guidelines and procedures for a comprehensive readiness reporting system that evaluates readiness on the basis of the actual missions and capabilities assigned to the forces. The Defense Readiness Reporting System (DRRS) establishes a capabilities-based, adaptive, near real-time readiness information system for the DoD. This system is being designed to measure the readiness of military forces and supporting infrastructure to meet missions and goals assigned by the Secretary of Defense. DRRS also hosts information and applications used to support Joint Forces Command (JFCOM) in their role as the Joint Force Provider.

The transformation of readiness reporting into a new comprehensive readiness system presents a number of significant challenges. First, there are thousands of new potential reporting entities to include in DRRS, such as Active and Reserve component units, agencies, Combatant Commanders, installations, depots, ports, and major elements of the industrial base. These new entities must not only define and implement reporting based on specific readiness metrics, but they must make their readiness status continuously available in near real time to DRRS. Second, the current National Military Strategy makes substantially more complex demands on readiness reporting. Instead of basing readiness on traditional MTW-based scenarios, the NMS asks us to contemplate readiness for an entire range of operational forms, and to design DRRS to assess global readiness impact based on our integrated ability to project and sustain a mix of constructed forces in simultaneous engagements. Finally, OIF/OEF sourcing challenges mean that force managers need applications that will query the entire Department for suitable, available organizations to meet current needs. The need for these applications and the underlying data are a top priority for the DRRS project.

The realization of DRRS will require integrating a host of key technologies in order to achieve an information system that will support massive-scale distributed, collaborative dynamic readiness reporting and continuous tool-based assessment. The primary technical goal is the creation of a high-reliability, secure integrated readiness data environment that will leverage and extend current readiness information systems. This system will be based on intelligent agents, dynamic databases, semantic middleware, and publish/subscribe concepts; and will provide a logically uniform view into the multiple databases and information sources that will feed DRRS. Crucially, through this type of advanced information environment, we will dramatically expand the range of readiness queries that DRRS will be able to handle. Coupled to this data environment will be a set of high-speed scenario-oriented tools that support ad hoc queries and drilldown, and an advanced workflow system that can assemble existing and new scenario and assessment tools into high-level task-specific query processes. These tools and tool suites will harness the power of the information environment to make possible the kind of quick-turnaround, excursion-driven readiness assessment that is at the heart of DRRS.

B. Accomplishments/Planned Program

Defense Readiness Reporting System		FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost		14.820	19.335	13.475	10.162
RDT&E Articles Quantity *(as applicable)		N/A	N/A	N/A	N/A

FY 2005 Accomplishments:. Expanded resource information, reporting organizations; developed Joint Force Provider tools

- Successfully launched DRRS 1.0
  - Migrated users from prototype system to DRRS
  - All Combatant Commanders and Combat Support Agencies conducted METL assessments
  - Over 800 Navy organizations conducted initial METL assessments
  - All Pacific Command (PACOM) organizations conducted initial METL assessments
  - Linked to personnel, GSORTS, force structure, and training data for all Services; Comprehensive resource data for Navy
- Created initial joint force provider tools
  - Department-wide capability query application
  - Request for Forces/Capability management system
- Designed Distributed Data Environment
- Facilitates high-level information transfer from within the readiness domain and serves as a transition from current Global Information Grid (GIG) to JC2
- Created initial scenario library
- Set up four to six additional server clusters across the world

FY 2006 Plans: Expanded resource information, joint force providers tools and organizational METL reporting

- Begin transition from GSORTS to ESORTS
- Continue ESORTS deployment to installations and other parts of the infrastructure
- Complete web-based scenario assessment and adaptive planning tools
- Implement first phase of the Distributed Data Environment
- Complete initial transportation feasibility tools

FY 2007 Plans: Expanded mobility and transportation models; completed Distributed Data Environment

- Completed risk assessment tools including collaborative software
- Completed Distributed Data environment and an extensive use of web services

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
DEFENSE-WIDE, RDT&E (400) BUDGET ACTIVITY 6				Joint System Architecture Development (JSAD) PE 0604875D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0.000*	4.900	9.254	9.244	9.544	9.313	9.286	9.297

* Total FY 2004 appropriation ($9.000 million) and a portion ($4.000 million) of FY 2005 appropriation is under Defense-Wide, RDT&E (0400) Budget Activity 3, PE0603832D8Z. In FY 2005, the JSAD portion of this appropriation began transition to Budget Activity 6.

A. Mission Description and Budget Item Justification: Transformation calls for top down, national security strategy driven, capabilities-based planning. DoD Instruction (DoDI) 5000.2 and CJCSI 3170.01D promulgate capabilities-based requirements and acquisition processes. This program enables collaborative efforts to achieve these goals. These efforts include providing systems support to conduct warfighting capability-based analyses, and assessments of joint capability area and joint integrating concepts; development and support of needed sets of system and system-related data; development and application of systems engineering methodologies and tools, creating integrated roadmaps to support acquisition investment decisions, and assessment of major defense acquisition programs (MDAPs) and major automated information systems programs in a capability area context. Activities in this project are divided into three areas: capability based analyses, roadmaps, and support tools and guidance. Capability-based analyses consists of efforts that provide systems aspects (views) to analyze technology, functionality, and integration impacts on warfighting capability; this forms the front end of systems engineering. Roadmaps are proscribed by DoDI 5000.2, 3.2.2; initiatives in this project enable roadmap development based on systems engineering and use to guide systems development and associated investment plans. Support tools and guidance initiatives in this project will develop systems engineering methods, systems data, and tools, exploiting the value of modeling and simulation and architecture to improve effectiveness of Systems Engineering, to improve assessment capability, and to field and test integrated systems of systems to achieve joint mission capabilities.

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	0.000	0.000	0.000	0.000
Current FY 2006 President's Budget Sub.	0.000	4.900	9.254	9.244
Total Adjustments				
Congressional program reductions				
Congressional rescissions				
Congressional increases				
Reprogrammings				
SBIR / STTR Transfer				
Other	0.000	+4.900	+9.254	+9.244

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A*

E. Performance Metrics:

Develop and update Capability Roadmaps.
Develop and implement a prototype Matrix Mapping Tool
Participate in the capabilities based analyses to ensure they are based on system technical and programmatic performance.
Leverage, co-sponsor, and develop state-of-the-art engineering methodologies, practices, and tools.
Define data standards, and content interchange
Improve tools and guidance for use to conduct system-of-systems modeling analysis

~~**A. Other Program Funding Summary: N/A**~~

~~**B. Acquisition Strategy: N/A***~~

* Not required for Budget Activities 1, 2, 3, and 6

Exhibit R-2a, RDT&E Project Justification							February 2005	
DEFENSE-WIDE, RDT&E (400) BUDGET ACTIVITY 6				Joint System Architecture Development (JSAD) PE 0604875D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0.000*	4.900	9.254	9.244	9.544	9.313	9.286	9.297

* Total FY 2004 appropriation ($9.000 million) and a portion ($4.000 million) of FY 2005 appropriation is under Defense-Wide, RDT&E (0400) Budget Activity 3, PE0603832D8Z. In FY 2005, the JSAD portion of this appropriation began transition to Budget Activity 6.

C. Mission Description and Budget Item Justification: Transformation calls for top down, national security strategy driven, capabilities-based planning. DoD Instruction (DoDI) 5000.2 and CJCSI 3170.01D promulgate capabilities-based requirements and acquisition processes. This program enables collaborative efforts to achieve these goals. These efforts include providing systems support to conduct warfighting capability-based analyses, and assessments of joint capability area and joint integrating concepts; development and support of needed sets of system and system-related data; development and application of systems engineering methodologies and tools, creating integrated roadmaps to support acquisition investment decisions, and assessment of major defense acquisition programs (MDAPs) and major automated information systems (MAIS) programs in a capability area context. Activities in this project are divided into three areas: capability based analyses, roadmaps, and support tools and guidance. Capability-based analyses consists of efforts that provide systems aspects (views) to analyze technology, functionality, and integration impacts on warfighting capability; this forms the front end of systems engineering. Roadmaps are proscribed by DoDI 5000.2, 3.2.2; initiatives in this project enable roadmap development based on systems engineering and use to guide systems development and associated investment plans. Support tools and guidance initiatives in this project will develop systems engineering methods, systems data, and tools, exploiting the value of modeling and simulation and architecture to improve effectiveness of Systems Engineering, to improve assessment capability, and to field and test integrated systems of systems to achieve joint mission capabilities.

D. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/Effort/Cost	0.000*	4.900	9.254	9.244

(U) FY 2004 Accomplishments:

*FY 2004 Appropriation ($9 million) is under Defense-Wide, RDT&E (0400) Budget Activity 3, PE0603832D8Z

(U) FY 2005 Plans:

Perform Capability-based Analyses

- Assessment of joint operational concepts to determine required system capabilities and evaluate them against current system functions
- Perform analysis of materiel solution alternatives to fulfill identified capability needs to support the front end of the systems engineering process
- Support Joint Functional Capability Board Capability Based Analyses:
  - Force Protection (Air and Missile Defense, Electronic Warfare)
  - Force Application (Land, Sea, Air)
  - Command and Control, Intelligence, Net-centric Operations
  - Focused Logistics
- Conduct analysis of Combatant Commander (COCOM) needs, and OIF/OEF lessons learned to determine issues and potential materiel solutions

Development of Capability Roadmaps

- Provide the necessary information to make sound programmatic and budgetary decisions to acquire a warfighting capability based on systems engineering planning and assessments
- Roadmaps will:
  - Highlight a concept of operations, and identify related systems and their associated data (cost, schedule, functionality, performance)
  - Show how these systems relate within this capability area (identify current/future gaps and where redundancies may exist)
  - Form a foundation for defining our system capabilities required for the future
- Roadmaps currently being developed under this project:
  - Joint Battle Management Command and Control (JBMC2)
  - Air and Missile Defense (AMD)
  - Weapons and Munitions
  - Electronic Warfare

Support Tools and Guidance

- Deliver spiral 2 and 3 prototypes of a Matrix Mapping Tool (formally called the Integration Framework) that provides a common baseline of systems and warfighting activities from which to conduct analysis of deficiencies and redundancies. Use this tool to support Joint Integrating Concepts and Roadmaps and frame the systems engineering planning

(U) FY 2006 Plans:

Perform Capability-based Analyses

- Support Joint Functional Capability Board Capability Based Analyses and front end systems engineering planning:

- Force Protection (Air and Missile Defense, Electronic Warfare)
- Force Application (Land, Sea, Air)
- Command and Control, Intelligence, Net-centric Operations
- Focused Logistics

Development of Capability Roadmaps

- Roadmaps along with supporting systems engineering plans currently being planned under this project:
  - JBMC2/AMD (updating)
  - Global Strike
  - Sea Basing

Support Tools and Guidance

- Update Matrix Mapping Tool for use across the Department to support Capabilities Based Planning
- Conduct systems engineering verification of proposed joint capabilities
- Perform systems of system modeling analysis, using state-of-the-art, industry endorsed, architecture and modeling practices and constructs such as Model Driven Architecture.
- Define data standards, and content interchange to promote M&S sharing across capability areas

(U) FY 2007 Plans:

Perform Capability-based Analyses

- Support Joint Functional Capability Board Capability Based Analyses and front end systems engineering planning::
  - Force Protection (Air and Missile Defense, Electronic Warfare)
  - Force Application (Land, Sea, Air)
  - Command and Control, Intelligence, Net-centric Operations
  - Focused Logistics

Development of Capability Roadmaps

- Roadmaps along with supporting systems engineering plans currently being planned under this project:
  - Continue Roadmap development in support of Warfighting capability based analyses conducted by the Joint Staff and COCOMs.

Support Tools and Guidance

- Update Matrix Mapping Tool for use across the Department to support Capabilities Based Planning
- Conduct systems engineering verification of proposed joint capabilities
- Perform systems of system modeling analysis, using state-of-the-art, industry endorsed, architecture and modeling practices and constructs such as Model Driven Architecture.
- Focus on implementing an engineering environment to achieve systems engineering for capabilities. Cross-cutting architectures, models, tools, and test resources are related and used by acquisition systems.

E. Other Program Funding Summary: N/A

F. Acquisition Strategy. N/A

G. Major Performers: The following contractors area anticipated to receive 15% or more in funding for support in FY 2005: MITRE, McLean, Virginia: Support to capability roadmaps.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2)				February 2005				
RDT&E, DEFENSE-WIDE (0400) BUDGET ACTIVITY SIX				CENTRAL TEST AND EVALUATION INVESTMENT PROGRAM (CTEIP) PROGRAM ELEMENT (PE) 0604940D8Z				
$'s in Millions	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
PE 0604940D	0.000*	0.000*	128.759	130.230	137.908	137.320	139.865	143.015

***Language in the National Defense Authorization Act of 2003 directed the establishment of the Defense Test Resource Management Center (DTRMC). The Act also requires the DTRMC to administer the Central Test and Evaluation Investment Program (CTEIP) and the Test and Evaluation/Science and Technology (T&E/S&T) program effective Fiscal Year 2006.**

Beginning with FY 2006, program elements 0603941D8Z (T&E/S&T) and 0604940D8Z (CTEIP) are transferred from the Operational Test and Evaluation, Defense (OT&E, D) appropriation (0460) to the Defense-wide RDT&E (0400) appropriation. FYs 2004 and 2005 Accomplishments are in the OT&E appropriation.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

Since its inception in FY 1990, this program element has been, and continues to be, used to fund the development of critically needed, high priority Test and Evaluation (T&E) capabilities for joint/multi-Service requirements. The Central Test and Evaluation Investment Program (CTEIP) uses a corporate investment approach to combine Service and Defense Agency T&E needs, maximize opportunities for joint efforts, and avoid unwarranted duplication of test capabilities. CTEIP focuses investments on projects that will have high productivity returns on investment. Projects under the CTEIP Program Element (PE) support two basic tasks: investments to improve the test capabilities base (Joint Improvement and Modernization (JIM) projects) and development of near-term solutions to test capability shortfalls in support of an ongoing operational test program (Resource Enhancement Project (REP)).

The JIM funds critically needed T&E investments in the major functional areas of test mission command, control, communications and instrumentation; electronic warfare systems; threat and computational simulation test and evaluation; space systems T&E; weapons effects test capabilities; targets; and physical and environmental test capabilities. The investments include

both the demonstrations of advanced technologies needed to test increasingly complex and sophisticated weapon systems and the transition of these technologies into test capabilities. Examples of project subject matter include: automated data collection, processing, display, and archiving; smart munitions testing; modeling and simulation (M&S); advanced electronic combat systems; low-observable technologies and signature measurements; targets and target control; time-space-position-information; end-game measurement; testing of advanced materials application; test design; and advanced sensors and space systems. CTEIP continues as the focal point for fostering common architectures throughout the test and training communities to enhance the sharing of resources and links between test and training ranges. CTEIP has provided special focus to institutionalize the use of M&S as a practical test tool; to link ranges through internetting to enhance inter-range and inter-Service cooperation and resource sharing; and, to ensure development and acquisition of common instrumentation necessary for a more efficient test infrastructure. Analyses of alternative solutions are conducted for each investment project to validate T&E requirements, to define integrated support systems, and to determine overall cost effectiveness of the proposed test investments. The use of Department of Defense (DoD)-wide criteria for requirement validation, prioritization, and risk assessment ensures an effective test resource investment program.

The REP funds development of near-term solutions for critical ongoing operational tests supporting decisions on major, high priority defense acquisition programs. These unanticipated operational test (OT) capability requirements arise from several sources such as a new threat system identified during OT planning, acquisition of foreign military assets that are critical in determining weapon system operational effectiveness, short timelines between system design maturity and scheduled OT, and emerging technologies and test requirements resulting from operational concept changes mandated by Congress or DOT&E, or system-of-systems testing. Funding these activities under the CTEIP provides the opportunity to coordinate and integrate these near-term test requirements with the total DoD test and evaluation investment planning, and ensures their availability and legacy for other programs that may have similar testing requirements. This PE also provides funds to perform travel to carry out oversight of the CTEIP program.

This Research Category 6.4 PE supports the development and application of proven technologies to provide major test and evaluation capabilities required to meet DoD component weapon system test requirements.

Program Accomplishments and Plans:

FY 2004 Accomplishments: See OT&E,D (0460) appropriation.

FY 2005 Accomplishments: See OT&E,D (0460) appropriation.

FY 2006 Plans:

JIM Projects:

- Complete the Land and Sea Vulnerability Test Capability project to provide an instrumented land-sea interface test capability at the Aberdeen Test Center.
- Complete the development and demonstration of time-space-position information (TSPI), flight termination / safe and arm (FTSA), and telemetry functions on advanced missile platforms under the Joint Advanced Missile Instrumentation project.
- Complete the Infrared Sensor Stimulator product improvement and continue development the Advanced Radar Environment Stimulator, under the Joint Installed Systems Test Facility Product Improvements project, to provide improved installed systems capabilities needed to support next generation aircraft testing.
- Complete systems development for the Joint Mobile Infrared Countermeasures Test Suite project to provide infrared spectrum test instrumentation for open air ranges.
- Complete concept development and initiate systems development for the Integrated Network Enhanced Telemetry project to develop a network-enhanced telemetry capability for T&E ranges and facilities.
- Complete validation of flight test procedures and unmanned aerial vehicle (UAV) operations in the U.S. National Airspace alongside manned aircraft, under the UAV Systems and Operations Validation Facility Program.
- Continue systems development of the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and test fixtures required to test and evaluate current and developmental chemical/biological (CB) detector systems over the entire range of expected use conditions.
- Continue systems development for improved test and evaluation capabilities for directed energy weapons.
- Continue systems development of the Joint C4ISR project to develop a capability to test increasingly complex multi-discipline fusion concepts.
- Continue systems development of the Soft Impact Location Capability project to provide the necessary instrumentation, signal processing, communication, and data processing capabilities to detect and locate the point and angle of impact of projectile and missile weapons within an 800m by 800m impact area.
- Continue systems development of the Enhanced Flight Termination System project to develop a UHF digital flight termination system for DoD unmanned flight vehicles.
- Continue systems development of the Advanced Instrumentation Data & Control System project to develop state-of-the-art instrumentation and control systems to meet DoD T&E requirements for propulsion systems, aerodynamic systems and space systems.
- Continue systems development of the Enhanced Range Applications Project to provide a state-of-the-art Airborne

Range Data System that supports next generation data collection requirements.

- Continue the Test and Training Enabling Architecture (TENA) Software Development Activity project to develop software enhancements and integration tools.
- Continue threat system simulator development efforts under the Threat System Simulator Development project to improve integration, reduce potential duplication in threat and target development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Continue the Tri-Service and CTEIP support projects.
- Initiate systems development for the Hypersonic Propulsion Test Capability project to provide a variable Mach number test capability at the Arnold Engineering Development Center.
- Initiate and complete concept development and initiate systems development for a project to provide a deployable capability to test availability, confidentiality, and integrity of information technology systems.
- Initiate concept development for an interactive electronic attack radio frequency capability to test electronic warfare and avionics systems against reactive air defenses in a secure, protected ground-based environment.
- Initiate concept development for a project to provide an advanced communications environment simulator that can replicate the networked environment to enable Faithful Timeslot Messaging and certification and interoperability.

Resource Enhancement Project:

- Complete the Probability of Raid Annihilation (PRA) Testbed Common Threat and Environment Capability subproject to develop a common set of threat and natural environment representations for consistent assessment of ship self defense systems across ship classes.
- Complete the Torpedo Proximity Scoring System subproject to develop a reliable and flexible prototype instrumentation system to support torpedo defensive system testing and evaluation requirements.
- Complete the Shootable Remote Threat Ground Targets subproject to provide six low cost ground targets operating in a tactical formation and an integrated portable autopilot and remote control system.
- Continue the Advanced Capability Mobile Flight Simulator subproject to to provide more realistic Tactical Ballistic Missile (TBM) threat scenario simulations.
- Initiate development of instrumented facilities to evaluate our next generation of sensors, weapons, platforms, and C4ISR systems in a realistic urban environment.
- Initiate development of improved test capabilities to fully test and evaluate current multi-spectral and hyperspectral seeker and sensor system technologies.

- Initiate development of non-intrusive C4ISR network performance monitoring and data collection instrumentation to support net-centric warfare systems.
- Initiate developments to address near term OT capability shortfalls in range instrumentation, sensors, and time-space-position information systems.
- Initiate developments to address near term OT capability shortfalls in range-space wireless communications, telemetry, and range control systems.

FY 2007 Plans:

JIM Projects:

- Complete systems development of the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and test fixtures required to test and evaluate current and developmental CB detector systems over the entire range of expected use conditions.
- Complete development the Advanced Radar Environment Stimulator, under the Joint Installed Systems Test Facility Product Improvements project, to provide improved installed systems capabilities needed to support next generation aircraft testing.
- Complete systems development of the Soft Impact Location Capability project to provide the necessary instrumentation, signal processing, communication, and data processing capabilities to detect and locate the point and angle of impact of projectile and missile weapons within an 800m by 800m impact area.
- Complete systems development of the Enhanced Flight Termination System project to develop a UHF digital flight termination system for DoD unmanned flight vehicles.
- Complete systems development of the Advanced Instrumentation Data & Control System project to develop state-of-the-art instrumentation and control systems to meet DoD T&E requirements for propulsion systems, aerodynamic systems and space systems.
- Complete systems development of the Enhanced Range Applications Project to provide a state-of-the-art Airborne Range Data System that supports next generation data collection requirements.
- Complete concept development and initiate systems development for the Interactive Electronic Attack project to provide an interactive electronic attack radio frequency capability to test electronic warfare and avionics systems against reactive air defenses in a secure, protected ground-based environment.
- Complete concept development and initiate systems development for the Advanced Communications Environment project to provide a Link 16 simulator that can replicate the networked environment to enable Faithful Timeslot Messaging and certification and interoperability.
- Continue systems development for improved test and evaluation capabilities for directed energy weapons.

- Continue systems development of the Joint C4ISR project to develop a capability to test increasingly complex multi-discipline fusion concepts.
- Continue systems development for the Integrated Network Enhanced Telemetry project to develop a network-enhanced telemetry capability for T&E ranges and facilities.
- Continue the Test and Training Enabling Architecture (TENA) Software Development Activity project to develop software enhancements and integration tools.
- Continue threat system simulator development efforts under the Threat System Simulator Development project to improve integration, reduce potential duplication in threat and target development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Continue the Tri-Service and CTEIP support projects.
- Continue systems development for the Hypersonic Propulsion Test Capability project to provide a variable Mach number test capability at the Arnold Engineering Development Center.
- Continue systems development for a project to provide a deployable capability to test availability, confidentiality, and integrity of information technology systems.
- Continue concept development for an interactive electronic attack radio frequency capability to test electronic warfare and avionics systems against reactive air defenses in a secure, protected ground-based environment.
- Continue concept development for a project to provide an advanced communications environment simulator that can replicate the networked environment to enable Faithful Timeslot Messaging and certification and interoperability.
- Initiate concept development for a project to provide advanced range control capabilities.

Resource Enhancement Project:

- Complete the Advanced Capability Mobile Flight Simulator subproject to to provide more realistic Tactical Ballistic Missile (TBM) threat scenario simulations.
- Complete development of instrumented facilities to evaluate our next generation of sensors, weapons, platforms, and C4ISR systems in a realistic urban environment.
- Complete development of improved test capabilities to fully test and evaluate current multi-spectral and hyperspectral seeker and sensor system technologies.
- Complete development of non-intrusive C4ISR network performance monitoring and data collection instrumentation to support net-centric warfare systems.
- Complete developments to address near term OT capability shortfalls in range instrumentation, sensors, and time-space-position information systems.
- Complete developments to address near term OT capability shortfalls in range-space wireless communications, telemetry, and range control systems.

- Initiate developments to address near term OT capability shortfalls in range interoperability and knowledge management.
- Initiate developments to address near term OT capability shortfalls in realistic test environments, to include open air test environments, tunnels, and chambers.
- Initiate developments to address near term OT capability shortfalls in the realistic representation of enemy threats and targets.
- Initiate developments to address near term OT capability shortfalls in installed systems and hardware-in-the-loop T&E facilities.

B. (U) PROGRAM CHANGE SUMMARY

*Language in the National Defense Authorization Act of 2003 directed the establishment of the Defense Test Resource Management Center (DTRMC). The Act also requires the DTRMC to administer the Central Test and Evaluation Investment Program (CTEIP) effective Fiscal Year 2006. Beginning with FY 2006, program element 0604940D8Z (CTEIP) is transferred from the Operational Test and Evaluation, Defense appropriation (0460) to the Defense-wide RDT&E (0400) appropriation.

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget:	0.000*	0.000*	0.000*	0.000*
Current FY 2006 President's Budget Submission:	0.000*	0.000*	128.759	130.230
Total Adjustments			+128.759	+130.230
Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogramming			+128.759	+130.230

C. (U) OTHER PROGRAM FUNDING NA

D. (U) ACQUISITION STRATEGY NA

E. (U) PERFORMANCE METRICS

Percentage of CTEIP projects that were developed and delivered to the DoD test community over the past five years.

BUDGET JUSTIFICATION
FOR PROGRAM ELEMENTS OF THE
OSD RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, DEFENSE-WIDE PROGRAM
FISCAL YEAR (FY) 2006/2007 BUDGET ESTIMATES SUBMISSION

PE 0604943D8Z, Thermal Vicar, program is submitted separately as a Special Access Program.

Exhibit R-2, RDT&E BUDGET ITEM JUSTIFICATION							Date: February 2005	
APPROPRIATION/BUDGET ACTIVITY 6 Research, Development, Test & Evaluation, Defense-wide			R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z					
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	31.194	30.894	31.075	31.836	33.175	33.284	34.682	35.975
P421 Technical Studies, Support & Analysis	31.194	30.894	31.075	31.836	33.175	33.284	34.682	35.975

A. Mission Description and Budget Item Justification

This program element is classified in Budget Activity 6 (Management Support) because it is a primary source of funding for the Office of the Secretary of Defense and the Joint Staff for studies, analyses, management, and technical support efforts, to improve and support policy development, decision-making, management and administration of DoD programs and activities. Specific projects address a variety of complex issues and dynamic problems facing the Under Secretary of Defense for Acquisition, Technology & Logistics [USD (AT&L)], the Under Secretary of Defense for Policy [USD (P)], Under Secretary of Defense for Personnel and Readiness [USD (P&R)], Assistant Secretary of Defense for Networks & Information Integration [ASD(NII)], Under Secretary of Defense for Intelligence [USD (I)], Director for Program Analysis and Evaluation (D,PA&E), the Joint Staff and Unified Command Commanders. Studies and analyses will examine the implications and consequences of current and alternative policies, plans, operations, strategies and budgets, and are essential for understanding and gaining insight into the complex multifaceted international, political, technological, economic, military, and acquisition environments in which defense decisions and opportunities take place. With our need to understand and cope with the threats and uncertainties facing the Nation in the current security, threat, and economic environments, the need for objective analyses and forward-looking planning for the mid and long-range (at acceptable risk) becomes greater.

Details follow for each organization supported.

General Support for Under Secretary of Defense (Acquisition, Technology & Logistics):

FY 2004 Accomplishments

- Began assessment on the effectiveness and cost of Unmanned Air Vehicles and conducted initial data collection and analysis to support the development of the Joint Vertical Aircraft Roadmap to define the DoD wide non-fixed wing aviation acquisition and technology investment strategy
- Evaluated weapon systems requirements and acquisition issues to assess the adequacy of the Services' FYDP against the postulate threat scenarios
- Analyzed TACAIR weapon systems performance, cost, and schedule issues in support of acquisition milestone decisions and DoD planning, programming, and budgeting activities
- Initiated a munitions modeling and simulation (M&S) program architecture to link physics and chemistry based models to support military worth studies and the development of a munitions modeling and simulation roadmap
- Conducted the DoD Fuze IPT to collect and analyze information on fuze technology and industrial base capabilities to support fuze procurement and budgeting, weapon/munitions system analysis, and development of the Fuze Technology Roadmap
- Assessed effectiveness and cost of Unmanned Air Vehicles (UAVs) and updated the UAV roadmap
- Began analysis of the UAV spectrum
- Continued study of Long-Range Strike capabilities
- Initiated analysis of Laser Shot Peening
- Conducted Joint Battle Management Command and Control (JBMC2) assessments, development, and implementation efforts
- Assessed new or advanced Radio Frequency Tag capabilities, including transition of demonstrated capabilities to JBMC2 systems and participation in key experiments and exercises
- Supported Precision Engagement / Time Sensitive Targeting analysis for making Department decisions regarding Force Application (including Precision Engagement) capabilities required by the Department and for making decisions on how these capabilities will be provided
- Conducted a study of Long-Term Projections of Operations and Support Costs
- Analysis of Tradeoffs among Ground Moving Target Indicator and Cruise Missile Defense Sensor Systems
- Assessed the Effectiveness and Cost of Unmanned Air Vehicles and implications for transforming tactical aircraft systems
- Performed a review of current range conditions and estimate the environmental impacts of munitions use on operational ranges

- Executed a study of spectrum supportability for Unmanned Air Vehicle use of the 4-5 GHz portion of the RF spectrum and potential interference with ground based or other airborne systems
- Conducted installation cost modeling for Forward Operation Sites (FOSs) and Cooperative Security Locations (CSLs)
- Performed an integrated cross-capability assessment and risk management framework for evaluating major DoD force capability options
- Conducted an analysis of joint airborne electronic attack systems
- Analyzed the status of military and civilian first responder technology transfer
- Conducted a review for sizing DoD medical readiness capability & managing beneficiary demand
- Began a pilot program to enable net-centricity for the Global Force Management Enterprise Data Initiative
- Studied the impact of force transformation on logistics
- Conducted an assessment of aviation forces capabilities and opportunities
- Supported the Enhanced Planning Process (EPP) for combating weapons of mass destruction
- Initiated a best practices clearinghouse for software acquisition
- Developed a capabilities based planning framework to improve risk management
- Conducted analyses of DoD strategic strike capabilities
- Studied the future of the Evolved Expendable Launch Vehicle Program
- Provided support to numerous Defense Science Board Task Forces addressing the issues of: Nuclear Weapons Effects Test & Evaluation, Corrosion Control, Identification of Critical Technologies, Aerial Refueling Requirements, Critical Homeland Installation Protection, High Performance Microchip Supply, Enabling Joint Force Capabilities, Transition to and from Hostilities, Space Based Radar, Ballistic Missile Defense, Vaccine production, Strategic Strike Skills, Patriot System Performance, the GPS System, Strategic Mobility Capabilities, Integrated Fire Support, Submunitions Reliability, National Ignition Facilities, MANTECH, Integrated WMD Defense, and Communication Architectures
- Provided support to the Defense Science Board Summer Study
- Provided Defense Adaptive Red Team (DART) wargaming support
- Completely restructured the Congressionally mandated Joint Warfighting Science and Technology Plan to reflect the Joint Staff's emphasis on functional capabilities. Published Defense Technology Objectives volume to accompany the Joint Warfighting Science and Technology Plan

- Completed two in a five-part Defense Industrial Base Capabilities Study series: Battlespace Awareness (January 2004) and Command and Control (June 2004), identifying issues in active hyper-spectral imagers, AESA radar, maser clocks, helmet mounted displays, swarming control tools, and optical inter-satellite links
- Designed and tested a prototype Program Managers' Functional Capability Conference (PMFCC) to support upcoming Acquisition Capability Area Review (ACAR)
- Began work on two additional "set pieces" of the transformed ACAR process: the Capability Area Captain/Architect and the Innovation Clearinghouse
- Completed an assessment of the manufacturing and business practices of the U.S. vertical lift industry; characterized the impact of the new functional capabilities construct and key major programs on vertical lift demand from 2004-2014; and highlighted major challenges and opportunities facing the vertical lift industry and the Department
- Completed a study on the adequacy of the U.S. industrial base for beryllium, which is widely used in strategic and tactical systems, and submitted a report on the study results to Congress
- Began a global benchmarking study assessing the business and manufacturing processes of the U.S. shipbuilding industry
- Initiated a solid rocket motor industry study due to concern for the current and future financial viability of our two remaining solid rocket motor suppliers (Alliant and Aerojet) and concern for the financial viability or production capacity of the sub-tier supplier base—especially the condition of our single source providers
- Conducted ongoing assessment of the semiconductor industrial base's ability to continue supplying trusted defense-specific integrated circuits
- Continued an ongoing space launch modernization plan update to include an evaluation of the dependence of launch reliability on booster production and launch rates, identification of the minimum sustaining rates of work for the prime contractors and major subcontractors, and determination of the appropriateness of retaining two launch providers. The study also addresses the investments the Department should make to support better "assured access to space"
- Conducted technical and economic analysis to support merger and acquisition reviews to ensure continuing competition in the Defense Industrial Base
- Conducted analyses/assessments on international cooperative R&D programs and recommended policy, funding and process changes
- Supported international armaments cooperation policy development, decision-making, and implementation activities

- Supported Allied Cross-Servicing Agreement (ACSA) program implementation
- Conducted strategic planning, technical analyses, and implementation support in fulfillment of US and NATO objectives embodied in the Prague Capabilities Commitments
- Examined the implications and consequences of current international cooperation policies, strategies and budgets and addressed a variety of complex issues and dynamic problems facing the USD(AT&L) in the international arena
- Evaluated technical, architectural, and programmatic issues in the areas of technology transfer and foreign disclosure
- Evaluated Theater Security Cooperation Strategies
- Assessed European responses and reactions to the JSF program and developed elements for public presentations of the role of JSF in the transformation of European defense
- Assessed the impact of US transformational programs and approaches on European industrial rethinking and how DOD might more effectively induce and influence transformational thinking and change in European industry and military establishments
- Conducted market survey on net-centric electronic document library tool capabilities
- Assessed Acquisition Program Plans, especially Nunn McCurdy breaches on various programs to include the H-1 Upgrade and the Evolved Expendable Launch Vehicle
- Per Congressional direction, evaluated weapon systems requirements and acquisition issues, and submitted master planning documents for key defense mission areas: Conventional Munitions (data collection annually, report submitted every other year), Anti-armor Munitions, and Electronic Warfare
- Studied Improvement options for DoDs SBIR program in terms of transformational technology focus, innovation and the small business defense industrial base
- Studied the feasibility of using optimization technology to improve long term planning of defense acquisitions
- Continued National Defense Authorization Act Section 804 (regarding competition in acquisition) implementation activities, overseeing and tracking Service and Agency process improvement programs
- Provided technical support for Information Technology activities and system-of-systems initiatives including the Global Information Grid (GIG), as well as other systems, and acquisition programs and program reviews
- Prepared detailed process and governance shortfalls as the DoD moves to capabilities-based portfolio management vice platform-centric acquisition
- Reviewed, analyzed, developed and coordinated policy and regulations related to Test & Evaluation and Systems Engineering

- Reviewed and analyzed issues associated with Value Engineering and developed a Value Engineering (VE) strategic plan
- Developed module to track execution of the Military/Civilian staff Conversion program
- Conducted analysis of the FY 2003 Competitive Sourcing Program to comply with legislative requirements
- Provided support to National Academy of Sciences (NAS) comprehensive study of how the Small Business Innovation Research (SBIR) Program has stimulated technological innovation and used small business to meet federal research and development needs. The Department of Defense is required, under the Reauthorization Act of 2000 (PL 106-554), to cooperatively support NAS and its study of the SBIR Program
- Performed research and analysis to determine overall qualitative impact of the SBIR program and addressed any necessary improvements to achieve greater overall effectiveness across DoD
- Trend Analysis and DoD Transformation – Conducted analyses to identify and explore available data bases that can be used effectively to ensure that small business is afforded the maximum opportunity to participate in DoD Acquisition

FY 2005 Program:

- Develop an aviation safety program strategy based on industry practices
- Continue data collection, analyses, and studies to support the development of the Joint Vertical Aircraft Roadmap with a focused emphasis on heavy lift vertical aircraft
- Continue to evaluate weapon systems requirements and acquisition issues to assess the Service's FYDP, threat scenarios, and the munitions requirements models
- Continue development of the munitions modeling and simulation (M&S) program architecture and the development of a Munitions M&S Roadmap. Establish a transition plan for DoD/DoE M&S tools to industry
- Continue the DoD Fuze IPT to collect and analyze information on fuze technology, and industrial base capabilities to support fuze procurement and budgeting, weapon/munitions system analysis, and support updates and implementation of the Fuze Technology Roadmap
- Continue analysis of effectiveness and cost of Unmanned Air Vehicles (UAVs). Maintain and further develop the UAV roadmap
- Continue analysis of the UAV spectrum
- Complete analysis of UAV airspace
- Complete analysis of Laser Shot Peening

- Identify and analyze the roles of Unmanned Aerial and Ground Vehicles and identify methods to integrate both types of systems
- Assess the land-attack weapons mix. Provide recommendations for optimum weapons mix composition to achieve operational objectives in support of the Land Attack Weapons Capability Area Review
- Study the effects of small and handheld UAVs on manned aircraft, and identify ways to improve integration of both within the battlespace
- Develop methods to improve Unmanned Aerial Vehicle survivability
- Continue Joint Battle Management Command and Control (JBMC2) assessments, development, and implementation efforts
- Continue assessment and technical assertion of new or advanced RF Tag capabilities. This includes transition of demonstrated capabilities to Joint Battle Management Command and Control (JBMC2) systems and participation in key experiments and exercises
- Continue to support Precision Engagement / Time Sensitive Targeting analysis for making Department decisions regarding Force Application (including Precision Engagement) capabilities required by the Department and for making decisions on how these capabilities will be provided
- Initiate Capability Area Reviews and Capabilities Based Assessments of Global Strike and Joint Under Sea Superiority capabilities
- Study methodologies to analyze the fleet-wide cost and capabilities deltas for application of new systems and technologies, such as: high-energy weapons; directed energy weapons; unmanned vehicles; minimally-manned vehicles; fully developed net-centric operations; common, modular components and outfitting; and fuel cell propulsion systems
- Continue to assist with Reduction of Total Ownership Costs and Value Engineering Efforts
- Analyze the naval systems resource base from three perspectives: energizing and sustaining the naval engineering education and training pipeline; developing and sustaining naval engineering technological innovation; and developing and forecasting future innovative naval system capabilities
- Research, analyze, and document systems engineering (including software) best practices and transition information to programs with systems engineering issues
- Assess the potential of establishing a “Civil Reserve Air Fleet (CRAF)-like” program of Third Party Logistics (3PL) providers to provide contingency distribution support for deployed forces. Accomplish case analyses that analyze depot maintenance core requirements and expand or modify the logistics programmatic efforts to meet changes in the PPBE structure

- Develop a cost model to identify the least cost method to maximize quality of inventory, making systemic changes to rebalance the inventory for a component to ensure assets are where they should be and in the expected state of repair
- Develop data sources to use directly or indirectly to digitally transfer management information system tasks and modernize various logistical management information system tools
- Provide support to numerous Defense Science Board Task Forces on an ad hoc basis and the Defense Science Board Summer Study including the topics of Force Protection, Manufacturing Technology, Aerial Targeting, Critical Homeland Installation Protection, Management Structure in Acquisitions Organizations, Nuclear Weapons Test and Evaluation, and Integrating WMD Defense
- Complete three remaining functional capability area industrial base assessments: Force Application (October 2004), Protection (December 2004), and Focused Logistics (May 2005)—identify pressing industrial base sufficiency issues
- Develop Industrial Capabilities Capability Area Captain/Architect and Innovation Clearinghouse concepts as key organizational enablers to find/exploit innovative technology solutions to meet DoD needs
- Complete shipbuilding global benchmarking study from FY 2004
- Complete semiconductor study from FY 2004
- Complete space launch modernization plan update from FY 2004
- Complete solid rocket motor industry study from FY 2004
- Conduct technical and economic analyses to support merger and acquisition reviews to Ensure Continuing Competition in Defense Industrial Base
- Continue to assess the impact of US transformational programs and approaches on European industrial rethinking and how DOD might more effectively induce and influence transformational thinking and change in European industry and military establishments
- Maintain international cooperative R&D program databases and conduct programs policy analysis and planning
- Provide analytical support to establish U.S. positions for international armaments and logistics issues at NATO meetings
- Conduct assessments and analyses of NATO allies' progress toward implementing the Defense Capabilities Initiative
- Provide analyses on European defense initiatives and the dynamics of the European defense environment
- Support bilateral and multilateral institutional arrangements (e.g., US-UK Interoperability Commission)
- Continue to build on cooperative framework facilitating transatlantic cooperation

- Continue to conduct analyses/assessments of international cooperative R&D programs
- Continue to support international armaments cooperation policy development, decision-making, and implementation activities
- Continue to support international agreements review and approval activities
- Continue to support Allied Cross-Servicing Agreement program implementation
- Continue to conduct analyses/assessments in support of to U.S. engagement in NATO logistics
- Conduct strategic planning, technical analyses, and implementation support in fulfillment of US and NATO objectives embodied in the Prague Capabilities Commitments and associated activities stemming from the 2004 Istanbul Summit
- Continue to examine the implications and consequences of current international cooperation policies, strategies and budgets and address complex issues and dynamic problems facing the USD(AT&L) in the international arena
- Continue to evaluate technical, architectural, and programmatic issues in the areas of technology transfer and foreign disclosure
- Conduct an independent assessment of the current state of Earned Value Management (EVM) in the Department of Defense (DoD)
- Develop a suite of tools to share data, information and knowledge frequently and rapidly to allow continuous collaboration among DoD organizations on Acquisition Programs
- Analyze TACAIR weapon systems performance, cost, and schedule issues in support of acquisition milestone decisions and DoD planning, programming, and budgeting activities
- Assess Acquisition Program Plans, especially Nunn McCurdy breaches on various programs
- Per Congressional direction, evaluate weapon systems requirements and acquisition issues, and submit master planning documents for key defense mission areas: Conventional Munitions (data collection annually, report submitted every other year), Anti-armor Munitions, and Electronic Warfare
- Update the AT&L Portfolio Costing/Optimization Model with new SAR data, including adding new ACAT1 systems, and new plant business projections. The Model is used to support impact analysis of production schedule changes, procurement bow-wave analysis, and for ad hoc analyses (e.g., cost growth, transformation planning, etc.)
- Expand pilot development of an Internet-capable automated housing referral system to 50 bases from initial 9. The system provides housing managers with a market tool to interface with the Basic Allowance for Housing (BAH) system collected annually by compensation
- Support the continued compilation, analysis and publishing of the Environmental Quality Annual Report to Congress, to meet statutory and Executive Order requirements on environmental issues

- Consult with tribes on the promulgation of the DoD Native American Graves Protection and Repatriation Act Implementation Policy and work with the Native American community to develop agreements and procedures for dealing with the inventory of funerary remains and related objects that cannot be returned to tribes
- Support acquisition program milestone decisions, Environmental, Safety and Occupational Health risk management and planning, programming, training, and policy activities
- Detailed model testing, training and implementation of fire and Chemical, Biological, Radiological, Nuclear, and High Explosive response capability
- Technical and policy analyses of environmental issues affecting DOD associated with Stratospheric Ozone Depletion and Global Climate Change
- Support joint US and UK efforts to analyze and address challenges to operations, systems and facilities posed by existing and in draft environmental legislation developed by the European Union
- Implement transformation of Safety, Heath & Fire Policy by refocusing on reduction of hazard risk areas
- Pursuant to Congressional direction, develop a new and improved condition reporting system to assess, rate, and validate facility conditions ensuring commonality across DoD
- Research, analyze, and document systems engineering (including software) best practices and transition information to programs with systems engineering issues
- Continue Reduction of Total Ownership Costs and Value Engineering Efforts
- Continue Test Program for Negotiation of Comprehensive Small Business Subcontracting Plans (National Defense Authorization Act of Fiscal Years 1990 and 1991 (PL 101-189 Section 834)) – Develop cost/benefit measures for Test Program participants and perform analysis on subcontracting performance to include second and third tier subcontracting reporting
- Support the President's Management Council (PMC) initiative to reduce or mitigate the effect of "contract bundling" on small business concerns
- Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (STTR) Fast Track accomplishments and assessment – Conduct in-depth study to ascertain the effectiveness of the DoD Fast Track Initiative to attract additional funding for previously funded SBIR and STTR Phase I and Phase II research efforts. Focus on any need for improvements and determine which components may be utilizing the Initiative more effectively

- Study continuing needs for recommendations and reports to help small businesses meet the needs of the DoD, maintain a repository of pertinent statistical information, and enhance a strategic management system that provides continuous improvement to the OSD Small Business Program
- Perform special studies and analyses, as needed, to assist the OSD Small Business Office in understanding economic and other factors that impact the ability for the Department of Defense to achieve Small Business Program Goals

FY 2006 Plans:

- Continue data collection, analyses, and studies to support updates to the Joint Vertical Aircraft Roadmap
- Continue to evaluate weapon systems requirements and acquisition issues to assess the Service's FYDP, threat scenarios, and the munitions requirements models
- Update the munitions modeling and simulation (M&S) program architecture to include emerging models of merit. Update the Munitions M&S Roadmap to represent the current program architecture and continue to transition DoD/DoE M&S tools to industry
- Continue the DoD Fuze IPT to collect and analyze information on fuze technology, and industrial base capabilities to support fuze procurement and budgeting, weapon/munitions system analysis, and support updates to and implementation of the Fuze Technology Roadmap
- Develop the J-UCAS system attributes for early operational assessments
- Complete the expanded Weapons Roadmap
- Complete an Integrated Air and Missile Defense Roadmap and Capability Area Review DAB
- Continue Capability Area Reviews and Capabilities Based Assessments of UAVs and Joint Undersea Superiority Capabilities
- Continue to expand the UAV Roadmap
- Continue Net Centric Operational Environment analyses
- Naval Systems Development Strategy: Using the preferred methodologies from the FY2005 study, prioritize future fleet-wide technology opportunities in terms of capabilities and cost
- Naval Systems Resource Base: Complete study of the naval engineering resource base
- Analyze TACAIR weapon systems performance, cost, and schedule issues in support of acquisition milestone decisions and DoD planning, programming, and budgeting activities

- Develop deliverables for logistical policies and procedures for supporting research and development of logistical system supply chain operations
- Issue-specific analysis and studies to review product support pilot maintenance and transportation concepts
- Initiate case studies supporting recommended approaches to maintenance, transportation and logistics transformation policies
- Develop a study that recommends plans and policies to begin the implementation of a functional portfolio approach to logistical acquisition oversight and integrate study recommendations into supply chain integration and logistics systems modernization policies and product support
- Provide support to numerous Defense Science Board Task Forces on an ad hoc basis and the annual Defense Science Board Summer Study
- Update continuing functional capability area industrial base assessments
- Assemble a Small Business Leadership team to examine and improve DoD policy effectiveness in addressing industrial base needs with research funding
- Continue analyses of the defense industrial base to deepen understanding of lower-tier and component suppliers to DoD, assess the industrial capabilities of key sectors, forecast vulnerabilities in the supply chains on which DoD relies, promote/secure a more integrated global industrial supply base, and identify and minimize impediments to transatlantic industrial linkages
- Continue to assess financial and economic impact of proposed business ventures on the defense industry and conduct technical and economic analysis to support merger and acquisition reviews
- Develop metrics to evaluate and monitor transatlantic industrial cooperation as well as “Fortress –like” conduct
- Continued participation in identifying opportunities for leveraging globalization to enhance interoperability
- Provide analytical support to establish U.S. positions for international armaments and logistics issues at NATO meetings
- Conduct assessments and analyses of NATO allies’ progress toward implementing the Defense Capabilities Initiative
- Provide analyses on European defense initiatives to and the dynamics of the European defense environment
- Support bilateral and multilateral institutional arrangements (e.g., US-UK Interoperability Commission)
- Continue to build on the current cooperative framework facilitating transatlantic cooperation
- Continue to conduct policy analyses/assessments of international cooperative R&D programs and maintain program data
- Continue to support international armaments cooperation policy development, decision-making, and implementation activities
- Continue to support international agreements review and approval activities

- Continue to support Allied Cross-Servicing Agreement program implementation
- Continue to conduct analyses/assessments in support of to U.S. engagement in NATO logistics
- Conduct strategic planning, technical analyses, and implementation support in fulfillment of US and NATO objectives embodied in the Prague Capabilities Commitments and associated activities stemming from the 2004 Istanbul Summit and other NATO summits and ministerial meetings
- Continue to examine the implications and consequences of current international cooperation policies, strategies and budgets and address complex issues and dynamic problems facing the USD(AT&L) in the international arena
- Continue to evaluate technical, architectural, and programmatic issues in the areas of technology transfer and foreign disclosure
- Assess the state of Earned Value Management (EVM) within the Department to include: obstacles or institutional barriers to effective EVM application facilitate EVM use among defense organizations, level of EVM expertise in the Department, and EVM training needs
- Perform Defense Acquisition Management Information Retrieval studies to support Net-centricity initiatives
- Assess Acquisition Program Plans, especially Nunn McCurdy breaches on various programs
- Per Congressional direction, evaluate weapon systems requirements and acquisition issues, and submit master planning documents for key defense mission areas: Conventional Munitions (data collection annually, report submitted every other year), Anti-armor Munitions, and Electronic Warfare
- Provide Earned Value Management mission support to include assessing acquisition program plans, especially Nunn McCurdy breaches on various Major Defense Acquisition Programs
- Develop long range strategic resource allocation models and estimate techniques to support future budget and programming decisions for acquiring defense capabilities as well as planning future costs of operating and sustaining DoD forces and infrastructure
- Develop and submit a plan for training Military Housing Office (MHO) personnel and Relocation Assistance Professionals (RAP) and identify accuracy of data and customer satisfaction measures
- Support the continued compilation, analysis and publishing of the Environmental Quality Annual Report to Congress, to meet statutory and Executive Order requirements on environmental issues
- Support acquisition program milestone decisions, Environmental Safety and Occupational Health risk management and planning, programming, training, and policy activities

- Technical and policy analyses of environmental issues affecting DOD associated with Stratospheric Ozone Depletion and Global Climate Change
- Support joint US and UK efforts to analyze and address challenges to operations, systems and facilities posed by existing and in draft environmental legislation developed by the European Union
- Develop an aviation safety program strategy based on industry practices
- Implement transformation of Safety, Heath & Fire Policy by refocusing on reduction of hazard risk areas
- Pursuant to Congressional direction, develop a new and improved condition reporting system to assess, rate, and validate facility conditions ensuring commonality across DoD
- Continued analysis of Test Program for Negotiation of Comprehensive Small Business Subcontracting Plans (National Defense Authorization Act of Fiscal Years 1990 and 1991 (PL 101-189 Section 834)) - Detailed evaluation of FY2005 study to establish baseline to provide a recommendation to continue, modify or discontinue the Test Program to Congress
- Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Analysis of technology transitions into Major Defense Acquisition Programs – Conduct in-depth research and assessment of successful transitions of funded technology into mainline defense programs and the effects of the technology on the overall results of the Program
- Trend Analysis – Develop recommendations and implement an improved management reporting system that provides timely information to be used to assess performance and stimulate improvement within the defense Small Business Program

FY 2007 Plans:

- Continue data collection, analyses, and studies to support updates to the Joint Vertical Aircraft Roadmap
- Continue to evaluate weapon systems requirements and acquisition issues to assess the Service's FYDP, threat scenarios, and the munitions requirements models
- Update the munitions modeling and simulation (M&S) program architecture to include emerging models of merit. Update the Munitions M&S Roadmap to represent the current program architecture and continue to transition DoD/DoE M&S tools to industry
- Continue the DoD Fuze IPT to collect and analyze information on fuze technology, and industrial base capabilities to support fuze procurement and budgeting, weapon/munitions system analysis, and support updates to and implementation of the Fuze Technology Roadmap

- Naval Systems Development Strategy: Study alternative naval force architectures optimized on the high-priority future fleet-wide technology opportunities identified in FY2006. Develop an overarching naval systems technology development strategy based on the most promising long-term naval force architecture options
- Naval Systems Resource Base: Investigate strategies to address the naval engineering resource base long term shortfalls identified in the FY2005-2006 study. Develop national maritime policy proposals with other government agencies
- Accomplish a comparative analysis of DoD and commercial practices that identify and assess potential data exchange technologies for logistics applications and improvement
- Initiate an analysis that recommends approaches for technical solutions to improve implementation and integration of electronic data interface (EDI) procedures and data sharing, including ways to interface multiple EDI translators in DoD logistics systems
- Accomplish a case study that proposes policies to enable the separation of infrastructure requirements from acquisition of functional applications of commercial off-the-self software
- Explore processes and policies for exporting Service/Agency Logistics best practices across the Department and procedures for logistics enterprise action planning and information management
- Provide support to the annual Defense Science Board Summer Study and numerous Defense Science Board Task Forces on an *ad hoc* basis
- Analyze TACAIR weapon systems performance, cost, and schedule issues in support of acquisition milestone decisions and DoD planning, programming, and budgeting activities
- Continue to develop an aviation safety program strategy based on industry practices
- Naval Systems Development Strategy: Study alternative naval force architectures optimized on the high-priority future fleet-wide technology opportunities identified in FY 2006. Develop an overarching naval systems technology development strategy based on the most promising long-term naval force architecture options
- Naval Systems Resource Base: Investigate strategies to address the naval engineering resource base long term shortfalls identified in the FY 2005-2006 study. Develop national maritime policy proposals with other government agencies
- Continue analyses of the defense industrial base to deepen understanding of lower-tier and component suppliers to DoD, assess the industrial capabilities of key sectors, forecast vulnerabilities in the supply chains on which DoD relies, promote/secure more integrated global industrial supply base, and identify and minimize impediments to transatlantic industrial linkages

- Continue to assess financial and economic impact of proposed business ventures on the defense industry and conduct technical and economic analysis to support merger and acquisition reviews
- Develop metrics to evaluate and monitor transatlantic industrial cooperation as well as "Fortress –like" conduct
- Continued participation in identifying opportunities for leveraging globalization to enhance interoperability
- Conduct research and analysis on Test Program participants' progress on subcontracting performance and test/compare to projections made in FY 2006
- Provide analytical support to establish U.S. positions for international armaments and logistics issues at NATO meetings
- Conduct assessments and analyses of NATO allies' progress toward implementing the Defense Capabilities Initiative
- Provide analyses on European defense initiatives to and the dynamics of the European defense environment
- Support bilateral and multilateral institutional arrangements (e.g., US-UK Interoperability Commission)
- Continue to build on cooperative framework facilitating transatlantic cooperation
- Continue to conduct analyses/assessments of international cooperative R&D programs and maintain program data
- Continue to support international armaments cooperation policy development, decision-making, and implementation activities
- Continue to support international agreements review and approval activities
- Continue to support Allied Cross-Servicing Agreement program implementation
- Continue to conduct analyses/assessments in support of to U.S. engagement in NATO logistics
- Conducted strategic planning, technical analyses, and implementation support in fulfillment of US and NATO objectives embodied in the Prague Capabilities Commitments and associated activities stemming from the 2004 Istanbul Summit and other NATO summits and ministerial meetings
- Continue to examine the implications and consequences of current international cooperation policies, strategies and budgets and address complex issues and dynamic problems facing the USD(AT&L) in the international arena
- Continue to evaluate technical, architectural, and programmatic issues in the areas of technology transfer and foreign disclosure
- Assess the state of Earned Value Management (EVM) within the Department to include: obstacles or institutional barriers to effective EVM application facilitate EVM use among defense organizations, level of EVM expertise in the Department, and EVM training needs
- Perform Defense Acquisition Management Information Retrieval studies to support Net-centricity initiatives
- Assess Acquisition Program Plans, especially Nunn McCurdy breaches on various programs

- Per Congressional direction, evaluate weapon systems requirements and acquisition issues, and submit master planning documents for key defense mission areas: Conventional Munitions (data collection annually, report submitted every other year), Anti-armor Munitions, and Electronic Warfare
- Provide Earned Value Management Mission support to include assessing acquisition program plans, especially Nunn McCurdy breaches on various Major Defense Acquisition Programs
- Develop long range strategic resource allocation models and estimation techniques to support future budget and programming decisions for acquiring defense capabilities as well as planning future costs of operating and sustaining DoD forces and infrastructure
- Maintenance of the Commercial Activities Management System secure website and analysis of program execution
- Develop Most Efficient Organization cost tracking tool, provide analysis on costing issues for COMPARE Program
- Begin DoD Information Technology Security Certification Accreditation Process for Automated Housing Referral Network
- Support the continued compilation, analysis and publishing of the Environmental Quality Annual Report to Congress, to meet statutory and Executive Order requirements on environmental issues
- Support acquisition program milestone decisions, Environmental, Safety and Occupational Health risk management and planning, programming, training, and policy activities
- Technical and policy analyses of environmental issues affecting DOD associated with Stratospheric Ozone Depletion and Global Climate Change
- Supports joint US and UK efforts to analyze and address challenges to operations, systems and facilities posed by existing and in draft environmental legislation developed by the European Union
- Pursuant to Congressional direction, maintain a new and improved condition reporting system to assess, rate, and validate facility conditions ensuring commonality across DoD
- Conduct research and analysis on Negotiation of Comprehensive Small Business Subcontracting Plans Test Program participants' progress on subcontracting performance and test/compare to projections made in FY2006
- Conduct in-depth research, analysis and review on the successes of the previous 10 years of the SBIR Program to highlight efficiencies and realized technology developments and their transition into military systems, focusing on any need for improvements and legislative changes to improve the effectiveness of the overall Program

- Develop trend analysis analytical tools and techniques that can be used to foster improvement in the DoD small business program. Examine the latest fiscal year contract action database to identify opportunities to increase Small Business participation in defense acquisition

Technical Support for the Director, Program Analysis & Evaluation:

FY 2004 Accomplishments:

- Assessed the operational effectiveness of the KC-767A aircraft in the aerial refueling role in comparison with the KC-135R
- Identified the near-term and potential long-term missions that should be conducted by Unmanned Combat Air Vehicles
- Identified intelligence collection needs and defined a corresponding integrated air and space architecture for 2008-2018 time period
- Analyzed the impact of the projected level of global engagement on US force structure on PERSTEMPO and OPTEMPO
- Analyzed cost and force capability implications of current and future defense programs
- Examined enhancements to force capability and survivability of space systems
- Analyzed C4ISR persistence surveillance and rapid strike capabilities
- Assessed military forces capabilities to better exploit information technology
- Provided mathematical and scientific support for selected TACAIR analyses and studies
- Continued the development of enhanced cost estimating tools to support military aircraft development and production
- Improved methodologies for estimating weapon system development costs by the use of simulation techniques
- Analyzed US forces capabilities to display and sustain forces in an access-denial environment
- Developed a comprehensive process to estimate the life-cycle cost of the next generation unmanned aerial vehicle systems
- Developed metrics for sufficiency of military service / major defense agency O&M funding
- Provided research on new tools for estimating costs of new development programs in key product sectors
- Provided technical analysis of selected aviation and ground systems and platforms
- Estimated the market value and DoD cost to vacate the 1710-1755MHz spectrum

- Analyzed tradeoffs among Ground Moving Target Indicator (GMTI) and cruise missile defense sensor systems
- Evaluated the effectiveness, costs, operational risks, technological risks, and programmatic risks of alternative joint UCAV and Airborne Electronic Attack (AEA) platform options
- Examined O&M execution data in support of the Planning, Programming, Budgeting, and Execution System (PPBES)
- Assessed the effectiveness and cost of tactical Unmanned Air Vehicles (UAVs)
- Examined the potential impact of force transformation on logistics footprints (number of personnel, numbers and types of units), supply requirements, and deployment timelines and requirements
- Developed methods for assessing the likely cost and schedule implications of capability needs as developed by the Joint Capabilities Integration and Development System (JCIDS) and as evaluated by the Enhanced Planning Process (EPP)
- Provided senior leaders with key analyses to aid in resource allocation decisions and directly enhance defense planners' ability to make the most effective use of scarce collective defense resources
- Assessed the impact of various combinations of pre-positioned equipment and forward-based forces and their impact on both mobility requirements and modernization decisions for the C-5, C-17, KC-10, KC-135, C-130 and future airlift/tanker aircraft
- Examined medical missions, capabilities, and forces in support of defending the homeland; deterring aggression and coercion forward in critical regions; swiftly defeating aggression in overlapping major conflicts while preserving the option to call for a decisive victory in one of the conflicts; and conducting a limited number of smaller-scale contingencies
- Supported the Secretary of Defense’s Integrated Global Presence and Basing Strategy initiative by providing rough order of magnitude facilities cost estimates for Forward Operating Bases (FOBs) and Forward Operating Locations (FOLs)
- Examined critical air warfare problems: air-to-air campaigns; integration of intelligence, surveillance, and reconnaissance (ISR) into air campaigns; end game maneuver; the physics of target acquisition and track in air campaigns; modeling a responsive and adaptive adversary; and more
- Improved the ability to evaluate program assumptions on costs and benefits of software development programs and strategies
- Improved databases and methods for estimating the costs to conduct defense systems remanufacturing, upgrades, modifications, service life extension programs and depot repair activities
- Improved taxonomies for analyses of forces and missions and improve methods for estimating resource requirements for transformed military forces

- Performed analyses to improve the Department's understanding of the complex relationship among resources allocated to Central Training, major characteristics of force structure, and the Department's investments in training and learning technologies
- Developed a set of approaches and comprehensive processes to estimate the life cycle cost of next generation mission systems and avionics
- Developed a comprehensive, global assessment of programmed operations and maintenance (O&M) funding
- Analyzed the tradeoffs between different operating concepts (CONOPs), platforms and systems in a challenging undersea warfare campaign
- Developed alternative force/capability options for the QDR containing ambitious initiatives to mitigate future risks by transforming the force

FY 2005 Program:

- Provide senior leaders with key analyses to aid in resource allocation decisions and enhance defense planners' abilities to make the most effective use of scarce defense resources in support of transformation and capabilities-based planning
- Support a Cost Estimating Institute that will facilitate cooperative activities with industry and academia
- Continue development of critical management indicators, tools, and techniques for incorporation into the DPP materials used to provide DoD senior leadership with an overview of the long-term trends, "health", and affordability of the defense program
- Review army force and manpower issues that arise as part of the Program Review process
- Improve tools for comparing performance of alternative systems, weapon configurations, and force levels
- Improve PA&E's ability to evaluate program assumptions in areas related to software
- Provide analytical support to senior DoD leadership for development of the Quadrennial Defense Review (QDR)
- Develop new tools to support the DoD Capabilities-Based Planning framework
- Build analytical baselines in support of the Analytical Agenda, including Multi-Service Force Deployment baselines (MSFDs)
- Perform analyses to support issue teams in the Enhanced Planning Process
- Assess the near-term and potential long-term missions that could be conducted by Unmanned Combat Air Vehicles
- Identify intelligence collection needs and define a corresponding integrated air and space architecture for 2008-2018 time period
- Analyze the impact of the projected level of global engagement on US force structure on PERSTEMPO and OPTEMPO

- Analyze cost and force capability implications of current and future defense programs
- Determine the value of enhancements to force capability and survivability of space systems
- Analyze C4ISR persistence surveillance and rapid strike capabilities
- Assess military force capabilities to better exploit information technology
- Provide mathematical and scientific support for selected TACAIR analyses and studies
- Continue the development of enhanced cost estimating tools to support military aircraft development and production
- Improve methodologies for estimating weapon system development costs by the use of simulation techniques
- Analyze US forces' capabilities to display and sustain forces in an access-denial environment
- Develop a comprehensive process to estimate the life-cycle cost of the next generation unmanned aerial vehicle systems
- Develop metrics for sufficiency of military service / major defense agency O&M funding
- Provide research on new tools for estimating costs of new development programs in key product sectors
- Provide technical analysis of selected aviation and ground systems and platforms
- Analyze tradeoffs among Ground Moving Target Indicator (GMTI) and cruise missile defense sensor systems
- Assess the force structure of the Navy Expeditionary Strike Group (ESG)
- Continue to evaluate the effectiveness, costs, operational risks, technological risks, and programmatic risks of alternative joint UCAV and Airborne Electronic Attack (AEA) platform options
- Develop O&M execution data in support of the Planning, Programming, Budgeting, and Execution System (PPBES)
- Assess the effectiveness and cost of current tactical Unmanned Air Vehicles (UAVs)
- Complete the assessment of the potential impact of force transformation on logistics footprints (number of personnel, numbers and types of units), supply requirements, and deployment timelines and requirements
- Perform analyses in support of the Mobility Capabilities Study
- Develop methods for assessing the likely cost and schedule implications of capability needs as developed by the Joint Capabilities Integration and Development System (JCIDS) and as evaluated by the Enhanced Planning Process (EPP)
- Assess the impact of various combinations of pre-positioned equipment and forward-based forces and their impact on both mobility requirements and modernization decisions for the C-5, C-17, KC-10, KC-135, C-130 and future airlift/tanker aircraft

- Assess medical missions, capabilities, and forces in support of defending the homeland; deterring aggression and coercion forward in critical regions; swiftly defeating aggression in overlapping major conflicts while preserving the option to call for a decisive victory in one of the conflicts; and conducting a limited number of smaller-scale contingencies
- Support the Secretary of Defense's Integrated Global Presence and Basing Strategy initiative by providing rough order of magnitude facilities cost estimates for Forward Operating Bases (FOBs) and Forward Operating Locations (FOLs)
- Develop a better understanding of critical air warfare problems: air-to-air campaigns; integration of intelligence, surveillance, and reconnaissance (ISR) into air campaigns; end game maneuver; the physics of target acquisition and track in air campaigns; modeling a responsive and adaptive adversary; and more
- Improve our ability to evaluate program assumptions on costs and benefits of software development programs and strategies
- Improve databases and methods for estimating the costs to conduct defense systems remanufacturing, upgrades, modifications, service life extension programs and depot repair activities
- Perform analyses to improve the Department's understanding of the complex relationship among resources allocated to Central Training, major characteristics of force structure, and the Department's investments in training and learning technologies
- Develop a set of approaches and comprehensive processes to estimate the life cycle cost of next generation mission systems and avionics
- Develop a comprehensive, global assessment of programmed operations and maintenance (O&M) funding
- Analyze the tradeoffs between different operating concepts (CONOPs), platforms and systems in a challenging undersea warfare campaign
- Develop alternative force/capability options for the QDR containing ambitious initiatives to mitigate future risks by transforming the force

FY 2006 Plans:

- Provide senior leaders with key analyses to aid in resource allocation decisions and enhance defense planners' abilities to make the most effective use of scarce defense resources in support of transformation and capabilities-based planning
- Continue development of critical management indicators, tools, and techniques for incorporation into the DPP materials used to provide DoD senior leadership with an overview of the long-term trends, "health", and affordability of the defense program

- Review force structure and manpower issues that arise as part of the Program Review process
- Improve tools for comparing performance of alternative systems, weapon configurations, and force levels, especially as related to C4ISR evaluations
- Improve PA&E's ability to evaluate program assumptions in areas related to software
- Improve tools for estimating major weapon systems, infrastructure, and operations and maintenance (O&M) costs
- Improve analytical techniques associated with evaluating and planning for stability operations
- Support development of improved tools for the Global Force Management initiative
- Develop and maintain a modeling and simulation master plan
- Continue to support a Cost Estimating Institute that will facilitate cooperative activities with industry and academia
- Improve cooperation with our allies in performing joint analyses and estimating costs of systems of common interest
- Develop new tools to support Capabilities-Based Planning
- Perform analyses to support Operational Availability studies
- Perform analyses to support issue teams in the Enhanced Planning Process
- Build analytical baselines in support of the Analytical Agenda, including Multi-Service Force Deployment baselines (MSFDs)

FY 2007 Plans:

- Provide senior leaders with key analyses to aid in resource allocation decisions and enhance defense planners' abilities to make the most effective use of scarce defense resources in support of transformation and capabilities-based planning
- Continue development of critical management indicators, tools, and techniques for incorporation into the DPP materials used to provide DoD senior leadership with an overview of the long-term trends, "health", and affordability of the defense program
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- Build analytical baselines in support of the Analytical Agenda, including Multi-Service Force Deployment baselines (MSFDs)

Technical Support for the Under Secretary of Defense (Policy):

FY 2004 Accomplishments:

- Completed the Allied Defense Burdensharing and Capability Analysis report, a Congressionally-mandated report (w/PA&E)
- Evaluated Service components Theater Security Cooperation activities
- Developed scenarios and planning tools for use in connection with the Defense Planning Guidance and capabilities-based planning and programming
- Initiated a project on force management and policy implications of alternative overseas postures
- Planned and conducted the DoD Worldwide Combating Terrorism Conference
- Launched a major initiative with the five regional centers to underwrite a variety of research initiatives focusing on the war on terrorism and other critical issues. The effort is intended to help better align the work of the centers with the SecDef's priorities
- Assisted in monitoring the implementation of national and department-level guidance governing the development and deployment of missile defense
- Launched an assessment of the defense and military capabilities of the republic of Croatia
- Analyzed and developed recommendations for improving relevant policy, military, interagency and coalition organizations for stability operations

- Initiated a major effort to provide innovative insights and critical analysis of key issues relating to defense planning; e.g. developing capabilities-based planning constructs as well as developing and evaluating approaches to establishing an adequate and sustainable force size, composition and posture
- Initiated an effort to examine and make recommendations on the long-term challenges to US security, including the development of a framework for establishing strategic and investment priorities
- Obtained analytical support on issues related to Iraq and Afghanistan
- Initiated the development of a Joint Operational Foreign Disclosure Course
- Continued the study of Special Operations Forces (SOF) Global Planning Issues, addressing intelligence, communications, logistics, and operational issues. The results will contribute to a new SOF transformation study
- Analyzed issues and challenges related to manning the special operations forces
- Analyzed a recommendation from the 9/11 Commission concerning the transfer of paramilitary operations to the U.S. Special Operations Command

FY 2005 Program:

- Continue the analysis of critical issues dealing with manning the Special Operations Forces, focusing on some current and near-term manning issues
- Continue to provide analysis for the Allied Defense Burdensharing and Capability Analysis report, a Congressionally-mandated report
- Study how transformation efforts can be harnessed to maintain U.S. strategic superiority in an unpredictable world
- Conduct various studies and research dealing with homeland defense
- Conduct studies and analyses dealing with deterring and responding to terrorism
- Conduct studies that support the goals and requirements of the Quadrennial Defense Review
- Continue work on developing ways to counter the threat posed by weapons of mass destruction
- Conduct regionally-focused studies and other analyses on areas of interest, particularly in the Middle East and the Pacific
- Continue analyses of issues related to nuclear weapons employment policy
- Continue to sponsor research at the regional centers, especially concerning the war on terrorism and other critical issues as they relate to the Secretary's analytical priorities

- Support and conduct the Interagency Terrorism Response Awareness Program
- Conduct the 19th annual DoD Worldwide Combating Terrorism Conference
- Conduct a number of studies and analyses and obtain technical support to help contribute toward the DoD position on space policy issues

FY 2006 Plans:

Focus the program on critical issues of importance to the Secretary of Defense and the Under Secretary of Defense for Policy. These are likely to include, but not be limited to, some or all of the following:

- the Global War on Terrorism, including strategy, doctrine, organizations, and training to deal with the evolving terrorist threat
- weapons of mass destruction: nuclear, chemical, and biological
- alternative defense budgets, programs and strategy options
- military revolutions, future warfare, and military transformation
- dealing with failed states and conducting stabilization and counterinsurgency missions
- analyzing and developing strategies to deal with the new threat environment
- global peace operations
- homeland defense
- ballistic missile defense
- nuclear employment policy options
- long-range defense strategy and policy issues
- force structure and basing alternatives
- security cooperation issues
- relations with allies, maintaining coalitions, and sharing burdens
- space policy issues

- regionally-focused analyses on areas of interest and concern

FY 2007 Plans:

Focus the program on critical issues of importance to the Secretary and the Under Secretary of Defense for Policy. These are likely to include, but not be limited to, some or all of the following:

- the Global War on Terrorism, including strategy, doctrine, organizations, and training to deal with the evolving terrorist threat
- weapons of mass destruction: nuclear, chemical, and biological
- alternative defense budgets, programs and strategy options
- military revolutions, future warfare, and military transformation
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- homeland defense
- ballistic missile defense
- nuclear employment policy options
- long-range defense strategy and policy issues
- force structure and basing alternatives
- security cooperation issues
- relations with allies, maintaining coalitions, and sharing burdens
- space policy issues
- regionally-focused analyses on areas of interest and concern

Technical Support for the Under Secretary of Defense (Personnel & Readiness):

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2005
APPROPRIATION/BUDGET ACTIVITY **Research, Development, Test & Evaluation, Defense-wide**	R-1 ITEM NOMENCLATURE **Technical Studies, Support & Analysis PE 0605104D8Z**

FY 2004 Accomplishments:

- Developed a new framework to evaluate various lateral entry options and determined that large-scale lateral entry of non-prior service personnel would not lead to significant savings in training costs
- Explored the types of personnel management and compensation policy changes that might be required for military transformation
- Assessed interest in hypothetical enlistment incentives for the college market, finding that a college loan repayment program and a program allowing dropouts to enlist directly without first returning to college generated the most interest
- Explored the problems military spouses face pursuing their employment or educational opportunities
- Completed analysis of the alternate career paths for Field Grade Officers (Up or Stay Military officer promotion policy) pilot project
- Analyzed civilian extended leave programs for possible implementation for military Service members
- Developed alternative career models to address the high turnover of the military's general and flag officers
- Assessed the management and policy implications of potential changes in military officer career management, given officer personnel requirements
- Evaluated ways of adding flexibility to the military compensation system to support transformation
- Continued to evaluate approaches to integrate various human resource management and resourcing systems
- Continued development of a strategic approach to officer development in joint matters, given the context of the future environment, including the joint mission
- Examined ways to improve retention metrics and goals in the context of military transformation
- Continued analysis and assessment of the goals and effectiveness of current policies for compensating veterans with military-related disabilities
- Continued analysis of the Department's civilian workforce requirements and approaches to workforce replenishment
- Developed a methodology for evaluating the extent to which federal agencies should be required to use particular, standardized processes
- Compared data on military members' satisfaction with commissaries and exchanges to customer satisfaction data for the commercial grocery and retail sectors
- Analyzed the impact of multiple and long-term deployments of reservists on reserve retention and evaluated mobilization policies and practices in the field

- Continued efforts to develop a model to forecast long-term operations and support costs based on major cost-drivers
- Responded to various congressional mandates and directives

FY 2005 Program:

- Continue development of an analytical personnel costing tool prototype to support decisions on the conversion of military to civil service positions
- Operationalize the strategic approach for a review of joint duty positions in the Department of Defense
- Evaluate the effectiveness of joint military advertising
- Continue development of analytical products in support of the newly established Medical Readiness Review process
- Develop conceptual model for evaluating retirement system alternatives from the total force perspective and assess the impact of the alternatives on the military members and on the military personnel system
- Continue examination of military equal opportunity and civilian equal employment opportunity issues to enhance mission readiness through improved unit cohesion
- Identify educational concerns of military families and create viable options
- Analyze the impact of multiple and long-term deployments of reservists on reserve retention
- Analyze the full costs of family support, and Morale, Welfare, and Recreation activities, for deployed military personnel
- Conduct an in-process evaluation of the implementation of the National Security Personnel System (NSPS)
- Identify educational concerns of military families and create viable options to address those concerns
- Continue evaluation of how best to integrate various human resource management and resourcing systems
- Re-examine the compensation package for active and reserve military in view of the recruiting and retention needs of a refocused military
- Develop a strategic overview of the skills and competencies needed in both civilian and military workforces in view of recent aggressive efforts to convert military to civilian positions wherever possible
- Develop a robust analysis of the medical readiness needs of a global strategy of 1-4-2-1
- Evaluate ways to support the employers of mobilized reservists
- Conclude the evaluation of new and original ways to compensate personnel for distance-learning and other just-in-time training programs

- Respond to congressional mandates and directives

FY 2006 Plans:

- Begin evaluating and providing "lessons learned" from the new National Security Personnel System (NSPS)
- Continue research to understand the most cost-effective ways to recruit and retain quality civilians
- Evaluate long-term impact of increased OPTEMPO and PERSTEMO created by combat operations in support of OIF
- Continue examination of impact of OIF deployments on recruiting and retention
- Examine impact of extended combat deployments on military families
- Continue analysis of effects from OIF on Guard and Reserve enlistments
- Continue research on military compensation issues
- Continue transformation and improvement in civilian education, training, and professional development
- Continue to improve access to and management of Reserve Component units and/or individual members
- Evaluate impact of training transformation initiatives
- Continue research support for the Department's recruiting and advertising programs
- Respond to congressional mandates and directives

FY 2007 Plans:

- Continue study of issues related to implementation of National Security Personnel System (NSPS)
- Continue study of long-term effects of stress on the force created by extended combat deployments
- Study impact of "baby-boomer" retirement bulge on DoD civilian workforce
- Evaluate the effectiveness of the Department's recently-implemented strategic human resources plans
- Evaluate impact of changes in Military Health System on medical readiness of military units
- Continue review of Guard and Reserve issues related to long-term mobilization and deployment
- Respond to congressional mandates and directives

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2005
APPROPRIATION/BUDGET ACTIVITY **Research, Development, Test & Evaluation, Defense-wide**	R-1 ITEM NOMENCLATURE **Technical Studies, Support & Analysis PE 0605104D8Z**

Technical Support for the Assistant Secretary of Defense (Networks & Information Integration):

FY 2004 Accomplishments:

- Developed a roadmap that addresses how the Department can best develop and implement wideband and ultra-wideband technologies in support of net centric operations and warfare
- Developed a framework for Top Level Transport Network Management System that will work with the Network Management Systems within the individual networks to help ensure that warfighting and business operations capabilities are delivered in accordance with user and application demands
- Established a General Officer Steering Council to examine the effectiveness of virtual reachback capabilities in rebalancing the active/reserve force structure

FY 2005 Program:

- Develop a communication programs roadmap for transition to a net centric environment
- Build a semantic architecture that enables the sharing of information among military domains to improve collaboration and interoperability
- Examine the net centric command and control capability within the Unified Command Structure to identify improvements for the shared situational awareness models
- Complete a study to examine the probability of extending the applicability of the Global Information Grid (GIG) Core Services to highly disadvantaged operating environments and applications with very stringent latency requirements by exploiting mobile ad hoc networking concepts and techniques

FY 2006 Plans:

- Continue studies and analyses to transition communications programs to a net centric environment
- Identify barriers to the creation of coalition net centric operations
- Assess time phased investment alternatives for C4ISR program initiatives that enable the military to transform the way it operates

FY 2007 Plans:

- Continue studies and analysis to support the Department’s transition to a net centric environment

- Continue efforts to improve coalition net centric operations

Technical Support for the Under Secretary of Defense (Intelligence):

FY 2004 Accomplishments:

- Began developing a comprehensive DoD Intelligence, Surveillance and Reconnaissance (ISR) Integration Roadmap that establishes the Department's fundamental ISR goals, comprehensively describes the ISR activities of the military departments and the intelligence agencies of the Department of Defense, and discusses how DoD intelligence can enhance DoD's role in fulfilling its homeland security responsibilities
- Contributed to a study of Ground Moving Target Indicators and Cruise Missile Defense Sensor Systems
- Provided analysis of programmatic alternatives for the future of the National Reconnaissance Office

FY 2005 Program:

- Developed a roadmap for the Joint National Intelligence Training Federation to establish a baseline of existing Modeling and Simulation (M&S) capabilities throughout the Intelligence Community (IC), validate existing Joint requirements for IC participation in the Joint Training environment, and provide a recommended course of action for modification and/or development of systems to support Joint Training
- Conducted an assessment and recommended a future investment strategy of DoD Counterintelligence and Security (CI&S) Technologies for USD(I)
- Follow-on analysis for the ISR Integration Roadmap that develops an enterprise wide investment strategy that provides a balanced set of existing, upgraded and new ISR capabilities, including the communications and processing /exploitation capabilities. This will incorporate the findings of the Department's Persistent Surveillance study

FY 2006 Plans:

- Evaluate the planned air and space sensor mix against updated warfighting plans and scenarios to ensure military operations and intelligence needs are met. Identify shortfalls and make recommendations

- Assess the ability of current planned manned and unmanned aerial vehicles to provide reliable target coordinates for coordinate seeking weapons in near real time and recommend changes to the planned platforms and sensors to reduce the processing, manpower, and time to obtain precision coordinates
- Study the potential methodologies to integrate HUMINT data into the Distributed Common Ground/Surface Family of Intelligence Systems
- Update the procedures specified in the Distributed Common Ground/Surface (DCGS) Family of Intelligence Systems Interoperability Capabilities Document
- Improve the DCGS enterprise management capability to meet increasingly dynamic operational environment requirements
- Conduct a study, if necessary, to define a DCGS enterprise testing strategy
- Perform a study to determine current requirements for MASINT, develop proposals for MASINT reorganization, R&D, acquisition, and TPED systems; and assess the strategic and tactical benefits to the Intelligence Community and warfighter of a mission realignment
- Examine how the Department may organize a Defense Warning Activity that directly supports SECDEF
- Perform an assessment of Long-Term Requirements and Planning for Intelligence Support to Transition Operations after combat
- Conduct a study to identify the substantive, technical, procedural, and architectural impediments to intelligence support to the warfighter and recommend solutions in order to ensure that relevant, credible, and timely information is shared and understood at the tactical level
- Assess strategic indications and warning to enhance deterrence in the 21st century and examine potential deterrent postures in the context of the global war on terror and in support of stability operations
- Develop an understanding of how to improve collection of intelligence on and analyze terrorist organizations and operations with the goal of being able to prevent or deter terrorist attacks

FY 2007 Plans:

- Conduct studies to reduce the processing, manpower, and time required to deliver precision coordinates to smart weapons from airborne sensors
- Evaluate the military use of commercial SATCOM and imagery and project future use to ensure the Department is adequately planning for its communication and imagery needs

- Continue studies and analyses related to Intelligence, Surveillance, and Reconnaissance
- Provide continuing analysis of issues related to DoD's intelligence capabilities and homeland defense

Technical Support for the Joint Staff:

FY 2004 Accomplishments:

- Supported the Global Force Management Data Initiative, advancing the Secretary of Defense's Strategic Planning Guidance (SPG) directive to make net-centric data transparent, easily accessible to users, and shared using common standards and resources
- Identified a framework and funding options for: potential increases to the Chemical, Biological, Radiological and Nuclear (CBRN) Defense Program; recapitalization of physical and intellectual infrastructure required to address known and evolving WMD threats; and assistance to Executive Agents identified for WMD elimination and WMD Interdiction
- Developed Initial Capabilities Documents (ICDs) focusing on Chat services and on Web services to bridge warfighter requirements with the numerous Coalition Wide Area Network (CWAN) development efforts now underway
- Conducted a study to develop options in order to implement an approved plan for the future Universal Joint Task List taxonomy to support Combatant Commands, Services and Combat Support Agencies readiness, operational, and training requirements

FY 2005 Program:

- Conduct follow on analyses to the Strategic Approach to Joint Personnel Issues study, to provide overarching guidance on how officer training and development in joint matters would best meet DOD's goals by increasing the quality of officers in joint assignments and ensuring that general and flag officers are well-rounded in joint matters in the context of evolving combatant commander needs, reduced resources, and a dramatic cultural shift in the military
- Assess the ability of the Integrated Broadcast System (IBS) to meet the timeliness and volumetric requirements of time-critical and non-time critical information dissemination. This effort will develop recommendations to assist the Chairman of the Joint Chiefs of Staff in integrating the various Operational Requirements Documents and Capabilities Development Documents that comprise the necessary end-to- end IBS capability required by joint combat forces

- Develop insights and potential solutions regarding how DoD can play more effective roles in bridging the capability requirements of the Joint Capability Integration and Development System process and the opening stages of the Defense Acquisition System

FY 2006 Plans:

- Conducting various studies assessing decision-superior warfare in response to anticipated QDR-directed taskings

FY 2007 Plans:

- Continue to integrate QDR-directed taskings and respond to Strategic Planning Guidance (SPG 06) study requirements

B. Program Change Summary

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	29.762	30.618	31.117	31.772
Current FY 2006 President's Budget	31.194	30.894	31.075	31.836
Total Adjustments	+1.432	+0.276	-0.042	+0.064
Congressional program reductions	-0.202	-0.724		
Congressional rescissions				
Congressional increases		+1.000		
Reprogrammings	+2.185			
SBIR/STTR Transfer	-0.551			
Other program changes			-0.042	+0.064

C. Other Program Funding Summary **N/A**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	**DATE February 2005**
APPROPRIATION/BUDGET ACTIVITY **Research, Development, Test & Evaluation, Defense-wide**	R-1 ITEM NOMENCLATURE **Technical Studies, Support & Analysis PE 0605104D8Z**

D. Acquisition Strategy **N/A**

E. Performance Metrics

This program generally conducts over one-hundred fifty actions per fiscal year to support a wide variety of dynamic goals of the Department and is designed to encourage a collaborative research approach among the components of OSD and the Joint Staff. The focus of studies varies across a wide spectrum including weapons systems cost analysis, strengthening alliances, human resource and military personnel management, examination of innovative technologies, application of technology to operational doctrine, and many other issues of timely importance. Most of the actions are long to intermediate-range in outlook, so directly quantifiable measurements are difficult to obtain. However the program allows high-level managers to steer their research toward their highest-priority goals and other high-level guidance such as the President's Management Agenda and the National Security Strategy of the United States of America.

FY 2006, RDT&E Budget Item Justification Exhibit R-2							Date: February 2005	
RDT&E, Defense-Wide/ RDT&E Management Support - BA6			Program Element: 0605110D8Z Program Element Title: Military Critical Technology Support					
Cost ($ in millions)	FY 2004	*FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Military Critical Technology Support	0.000	0.000	1.999	1.998	2.109	2.089	2.085	2.085

*transferred from DTRA PE060511BR to AT&L Office of International Technology Security

A. Mission Description and Budget Item Justification:

The Military Critical Technology Support Program (MCTP) entails multiple activities to include the development and publication of the Militarily Critical Technologies List (MCTL). The congressionally-mandated MCTL is the fundamental source document for identification of leading edge and current technologies which must be monitored and assessed worldwide for national security and nonproliferation control of weapons of mass destruction and advanced conventional weapons. The main efforts which encompass the MCTL are:

- Continuous technical support to interdepartmental and international processes which develop multinational export control agreements on technologies of concern to DoD;
- Worldwide technology capabilities assessments for the MCTL and other USG International critical technologies efforts;
- Identification and determination of technical parameters for proposals for international control of weapons of mass destruction;
- Technical assessments to support decisions on foreign ownership of US industrial assets and treaty compliance inspections;
- Identification of foreign technologies of interest to the DoD and opportunities for international cooperative research and development;
- Identification of Homeland Defense and terrorism applications of militarily critical technologies.

MCTP activities include:

- Developing and publishing in electronic form (including Internet version, both restricted and public) various editions of the MCTL and Developing Critical Technologies/Science and Technology (DCT/S&T) documents that describe the military and proliferation significance of various technologies;
- Monitoring and assessing dual-use and military technologies worldwide;

- Assisting in the development of proposals for negotiation in various multilateral export control regimes;
- Providing technical support for the review/revision of the U.S. Munitions List under the Defense Trade Security Initiative;
- Providing analytical support for Congressional reports.
- This program includes funding for travel by DOD personnel in support of management and technical objectives.

B. Program Change Summary:	FY 2004	FY 2005	* FY 2006	FY 2007
Previous President's Budget:	0.000	0.000	0.000	0.000
FY 2006 President's Budget Submission:	0.000	0.000	1.999	1.998
Adjustments to Appropriated Value:	0.000	0.000	+1.999	+1.998
Congressional Program Reductions:				
Congressional Rescissions:				
Congressional Increases:				
Reprogrammings:				
SBIR/STTR Transfers:				
Other:				
Program Increases:			+1.999	+1.998

*****A functional transfer of FY 2005 funds from the Defense Threat Reduction Agency was accomplished, through a MIPR, in December 2004, to the Deputy Under Secretary of Defense, International Technology Security (ITS), to execute reforms to the Military Critical Technology Program.

C. Other Program Funding Summary: N/A
D. Acquisition Strategy. N/A
E. Performance Metrics: NA

FY 2006, RDT&E Project Justification Exhibit R-2a							Date: February 2005	
RDT&E,DW/BA 2				PE: 0605110D8Z Military Critical Technology Support				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Military Critical Technology Support Program	0.000	0.000	1.999	1.998	2.109	2.089	2.085	2.085

(U) A. Mission Description and Budget Item Justification: The RDT&E program was transferred from the Defense Threat Reduction Agency in December 2004 to continue support for the Military Critical Technology Support Program that is managed under a Task Order by the Institute for Defense Analyses. The MCTP was identified in the Export Administration Act of 1979 and extended by Presidential Directive to review militarily critical goods and technologies and to consider worldwide technology capabilities.

B. Accomplishments/Planned Program

Accomplishments

- Maintained the Technology Working Group (TWG) infrastructure to review and report on parameters for critical technologies.
- Produced enhancements of the Developing Science & Technologies list (DTSL)
- Provided technical support to the Wassenaar Arrangement (WA) negotiations (preparation of proposals and on-site technical support) and the export control community (e.g., High Performance Computers)
- Conducted technology reviews and assessments by trips to major industrialized nations.
- Provide Worldwide Technology Capability (WTC) assessments for the DDR&E Global Technology Knowledge Base (GTKB)
- Performs ad hoc tasks to include technical advice to the review of the Munitions List.

Planned Program

- To enhance resources to define in quantitative technical terms, which technologies contribute to, or have the potential to threaten, US national security;
- To evaluate the global state-of-the-art and trends that affect the availability of such technologies and the ability of the US and cooperating countries to control the dissemination of such technologies;
- To recommend strategies and guidelines that facilitate international cooperation and protect US national security interests without imposing unnecessary restraints on commerce.

FY 2006 Plans

- Establish a mechanism to review and update at least one half of the categories of technologies on the MCT and on the DS&T Lists annually.
- Expand ability to provide technical experts for the Wassenaar Arrangement negotiations during proposal development and to support the negotiations.
- Increase ability to visit industrial facilities in the US and abroad to access technologies and foreign availability.
- Create and administer new technology working groups to respond to new categories of evolving technologies.

FY2007 Plans

- Improve the ability to expand the review and reporting on the status of critical technologies, in a more timely and effective manner.

BUDGET JUSTIFICATION
FOR PROGRAM ELEMENTS OF THE
OSD RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, DEFENSE-WIDE PROGRAM
FISCAL YEAR (FY) 2006/2007 BUDGET ESTIMATES SUBMISSION

PE 0605114D8Z, Black Light, program is submitted separately as a Special Access Program.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: Support to C3I, PE 0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	24.621							
Command Information Superiority Architecture	4.491							
Defense Architecture Repository	.988							
Integrated Planning & Management	1.816							
Rapid Acquisition Incentives	3.201							
Support to C3I Mission Requirements	14.125							

A. Mission Description and Budget Item Justification:

The program element supports technical and analytic efforts to evaluate and improve the management oversight of DoD command and control (C2), communications, space, and information superiority programs. Support is focused on reviewing resources and acquisition issues for existing and planned space programs; exploring new command and control research concepts that exploit emerging technologies to improve DoD's understanding of the national security implications of the Information Age; integration and overarching requirements/ planning process for national and nuclear C2 capabilities; development and integration of Command Information Superiority Architectures (CISA) to better define command capabilities; oversight of information operation activities; development of the Defense Architecture Repository (formerly know as the Joint C4ISR Architecture Planning/Analysis System) an enterprise wide repository to store, retrieve, and use DoD architecture data. This program is funded under Budget Activity 6, RDT&E Management Support because it includes studies and analysis in support of RDT&E efforts.

B. Program Accomplishments and Plans:

FY 2004 Accomplishments: ($14.125 million)

- Developed a "Broad Agency Announcement" to solicit research proposals related to command and control in the context of edge organizations. Initiated a number of research projects.
- Created an "Edge Institute" at the Naval Postgraduate School. FY 2004 funded projects address development of analytic infrastructure to investigate command and control in a networked environment
- Collaborated with DoD Office of Force Transformation on the development of an Network-centric Conceptual Framework and its application to a number of case studies

- Worked with others throughout the DoD to improve the state of the art and practice of experimentation.
- Worked with US Marines to rethink aviation in light of NCW
- Chaired NATO Research Group leading study of new command concepts
- Held annual Command and Control Research and Technology Symposium that was attended by over 400 C2-related researchers and analysts.
- Co-sponsored 9th International C2 Research and Technology Symposium with the Danish Armed Forces
- Continued CCRP Publication Program including new books underway on Campaigns of Experimentation, Networked Organizations, and educational material on Transformation.
- Successfully collected, compiled and submitted the FY 2005 BES to OMB and Congressional Justification Materials
  - required a change to data collection formats for both OMB and Congress
  - required the ability to upload to OMB as an XML file
  - new Congressional requirement, required a format change in paper output
- Developed and implemented ability to upload an XML format into ITMA.
- Supported classified information operations program efforts.
- Conducted research and analysis with the goal of implementing and demonstrating a DoD and FAA-approved "equivalent level of safety" (ELOS) for unmanned aircraft, permitting routine operation in the National Airspace System.

Pacific Disaster Center

- The PDC implemented several data and information capabilities in support of regional-, state-, and county-level disaster managers. These capabilities included: the *Asia-Pacific Natural Hazards and Vulnerabilities Atlas*, an Internet-based, decision support tool providing the region's disaster management community with a dynamic geospatial framework for timely access and viewing of critical hazard information; the *Hawaii State Civil Defense Critical Infrastructure Protection Database*, a new state-level capability in support of the Hawaii homeland security effort for combating future threats, both natural and man-made, to critical facilities and infrastructure; and the *Hawaii County Remote Information Services*, a county-level, emergency management and planning capability designed to utilize emerging technologies not readily available to operational entities.
- The PDC inaugurated the *Asia Pacific Natural Hazards Information Network (APNHIN)*, a suite of applications and information services enabling disaster managers to tap into geospatial information resources for the Asia Pacific region. APNHIN can be reached at http://apnhin.pdc.org. APNHIN will support disaster management decision makers by providing convenient access to a wide spectrum of premium data resources—including remote sensing and other Geographic Information Systems data. By building collaborations with partner organizations, APNHIN will grow over time to form a community of information-sharers.
- In cooperation with the World Bank, the Asian Development Bank, U.S. Government Agencies and regional disaster management

organizations, the PDC is building upon past successes in developing mitigation plans (American Samoa, Vanuatu) and is pursuing resources (submitted several pending proposals) to continue this work in the Philippines and the Mekong River region.

- In support of the Department of Defense and specific regional and state agencies, the PDC participated in several major exercises dealing with natural disasters (earthquakes, floods, severe weather) and terrorism (WMD, CBR). PDC has transitioned the *Integrated Decision Support System (IDSS)* to USSOUTHCOM for implementation in the Caribbean region in support of humanitarian assistance operations.

- PDC continued to work with the State of Hawaii, as part of the Hawaii Industry Partnership, and acts as an incubator for emerging, high technology firms in Hawaii. The PDC, with support from its managing partner, the East West Center, has developed plans to move into a new, expanded facility which will allow further growth as the PDC moves towards future sustainability and community involvement.

FY 2005 Plans: N/A

FY 2006 Plans: N/A

FY 2007 Plans: N/A

C. Program Change Summary: (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	25.529			
Current President's Budget	24.621			
Total Adjustments	-0.908			
Congressional program reductions				
Congressional rescissions, Inflation Adjustments	-0.461			
Congressional increases	1.369			
Reprogrammings				
SBIR/STTR Transfer				

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Command Information Superiority Architectures (CISA)/0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: Command Information Superiority Architectures	4.491							

A. Mission Description and Budget Item Justification:

The CISA program continues to be a leader in the transformation of the Department of Defense (DoD). Using a common architecture planning process, CISA products have provided decision makers at all levels of the department with the knowledge and tools to make intelligent, cost effective decisions on key transformational elements and policies, to include Net-Centric Operations and Warfare (NCOW), and the Global War on Terrorism (GWOT). CISA is the prime catalyst for transforming the COCOMs to a net-centric environment. The program is focusing on architecture deliverables that focus on Net-Centric Transition Plans for the COCOMs and integrating Portfolio Management into the COCOMs information technology and capital planning processes. The CISA architecture products results will be used to determine the future DoD CIO IT issues and investment strategies for the COCOMs. In addition, the results will provide direct inputs into the COCOM Integrated Priorities Listings (IPLs), and provide rationale for Program Objective Memorandum (POM) decisions by identifying critical capability shortfalls. The CISA information technology (IT) architectures products; the tactics, techniques, and procedures (TTPs) documents; and the architecture reference models have earned an enviable reputation throughout DoD as the "ground truth". Several have resulted in directly impacting critical shifts in DoD policies which include the new capabilities process for Capital Planning and Investment under the Joint Staff Instruction 3170.01; the Unified Command Plan 2 (directs the standup of USNORTHCOM and the re-structuring of USSTRATCOM); expansion of the GWOT focusing on USSOCOM as the lead developer of a global two-tier net-centric approach; coalition interoperability through the use of USCENTCOM Combined Enterprise Regional Information Exchange System (CENTRIXS) world-wide architecture which links 60 nations in a unified effort; and lastly, Net-Centric Operations and Warfare (NCOW) through the Global Information Grid (GIG) architecture and the NCOW Reference Model (RM). CISA is a leader in supporting the DoD CIO focus on initiatives defined in the Information Technology Management Reform Act (ITMRA), (Clinger-Cohen Act) in the development of the GIG, the Department wide IT architecture. The GIG is considered the essential enabler of Information Superiority and Net-Centricity requirement expressed in the Department's Joint Vision 2020. The inputs include GIG Architecture V1.0 – the DoD baseline "as is" architecture; and GIG 2.0 approved by the DoD CIO on 9 Dec 2003 as the objective architecture for 20XX embedding NCOW transformational concepts. The NCOW RM represents the key compliance mechanism for evaluating IT-related capability, and mapping DoD acquisition programs to implement NCOW.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	4.491			
RDT&E Articles Quantity *(as applicable)				

FY 2004 Accomplishments: ($4.491 million)

- Completed Global Information Grid (GIG) 2.0, DoD Enterprise Architecture focusing on Homeland Defense, Counter-terrorism, Force Allocation, and Combined Forces Command - Korea
- Completed the Net-Centric Operations and Warfare (NCOW) Reference Model, 1.0.— the guide used by DoD Program Managers use for NCOW transformation
- Conducted Net-Centric assessments of key DoD Programs to include Army's Future Combat System (FCS), Navy's Economic Resource Planning (ERP)
- Established EUCOM and North Atlantic Treaty Organization (NATO) standard for establishing and maintaining a Joint Task Force (JTF)
- Drove the implementation of the Joint Task Force for the Olympics 2004
- Provided direct architectural support to the Joint Staff Functional Capabilities Boards (FCBs) allowing key acquisition programs to pass key milestones in the Joint Capabilities Integration and Development System (JCIDS)
- Drove the JFCOM Joint National Training Capability (JNTC) by implementing key Joint Tactical Tasks (JTTs) architectures designed to implement a persistent Net-Centric training capability. Developed and made capital planning and investments of over $1.4 Billion for the Joint Training Network (JTEN).
- Directly supported USCENTCOM receiving $467 Million for critical information technology upgrades over the FY 2004-2009 POM
- USPACOM Information Technology 21 Architecture provided information technology blueprint for implementing new Headquarters building and Network Operations Center (NOC)
- USCENTCOM Operation Iraqi Freedom (OIF) communications architecture was blueprint in establishing information technology requirements and upgrades necessary to support conflict and was key driver in USCENTCOM receiving funds in the FY 2004 supplemental funding bill
- USCENTCOM Combined Enterprise Regional Information Exchange System (CENTRIXS) integrated architecture resulted in achieving $1.1 Billion in additional funding for OIF operations within USCENTCOM theater
- USJFCOM architecture predictive analysis directly impacted critical leadership decisions on sovereignty transitions in OIF.

C. Other Program Funding Summary:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
O&M, DW (PE0902198D8Z)	5.786								5.786

D. Acquisition Strategy. N/A

E. Performance Metrics: Performance is based on the number of initiatives that transition to the net-centric environment to support operations.

Measures include:

- Requirements: Business products identified in need of change
  Business products impacted or changed due to architecture analysis or products
- Acquisitions: Number of system(s) or system functions identified as duplicate
  Number an/or type of system identified as necessary to complete capability
  Number of system(s) and/or applications impacted by architecture analysis
- Portfolio Management:
  Number of systems included in portfolio
  Cost estimates provided for portfolio
  Number of duplicate systems identified in portfolio analysis
  Funds obtained as a result of portfolio analysis

Exhibit R-2a, RDT&E Project Justification						Date: February 2005		
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Defense Architecture Repository System (DARS)/PE 0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: DARS	0.988							

A. Mission Description and Budget Item Justification:

DARS is the enterprise wide repository to store, retrieve, and use DoD architecture data. DARS provides two different types of architecture data- unstructured and structured along with key reference data. The architecture data is available to all DoD users once they have registered. Currently versions exist on both the NIPRNET (unclassified) and SIPRNET (Collateral Classified). Plans are also underway to implement DARS on the Joint World Wide Intelligence Communications System (JWICS). Key features of the DARS program focus on: (1) reuse of common validated architecture data to build integrated architectures; (2) conducting architecture analysis; and, (3) integration architecture data into the DoD mainstream decision-making processes. The DARS data structure is based on the Core Architecture Data Model (CADM), and its data structure is fully CADM compliant. This data structure is under full configuration management, and has the goal of transporting architecture data between and among diverse enterprise architecture and other tools (tool agnostic capability), allowing collaboration among users. By using a standard universal applications process interface (API) CADM XML, DARS works with multiple tool vendors to achieve the collaborative tool agnostic environment. The FY 2005 DARS program will follow the results of the FY 2004 pilot effort to prove that the CADM XML XSD will be the standard Universal API, and allow COTS tool vendors to integrate this into their tool capabilities. DARS will additionally add additional architecture products to the structured capability which may include the OV 6 a,b,c products along with SV 4,5,6,9, and 10A,b,c. Also data exchange capabilities will include the Joint Resource Allocation Module (JRAM), and other executable or modeling and simulation tools. DARS goals for FY 2005 are aggressive and include implementing DARS 3.0 in Feb 2005. DARS will also support the transfer of CADM XML to the international data exchange standard AP 233 using the CADM XML XSLT as the core driver for the transformation. The Department of the Air Force, Army, and Navy CIO's are collaborating in the development of DARS to ensure the success of all. New DARS releases are scheduled for every six months during FY 2005 (DARS 5.0 and 4.0).

Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.988			
RDT&E Articles Quantity *(as applicable)				

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Integrated Planning and Management/PE 0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: Integrated Planning & Management	1.816							

A. Mission Description and Budget Item Justification:

The Unified Command Structure (UCS) provides a single national C2 structure to support every echelon of command from national to tactical. UCS will provide the mechanism and construct to transform the existing set of dedicated, single purpose command and control (C2) systems into an integrated C2 framework to support the national strategy and to provide a unified, flexible, and adaptable full-spectrum command and control capability for warfighters and senior leaders within a globally connected common information environment (CIE). UCS is a new approach that unifies National/Strategic through Operational to Tactical C2 capabilities into a Unified command Capability (UCC) that defines net-centric C2 for DoD.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	1.816			
RDT&E Articles Quantity *(as applicable)				

FY 2004 Accomplishments: ($1.816 million)

- Defined UCS Metrics
- Development of UCS/HF05 Demo Integration Plan
- Conducted Nuclear Thin-line net-centric capability Assessment

C. Other Program Funding Summary:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
O&M, DW (PE0902198D8Z)	3.000								3.000

D. Acquisition Strategy: N/A

E. Performance Metrics: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E,DW BA #6				Project Name and Number: IT Rapid Acquisition PE0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: IT Rapid Acquisition	3.201							
RDT&E Articles Quantity								

A. Mission Description and Budget Item Justification:

The Department must rapidly transform its business processes with the same intensity and depth being used to transform its warfighter processes. This PE is dedicated to the Rapid Acquisition Incentives – Net Centricity (RAI-NC) initiative which serves as the only DoD initiative providing RDT&E proof-of-concept pilots exclusively targeted to advancing and moving the business domains of DoD towards Net Centricity. The PE permits accelerating business domains support processes thru rapid (under $1M and 12 months) pilot development. This PE does not support the DoD Information Technology /Enterprise Information Environment (EIE) Mission Area (EIE). The RAI-NC program provides funding for Net Centric pilot initiatives that directly support and facilitate the transformation of the DoD business enterprise. This initiative is consistent with the Department's strategic goals to: reduce costs; improve efficiency; increase effectiveness by improving the efficiency and effectiveness of process redesign; business systems modernization; strategic sourcing; infrastructure reductions; and optimal-sized inventories. The objective of the RAI-NC Initiative is to accelerate DoD's net centric business transformation in support of the warfighter. The scope of the Rapid Acquisition Incentives – Net Centricity project encompasses defense policies, processes, people, and systems that guide, perform or support all aspects of business processes within the Department. Pilots submitted by DoD Components will directly support transformed DoD business processes, which will be based on Net Centric principles. Each RAI-NC pilot provides proof of concept sustainability as well as the scalability necessary for business Domain enterprise wide implementation that will allow end-to end accessibility to net-centric based decision-making information. Successful implementation will result in more reliable, accurate and timely net centric management information upon which managers can make more effective business decisions in a timely manner for the Department. RAI-NC enables the acceleration of DoD efforts to implement a Domain network centric operational environment while providing a secure, flexible, reliable, affordable, integrated network to achieve high effectiveness in joint and combined operations. The DoD CIO maintains an overarching implementation plan that includes requirements, pilot charter, plans, criteria, oversight mechanisms as well as valid performance measures. This program employs RDT&E funds to plan, develop and oversee proof of concept pilot projects. Successful pilots will not be allowed to enter full deployment and operation without an Opportunity Analysis (business case) demonstrating the achieved goals and outcomes, in addition to Domain support and resourcing. This program is funded under BA-6, Management Support because it includes studies and analyses in support of R&D efforts.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	3.201			
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: ($3.201 million)

Funding was used to initiate RAI-NC and develop the web enabled pilot submission process, evaluate candidates and select four RAI-NC proof of concept pilots. The Department of Navy serves as the DoD Executive Agent. The four FY 2004 pilots are delivering web-based prototypes that:

- Provide a global enterprise level business intelligence tool for integrating procurement, contract, acquisition and financial data. USD AT&L, with Military Department assistance, is developing a web-based global enterprise level business intelligence tool for integrating procurement, contract, acquisition and financial data.
- Accelerate new security capabilities using the Common Access Card (CAC). This will avoid costs of over $75,000 for each of the thousands of information systems that will need to employ the CAC. The Army is developing a set of standard enterprise services for CAC including encryption, authentication, and digital signature.
- Demonstrate that having a trusted space-based Internet server capability will dramatically improve the air, sea and land based mobility, accessibility and continuity of our information systems. Air Force Space Battlelab is developing a web based, global interface to allow warfighter access to satellite information and the ability to directly request information from a satellite via a first ever space-based router using standard internet protocol.
- Enable the acceleration of "time to deliver" for weapons systems through improved collaborative tools for engineers and test managers. Navy is developing a secure collaborative community of interest to exchange test and evaluation data to shorten time for the development of the next generation of night vision illumination goggles.

Similar high leverage outcomes are expected for the FY 2005 pilot submission process that commences June 1, 2004 with selections being announced in October 2004.

FY 2005 Plans: N/A

FY 2006 Plans: N/A

FY 2007 Plans: N/A

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

F. Performance Metrics:

1. Effectively merge the visions and goals of DoD transformation and net centricity into rapidly deployed, common solutions that will accelerate the transformation of DoD business Domains.
2. Provide rapidly structured pilots, which deliver practical business case-based operational solutions within 12 months at a unit cost of under $1M, a concept that has increasing Congressional support.
3. Promote EIE and Domain teaming and help overcome existing barriers to executing the Department's transformation goals and obtaining a net centric environment.
4. Deliver up to four proven, business case based pilots capable of enterprise wide implementation.
5. Permit more efficient DoD mission support by enabling quicker fielding of both net centric information systems and weapons systems
6. Accelerate force transformation and enables business processes to be more timely and efficient (reduce cost of support), to include eBusiness solutions
7. Permit DoD to accelerate the rate of lowering the cost of doing business
8. Reduce information systems risks and costs, by speeding up proof of concept demonstrations and providing business case based implementation decisions

Exhibit R-2, RDT&E Budget Item Justification						Date: February 2005		
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: Foreign Materiel Acquisition and Exploitation PE 0605117D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	33.270	34.741	36.895	37.553	39.188	39.148	40.328	41.263

A. Mission Description and Budget Item Justification:

Program Accomplishments and Plans:

This program manages the acquisition and assessment of foreign weapons systems, military equipment, and military and dual-use technologies for the military services and defense agencies.

FY 2004 Accomplishments:

- Mission Support $33.270

FY 2005 Accomplishments:

- Mission Support $34.741

FY 2006 Plans:

- Mission Support $36.895

FY 2007 Plans:

- Mission Support $37.553

B. **Program Change Summary:** (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	33.421	35.572	36.069	36.749

Current President's Budget	33.270	34.741	36.895	37.553
Total Adjustments	-0.151	-0.831	+0.826	+0.804
Congressional program reductions		-0.831		
Congressional rescissions				
Congressional increases		+1.000		
Internal reprogramming		-1.000		
Other Adjustments	-0.151		+0.826	+0.804

Change Summary Explanation:

FY 2004: Miscellaneous reductions $0.151
FY 2005: $1.000 Congressional add for Weather Scout UAV internally reprogrammed to Foreign Comparative Testing program; $0.831 Undistributed congressional reductions
FY 2006: Department adjustments
FY 2007: Department adjustments

C. Other Program Funding Summary: Not Applicable

D. Acquisition Strategy: Not Applicable

E. Performance Metrics: Classified

Exhibit R-2 RDT&E Budget Item Justification							Date: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E - Defense Wide/Budget Activity: 6			R-1 ITEM NOMENCLATURE Export License Control – PE:0605123D8Z					
COST $ In Millions	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element PE Cost	7.496	5.433	0	0	0	0	0	0

(U) **A. Mission Description and Budget Item Justification**

(U) **BRIEF DESCRIPTION OF ELEMENT:** The program element supports the research design and acquisition of an automated system by the Director Policy Automation Services (PAS), Office of the Under Secretary of Defense for Policy (OUSD(P)) , for export license processing and analysis. This program is a new start effort. The system will be integrated among all export license regulatory and reviewing agencies (Departments of Defense, Commerce, State and other agencies) and incorporate connectivity to industry license applicants. The system will improve the quality of the reviews that protect critical military capabilities and support defense cooperation with allies and friends and reduce review times to meet global marketplace demands.

(U) FY 2004 Accomplishments:

- Completed the Beta system development and Beta testing
- Competed Independent Verification and Validation
- Completed User Acceptance Testing
- Completed necessary security requirements and received authority to operate (ATO)
- Completed Munitions data migration
- Completed baseline system development and fielded USXPORTS for IOC
- Completed one point release of USXPORTS with expanded capability
- Completed documentation and training

(U) FY 2005 Accomplishments:

- Completed system upgrade to include Dual Use functionality and fielded USXPORTS V2.0
- Competed one point release of USXPORTS to optimize functionality and fielded USXPORTS V2.1
- Completed update of documentation and training

Exhibit R-2 RDT&E Budget Item justification	Date: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E - Defense Wide/Budget Activity: 6	R-1 ITEM NOMENCLATURE Export License Control - PE: 0605123D8Z

(U) FY 2005 Plans:

- Field enhanced version of USXPORTS
  - Expand Service Components Requirements to include auto staffing
  - Expand assessment capability associated with the Policy Assessment Repository
  - Field infrastructure improvements

(U) B. Program Change Summary	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	7.718	5.882	0	0
Current BES/President's Budget	7.496	5.433	0	0
Total Adjustments				
Other Program Reductions	-0.222	-0.449	0	0

(U) Schedule: Not Applicable

(U) Technical: Not Applicable

(U) C. Other Program Funding Summary: None.

(U) D. Acquisition Strategy: Continuation of existing contract with SRA International.

(U) E. Performance Metrics: Protect National Security Interests, Facilitate the Export Licensing Process, Speed overall application to decision process, protect industry proprietary information and comply with CCA & GPEA.

Exhibit R-2, RDT&E Budget Item Justification				Date: February 2005					
APPROPRIATION/BUDGET ACTIVITY RDT&E – Defense Wide/Budget Activity: 6				R-1 ITEM NOMENCLTURE Defense Travel System – PE: 0605124D8Z					
COST ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
Total Program Element (PE) Cost	30.513	26.332	20.441	12.581	21.037	12.264	12.584	12.877	148.629
Defense Travel System	30.513	26.332	20.441	12.581	21.037	12.264	12.584	12.877	148.629

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

(U) BRIEF DESCRIPTION OF ELEMENT: The Program Management Office (PMO) for the Defense Travel System (DTS) was established to provide procurement management and system fielding support worldwide. The DTS is the standard DoD business travel services system that combines reengineered travel policies and procedures with the best industry practices and technology. The DTS provides full travel management support from arranging for travel and approving travel authorizations, to processing reimbursement vouchers following travel and maintaining appropriate government records. The DTS is an end to end fully electronic process that leverages technology to speed the coordination of travel, incorporates a digital signature capability, and embraces standard industry Electronic Commerce procedures. DTS was designated as an ACAT IAM Program on May 28, 2002 and is fully compliant with all statutes and regulations for a DoD Major Automated Information System.

PROGRAM ACCOMPLISHMENTS AND PLANS: ($ in millions)

1. (U) FY 2004 ACCOMPLISHMENTS: ($30.513)

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E – Defense Wide/Budget Activity: 6	R-1 ITEM NOMENCLTURE Defense Travel System – PE: 0605124D8Z

PROGRAM ACCOMPLISHMENTS AND PLANS: (Continued)

- ($17.328) Continue development, test, and integration of DADS interfaces and software releases, DADS system changes, MIS Archive, development of Interface Control Documents and Memorandums of Agreement (MOA) .
- ($1.544) DTS security requirement risk assessment, compliance validation, and PKI certification.
- ($7.606) Complete Jefferson software release development and testing. Start Madison software release development.
- ($2.995) Engineering Support.
- ($0.136) Continued development of the MIS/Archive for electronic storage of travel records.
- ($0.904) DEBX to DADS mapping.

2. (U) FY2005 PLANS: ($26.332)

- ($5.000) Continue development, test, and integration of DADS interfaces and software releases, DADS system changes, MIS Archive, development of Interface Control Document and Memorandums of Agreement (MOA).
- ($16.398) Complete Madison software release development and testing. Start Monroe software release development.
- ($3.250) Engineering Support
- ($0.270) DTS ST&E
- ($1.414) DEBX to DADS mapping

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E – Defense Wide/Budget Activity: 6	R-1 ITEM NOMENCLTURE Defense Travel System – PE: 0605124D8Z

3. (U) FY2006 PLANS ($20.441):

- ($6.988) Continue development, test, and integration of DADS interfaces and software releases, DADS system changes, MIS Archive, development of Interface Control Document and Memorandums of Agreement (MOA).
- ($8.867) Complete Monroe software release development and testing. Start Q. Adams software release development.
- ($2.890) Engineering Support.
- ($0.270) DTS ST&E
- ($1.426) DEBX to DADS mapping.

(U) B. PROGRAM CHANGE SUMMARY:

	FY2004	FY2005	FY2006	FY2007	Cost to Complete
(U) Previous President's Budget	30.513	28.508	19.880	12.251	Continuing
(U) Current President's Budget:	30.513	26.332	20.441	12.581	Continuing
(U) Total Adjustments:	0	-2.176	0.561	0.330	
Congressional Adjustments	0	-2.176	0.561	0.330	

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E – Defense Wide/Budget Activity: 6	R-1 ITEM NOMENCLTURE Defense Travel System – PE: 0605124D8Z

(U) C. OTHER PROGRAM FUNDING SUMMARY: (Dollars in Millions)

Project Number & Title	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	To Complete
(U) O&M Line - 04WH31 Defense Travel System	37.440	23.450	22.494	11.515	10.807	9.441	9.678	9.874	Continuing

(U) D. ACQUISITION STRATEGY: Not Applicable

(U) E. PERFORMANCE METRICS: Northrop Grumman Mission Systems (NGMS) is the developer of the DTS software. The corporation is under a contractual EVMS reporting requirement for the cost plus incentive fee (CPIF) contract for the Madison and Monroe releases of DTS. The cumulative CPI to date (data ending 31 December 2005) is 1.063 and the cumulative SPI to date (data ending 31 December 2005) is 0.999. Cost and schedule performance are currently green. The "To Complete Performance Index" TCPI – which is based on the actual budgeted amounts (BAC) in the CPR is 0.900 at the 65.01% complete state for the Madison and Monroe releases.

The incentives for the Madison and Monroe releases are being tracked by cost (30% of fee pool), schedule (40% of fee pool), and quality (30% of fee pool) with upper and lower boundaries to ensure success.

BUDGET JUSTIFICATION
FOR PROGRAM ELEMENTS OF THE
OSD RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, DEFENSE-WIDE PROGRAM
FISCAL YEAR (FY) 2006/2007 BUDGET EXTIMATES SUBMISSION

PE 0605128D8Z, Classified Program USD(POLICY), is justified in the classified annex.

Exhibit R-2, RDT&E BUDGET ITEM JUSTIFICATION							Date: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E Defense Wide (0400) Budget Activity 6				R-1 ITEM NOMENCLATURE Foreign Comparative Testing (FCT) PE 0605130D8Z				
COST *(In Millions)*	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	35.956	36.833	35.738	36.419	38.278	38.271	39.049	39.942

A. Mission Description and Budget Item Justification

The Foreign Comparative Testing (FCT) program supports the warfighter by leveraging non-developmental items from allied and friendly nations to satisfy U.S. defense requirements, thereby accelerating the U.S. acquisition process and lowering development costs. Authorized by Title 10, U.S. Code, Section 2350a(g), the FCT Program is managed by the Deputy Under Secretary of Defense (Advanced Systems & Concepts), Comparative Testing Office. FCT projects are nominated by the Services and U.S. Special Operations Command (USSOCOM) each year. Evaluation processes for project selection includes a detailed review to confirm the proposed item addresses valid requirements, a thorough market survey, and development of a viable acquisition strategy. A 30 day Congressional notification of the intent to fund the most meritorious projects is required, prior to the obligation of funds.

Since the program's inception in 1980, OSD has initiated 528 projects and 444 projects have been completed to date. Of the 234 evaluations that met the sponsor's requirements, 161 led to procurements worth approximately $6.6 billion in FY 2005 constant year dollars. With an OSD investment of about $932 million, the FCT Program has realized an estimated RDT&E cost avoidance of $6.0 billion in FY 2005 constant year dollars.

The FCT program is frequently a catalyst for teaming or other business relationships between foreign and U.S. industries; many successful FCT projects result in arrangements for the licensed production of the qualified foreign item in the U.S. Other nations recognize the long-term value of such practices for competing in the U.S. defense market and the resultant strengthening of the "two-way street" in defense procurement. For the U.S., the result often means the creation of jobs and contributions to local economies. To date, companies across 31 states have benefited from FCT projects.

This Research Category 6.5 is assigned and identified in this descriptive summary in accordance with existing DoD policy.

B. Program Change Summary

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget:	36.464	35.633	36.126	36.750
Current FY 2006 President's Budget Submission:	35.956	36.833	35.738	36.419
Adjustments to Appropriated Value:	-0.508	+1.200	-0.388	-0.331
Congressional Program Reductions:				
Congressional Rescissions:				
Congressional Increases:				
Reprogrammings:				
SBIR/STTR Transfers:				
Other:				
Congressional adds under other programs transferred to FCT		+2.050		
Other program adjustments	-0.508	-0.850	-0.388	-0.331

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics:

In FY 2005-FY 2011, initiate the new start of approximately 15-20 projects and conclude activities on many continuing projects.

Exhibit R-2a RDT&E Budget Item Justification						Date: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDT&E Defense Wide (0400) Budget Activity 6				R-1 ITEM NOMENCLATURE Foreign Comparative Testing (FCT) PE 0605130D8Z				
COST *(In Millions)*	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	35.956	36.833	35.738	36.419	38.278	38.271	39.049	39.942

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Foreign Comparative Testing (FCT) program supports the warfighter by leveraging non-developmental items from allied and friendly nations to satisfy U.S. defense requirements, thereby accelerating the U.S. acquisition process and lowering development costs. Authorized by Title 10, U.S. Code, Section 2350a(g), the FCT Program is managed by the Deputy Under Secretary of Defense (Advanced Systems & Concepts), Comparative Testing Office. FCT projects are nominated by the Services and U.S. Special Operations Command (USSOCOM) each year. Evaluation processes for project selection includes a detailed review to confirm the proposed item addresses valid requirements, a thorough market survey, and development of a viable acquisition strategy. A 30 day Congressional notification of the intent to fund the most meritorious projects is required, prior to the obligation of funds.

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successful FCT projects result in arrangements for the licensed production of the qualified foreign item in the U.S. Other nations recognize the long-term value of such practices for competing in the U.S. defense market and the resultant strengthening of the "two-way street" in defense procurement. For the U.S., the result often means the creation of jobs and contributions to local economies. To date, companies across 31 states have benefited from FCT projects.

This Research Category 6.5 is assigned and identified in this descriptive summary in accordance with existing DoD policy.

B. (U) PROGRAM ACCOMPLISHMENTS AND PLANS:

	Service	FY 2004	FY 2005	FY 2006	FY 2007
105mm Preformed Fragments	Army	1.477	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating the potential increased lethality and range of the conventional 105mm Field Artillery Ammunition, developed by Denel-Naschem, South Africa, over the current U.S. 105mm ammunition. If successful, the project will greatly enhance the lethality of U.S. Army light combat forces, giving them near the same fire support capability as with our current 155mm Artillery ammo, in operations where those heavier combat forces are not readily deployable.

FY 2004 Accomplishments: Awarded contract. 105mm HE Pff Projectile tested at Yuma Proving Ground. Results to date are according to expectations. Acquisition strategy/plan developed for the 105 HE Pff. User has endorsed ACA2P and made part of their Operational Studies.
FY 2005 Plans: Gun Classification and Type Classification activities

	Service	FY 2004	FY 2005	FY 2006	FY 2007
155mm Ammunition	Army	1.198	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating the potential increased range of the family of 155mm Field Artillery projectiles,

developed by Denel-Naschem, over current U.S. 155mm ammunition. If successful, the project will greatly increase the fire support provided to U.S. Army ground combat forces, by allowing them to engage hostile targets at ranges greater than what it currently can, utilizing our current 155mm Artillery weapon systems. This will result in their greater lethality and survivability.

FY 2004 Accomplishments: Awarded contract. Projectiles tested at Yuma Proving Ground, 155mm IM HE, 155mm Bi-Spectral Smoke, and 155mm IR Illumination. Results to date are according to expectations. Acquisition strategy/plan developed for the 155 Bi-Spectral Smoke and IM HE 155mm. User has endorsed ACA2P and made part of their Operational Studies.
FY 2005 Plans: Gun Classification and Type Classification activities

	Service	FY 2004	FY 2005	FY 2006	FY 2007
20 MM Replacement Round	Air Force	0.000	0.996	0.000	0.000

This project is evaluating 20mm ammunition developed by Diehl Munitionssyteme of Germany and Oerlikon of Switzerland to replace current 20mm combat rounds. The in-service round, the PGU-28B, currently presents a safety hazard due to twenty-five in-barrel detonations that caused aircraft damage and could have resulted in pilot death and loss of the aircraft. The PGU-28B inventory has been declared "For Emergency Use Only" even though the rounds meet the USAF requirements for employment ranges and target damage. The current alternative, the M-56 round, requires the pilot to engage targets at significantly closer ranges without the same lethality, resulting in an increase in vulnerability.

FY 2004 Accomplishments: Conducted DT&E Risk Reduction testing with AF funding.
FY 2005 Plans: Conduct OT&E and OPEVAL in June 2005. Transition to procurement

	Service	FY 2004	FY 2005	FY 2006	FY 2007
40mm Enhanced Grenade Launcher for M4 Carbine	USSOCOM	0.766	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating grenade launchers from Heckler and Koch of Germany, along with domestic sources, to find a technical solution to the requirement for a more accurate and reliable weapon for Special Operations Forces as a potential replacement for the current M203 40mm grenade launcher, which is over 30 years old and becoming logistically unsupportable.

FY 2004 Accomplishments: Completed safety certification of test fixture; Validated Capability Development Document and performance specification. Published Enhanced Grenade Launcher solicitation and received test samples using IDIQ contract awarded to NICO. EGLM schedule now integrated into the overall Special Operations Forces' Combat Assault Rifle (SCAR) schedule.
FY 2005 Plans: Conduct technical and operational testing. Determine competitive range; compile test results; complete final source selection / procurement decision. FCT close-out scheduled.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
40mm High Explosive Dual Purpose (HEDP) Improvement	Marine Corps (joint w/USSOCOM)	0.575	1.751	0.000	0.000

This project is integrating and evaluating an improved propulsion propellant "after armor" effect technology and a standardized fuze interface into a 40mm HEDP cartridge for use in both the MK19 Grenade Machine Gun and MK 47 Advanced Lightweight Grenade Launcher. NAMMO of Norway developed the warhead and standardized fuze interface, Nico-Pyrotechnik of Germany developed the propulsion system, and Nitrochemie AG of Switzerland developed the propellant for the cartridge to be evaluated.

FY 2004 Accomplishments: Conducted an evaluation of the self-destruct fuse options. Down-selected Pax2A Insensitive Munitions (IM) fills for use in the improved warhead. Conducted preliminary engineering evaluation to integrate improved warhead and Mk281 propulsion system. Awarded integration contract to NAMMO. Completed Draft Test Plan.
FY 2005 Plans: Procure the PAX-2A from Holston Army Ammunition Plant and transfer it to Norway for loading into the candidate cartridge. Commence baseline Insensitive Munitions (IM) and lethality testing of the US M430A1 cartridge. Continue the Engineering Phase of the integration effort.
FY 2006 Plans: Complete Engineering Phase of the integration effort, finalize baseline IM and arena testing of Marine Corps cartridge, complete qualification of Swiss propellant.
FY 2007 Plans: Obtain WSESERB Certification. Procurement decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Advanced Family of Interfaces for Chem Bio Clothing	USSOCOM	0.383	0.000	0.000	0.000

With the advent of emerging chemical/biological (CB) protective material technologies a need arises for enhanced methods of sealing CB garment interfaces. The vulnerabilities created by the emerging barrier materials are the interfaces at the wrist, ankles, zippers, and the neck of CB garments, as demonstrated in recent vapor and aerosol testing. This project will evaluate new types of CB closures and interfaces developed by YKK Universal Fasteners of Japan and TiZip of Germany.

FY 2004 Accomplishments: Awarded contract for test articles; Received test articles and conducted technical and user testing for phase 1. Down select to a single vendor.
FY 2005 Plans: Perform operational user assessment for phase 2. Compile test results; Prepare decision packet. FCT close-out.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Assault Breacher Vehicle Remote Control System	Marine Corps	0.000	1.477	0.000	0.000

This project is evaluating foreign, non-developmental testing for a remote control system manufactured by Pearson Engineering of the UK. The RCS subsystem will be integrated into the Assault Breacher Vehicle (ABV) concept demonstrator and three Production Representative Prototype ABVs and tested to verify vendor performance claims. Upon successful completion of FCT, the US Marine Corps will procure 30 remote control systems for use on the production ABV's.

FY 2004 Accomplishments: Foreign Test Data Received. Contract Preparation and Award. Test Planning Completed. Test Articles Received.

FY 2005 Plans: Conduct Technical Testing at Aberdeen Test Center to determine if the RCS can effectively and safely maneuver the ABV through Various operational scenarios. MCOTEA will perform Operational Tests at Ft. A.P. Hill and 29 Palms, CA to confirm that the remote control system can accomplish the mission, as specified in the ORD.

FY 2006 Plans: Data Analysis & Evaluation provided by MCOTEA and MCSC. Technical Test Report furnished by Aberdeen Test Center. Close out Report provided by MCSC. Procurement Decision (projected 4th quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Biocular Image Control for M1A1 Main Battle Tank	Marine Corps	0.980	0.000	0.000	0.000

This project is evaluating the Biocular Image Control Unit (BICU). The BICU, developed by Brimar, will be part of the Marine Corps' M1A1 Firepower Enhancement Program. The BICU directly supports the tank crew's situational awareness by enabling the 2nd generation Forward Look Infrared (FLIR) imagery to be displayed in the Gunner's Primary Sight monocular display and also the biocular display. The BICU will provide eye relief to the gunner that will significantly reduce gunner's fatigue. A successful FCT will enable the crewman to utilize the best features of direct view optics and 2nd generation FLIR imagery at the same time to acquire and engage targets.

FY 2004 Accomplishments: Program accelerated by six months. Prepared and awarded the contract for testing of the FCT project. Received the Foreign Test Data and Test Articles. Conducted laboratory tests at the US Army's Night Vision & Electronic Sensors Directorate (NVESD), Fort Belvoir, VA. Initiated integration of the BICU into the Gunner's Sight of the M1A1 Main Battle Tank at the US Army Research and Development Center (ARDEC), Picatinny Arsenal, NJ. Conducted BICU system testing at Aberdeen Proving Ground, MD (3rd quarter FY 2004). Completed User evaluation tests (4th quarter FY 2004). Completed Milestone C.

FY 2005 Plans: Procurement Decision (projected for 1st quarter FY 2005). Award Full Rate Production contract (place 192 BICU on contract). Award an Initial Spare Contract (place 12 BICUs on contract). Complete Final Test Report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007

Biosensors for Explosive Detection	Navy	0.200	0.109	0.000	0.000

This project is evaluating Biosens-E explosive detectors developed by Biosensors Applications of Sweden against improvised explosives devices, and conduct comparison analysis of test results of conventional explosive detection technologies being conducted by the Navy for the past three years.

FY 2004 Plans: Prepare contract for purchase of test items; prepare test equipment; receive test item sensors and initiate testing. Received test article and spare parts. Prepare test plan.
FY 2004 Plans: Completed and approved Test Plan. Purchased test items; prepared test equipment; and received test item sensors. Completed operator's course training. Completed in-house Test Readiness Review. Completed initial laboratory testing. Ran additional laboratory tests to better characterize system. Initiated analysis of laboratory data collected.
FY 2005 Plans: Complete analysis of laboratory data. Investigate whether manufacturer can apply system upgrades and rerun laboratory tests. Coordinate field testing with Laser IMS testing. Complete field testing. Analyze final test data. Issue Test Report

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Celluloid Mortar Increment Containers	Army	0.826	0.514	0.000	0.000

This project is evaluating and qualifying a second source for nitrocellulose-based belted-fiber Mortar Increment Containers (MIC) for use with 60mm, 81mm and 120mm mortars. Qualification of the celluloid MICs developed by Kaufman & Gottwald GmbH (KAGO). Austria, will significantly reduce procurement cost, thereby reducing overall program production costs, and will improve the robustness of the propulsion charge systems for semi- and auto- loading capabilities required for the Army's Future Combat System. These containers are also more "environmentally friendly" and safer than the current domestic product.

FY 2004 Accomplishments: Contract awarded April 2004. Celluloid mortar increment container drawings (Phase 1) have been completed to meet the performance envelope for U.S. propulsion systems. Meeting with celluloid sheet manufacturer

was conducted. Manufacturer is preparing sheets to be used by KAGO to manufacture MICs. Manufacture of celluloid MIC tooling (Phase 2) was initiated to produce 60mm and 120mm MICs.
FY 2005 Plans: Complete manufacture of celluloid MIC tooling. Conduct initial evaluation testing with initial celluloid MIC test quantities at Yuma Proving Ground (YPG), Conduct final qualification testing with final celluloid MICs at YPG.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Composite Shroud for LCAC	Navy	0.000	0.900	1.500	0.000

This FCT is evaluating Landing Craft Air Cushion (LCAC) composite propeller shrouds. The current shroud is an extremely complex riveted construction with high maintenance and repair costs. Material costs are about $300 thousand per shroud, and parts procurement lead times are up to one year. Labor costs are nearly $150 thousand/years. There is only one supplier of the 508 different parts, and that supplier is now gone out of production and is no longer interested in providing parts. The situation is becoming critical and will soon impact the LCAC's ability to perform its mission. The composite shrouds identified in this FCT proposal will be more easily repairable, and 30% more reliable; thus, reducing life cycle maintenance costs and increasing craft mission availability. Potential US Navy savings of $500 thousand specification development, $13.5 million in material/labor and R&D costs plus an estimated additional reliability savings of $1.2 million over the life of the LCAC Program.

FY 2005 Plans: Procure test items that will be delivered and accepted as they come off of the Manufacturers Assembly line. Currently, anticipated lead times yield 4 units in the first year. One static form fit and function test at CSS prior to installation at the ACUs. Technical tests will commence upon installation at the Assault Craft Units. Evaluation over the course of a year will provide a fair measure of product durability. The number of test items needed (4) is necessary in order to evaluate the effects of diverse operational environments, support equipment variations, and maintenance personnel skill sets at the respective ACU's.
FY 2006 Plans: The outfitting of 2 different Craft (one at each ACU) will allow for real-world evaluation of Test Articles during certification and training evolutions. Engineering labor and Logistics support will be extensive on this effort.

	Service	FY 2004	FY 2005	FY 2006	FY 2007

Deployable GSM Cellular Network	USSOCOM	0.328	1.965	0.000	0.000

This project is evaluating a commercially available transportable cellular network developed by Ericsson Systems of Sweden that can be deployed worldwide (stand-alone) in support of mission requirements in austere environments for USSOCOM and US Army. If testing is successful, the Swedish equipment will satisfy critical requirements of the Special Operations Forces Tactical Assured Connectivity System and the Joint Threat Warning System.

FY 2004 Accomplishments: Implemented agreement with U.S. Army for joint evaluation; awarded contract for test article, technical support and receive vendor training. Completed initial training and initiated technical testing and began operational testing. The DC Net system continues to undergo test and evaluation at the U.S. Army Communications Electronics Command (CECOM), Ft. Monmouth, NJ, with favorable results. Training of Program Manager U.S. Army Warfighter Information Network – Tactical (WIN-T) engineers and technicians continued at CECOM. DC Net Test and Evaluation Program Management Review meeting was held with representatives of Ericsson, CECOM, and USSOCOM in July, August, and September 2004.
FY 2005 Plans: Complete operational testing; Compile test data, prepare decision packet and obtain procurement decision. FCT close—out.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Deployable Instrumentation for Marine Air Ground Task Force (MAGTF) Training System	Marine Corps	1.313	0.930	0.000	0.000

This project, initiated in FY 2003, is evaluating mobile Range Instrumentation Systems developed by Saab Training Systems of Sweden and RUAG of Switzerland to meet Marine Corps requirements to integrate current training devices, which provide deployable force-on-force training for the Marine Air Ground Task Force.

FY 2004 Accomplishments: Received Foreign Test Data. Completed Test Planning. Completed Contract Preparation & Award with Saab and RUAG. Government Furnished Equipment was provided and retrofitted. Conducted Phase I, preliminary system integration tests, and initiated operational evaluation.

FY 2005 Plans: Complete Operational Tests with RUAG and SAAB and field evaluation with both vendors. Provide Test Reports.
FY 2006 Plans: Procurement decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Deployable Multi-Purpose Moving Target System	Marine Corps	0.460	0.361	0.000	0.000

This project will evaluate a deployable moving pop-up automated marking and targeting system developed by Thiessen Training Systems GmbH for range performance, target lifting life, hit indication, and other critical reliability performance parameters. A successful FCT will enable Marines to train as they fight and enhance proficiency with anti-armor engagement tactics.

FY 2004 Accomplishments: Issued RFP. Received Foreign Test Data. Phase I contract awarded to Theissen, Germany for Preliminary System Integration of the testing. Supplied Theissen with the Interface Control Documents for MILES 2000. Completed the test plans for the integration of MILES 2000 and DTS. Received delivery of two complete DTS Systems. Initiated Phase I integration.
FY 2005 Plans: Complete Phase I testing. Conduct Phase II Operational Test at Camp Pendleton, CA and Camp Lejuene, NC, to include system integration and user evaluation tests. Provide test reports.
FY 2006 Plans: Procurement decision (projected for 1st quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Digital Flight Control System for EA-6B	Navy	0.547	0.000	0.000	0.000

This project, initiated in FY 2002, is evaluating a Digital Flight Control System (DFCS) developed by British Aerospace (BAE) Systems Avionics Ltd. for the Eurofighter, to replace the increasingly obsolete automatic (analog) flight control system in the Navy's EA-6B "Prowler" aircraft. The project follows successful integration of the BAE DFCS into the Navy's F-14 "Tomcat" aircraft.

FY 2004 Accomplishments: Awarded BAE Basic Contract to modify F-14 DFCS computers into EA-6B DFCS Lab Test Prototypes. Completed Piloted Simulation Evaluation of Control Laws. Successfully completed Preliminary Design Review. Grounded Aircraft 158033 arrived at Patuxent River to support Ground Testing. Exercised BAE Contract Option 1 to modify F-14 DFCS computers into EA-6B DFCS Flight worthy Prototypes. DFCS Lab Test Prototype delivered on schedule to Patuxent River Laboratory. Awarded Letter to NGC for Flight Test Aircraft Instrumentation Package. Began Lab Testing and Ground Testing of Prototype EA-6B DFCS.
FY 2005 Plans: Identify particular unrestricted Block 89A aircraft as the DFCS DT Flight Test Asset and deliver to Patuxent River. Deliver flight worthy Prototype DFCC Test Articles. Exercise BAE Contract Option II to manufacture production representative DFCSs. Complete Phase I Ground Testing. Complete installation of DFCS and flight test instrumentation on DT aircraft. Complete qualification testing of DFCS build 1 software. Complete Phase II ground testing on DT aircraft. Conduct Flight Test Readiness Review. Conduct DT Flight Test with Build 1 software. Conduct DT Flight Test with Build 2 software. Submit final test report and closeout report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Eye-Safe Laser Rangefinder for M1A1 Main Battle Tank	Marine Corps	0.612	0.054	0.000	0.000

This project, initiated in FY 2003, will evaluate eye-safe lasers developed by Zeiss of Germany and Thales (formerly AVIMO) of the United Kingdom, for range, beam divergence, output energy, shot life, receiver field of view, sustained rate of ranging, and other parameters used to locate distant targets for the M1A1 Firepower Enhancement Program. The eye-safe laser is expected to increase the range performance by 2000 meters.

FY 2004 Accomplishments: Foreign Test Data Received. Completed Contract Preparation and Award. Completed Detailed Test Plan. Received test articles and conducted M1A1 integration tests and Lab Testing. Initiated system testing and user evaluation tests at the Aberdeen Proving Ground, MD.
FY 2005 Plans: Completed Qualification Testing on Zeiss Laser and initiated Qual Test on Thales Laser. Complete remaining

Qualification Testing. Perform and Finalize Developmental Testing. Complete data analysis and evaluation. Procurement decision (projected 4th Quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Floating Smoke Pot System	Marine Corps	0.672	0.000	0.000	0.000

This project is evaluating a Floating Smoke Pot manufactured by Diehl Munitionssysteme (formerly Comet Pyrotechnik) to replace the current K867 floating smoke pot for use in training and combat, on land and in water. The current floating smoke pot produces a smoke that possesses carcinogenic properties and a fuze that has experienced reliability problems. The German item adds infrared smoke to screen troops in low-light situations against night-vision devices.

FY 2004 Accomplishments: Phase I Test Article received. Completed Initial Operational Testing and the Tech Data Package have been redefined for Phase II portion of testing the FSP System.
FY 2005 Plans: Complete Phase II; Initial Functional Test, Insensitive Munitions Test, Safety & Environmental Test, Durability Test, Hazard Classification Test, Control & Functional Test, User Test. Complete the Data Analysis & Evaluation. Procurement decision projected 4th Quarter FY 2005.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Fuel Cells for Dismounted Soldier Systems	Army	0.602	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating electrochemical fuel cells developed by Ballard Power Systems and Hydrogenics, both of Canada; NoVars and Smart Fuel Cells, both of Germany; Intelligent Energy, Inc. of the United Kingdom, to meet Army requirements for longer lasting, lighter-weight portable power sources. This project directly supports Army "Transformation" in that it has direct application to the "Landwarrior" program, and potential application to the Future Combat System program, making for a lighter, more mobile, more lethal, yet more survivable fighting force.

FY 2004 Accomplishments: Complete testing of all units, deliver "good" units to USSOCOM for user evaluations. Prepare final report detailing results of FCT effort. Incorporate test results into future specs.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Gamma Titanium Sheets	Army	0.023	0.000	0.000	0.000

This project was supposed to evaluate gamma-titanium sheets developed by Plansee of Austria as potential replacement for current structural components used on Army helicopter manifolds and exhaust firewalls. The potential benefits of γ-TiAl are being recognized throughout the aerospace community and this substitution, for example, could increase Vertical Rate-of-Climb performance for Comanche aircraft, which would greatly increase both aircraft operational capability and survivability, while reducing RDT&E costs. Unfortunately the project was terminated when the Army cancelled the major program that this project supported.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Global Cellular Phone System Optimization	USSOCOM	0.361	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating commercially available hardware and software that can monitor, exploit, and interrupt portable cellular phone transmissions. Candidate systems to be tested are from MMI Research; Smith Meyers; GCOM of the United Kingdom, as well as from Spectra Communications of Sweden and CRC/Marconi of Canada.

FY 2004 Accomplishments: Operational tests completed on Sectra GSM Phone portion of evaluation. Evaluation of the

Military Digital Analysis System (MiDAS) from CRC/Marconi, was delayed by 90 days due to delivery delay.
FY 2005 Plans: Complete user testing and compile test results.
FY 2006 Plans: Prepare decision packet and obtain procurement decision. FCT close out to be completed at the beginning of second quarter.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Guidance Components for Missiles	Air Force	0.895	0.175	0.000	0.000

This project is evaluating the performance of missile guidance components developed by Radstone Technology of the United Kingdom, DY4/Force Computers of Canada, Aitech Defense of Israel, Saab Ericsson Space of Sweden, SBS (OR) Technologies of Germany, and Thales Computers of France. Improvements to basic guidance and control (G&C) technology and miniaturization of G&C components have potential to enhance the performance of U.S. non-strategic missile systems. Advanced components are being used by foreign suppliers and are candidates for easy integration into U.S. programs.

FY 2004 Accomplishments: Two vendors were eliminated from the candidate list. Thales does not provide a product that is designed to work in a vacuum environment and Saab Ericsson utilizes a special processor configuration, which would require the end users to incur additional cost to adapt to another development environment. Radstone, DY4, SBS and Aitech remain as candidate vendors
FY 2005 Plans: Complete testing and analysis
FY 2006 Plans: Interface with Vendors to procure new guidance systems

	Service	FY 2004	FY 2005	FY 2006	FY 2007
High Temperature Protective Coating for Gas Turbine	Navy	0.837	0.718	0.000	0.000

Engines					

This project, initiated in FY 2003, is evaluating a protective coating made by MDS-PRAD Technologies (MPT), a joint venture company of MDS Aero Support of Canada and PRAD (Ural Works of Civil Aviation) of Russia, for the high-temperature section of turbine engines. The protective coating reduces hot-gas corrosion, oxidation and thermal fatigue, thereby significantly increasing turbine life and reducing engine life cycle support costs.

FY 2004 Accomplishments: MPT delivered a report indicating a component engine life improvement greater than 2X using unique Russian coating process. MPT coatings under FCT consideration expanded to include thermal barrier coating technology. Representative uncoated alloy test coupons procured for FCT testing. Signed Space Act Agreement between NAVAIR and NASA GRC establishing a test capability for proprietary coatings. Selected Rolls-Royce (RR) AV-8B Harrier F402-RR-408 (F402) engine as the initial platform for fleet transition.
FY 2005 Plans: Contract with MPT to provide coated coupons, F402 IPT interface support for prototype hardware specification, ROI analysis and planning for transition of coatings production capability to North America. Leverage on-going NAVSEA MANTECH iMAST Center of Excellence turbine coatings program for coating of baseline coupons and increasing transition opportunities. Conduct comparative coatings tests at NASA GRC and NAVSEA Carderock. Task RR, through F402 Component Improvement Program (CIP), for uncoated turbine hardware new part coating specification and ROI analysis. Stand-up NRL web-based microscope capability to exchange fielded component metallurgical data with MPT Russian scientists.
FY 2006 Plans: Coordinate with planned FY 2007 F402 Accelerated Mission Endurance Test (ASMET) Program. Test program to include MPT-coated turbine hardware in ASMET. Initiate an F402 Engineering Change Proposal (ECP) to transition MPT coatings.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Improved Specific Emitter Identification (I-SEI) System	Navy	0.301	0.000	0.000	0.000

This project, initiated in FY 2003, is comparing NSA-compliant alternatives developed by QinetiQ of the United Kingdom to the U.S. Specific Emitter Identification processors for passive identification and fingerprinting of radar emitters in various applications. The two NSA-compliant systems currently in Navy use will be included in the tests for comparison.

FY 2004 Accomplishments: Completed four-phase performance comparison and released report via SIPRNET on the SPAWARSYSCEN SEI website. The results are classified due to the analysis of currently fielded U.S. intelligence systems. Environmental test criteria and test phase planning were initiated. An extension of the test deadline to 31 March 2005 was granted due to extensive difficulties in identifying the Environmental test criteria and test locations.
FY 2005 Plans: Complete contracting, determine test and equipment rack requirements, and conduct environmental testing phase of the I-SEI FCT at the Hi-Test Laboratories, Inc. in Virginia. Issue final test report and close out report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
JSLIST Alternative Footwear Solution	Marine Corps	0.485	0.000	0.000	0.000

This project is evaluating a one-size-fits-all, small packaged chemical-biological protective boot developed by Acton International, Inc. to meet urgent requirements of the Joint Service Lightweight Integrated Suit Technology (JSLIST) program. A successful FCT will enable improved operational suitability for the warfighter, meet urgent needs, and result in at least 25 percent production cost savings.

FY 2004 Accomplishments: Completed Test Plan for DT1 regarding the U.S. Navy (USN) Urgent Needs Statement (UNS). Completed USN UNS testing. Contract awarded to purchase $0.175 million boots over two year period of FY 2004 and FY 2005 for $6.5 million. Drafted Field Durability Developmental Testing (FDDT). Completed FDDT in Yuma, AZ. Coordinated combined test effort with JSLIST Block 2 Glove Upgrade FCT along with the Alternative Bead Suit Test led by JPMO-IP.
FY 2005 Plans: Complete Phase II, Human Factors and Field Artillery Group test. Complete the down selection, and start Developmental Testing and Operational Testing.
FY 2006 Plans: Complete Chemical Protection and Physical Properties testing. Procurement decision (projected 1st Quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
JSLIST Block II Glove Upgrade	Marine Corps	0.751	0.474	0.000	0.000

This project is evaluating nuclear, biological, chemical (NBC) protective gloves manufactured by Acton International, Inc. to meet the requirements for a "JB2GU" glove, a component of the Joint Service Lightweight Integrated Suit Technology (JSLIST) ensemble. The JB2GU will provide NBC protective gloves for the Army, Marine Corps, Navy and Air Force military personnel. The JB2BGU will be worn as part of the NBC protective ensemble and allow the warfighter to perform a full range of missions in NBC environments worldwide up to 30 days without performance degradation, by increasing tactility, dexterity, and durability beyond that found in the currently fielded butyl glove.

FY 2004 Accomplishments: Prepared for Developmental Testing during Contamination Avoidance at Seaports of Debarkation (CASPOD) ACTD final demonstration. Completed Field Durability Development Testing (FDDT) in Yuma, AZ. Completed wear testing in Yuma, AZ.
FY 2005 Plans: Complete Phase II, Human Factors and Field Artillery Group test. Complete the down selection, and start Developmental Testing and Operational Testing.
FY 2006 Plans: Complete Chemical Protection and Physical Properties testing. Procurement decision (projected 2nd Quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Large Scale Display System	Army	0.328	0.000	0.000	0.000

This project is evaluating very high resolution Flat Screen Displays developed by NEC/Mitsubishi of Japan and Samsung of the Republic of Korea for potential application in Army battlefield C2 requirements. Successful evaluation and fielding will allow the commander and staff to simultaneously view the Command Operational Picture, employ collaborative tools, and directly monitor various feeds from sensors or news services to rapidly gain situational awareness/understanding. This will greatly enhance battlefield C2, thus overall operational effectiveness and survivability for units engaged in combat.

FY 2004 Accomplishments: Completed all justifications for purchase of FCT item (as this is considered an IT item, various procurement rules/regulations affected purchase of FCT item). Completed Engineering efforts for Common Hardware Systems (CHS) applications for FCT effort. Completed meetings with Program Manager CHS (PM-CHS) and supporting contractors to prepare for support of effort (environmental testing in place). Completed lab testing of video switches, interface devices, and scan converters to link FCT product to source equipment. Completed development of interfaces. Completed engineering evaluation and tests for FCT items with PM-CHS applications. Completed final report/brief PM-CHS.
FY 2005 Plans: Based on close our report and meetings with PM-CHS and PM - Tactical Operations Center (PM-TOC), C2D demonstrated the Foreign Comparative Test (FCT) Samsung 46 inch, high-resolution Liquid Crystal Display (LCD) panel at the PM-TOC Summit, 14 DEC 04. The Product Manager PdM-TOC, LTC Johnson was very pleased with the demonstration. As a result, LTC Johnson requested C2D to determine full ruggedization requirements for potential use in PM-TOC's new Command Post Platform (CPP) program (New effort within PM TOC). Subsequently, C2D met with representatives from Azbell Electronics (subcontractor responsible for developing rugged hardware for PM-TOC). C2D and Azbell will jointly complete this effort and interface the display to PM-TOC's CPP specific hardware during 2nd Quarter FY 2005. The U.S. Army could potentially purchase hundreds of these FCT LSDs, provided they're ruggedized and placed on the CPP Contract. The C2D will continue to pursue this endeavor.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
LCAC Lube Oil Cooler	Navy	0.000	0.746	0.300	0.000

This FCT is evaluating Lube Oil Coolers that are potentially suitable for use on LCAC for performance, wear and corrosion resistance. Under the FCT program a number of foreign produced Lube Oil Coolers will be obtained and evaluated in accordance with tests specified in Specification 7614-947251. Improved corrosion resistant hovercraft Lube Oil Coolers will reduce life cycle maintenance costs; procurement costs and increases Craft Mission Availability.

FY 2005 Plans: Procure test items that will be delivered and accepted as they come off of the Manufacturers Assembly line. Currently anticipated lead times yield 2 units per quarter for 3 consecutive quarters. Technical tests will commence upon installation at the Assault Craft Units. Evaluation over the course of a year will provide a fair measure of product durability.

The number of test items needed (6) is necessary in order to evaluate the effects of diverse operational environments, support equipment variations, and maintenance personnel skill sets at the respective ACU's.
FY 2006 Plans: Outfitting of three different Craft at each ACU will allow for In-Theatre Evaluation while also allowing for Stateside evaluation of Test Articles during certification and training evolutions. Engineering labor and Logistics support will be extensive on this effort.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Lightweight Prime Mover	Marine Corps	0.547	2.189	0.000	0.000

This project is evaluating foreign, non-developmental, high mobility, off-road vehicles manufactured by Automotive Technik Ltd and Supacat Ltd of UK, Krauss-Maffei-Wegman of Germany, and MOWAG of Switzerland. These systems will be tested to verify vendor performance claims and to satisfy, at a minimum, the requirement for LW155 towing capability, operational suitability, and external transport via MV-22 Osprey. The Lightweight Prime Mover project will incorporate lessons learned from the joint program venture between the US Marine Corps, US Army, and United Kingdom for the LW155 medium howitzer program.

FY 2004 Accomplishments: Received Test Articles/Prime Mover (2 per vendor). Foreign Test Data Received. Two Part Test Contract issued to Nevada Automotive Test Center (NATC) to conduct verification/demonstration testing of candidate vehicles. Performance Spec for LWPM was contracted to NATC for development. Completed Draft Test Plan.
FY 2005 Plans: Release RFP to vendors. Complete Test Plan. Evaluate Schedule and Test Plan to determine if FCT can be shortened without compromising requirements and objectives. Contract Preparation & Award for Test Articles. Contract to build surrogate howitzers. Test Article delivery is slated for April 2005. Perform comparative assessment at NATC for towing capability and operational suitability. Execute Flight Certification tests for external transport via MV-22 Osprey.
FY 2006 Plans: USMC LRIP decision. MCOTEA performs User Evaluation. Live Fire Test executed at Aberdeen Test Center. Provide Final Test Report. Milestone C decision (projected 4th Quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Lightweight Smoke Generator	Army	0.584	0.252	0.000	0.000

This project is evaluating a camouflage smoke generator developed by PZL Rzeszow of Poland that is significantly lighter, and produces a better screen, than the U.S. Army's M56 system. A key aspect of the Polish system is that it uses a combination of fog oil and infrared obscuring particles in one solution to provide visual/IR obscuration. This is in contrast to the M56 system, which uses additional components to separately disseminate fog oil and graphite. If the project is successful, significant weight reduction could be achieved and the Polish system could be incorporated into the Army's M56 production program, the Robotic Obscuration production program and the Future Combat System Obscuration development program. This will greatly enhance both operational effectiveness and survivability on the battlefield, as well as greatly increasing RDT&E cost avoidance. This is the very first U.S. Army FCT project with Poland, a new NATO ally, and active coalition partner in Operation Iraqi Freedom.

FY 2004 Accomplishments: Purchased 4000 liters of obscuring liquid from GFG Lastadia, Gdynia, Poland. Initiated chamber testing to determine extinction coefficient of Polish obscuring liquid.
FY 2005 Plans: Complete lease agreement with Agencja Mienia Wojskowego (AMW) in Warsaw for leasing one Polish Camouflage Smoke Generator (CSG). Integrate CSG onto a HMMWV in preparation for testing. Conduct visual/IR performance testing, hot/cold chamber testing and reliability testing. Prepare detailed report of test results.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Lithium-Ion Battery Cells	Army	1.970	2.191	0.000	0.000

This project is evaluating the potential for Li-Ion battery cells developed by SKC of the Republic of Korea, E-One Moli Energy Ltd. of Canada, and AGM Batteries, Ltd. of the United Kingdom to satisfy Army and USMC portable electrical power requirements for a high energy density, high cell potential fuel source. The candidates may provide greater energy than present Li-Ion cell-based batteries and have the potential to reduce the logistics burden and enhance cost effectiveness through increased mission times

(increases in power), greater shelf life, increases in power, and greater recharging capability. This project is also estimated to result in a $10 million RDT&E cost avoidance and a $10 million O&S cost savings.

FY 2004 Accomplishments: Purchased/evaluated Li-ion cells for XX90, XX47, XX57, XX88, XX600 and XX800 type batteries. Based on engineering evaluation, initial batteries constructed for XX90 type battery. Complete engineering evaluation of cells and designed the cases for XX47, XX57, XX88 batteries with smart SMBus interface. Testing of AGM XX600 and XX800 type batteries mostly complete. Testing of SKC XX90 batteries initiated. FCD (Full Capacity Discharge) testing almost complete (FY05). This involves 3 cycles (charge/discharge) of each battery (50 each) for a total of 150 cycles. Complete prep for purchase of cell types to evaluate for remaining battery types: XX98, XX99, XX30, XX58, XX16 and XX57.
FY 2005 Plans: Complete full spectrum of testing for SKC XX90 batteries. The remaining tests include (1) overcharge, (2) low temperature discharge, (3) high rate discharge, (4) charge retention, and (5) high rate pulse discharge. Complete evaluations of batteries using Li-Ion cells for XX90, XX47, XX57, XX88, XX600 and XX800 type batteries. Currently, the tooling for XX47, XX57, and XX88 battery cases are being fabricated and circuitry boards for XX47, XX57 and XX88 are completed. These battery types will be delivered 2nd qtr FY05. Perform field testing of all batteries in actual equipment. Purchase and evaluation of battery Cells for building battery types: XX98, XX99, XX30, XX58, and XX16. Complete written evaluations/reports for CECOM Logistics & Readiness Center (LRC) Battery group to purchase (if FCT successful) battery types. Working with LRC to complete the technical data package to incorporate the polymer technology for next procurement.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Low Probability of Intercept Communications Intelligence Direction Finding	USSOCOM	0.350	0.066	0.000	0.000

This project is evaluating commercially available equipment developed by Elta Electronics, Ltd. of Israel that will detect sideband, spread spectrum/broadband, and other types of low probability of intercept communication signals from potential adversaries to provide threat warning to meet the requirements of the Joint Threat Warning System.

FY 2004 Accomplishments: Awarded contract for test articles and receive equipment; began technical testing. Analyzed vendor data.

FY 2005 Plans: Procure and receive test articles. Conduct initial technical testing. Complete technical and operational testing; Compile test data, prepare decision packet, and obtain production decision. FCT close-out.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Man Portable Satellite Communications (SATCOM) System	USSOCOM	0.219	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating small, lightweight satellite dishes manufactured by SweDish of Sweden that can provide one-person operation of a turnkey satellite communications solution. Two sizes of small dishes promise to provide secure communications (live video/audio streaming, broadband transmission and automated setup) without sacrificing the identity or location of the user.

FY 2004 Accomplishments: Test was completed successfully and close-out report was submitted. Total procurements to date: fifty-one .9 meter systems and thirty 1.5 meter systems totaling $18.1 million. Additional procurements are projected for late 2004 and early 2005.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
MARIA (Congressional Plus Up)	Navy	2.100	1.050	0.000	0.000

The FY 2004 and FY 2005 Appropriations included $2.1 million and $1.050 million plus ups respectively for MARIA to the Advanced Concept Technology Demonstration (ACTD) Program under Program Element 0603750D8Z. The ACTD Program did not have an existing MARIA Program in which to execute the FY 2004 or FY2005 funds appropriated. A Below Threshold Reprogramming Action was executed to reprogram these funds into the Foreign Comparative Testing (FCT) Program Element since MARIA was an active FCT project initiated in FY 2001.

This project is evaluating a software-based command and control system from Teleplan AS that provides superior battlespace

awareness through the rapid display of geographic imagery and positional information on friendly, neutral, and enemy units. The Navy Readiness Reporting Systems initiative is a dynamic, on-going evolutionary development aimed at providing the Navy, Afloat, Type Commander (TYCOM) and Fleet Commanders-in Chief (FLTCINs) the highest level of readiness reporting, collection, display and analysis for readiness assessment and planning. MARIA will be used to graphically present these data and also provide a point-and-click interface for data collection and reporting. The Space and Naval Warfare Systems Command, San Diego, California, is conducting the test project.

FY 2004 Accomplishments: Conducted initial Planning Team meeting in Washington, DC with project stakeholders NNWC, Navy IPO, NAID, SPAWAR FCT, OPNAV and SPAWAR SYSACTPAC. Designated SPAWAR SYSACTPAC as the project manager. Held technical meeting with NAID, Teleplan, NNWC, SPAWAR SYSACTPAC and INNOVASYSTEMS in San Diego. Developed details on a three-phase spiral for MARIA integration.
FY 2005 Plans: Conduct MARIA user and development training conducted at North Island NAS, San Diego. Setup MARIA development server. Complete contract negotiations with NAID for purchase of MARIA Licenses. Write application module and interface to display readiness data on MARIA client. Write application module interface to accept data input from MARIA client and send data to readiness database. Deploy to two Ashore sites for testing.
FY 2006 Plans: Complete testing. Make procurement decision. Deploy to Fleet units.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Micro Electro Mechanical System (MEMS) Inertial Measurement Units (IMUs)	Air Force	0.274	1.368	0.000	0.000

This project is evaluating the currently developed and deployed British Aerospace (BAE) Systems MEMS Inertial Measurement Unit which is reported to represent a significant size, weight, and cost advantage over domestic alternatives. Many current U.S. weapons require an IMU to make them intelligent/precision assets that can strike targets accurately. IMU costs have always been a major contributor to the high overall guidance system cost. Additionally, the IMU's relatively large size has driven the guidance system to be a significant portion of the "payload mass" that is lifted by the propulsion system, thereby reducing the available mass for lethal portion of the payload.

FY 2004 Accomplishments: Technical specification (evaluation data) describing SiIMU01 has been received the Program

Office confirmed that the components are suitable for tactical assets. Acquired three each SiIMU01/02: one each for testing at the launch service subcontractors (OSC and Draper) and one for environmental testing. The IMUs will be integrated into a hardware-in-the-loop test fixture for evaluation. Efforts and costs are part of the launch service integrators' responsibility. Development of testing procedures
FY 2005 Plans: Test and assess the SiIMU01/02 to verify its performance and suitability for both strategic and tactical assets. The tests will include verifying input/output throughput capabilities, power consumption, and performance against vendor-supplied specifications. Environmental testing will be conducted and will include testing against vibration, shock, temperature, humidity, and altitude operating environment requirements. The tests are intended to be non-destructive, but destructive tests may be conducted to assess the ultimate capabilities of the unit. Initiate procurement if results are favorable. Procure test articles and complete testing.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Mine Countermeasures Small Unmanned Underwater Vehicle	Navy	0.410	0.197	0.000	0.000

This project is evaluating the capabilities of a small unmanned underwater vehicle, developed by Hafmynd of Finland, in mine countermeasures operations in the very shallow water zone (10 to 40 feet depth). This type of small underwater vehicle can be used to search coastal areas and identify hazards to naval operations in preparation for amphibious assault, force protections and harbor security operations.

FY 2004 Accomplishments: Contracted for purchase of properly MCM equipped GAVIA UUV with Hafmynd, Ltd. Reviewed GAVIA product specification and modified to meet USN needs. Awarded contract with Life Cycle Support. Conducted "Reacquire and Identify" PMT meeting to review the Requirements Compliance Testing Plans and develop RI UUV Tactics. Started production of GAVIA UUV system at company facilities and subcontractors. Received all major components and long lead items at the company's facilities. Started development of the Lithium Battery Safety Data Package

and began processing.
FY 2005 Plans: GAVIA UUV will undergo a 2-3 month Very Shallow Water Mine Countermeasure Test and Evaluation by SPAWAR Systems Center San Diego and a User Operational Evaluation conducted by fleet personnel in Naval Special Clearance Team One. Hafmynd, Ltd. to provide technical support during these trials. Consider contract option to purchase up to 10 more GAVIA UUV's with logistical support for incorporation into fleet operations.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Missile Reserve Battery Replacement	Air Force	0.679	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating battery cells developed by Saft Alcatel of France and Japan Storage Battery, Ltd. (Nippondenchi) for use in missile/booster environments. If testing is successful, Eagle Picher will assemble the batteries with cells from candidate source(s) incorporating the newer technologies.

FY 2004 Accomplishments: Completed contract actions with the testing facility; drafted and provided Test Requirements Document to NSWC Crane, Indiana. Completed acquisition negotiations for test articles. Test results were very positive and the project should transition to battery testing and qualification.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
MK48 (7.62mm Lightweight Machine Gun) Semi-rigid Ammunition Container	USSOCOM	0.098	0.000	0.000	0.000

This project is evaluating a semi-rigid ammunition container from FN Herstal of Belgium for the MK48 Lightweight Machine Gun, an organic weapon for U.S. Special Forces Teams. The container increases the reliability of the weapon by protecting the ammunition while operating in harsh environments such as surf zones. The container also provides for a better balanced weapon due to its mounting under the centerline, providing greater operational suitability while patrolling.

FY 2004 Accomplishments: Held design review with FN Herstal and user representatives on 29 July 2004. Project received 55 each test units on 30 July 2004. Conducted operational assessment in August 2004 with Naval Special Warfare and the 75th Ranger Regiment Completed final design changes for the 175 each LRIP units. Procured test articles. Technical and operational testing was successfully conducted.
FY 2005 Plans: Preparation of decision packet and procurement decision. FCT close-out will be prepared.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Mobile Acoustic Support System	Navy	0.438	0.164	0.000	0.000

This project, initiated in FY 2004, is evaluating a mobile ground-based system developed by General Dynamics Canada to meet a Navy requirement for post flight analysis of sonabuoy (underwater microphone) acoustic data recorded on Maritime Patrol Reconnaissance Aircraft from fixed and rotary wing aircraft and surface and sub-surface units conducting anti-submarine warfare missions. The Mobile Analysis Support System (MASS) is a system that performs Post Flight Analysis (PFA) of recorded sonobuoy (underwater microphones) information from all Anti-Submarine Warfare (ASW) platforms (fixed and rotary wing, surface and subsurface). The MASS would replace the current Fast Time Analysis System (FTAS) system fielded in the fleet, which has been in service for at least 10 years and has reached the end of its projected life cycle. It will provide operational commanders with post-mission acoustic intelligence and provide a scalable system that will keep pace with emerging technology.

FY 2004 Accomplishments: Completed testing on one domestic system against the current specification and assess the following suitability areas: Reliability, Maintainability, Availability, Logistic Supportability, Compatibility, Interoperability, Training, Human Factors, and Safety Documentation. This month, testing will be completed for one foreign system in the same suitability areas identified above.
FY 2004 Accomplishments: Sent official correspondence to the Canadian Department of National Defense (DND) Headquarters, Ottawa, Canada requesting access to the GDC-FTAS for the FCT project and obtained agreement. Conducted testing of the Canadian GDC System occurred August 9-22 2004 at Greenwood, Nova Scotia. Sent official correspondence to

the BBN Technology Solutions requesting concurrence to participate in the FCT project and obtained agreement. Testing of the BBN domestic system occurred June 7-18, 2004. Delivered Test Plan and Procedures to FCT office. Began analysis of test data for both domestic and foreign systems.
FY 2005 Plans: Complete data analysis and document system test results. Finalize Test Report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Mortar Propellant	Army	0.629	0.744	0.000	0.000

This project is evaluating a high-performance Extruded-Impregnated (EI) propellant for long-range mortar systems developed by Rheinmetall/Nitrochemie Wimmis AG of Switzerland. Qualification of EI propellant will support the Army's Future Combat System requirements for a 15% increased range over current 120mm mortar systems this will eliminate use of a hazardous/toxic stabilizer, reduce blast overpressure, increase rate of fire, decrease gun tube wear, and increase propellant shelf life.

FY 2004 Accomplishments: Awarded Contract Mod 1 April 2004. Initiated production of EI main charge propellant for Phase 1 (Main Charge Initial Evaluation). Conducted preliminary ballistic testing of EI main charge propellant at Yuma Proving Ground (YPG).
FY 2005 Plans: Complete final qualification testing of EI main charge propellant at YPG. Scope expanded to also evaluate the powder for use in the mortar igniter. Award Contract Mod 2 to procure EI igniter propellant. Produce EI igniter propellant for Phase 1B (Igniter Initial Evaluation). Load, assemble and pack (LAP) mortar increment containers and ignition cartridges with EI propellant and conduct ballistic igniter testing at YPG.
FY 2006 Plans: Load, assemble and pack (LAP) mortar increment containers and ignition cartridges with EI propellant and conduct final qualification testing (Phase 2) at YPG.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Mounted Cooperative Target Identification System (MCTIS)	Marine Corps	0.547	0.460	0.000	0.000

This project is evaluating a combat identification system developed by Thales Missile Electronics that may be capable of meeting the requirement for the Marine Corps MCTIS. The British system provides a positive encrypted identification of friend or unknown, bore sighted through the gunner's primary sight on Marine Corps M1A1 Tanks, Light Armored Vehicles (LAVs), and Advanced Amphibious Assault Vehicles (AAAVs). As a result, the range at which threat targets may be engaged without fear of misidentification regardless of battlefield obscurants will increase significantly and related incidents of fratricide will decline significantly.

FY 2004 Accomplishments: Initial FCT project tests were conducted under the Coalition Combat Identification (CCID) Advanced Concept Technology Demonstration (ACTD) Project. Participated in Thales Missile Electronics environmental analysis efforts. Prepared and awarded contract. Received Foreign Test Data and Test Articles. Initiated testing to perform design verification and to validate the design and performance characteristics against established requirements, to include: performance, environmental, vibration/shock, electromagnetic interference, reliability, and maintainability.
FY 2005 Plans: Complete Laboratory Testing to include system integration.
FY 2006 Plans: Complete Field and User Evaluation. Provide Data Analysis & Evaluation.
FY 2007 Plans: Procurement Decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Multi-Role Anti-Armor Anti-Personnel Weapon System (MAAWS) Illumination Round	USSOCOM	0.706	0.000	0.000	0.000

This project, initiated in FY 2001, is evaluating illumination ammunition developed by Saab Bofors Dynamics of Sweden for the 84mm Carl Gustaf recoilless rifle. The round has a visible candle with increased burn duration and a dual safe fuse that meets US Army Fuse Safety Review Board Standards.

FY 2004 Accomplishments: Air drop analysis completed and methodology forwarded to US Army Research Development and Engineering Command (ARDECOM), NATICK Soldier Center (NSC) for approval. Program office has been successful in obtaining

Saab Bofors Dynamics (SBD) methodology for calculating burn time, duration and illumination field. USSOCOM assessors have agreed to accept SBD methodology with a verification test observed by users. Nearly 1/2 of the overall Army and Navy Product Qualification Testing (PQT) have been completed. Blast Overpressure testing has begun. Streamlining of PQT has freed up test hardware. The additional hardware has been utilized to test blast overpressure in addition firing positions.
FY 2005 Plans: Complete user testing; Receive safety and production certification; Begin production. FCT close-out will be completed.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Naval Active Intercept and Collision Avoidance	Navy	0.657	0.875	0.000	0.000

This project is evaluating a system developed by Sonartech, to support the submarine force's number one priority of collision avoidance and situational awareness. The Australian system detects and localizes emissions from active sources such as sonar, sonabuoys, and active homing torpedoes using sensors already installed on US submarines. System functionality will be tested against the requirements for the AN/WLY-1 currently applicable to SSN688, SSN21, and SSN774 class submarines. It will prevent collisions with ships that have occurred in the past.

FY 2004 Accomplishments: Conducted FCT Kick-off meeting with program office and Sonartech (contractor). Obtained and analyzed technical data on NAIRCAS hardware and software. Conducted stand-alone test of the Naval Active Intercept and Ranging and Collision Avoidance System (NAIRCAS) followed by a test of a card set integrated into the A-RCI sonar system. Tested DT592, DT511, DT369, and DT276 hydrophones at University of Rhode Island to determine suitability for time delay of arrival (TDOA) analyses. Developed a DDL OMNI and NAIRCAS contractor report to review TEMPALT / SHIPALT cost and schedule. Developed Spatially Populated Volumetric Array (SPVA) recording system interface and data synthesizer. Reworked FCT plan of record (POR) due to failure of SPVA sea trials and distortion of SPVA sea trial data.
FY 2005 Plans: Conduct two submarine test events and system integration tests. Measure parameters such as bearing, bearing rate, range, range rate, passive detection, false alarm, and false alert rates; gauge against US active intercept and ranging requirements. Test NAIRCAS system at various depth and sound velocity profile (SVP) conditions against multiple platform

types. Integrate NAIRCAS functionality into the AN/BQQ-10 (V) (A-RCI) sonar system using PEO SUB (PMS 401) development and integrate funds as part of the established Advanced Processing Build (APB) and Technical Insertion (TI) process.
FY 2006 Plans: Perform Follow-On Test and Evaluation (FOT&E) by the Commander of Operational Test and Evaluation Group (COMOPTEVFOR). Analyze and evaluate results of FOT&E to determine the effectiveness of NAIRCAS with respect to US active intercept and ranging requirements.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Pitch Adaptive Composite Marine Propeller	Navy	0.492	1.094	1.500	0.000

This project is evaluating commercial Contur-series propeller developed by AIR Fertigung Technologies GmbH to improve submarine stealth. The propeller blades are designed to flex in a controlled manner under certain operating conditions, which causes a pitch modification that is claimed to improve vehicle stealth, speed, and propulsion efficiency. In addition, the pitch modification reduces cavitation damage, marine growth fouling, and permits in-water blade replacement. This advanced performance is enabled by the use of blades constructed from carbon fibers, instead of traditional metals.

FY 2004 Accomplishments: Gather information and specifications to develop the propeller blades to ensure compatibility with US Navy systems. Develop hydrodynamic and structural design of the new propeller for SSBN/SSGN. Determine the shape adaptable propeller blades enable advanced hydrodynamic performance. Determine the current state of the art graphite composites permits the construction of large propellers. Develop pitch adapting (flex) composite propeller design and analysis technology. Initial exchange of propeller geometry between NSWC and AIR to ensure the definitions are consistent. Completed development of fiber optic strain gage installation techniques, including manufacture of test blades. Initial Propeller geometry files transferred and propeller performance predictions between USN and vendor match. This is a confidence building exercise, so that USN can believe the performance predictions from Vendor for the flexible propellers that

will be designed by them.
FY 2005 Plans: Acquire a series of Contur Series Propeller blades for evaluations in land-based facilities, and then on the Advanced Swimmer Delivery System (ASDS). Compare USN propeller design cavitation avoidance techniques against those claimed by the vendor. Determine the structural adequacy of the blade material and hub designs, and the non-cavitating acoustic performance anticipated. Determine whether the vendor's product is a viable alternative to the metal propeller that the USN will be developing. Receive test items: ASDS blades (1), ASDS propellers (2), and SSBN sized blades (3) Complete Test and Evaluation plan. Test Plan and evaluation will be completed. Conduct fatigue and water tunnel Large Cavitation Channel Technical tests 1 and 2 (This testing will enable measurement of radiated noise, cavitation avoidance, and unsteady forces as well as permit a long-term operation to demonstrate the durability of the material. Conduct LCC Technical test 3).
FY 2006 Plans: Determine whether to order new propellers in FY 2007. Complete LCC Technical test 3. Complete ship installation and trial along with the FCT Close-out Report and Tech Data package.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Radarsat II Commercial High Resolution SAR	Air Force	1.642	0.431	0.000	0.000

This project is evaluating the ability of the Canadian Radarsat II, developed by MacDonald-Dettwiler, to provide all-weather imaging capability at 3 meter resolution for support of target detection, ocean surveillance, homeland defense, moving target indicators, and disaster response, as an upgrade when integrated with the Air Force's Eagle Vision Deployable Satellite Imagery Receiving and Processing Station. The Canadian Radarsat II satellite is the first commercially available high resolution synthetic aperture radar imaging capability.

FY 2004 Accomplishments: Eagle Vision is an open architecture satellite ground station that will support the interface to Radarsat II with the existing hardware architecture. The FY 2004 effort will acquire the test article and integrate it into the system. The evaluation will include field operations to collect, process, the data received from Radarsat II to evaluate operational effectiveness and performance. Contract awarded June 2004. The contract for the test article was awarded in June 2004 and initial testing was completed.
FY 2005 Plans: Interface to the satellite, operator interface, quality and performance of the imagery products, and operational

utility will be evaluated. Testing and data analysis.
FY 2006 Plans: Publish final report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Rayon for Heatshield and Motor Nozzles	Air Force	0.777	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating high-quality rayon from Lenzing Technik of Austria, Snecma Moteurs of France, Acordis of Germany; and Acordis of the United Kingdom to meet Air Force requirements for use in high temperature applications, such as heat shields and rocket motor nozzles. There are no longer any domestic suppliers of aerospace-grade rayon for rocket nozzles and reentry heat shield thermal protection.

FY 2004 Accomplishments: The candidate fibers have been processed into carbon phenolic, the test plans are finalized and the evaluation is being conducted. The testing to date has led to a down selection to two fibers, Fabelta and Snecma C-2. Current plans are to complete testing in 4th Quarter FY 2004.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Regenerative Drive System	Army	1.496	0.146	0.000	0.000

This project is evaluating the hydraulic Regenerative Drive System (RDS) for use in vehicles of 26000 to 36000 GVW, such as the Army's Family of Medium Tactical Vehicles. The RDS developed by Permo-Drive Technologies of Australia, recycles wasted power during vehicle deceleration and applies it to acceleration and or gained fuel economy. The Australian technology, which is easily retrofitted to the above military truck platform, captures normally wasted braking energy, stores it in the form of hydraulic pressure, and executes an electronically controlled releases to enhance dash capability or to achieve added fuel economy and brake life. Overall O&S cost savings are estimated to be in excess of $10,000 per truck over its life (Assuming typically over 20 years of peace time operation).

FY 2004 Accomplishments: Awarded a contract to Permo-Drive of Australia. Funded 2 blocks of work for hardware design, fabrication and installation using FCT funds. Contracted and funded Aberdeen Test Center (ATC) to develop a unique hybrid vehicle test plan. Conducted contractor start of work meeting. Delivered test assets to the contractor.
FY 2005-2006 Plans: Conduct vehicle structural integrity testing with simulated RDS mass on-board. Procure RDS hardware. Conduct calibration testing in U.S. Conduct bench testing and control software development in AU. Conduct hardware and program review in Australia. Research/select best value, approved test facility in US. Initiate technical and operational testing in April. Prepare and submit final FCT report by 30 Sept, 2005.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Replacement Structures for Aircraft	Navy	1.587	0.316	0.000	0.000

This project, initiated in FY 2003, is certifying and qualifying PZL-Swidnik of Lublin, Poland, as an approved source for the manufacture of aluminum honeycomb panels and sub-structures to support in-service, but out-of-production aircraft. Under this project, PZL is interpreting and translating complex manufacturing data, refurbishing and creating specialized tooling, and fabricating replacement aircraft structural components. These replacement components will be analyzed in the laboratory and installed on fleet F-14D aircraft and evaluated as part of an in-service reliability assessment. Legacy aircraft structures suffer from corrosion and are expensive to repair and maintain. This project makes optimum use of upgraded materials and streamlined manufacturing processes to produce a high quality replacement part at a reasonable price. This project also creates unique teaming agreements between three US companies and PZL to encourage mutual cooperation between US and Polish industry.

FY 2004 Accomplishments: Contract awarded to PZL-Swidnik and three domestic vendors. International Cooperative Administrative Support Services (ICASS) agreement and subsequent contract through US Embassy/Warsaw Admin Staff established to support USN/USAF FCT Project Office at PZL-Swidnik facility. Critical manufacturing specifications have been translated into Polish. Coupon specimens have been fabricated and are in the process of being delivered to USN

Laboratory for testing and analysis. Existing USN/F-14 project expanded to include USAF/F-16 Program Office and fabrication of airframe components to support USAF/F-16 spares requirement.
FY 2005 Plans: Test and analysis of coupon specimens. Fabrication and first article destruct test on first bonded assembly. Installation and in-service reliability testing of production representative panel assemblies in fleet service. Wrap-up and close out F-14 FCT effort. Submit qualification data package to NAVICP and Defense Supply Center Richmond (DSCR) for acceptance and subsequent inclusion into approved vendor's procurement database. Establish production/procurement contract with PZL-Swidnik. Conduct fabrication and destructive testing on F-16 part in USAF Laboratory. Test installation and reliability of F-16 production representative part of Air National Guard (ANG).
FY 2006 Plans: Issue reports and close out project.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Resilient Abrasive Resistant Skirt for Landing Craft Air Cushion (LCAC)	Navy	1.915	0.410	0.000	0.000

This project, initiated in FY 2003, is evaluating candidate materials developed by Reeves S.P.A. of Italy, Trelleborg of Sweden, and Northern Rubber of the United Kingdom to determine if they can provide a 50 percent improvement in the LCAC skirt's resistance to abrasion without a weight or cost penalty.

FY 2004 Accomplishments: Issued purchase orders to Reeves of Italy, Trelleborg of Sweden and Northern Icon of U.K. for delivery of phase one material. Completed the selection criteria for laboratory and flagellation testing phase one materials. Performed finger load characterization testing on LCAC 066 for comparison to standard skirt loads. Installed test fingers of phase one materials on LCAC at ACU4 and ACU5 for operational evaluation. Procured phase two evaluation materials,

performed laboratory comparative testing, and installed test fingers on LCAC. Completed evaluation of phase one and two and make final down select of top three materials. Started laboratory testing of the Phase one test materials at Smithers Scientific and is about 60% to 70% complete. Built test rigs for the specialized flagellation and dynamic folding tests. Made visit to the facility to observe the special tests and discuss testing issues. Installed forty-eight test fingers of the Trelleborg extra-wide material on LCAC 044 at ACU5, and are accumulating operational hours.
FY 2005 Plans: Install test fingers on LCAC 089 at ACU4. Extend Smithers contract for completion of work. Procure full sets of LCAC fingers made of top three materials and install onto Fleet craft. Start Fleet In-Service evaluation and complete FCT Close-out report. Make final revision to skirt material Project Peculiar Document (PPD) to reflect performance of top material(s).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Self Destruct Fuze for Multiple Launch Rocket System (MLRS)	Army	0.372	0.000	0.000	0.000

This project is evaluating the performance, safety, and feasibility of a self-destruct fuze developed by Israeli Military Industries of Israel. The fuze will be integrated into the submunitions of the MLRS system for testing, to the current dud rate of the submunitions from more than 5% to less than 1%. This is critical because that would greatly enhance both the operational capability and safety of our forces maneuvering on the battlefield, environmental cleanup of our training ranges, and future MLRS FMS cases to countries who have a self-destruct/dud-reducing requirement for their own munitions.

FY 2004 Accomplishments: Completed technical testing/ Phase II (ER MLRS rocket) and Phase III (GMLRS rocket) dispense testing. Completed High Rate Equipment (HRE) studies.
FY 2005 Plans: Analyze results/complete report phase III testing. Evaluate the necessity of Phase IV dispense testing. If necessary, conduct/evaluate results/complete report of Phase IV dispense testing. Production IPR decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007

Special Effects Small Arms Marking System (SESAMS)	Marine Corps	0.361	0.000	0.000	0.000

This project is evaluating the safety and integration suitability of Simunition's 5.56mm linked low-velocity training munitions for the M249 Squad Automatic Weapon (SAW). The SESAMS is a user-installed weapons modification kit that allows the individual Marine to fire low velocity ammunition with non-toxic primers, and a non-toxic marking medium at short range while precluding the weapon from firing live ammunition.

FY 2004 Accomplishments: Received M249 Conversion Kits and 120K rounds of 5.56 linked Simunition's rounds. Completed M2K Interface and Link Ammo Test. Completed the Terminal Ballistic Tests. Initiated safety testing at the Crane facility. Initiated M249 Conversion Kits testing at Quantico.
FY 2005 Plans: Complete laboratory, safety and user testing. Procurement decision (projected for 3rd Quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Special Operations Forces (SOF) Combat Rifle	USSOCOM	0.821	0.327	0.000	0.000

This project is evaluating advanced 5.56mm and 7.62mm rifles developed by FN Herstal of Belgium, Heckler and Koch GmbH of Germany, Beretta of Italy, and IMI from Israel, along with domestic sources, to meet requirements for highly reliable and modular light and heavy combat rifles for Special Operations Forces as a replacement for the aging M4A1 carbine.

FY 2004 Accomplishments: Awarded contract for test samples; Obtained safety release and safety certification; Began operational assessment.
FY 2005 Plans: Complete operational assessment; Obtain Milestone C production decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007

Traveling Wave Tube Amplifier	USSOCOM	0.233	0.350	0.000	0.000

This project is evaluating alternative traveling wave tube amplifiers developed by ELTA Electronics, Inc. of Israel, Dornier Satellitensystems GmbH of Germany, E2V or United Kingdom, and Thomson Tubes Electroniques (Thales) of France for use within the Joint Threat Warning System and Deployable Multi-Channels Satellite Communications (SATCOM) Systems. The objective of this project is to qualify additional sources of amplifiers in order to reduce SATCOM terminal cost and reduce program risk due to reliance on a single source.

FY 2004 Accomplishments: Awarded contract and procured test articles from one vendor; initiated technical testing both as a stand alone unit and integrated into the SATCOM terminal.
FY 2005 Plans: Award contract and procure test articles from remaining two vendors; Conduct technical testing both as a stand alone unit and integrated into the SATCOM terminal; Prepare procurement decision package.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Ultra Light Aero Diesel Engine	USSOCOM	0.178	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating non-developmental diesel powered aero engine candidates in the 100 hp range that can operate from sea level to 20,000 feet Mean Sea Level, for possible use for a variety of Special Forces purposes, including an ultra light Unmanned Aerial Vehicle (UAV) platform for leaflet delivery. DAIR 100 engine from Diesel Air from United Kingdom and Thielert 125-01 from Thieler Aircraft Engines of Germany are two candidates to be tested, against a US manufactured candidate engine.

FY 2004 Accomplishments: Integrate DAIR 100 test engines into the Wind Supported Air Delivery System; Complete bench testing, safety certification, and operational flight testing. Mist Mobility Integrated Systems Technology Inc. provided their final test report to US Army Research Development and Engineering Command (RDECOM), Natick Soldier Center, for review and analysis. The DAIR-100 ULADE did not meet required performance parameters for the Leaflet Delivery System

Unmanned Aerial Vehicle – Wind Supported Air Delivery System (WSADS).
FY 2005 Plans: Request project funding from Psyops Global Reach ACTD to continue testing on the Thielert 125-01 engine to meet requirements. Receive and integrate engine. Bench test and operational flight test.
FY 2006 Plans: Data Analysis, Milestone C decision, FCT close-out.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Underwater Communication and Tracking System for Submarines	Navy	0.876	0.000	0.000	0.000

This project, initiated in FY 2003, is evaluating the suitability of the Nautronix/Maripro underwater digital communication (HAIL) system from Australia for real-time data exchange of positional information between submarines participating in open ocean exercises. The system has been successfully demonstrated in joint U.S.-Australian submarine exercises.

FY 2004 Accomplishments: Completed test plan for Sea Test 2A and Sea Test 2B. Developed Temporary Alterations (TEMPALTs) to support Sea Test 2A and Sea Test 2B. Conducted Sea Test 2A (ST2A). Conduct Sea Test 2B (ST2B) in conjunction with "Assured Access" exercise. Worked to install HAIL on 3 SSNs and 2 Japanese Maritime Self Defense Force (JMSDF) SSKs for Undersea Dominance 2004 trials. Developed draft test plan at NUWC Keyport – Final test plan created by COMSUBPAC. Installed and participated in numerous exercises at COMSUBPAC including a range exercise with US and Japanese submarines. Installed HAIL on USS CHARLOTTE in support of ASDS testing. Installed HAIL on USS GREENEVILLE and USS KEY WEST in support of PCO Ops and LUNGFISH. Installed and tested HAIL at PMRF
FY 2005 Plans: Conduct HAIL At Sea Trials at Pacific Missile Range Facility – Kauai, Hawaii. Issue HAIL Close Out Report. Work with Johns Hopkins Applied Physics Laboratory to analyze Undersea Dominance 2004 results. Conduct FCT Close Out Report Review. Provide Procurement Decision. Finalize and obtain approval for HAIL 688 / 688i TEMPALTs for PCI and PXI backfit versions of HAIL. Work with ASDS (PMS395) and SDV (NSSC Panama City) to field HAIL systems to SEAL and SOF units.

FY 2005 NEW START PROJECTS:

The projects identified below were highlighted as FY 2005 FCT new start projects in our Congressional Notification letter dated 20 November 2004.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
3rd Generation Focal Plane Arrays for Future Combat and Apache Weapon Systems	Army	0.000	1.609	1.130	0.000

This Project will evaluate high-performance low-cost 3rd Generation Focal Plane Arrays (FPAs) developed by Qinetiq and BAE of England. Qualification of 3rd Gen FPA will support the Army's Future Combat System requirements to see first, understand first, act first and finish decisively. Qinetiq has developed an alternative substrate for 3rd Gen FPAs which reduces the cost of today's current and future FPAs by 75% and increasing the reliability by 200% , while meeting system requirements.

FY 2005 Plans: Performance and interface qualification testing will be done at the FPA level. Upon successful completion of this testing, the FPAs will be integrated into an LRAS system and operational testing will be done to include Noise Equivalent Test, Minimum Resolvable Temperature, Modulation Transfer Function, and range to detect and identify targets.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
40 mm Tactical Marking & 40 mm Day/Night Training Cartridges	USSOCOM	0.000	0.544	2.629	0.000

This Joint FCT project will qualify two 40mm low velocity (LV) cartridges for multi-service use: (1) a non-developmental IR tactical marking cartridge and (2) a 40mm day/night training cartridge. Both 40mm cartridges use unique chemi-luminescent night marking technology. The 40mm tactical marking cartridges provide for accurate IR target marking to support precision fire control and air-ground combat in daylight and at nighttime. The 40mm Day/Night training cartridges allow soldiers to train as they fight, at night using their night vision goggles, a capability not currently available.

FY 2005 Plans: Project funds received. Contract for and receive test articles. Begin Phase I Performance Test.

FY 2006 Plans: Complete Phase I Performance Test. Conduct Phase II Safety Test and environmental impact study. Conduct Phase III Operational User Assessment. Receive WSESRB approval. Milestone C Decision and complete FCT Close-Out Report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
40mm Low Velocity HEDP Ammunition	Marine Corps	0.000	0.564	0.420	0.000

This joint USMC and USSOCOM FCT project will integrate an improved propulsion system; cleaner burning propellant; a self-destruct fusing mechanism; and improved Insensitive Munitions (IM) energetic technology into an improved low velocity 40mm HEDP cartridge for use in the M79 and M203 Grenade Launchers.

FY 2005 Plans: Receive Foreign Test Data. Contract Preparation and Award and Test Planning. Foreign Test Data received and reviewed. Test Articles received and comparative test performed. Down-selection of vendors. Conduct qualification of energetics and perform safety & environmental tests as well as the user evaluation.
FY 2006 (Plans): WSESRB Preparation and Certification. Procurement Decision (projected 4th Quarter FY 2006).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
70 mm (2.75”) Rocket Warhead	USSOCOM	0.000	1.335	2.585	0.000

This project will qualify an improved 70mm “bunker buster” warhead for use by Special Operations Aviation Regiment (SOAR) (Task Force 160) aircraft (AH/MH-6J). This warhead will provide special operations forces (SOF) with a significant new capability to defeat hardened targets such as bunkers and buildings.

FY 2005 Plans: Project funds received. Contract preparation and award of test articles. Test planning. Interim hazard classifications. Receive test articles.
FY 2006 Plans: Conduct Phase I technical and safety testing. Obtain WSESRB approvals. Obtain air worthiness certification.

Conduct Phase II Operational and User Assessment. Milestone C decision and complete FCT Close-Out Report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
84 mm Multi-Target Warhead	USSOCOM	0.000	0.704	1.580	1.245

This project will evaluate an 84 mm Multi-Target (MT) Warhead for use in the Multi-Role Anti-Armor, Anti-Personnel System (MAAWS), the primary Special Operations Forces (SOF) crew served shoulder fired weapon. This munition is optimized for use in urban/built up area and will defeat various types of structures and targets using a tandem warhead with a follow-through charge. This weapon could greatly enhance the capability of SOF during operations in urban environments.

FY 2005 Plans: Project funds received. Contract preparation and award of test articles. Test planning. Begin of hardware integration and delivery. Begin technical and safety testing.
FY 2006 Plans: Continue hardware integration. Continue technical and safety testing.
FY 2007 Plans: Complete technical and safety testing. Perform limited user testing. Navy WSESRB approval. Milestone C Decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Air Launch Tethered Balloon ISR Platform	USSOCOM	0.000	0.657	0.000	0.000

This project will evaluate a means of employing a unique Intelligence, Surveillance, and Reconnaissance (ISR) Sensor/Communications Package (802.11) using a tethered balloon platform concept. If proven viable, this cost effective material solution will provide Special Operations Forces (SOF) a new capability that will significantly improve tactical situation awareness in the conduct of USSOCOM's mission objective to find, fix and destroy the enemy, and simultaneously provide friendly force protection.

FY 2005 Plans: Project funds received. Complete project planning. Contract for and receive test articles. Conduct analysis of vendor data and conduct initial technical testing. Conduct operational and user assessments.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Close Quarter Batter (CQB) Pistol	USSOCOM	0.000	0.252	0.170	0.000

This project will test and evaluate CQB pistols from foreign vendors that have demonstrated the ability of firing multiple caliber rounds from a single pistol. Non-developmental multi-caliber (9mm and .45 cal) pistols with a weight less than 40 ounces and improved accuracy, reliability and ergonomics will be tested to replace the legacy SIG226 battle pistol used by Special Operations Forces (SOF) for the past 15 years.

FY 2005 Plans: Project funds received. Conduct project planning. Contract for and receive test articles. Begin technical and safety testing.
FY 2006 Plans: Complete technical and safety testing. Conduct operational and user assessment. Milestone C Decision and complete FCT Close-out Report.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Diver Hull Inspection and Navigation System	U.S. Navy	0.000	0.274	0.350	0.000

This FCT project will allow minimal integration, test and evaluation of a mature underwater survey system to determine its suitability for use by U.S. Naval forces conducting Explosive Ordnance Disposal (EOD) diving operations, including searching and inspections of ship hulls and berthing areas. The Spot-On Ship Hull Survey System is Commercial off the shelf (COTS) and is currently being used by the Swedish Coast Guard. It is an open architecture system that combines video streams from multiple sensors, underwater positioning data and the ship's hull schematics to accurately track and record the diver's underwater movements. A diver hull inspection system is required to enable the rapid and accurate survey of ship hulls for unexploded explosive ordnance objects that

might impose a threat to Joint Military Operations.

FY 2005 Plans: Phase 1: Procure & test state of the art underwater survey system. Determine suitability for use in underwater EOD hull surveying missions.
FY 2006 Plans: Phase 2: Integrate system with appropriate sensors, navigation and diver display components and conduct technical evaluation.
FY2007 Plans: Phase 3: Conduct fleet evaluation of the integrated system

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Engine Air Particle Separator	Army	0.000	1.094	0.500	0.000

The Engine Air Particle Separator (EAPS) project is in support of desert operations and the need for flexibility in operating tempo. Current configuration of EAPS does not facilitate performing maintenance on the aircraft. The Engine Air Particle Separator (EAPS) swirls engine inlet air at a high velocity separating particulate matter via centrifugal force. The EAPS is used as mission equipment in dusty/sandy environments and can significantly increase engine life due to decreased erosion of engine components. The EAPS currently used by the U.S. Army is the “long can” design and requires that the EAPS be moved forward on its mounting rails to open the engine cowling when performing maintenance or inspections. The U.K design is a “short can” that will allow maintenance to be performed without unfastening and moving the EAPS.

FY 2005 Plans: Army test phases. First Article Test in FY 2005 for fit and function on the CH-47 aircraft, including maintenance operational checks, ground and flight test.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Highly Mobile Oxygen Supplementation System (HMO2SS)	Marine Corps	0.000	0.657	0.000	0.000

This FCT project will test a portable, lightweight battery powered Highly Mobile Oxygen Supplementation System (HMO^2SS) from University Health Network, Canada for reliability, ruggedness, and adaptability. The HMO^2SS is a highly mobile oxygen-breathing mask that can provide increased oxygen therapy in mass casualty medical care 8 to 12 times longer than current masks. A successful FCT will result in the medical units needing fewer of heavy, high pressure oxygen bottles when deployed without negatively impacting their current mission for mass casualty medical care.

FY 2005 Plans: Receive Foreign Test Data. Contract Preparation and Award. Test Planning conducted. Receipt of Test Articles. Technical Tests performed at Aberdeen Proving Ground. Operational Tests performed at Naval Medical Research Center, Bethesda, MD and overseen by MCOTEA.
FY 2006 (Plans): Data Analysis & Evaluation and the Technical Test Report provided by the Naval Medical Research Center, Bethesda, MD. FDA approval sought. Procurement Decision (projected 4th Quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Individual Serviceman Non-Lethal System	Army	0.000	0.411	0.613	0.000

This project will test and evaluate two foreign Non-Lethal capabilities that provide a higher rate of fire, greater engagement ranges, and greater magazine depth than currently fielded non-lethal capabilities.

FY 2005 Plans: Technical Testing. Conventional accuracy, reliability, maintainability, uniformity, plus Non-Lethal human effects, independently paneled through the NNLWD Human Effects Review Board (HERB). Safety Testing. Standard military requirements tailored to account for the function replacement of chemical energetics with compressed air, including the resulting changes in Hazardous Materials requirements in accordance with DOT 49 CFR 173.115 to evaluate any potential impact on tactical & strategic system transportability.

	Service	FY 2004	FY 2005	FY 2006	FY 2007

Laser Marksmanship Training System, (Hummerbook)	Marine Corps	0.000	0.164	0.000	0.000

This project will evaluate the ruggedized scoring device, known as the Hummerbook 50 thousand, from Seoul Standard Co., LTD based in Seoul, South Korea. This system will environmentally enhance the capability of the Laser Marksmanship Training System (LMTS) to move from an indoor marksmanship training system to a tactical engagement simulation in support of ground/convoy operations.

FY 2005 Plans: Receive Foreign Test Data for the Hummerbook-50 thousand. Evaluate for LMTS software and integration. Contract Preparation and Award. Receive test articles and determine capability of hardware. LMTS vendor, Beamhit, will perform technical testing to ensure system compatibility. Limited user test in a CONUS operational environment.

FY 2006 (Plans): Integration test in an OCONUS operational environment. Provide evaluation and test report. Procurement decision (projected 2nd Quarter).

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Link-16, 11B, Management Integrator	Navy	0.000	0.536	0.480	0.000

This project will evaluate the Air Defense Systems Integrator (ADSI), developed by Advanced Programming Concepts/Ultra Electronics, for integration of systems and subsystems required to provide Datalink interoperability/capabilities to the Special Projects Aircraft. The Air Transportable Ruggedized (1/2 ATR) ADSI will provide a robust Link-16 and Link-11 Message Implementation Plan (MIP) and network provider communications channels ("J" Voice) required for battlefield operations.

FY 2005 Plans: Procure 2- ½ ATR Air Defense Systems Integrators and associated NRE designed for the SPA platform. These integrators will allow for a parallel developmental paradigm that will expedite the development of the Datalink requirements and provide Full Operating Capabilities (FOC) to the SPA platform.

FY 2006 Plans: Datalink Requirements (DLR) Integration and Test at APC with complete Zephyr Link system. Test implementation of Identification Friend or Foe (IFF) and SeaVue radar system that will enable SPA platform to achieve Track Quality greater than zero (TQ>0). This requirement will provide real time targeting information to battlefield commanders/decision makers. Test additional DLR postponed for FOC: Sea Vue Radar integration, Time Of Arrival/Time

Differential Of Arrival (TOA/TDOA), Tempest Test, NCTSI Certification/Test, JTIC Certification/Test

	Service	FY 2004	FY 2005	FY 2006	FY 2007
M16A2/M4 Training Replacement Bolt	Marine Corps	0.000	0.432	0.000	0.000

This project will evaluate the M16A2/M4 Training Bolt that will be capable to fire the Special Effects Small Arms Marking System (SESAMS) training cartridge. The USMC will test the training bolt candidate from Canada (SNC Technologies). A successful FCT will allow the Marine to fire, at short range, a low velocity marking ammunition in a Military Operations in Urban Terrain (MOUT) training operations.

FY 2005 Plans: Receive Foreign Test Data. Contract Preparation and Award. Test Planning conducted. Test Articles Received. Phase I Technical Testing at Naval Surface Warfare Center, Crane to safely determine that live 5.56 ammunition cannot be fired with the bolt. Phase 2 Operational Testing conducted at MARCORSYSCOM's Ordnance Test Facility, Quantico, VA by PM TRASYS with operational M16A2. Data Analysis & Evaluation and Technical Test Report provided by PM TRASYS.
FY 2006 (Plans): Procurement Decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Mini Synthetic Aperture Radar	Army	0.000	0.241	1.506	0.000

The Mini SAR is a miniaturized Synthetic Aperture Radar (SAR) sensor system which produces radar images in near-photographic quality in day and night conditions. PM Robotic and Unmanned Sensors (PM RUS), with the support of RDECOM CERDEC I2WD, will integrate and test the Mini SAR for use on the Army Shadow 200 TUAV.

FY 2005 Plans: Conduct mechanical fit checks in the integration lab and ending with a defined flight test program. Integration Testing. Utilize a slow methodical approach to testing, verifying and validating the installation requirements to install the Mini SAR on the Shadow 200 TUAV. Conduct Operational Ground Testing. To the maximum degree possible all systems and sub-systems are exercised and tested to verify operations within normal parameters and no system incompatibilities exist. Main test are intersystem EMI/EMC checks and the engine run test where engine induced vibration effects are sought. Operational Flight Testing. System compatibilities are again verified prior to initiation of UAV Flight performance validation.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Multi-Spectral Camouflage Netting	Marine Corps	0.000	0.875	0.500	0.000

This project will test and evaluate a new 2-sided multi-spectral camouflage net from Israel (Fibrotex Ltd.), Canada (GMA Cover Corp) and Sweden (SAAB Barracuda LLC). A successful FCT will allow the Marine Corps to employ ground forces with “one net” that is capable of two different camouflage patterns. The result is a significant reduction in purchase quantity, cost, logistical transportation, and storage requirements while fielding the full camouflage capability in a much shorter time.

FY 2005 Plans: Receive Foreign Test Data. Contract Preparation & Award. Test Planning conducted. Test Articles Received. Lab Testing conducted at the Night Vision Lab, Ft. Belvoir, VA.
FY 2006 (Plans): Field Testing and Operational Assessment performed at White Sands Missile Range, New Mexico. Test Report provided by the Night Vision Lab, Ft. Belvoir.
FY 2007 (Plans): Close out Report furnished by PM NBCS, MARCORSYSCOM. Procurement Decision.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Next Generation Underwater Breathing Apparatus (NUBA)	Navy	0.000	0.492	0.450	0.000

This project will allow test and evaluation of mature state of the art diver life support equipment to determine suitability of use by U.S. Naval Forces in Underwater Explosive Ordnance Disposal (EOD) Mine Counter Measures (MCM)/Unexploded Ordnance (UXO), Naval Special Warfare (NSW) missions, battle space preparation for Amphibious Assault, Force Protection and Harbor Security operations. This diver life support equipment is currently approved and in use by numerous NATO countries for underwater EOD MCM/UXO and NSW operations. Project benefit will be measured in enhanced diver safety, improved mission effectiveness, and increased interoperability with NATO/Coalition partners.

FY 2005 Plans: Procure NDI COTS items (Phase I) Technical Tests (magnetic signature, environmental, performance) Unmanned safety test and evaluation
FY 2006 Plans: Procure UBAs for manned testing (Phase II) In-water manned safety and performance test Operational Fleet Evaluation

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Telementry Buoy for Underwater Communications (TBUCS)	Navy	0.000	0.516	1.072	0.600

TBUCS will provide an underwater communications link between various different US Navy platforms. By providing underwater communications, TBUCS will be a valuable asset as a contributor to Network Centric Warfare (NCW). TBUCS will utilize air dropped expendable sonobouys to establish a two way underwater communications link between US Navy submerged platforms and aircraft using a Hydro Acoustic Communications Link (HAIL) system.

FY 2005 Plans: The first phase of TBUCS testing will involve lab testing the equipment to ensure that TBUCS meets system requirements before operational testing. This phase will include testing the communication algorithms for predicted ranges and depths that the submerged platform can maintain from the buoy and still communication effectively (this will help to create the Concept of Operations (CONOPS)). This phase will also include testing with surface, air, and space communication equipment to ensure interoperability.
FY 2006 Plans: This phase will test the TBUCS system in the operational environment. The initial portions of this phase will

place the TBUCS buoy in a controlled sea environment and allow for retrieval. The follow on stages of this phase will involve seeding areas of the open ocean with TBUCS buoys and testing the system in the open environment, which will require expendable test assets.

	Service	FY 2004	FY 2005	FY 2006	FY 2007
Weather Scout UAV *Congressionally directed concept investigation	Air Force	0.000	1.000	0.000	0.000

This project will test and evaluate the employment of a weather-sensing UAV developed by Aerosonde Pty Ltd of Australia for tropical cyclone and target area weather reconnaissance, and will evaluate the anticipated improvement in forecasting tropical cyclones and target area weather and decision-quality weather information. Current weather observation capabilities are limited in providing situational and resultant predictive battlespace awareness weather information required for commanders' operational risk management decisions, as well as for weapons selection and tactics.

FY 2005 Plans: Lease Test article, test and evaluate the system.
FY 2006 Plans: Complete data analysis and publish final report.

FY 2005 FCT Program Plans:

For FY 2005, the FCT program will continue testing activities on 54 projects executing $24.055 million in FY 2005 funding. The FY 2005 Proposal submission process was initiated in January 2004, with the final selection of 19 FY 2005 New Start Projects being determined in December 2004. FY 2005 funding totaling $12.778 million will support the initiation of these selections. The selected FY 2005 New Start projects were addressed in a formal notification letter submitted to Congress in November 2004.

C. (U) OTHER PROGRAM FUNDING Not Applicable.

D. (U) EXECUTION Not Applicable.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							Date: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/BA 6					R-1 ITEM NOMENCLATURE Nuclear Matters-Physical Security, PE 0605161D8Z			
COST *(In Millions)*	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	0.000	0.000	12.442	13.079	14.111	14.959	15.609	16.273
Nuclear Matters/P476	0.000	0.000	12.442	13.079	14.111	14.959	15.609	16.273

(U) A. Mission Description and Budget Item Justification

(U) BRIEF DESCRIPTION OF ELEMENT

(U) Effective October 1, 2005 funding for this program will move from PE 0605160D8Z (Counterproliferation Support) in Budget Activity 3 to PE 0605161D8Z (Nuclear Matters-Physical Security) in Budget Activity 6. The purpose of the program is to sustain the U.S. nuclear deterrent posture. The funds for this program are used to support studies and analyses for research, development, test and evaluation efforts for nuclear weapons security, use control, nuclear weapons stockpile safety, survivability and performance. Funds are also used to develop and implement plans for stockpile transformation; infrastructure analyses and assessments; DoD-NNSA Nuclear Weapons Council activities, as mandated by Title 10 USC, section 179; radiological and nuclear emergency response efforts; and manage international programs of nuclear cooperation, particularly with respect to enhancing international nuclear safety and security. On July 19, 2004, this program incorporated additional responsibility for nuclear weapons physical security and Personnel Reliability Programs, to include policy development and implementation, and operations and oversight for the protection of nuclear weapons systems, DoD personnel and DoD facilities.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							Date: January 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/BA 6					R-1 ITEM NOMENCLATURE Nuclear Matters-Physical Security, PE 0605161D8Z			
COST *(In Millions)*	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	0.000	0.000	12.442	13.079	14.111	14.959	15.609	16.273
Nuclear Matters/P476	0.000	0.000	12.442	13.079	14.111	14.959	15.609	16.273

(U) Project Number and Title: P476 Nuclear Matters

(U) PROGRAM ACCOMPLISHMENTS AND PLANS

(U) FY 2004 Accomplishments:

These accomplishments were reported under BA-3, PE 0605160D8Z, "Counterproliferation Support"

(U) FY 2005 Plans:

These accomplishments were reported under BA-3, PE 0605160D8Z, "Counterproliferation Support"

(U) FY 2006 Plans:

(U) Nuclear Weapons Security, Use Control, and Safety ($9.954 million)

- Conduct OSD oversight and provide directions for actions conducted under DoDD 3150.2 , DoDD 3150.2-M, "DoD Nuclear Weapons Safety Program, DoDD 4540.5 “Transportation of Nuclear Weapons”and DoDI S-5210.82, "Protection of Nuclear Coding Equipment," DoDD 5210.41 and 5210.41-M, "Physical Security of Nuclear Weapons.
- Complete the updating and documentation of DoD policy, responsibilities, and procedures in DoD publications to include DoDD S-3150.7, "Controlling the Use of Nuclear Weapons", DoDD 3150.3, "Nuclear Forces Security & Surety" and "DoDD 5210.42, "Nuclear Weapons PRP."
- Continue to conduct implementation activities stemming from approved recommendations of the assessment on Nuclear Force Protection.
- Continue to manage the protection of classified nuclear weapons information including access to and dissemination of Restricted Data, as mandated by Enclosure 5, DoDD 5210.2, "Access to and Dissemination of Restricted Data".
- Continue as DoD Sigma 14/15 Approval Authority (Interface with DOE/NNSA).
- Action Freedom of Information Act and Mandatory Declassification Requests.
- As OSD sponsor, support the operations of the Joint Advisory Committee on Nuclear Weapons Surety (JAC).
- Continue the development of a Physical security equipment RDT&E program that supports the protection of tactical and fixed nuclear weapons, DoD personnel and their facilities.
- Continue the development of physical security equipment/systems that meet Services nuclear security requirements in the areas of Interior and Exterior Detection/Surveillance, Delay/Denial, Entry Control, Common Operating Picture, Tactical Systems and Airborne Intrusion.
- Initiate physical security equipment RDT&E projects that support the nuclear security requirements articulated in the Nuclear Weapons Physical Security Master Plan.

(U) Stockpile Performance and Survivability ($0.747 million)

- Conduct life cycle activities in support of the nuclear weapons stockpile under DoDD 3150.1, “Nuclear Weapons Life Cycle” and DODI 5030.55, "DoD Procedures for Joint DoD-DOE Nuclear Weapons Life Cycle Activities
- Continue to manage DoD RDT&E activities for nuclear warheads to include B61, W76, W78, W62, W80(0,1), W88 Weapons
- Implement DoD policy, responsibilities, and procedures in DoDD 3150.3. “Nuclear Weapons Security and Survivability” to include the actions of the Nuclear Forces Security and Survivability Steering Group.
- Support follow-up actions of the Defense Science Board (DSB) Task Force on Clandestine Nuclear Attack and the Task Force on Nuclear Weapons Effects Simulators/Simulation.
- Continue to support the DoD executive agency role for nuclear detectors for the Department of Homeland Security.

(U) Nuclear Weapons Council ($0.373 million)

- Manage the activities on the Congressionally mandated Joint DoD-DOE Nuclear Weapons Council and its support committees to include the Nuclear Weapons Council Standing and Safety Committee, the Compartmented Advisory Committee and the Action Officer group.
- Prepare, staff, and submit annual reports to the President and the Congress to include the FY 2006-2014 Nuclear Weapons Stockpile Memorandum and Requirements Planning Document, FY 2006 report on Stockpile Assessment, FY 2006 Joint Surety Report and the FY 2006 NWC Report to Congress.
- Conduct a week-long trip to several nuclear weapons complex sites for over sixty individuals within the nuclear weapons community including senior DoD/DOE officials.

(U) Stockpile Transformation and Infrastructure ($0.747 million)

- Supports the conduct of the next nuclear posture review.
- Continue programs to assess the future of the nuclear weapon stockpile
- Continue to support follow-on actions of the DSB Task Force on Strategic Strike Skills. Support new Task Forces in this functional area.
- Continue to develop and implement a Nuclear Matters knowledge system to help preserve nuclear weapons information for operational improvements and continuity.

(U) Radiological and Nuclear Emergency Response ($0.498 million)

- Conduct DoD oversight and provided direction for DoD preparations to train for response actions in the event of a nuclear weapon accident under DoDD 3150.8, “DoD Response to Radiological Accidents. Prepare and participate in exercise Diamond Knight, Dingo King and various interagency tabletop exercises.
- Participate in actions to update DoDD 3150.8, “DoD Response to Radiological Accidents”; DoD3150.8-M, Nuclear Accident Response Procedures” and DoDD 5110.63, "Security of Nuclear Reactors and Special Nuclear Material” to make them consistent with the National Response Plan.
- Maintain classified website to enhance coordination in the event of a nuclear weapon accident.
- Improve nuclear weapon accident planning through activities of the Nuclear Weapon Accident Response Steering Group.

(U) International Programs ($0.124 million)

- Support and participated in NATO nuclear weapon policy and oversight groups to include the High Level Group (HLG) and the Joint Theatre Surety Management Group (JTSMG).
- Continue to implement DoDD 5030.14, "Disclosure of Atomic Information to Foreign Governments and Regional Defense Organizations."
- Continue to support and participate with the UK under 1957 Mutual Defense Agreement.
- Continue to support US-Russia Nuclear Warhead Safety and Security bilateral activities.
- Continued to support US-France Nuclear Warhead Safety and Security bilateral activities.

(U) FY 2007 Plans

(U) Nuclear Weapons Security, Use Control, and Safety ($10.463 million)

- Conduct OSD oversight and provide directions for actions conducted under DoDD 3150.2 , DoDD 3150.2-M, "DoD Nuclear Weapons Safety Program, DoDD 4540.5, “Transportation of Nuclear Weapons” and DoDI S-5210.82, "Protection of Nuclear

Coding Equipment," DoDD 5210.41 and 5210.41-M, "Physical Security of Nuclear Weapons DoDD S-3150.7, "Controlling the Use of Nuclear Weapons", DoDD 3150.3, "Nuclear Forces Security & Surety" and "DoDD 5210.42, "Nuclear Weapons PRP."

- Initiate the updating and documentation of DoD nuclear weapon policy, responsibilities, and procedures in DoD publications.
- Continue to manage the protection of classified nuclear weapons information including access to and dissemination of Restricted Data, as mandated by Enclosure 5, DoDD 5210.2, "Access to and Dissemination of Restricted Data".
- Continue as DoD Sigma 14/15 Approval Authority (Interface with DOE/NNSA).
- Action Freedom of Information Act and Mandatory Declassification Requests.
- As OSD sponsor, support the operations of the Joint Advisory Committee on Nuclear Weapons Surety (JAC).
- Continue the development of a Physical security equipment RDT&E program that supports the protection of tactical and fixed nuclear weapons, DoD personnel and their facilities.
- Continue the development of physical security equipment/systems that meet Service's nuclear security requirements in the areas of Interior and Exterior Detection/Surveillance, Delay/Denial, Entry Control, Common Operating Picture, Tactical Systems and Airborne Intrusion.
- Continue physical security equipment RDT&E projects that support the nuclear security requirements articulated in the Nuclear Weapons Physical Security Master Plan.

(U) Stockpile Performance and Survivability ($0.785 million)

- Conduct life cycle activities in support of the nuclear weapons stockpile under DoDD 3150.1, "Nuclear Weapons Life Cycle" and DODI 5030.55, "DoD Procedures for Joint DoD-DOE Nuclear Weapons Life Cycle Activities
- Continue to manage DoD RDT&E activities for nuclear warheads to include B61, W76, W78, W62, W80(0,1), W88 Weapons
- Implement DoD policy, responsibilities, and procedures in DoDD 3150.3. "Nuclear Weapons Security and Survivability" to include the actions of the Nuclear Forces Security and Survivability Steering Group.
- Continue to support the executive agency role of the DoD for nuclear detectors for the Department of Homeland Security.

(U) Nuclear Weapons Council ($0.392 million)

- Manage the activities on the Congressionally mandated Joint DoD-DOE Nuclear Weapons Council and its support committees to include the Nuclear Weapons Council Standing and Safety Committee, the Compartmented Advisory Committee and the Action Officer group.
- Prepare, staff, and submit annual reports to the President and the Congress to include the FY 2006-2014 Nuclear Weapons Stockpile Memorandum and Requirements Planning Document, FY 2006 report on Stockpile Assessment, FY 2006 Joint Surety Report and the FY 2006 NWC Report to Congress
- Conduct a week-long trip to several nuclear weapons complex sites for over sixty individuals within the nuclear weapons community including senior DoD/DOE officials.

(U) Stockpile Transformation and Infrastructure ($0.785 million)

- Support studies for warhead replacement.
- Continue programs to assess the future of the nuclear weapon stockpile
- Continue to develop and implement a Nuclear Matters knowledge system to help preserve nuclear weapons information for operational improvements and continuity.

(U) Radiological and Nuclear Emergency Response ($0.523 million)

- Conduct DoD oversight and provided direction for DoD preparations to train for response actions in the event of a nuclear weapon accident under DoDD 3150.8, “DoD Response to Radiological Accidents. Prepare and participate in exercise Diligent Warrior 07 and various interagency exercises.
- Maintain classified website to enhance coordination in the event of a nuclear weapon accident.
- Improve nuclear weapon accident planning through activities of the Nuclear Weapon Accident Response Steering Group

(U) International Programs ($0.131 million)

- Support and participated in NATO nuclear weapon policy and oversight groups to include the High Level Group (HLG) and the Joint Theatre Surety Management Group (JTSMG)
- Continue to implement DoDD 5030.14, "Disclosure of Atomic Information to Foreign Governments and Regional Defense Organizations"
- Continue to support and participate with the UK under 1957 Mutual Defense Agreement
- Continue to support US-Russia Nuclear Warhead Safety and Security bilateral activities
- Continued to support US-France Nuclear Warhead Safety and Security bilateral activities

(U) B. Program Change Summary	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	12.442	13.079
Total Adjustments			12.442	13.079
Congressional program reductions				
Congressional rescissions				
Congressional increases				
Reprogrammings				
SBIR/STTR Transfer				
Programmatic Transfer from BA 3			12.442	13.079

Change Summary Explanation:

(U) Funding

Effective October 1, 2006 funding for this program moved from PE 0605160D8Z (Counterproliferation Support) Budget Activity 3 to PE 06051618Z (Nuclear Matters-Physical Security) in Budget Activity 6.

(U) C. Other Program Funding Summary

(U) NA

(U) D. Execution

(U) For execution year (CY), provide a list of funding recipients within the following categories:

Labs/centers
Universities
FFRDC's
Contractors Science Applications International Corporation, URS Corporation
(U) List only those entities receiving 10% or more of total funding available in the PE.

(U) E. Performance Metrics

The outcome goals for the Nuclear Matters-Physical Security program are the prevention of nuclear war, prevention of unauthorized use of a nuclear weapon and the provision of quality support to the Secretary of Defense in the event of a nuclear weapons accident. To that end, one Nuclear Matters output goal is to deliver the *FY 2005-2013 Nuclear Weapons Stockpile Memorandum and Requirements Planning Document, FY 2005 report on Stockpile Assessment, FY 2005 Joint Surety Report and the FY 2005 NWC Report to Congress* to the President and the Congress providing them with information needed to make policy and provide funding to maintain a safe, secure and reliable nuclear weapons stockpile. Other output goals include; maintaining currency of nuclear weapons safety, use control and security publications including DoD directives and instructions; promoting coordination between DOE and DoD nuclear weapons activities by conducting the required number of NWC meetings in accordance with 10 USC section 179; participating or leading at least one nuclear weapons accident exercise per year and updating nuclear weapons accident associated publications based on lessons learned; increasing nuclear weapons safety and security in the United States and other countries by supporting assured denial oriented research and development, participating in a variety of international meetings, information exchanges and exercises.

Exhibit R-2, RDT&E Budget Item Justification				Date: February 2005				
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: Support to Networks and Information Integration PE 0605170D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		37.304	10.706	10.819	11.333	11.348	11.670	11.869
Command Information Superiority Architecture		6.048	5.314	5.411	5.661	5.650	5.794	5.930
Defense Architecture Repository		1.134	1.208	1.230	1.285	1.285	1.316	1.347
Integrated Planning and Management		1.843	1.966	2.002	2.096	2.091	2.143	2.195
Support to NII Mission Requirements		28.279	2.218	2.176	2.291	2.322	2.417	2.397

A. Mission Description and Budget Item Justification:

This program element supports studies in the areas of networks, information integration, defense-wide command and control (C2), and communications. This program is funded under Budget Activity 6, RDT&E Management Support because it includes studies and analysis in support of RDT&E efforts.

Program Accomplishments and Plans:

FY 2005 Plans: ($28.279 million)

- Pursue research on new approaches to command and control suitable for 21st Century operations.
- Continue to fund the Edge Institute at the Navy Post Graduate School (NPS) and expand this virtual institute to other universities.
- Initiate research on implications of coalition and civil-military operations for command and control, military operations, and organizations.
- Continued development of metrics and conceptual framework suitable for assessing network-centric operations.
- Continue to work with the DoD community and international partners to improve the understanding of Information Age command and control related concepts, technologies, and experiments.
- Conduct 10th International Command and Control Research and Technology Symposia.
- Conduct workshops to explore command and control related issues.
- Continue C2 publications and outreach program.

- Complete a study of advanced shipboard Acoustical Communications.
- Conduct research to improve voice and speech clarity in noisy environments, specifically, target the chaotic climate found within a Combat Operations Center (COC) and Unit Operations Centers (UOC) with operators wearing headsets for voice communications.
- Study the potential capability to augment existing and planned IED detection devices with new technology that would improve the operators' ability to detect, analyze, identify, and localize IED devices more quickly and efficiently.
- Investigate, research, and analyze the high impulse noise operating environment existing on aircraft carrier (CV/N) flight decks. Document the factors which impede effective transmitted human speech communications which contribute to unsafe flight deck operations and define those critical elements for which Perfect Wave Independent Component Analysis (ICA) technology would benefit.
- Develop an improved flight deck communications system which incorporates the Independent Component Analysis (ICA) technology in order to mitigate ambient and machinery induced environmental noises introduced into human speech processing communications systems. Test, evaluate, demonstrate and validate the effectiveness of ICA in improved operation of flight deck voice communication systems.

Pacific Disaster Center

- Continue to expand the capabilities and development of an integrated distributed information network in the Asian-Pacific Region. Work with, and propose to, major regional support entities (World Bank, Asian Development Bank, etc) to develop natural hazard mitigation strategies and enabling policies in the development plans of emerging nations.
- Continue to expand the PDC presence in the Asia-Pacific Region capitalizing on the existing efforts being undertaken by the East-West Center, US State Department and other international entities concerned with the rising cost, both in human lives and property, of natural and man-made disasters.
- Continue to support the US Military Commands, DOD Homeland Defense, State and Federal Agencies, and regional organizations with unique products critical to decision-makers in managing risks posed by, and emergencies caused by, nature and/or mankind. Work more closely with other stakeholders, including planners, to plan for and mitigate the effects of these events and make communities more resilient.
- In partnership with the NII Directorate, Contingency Support and Migration Planning, continue to expand the Community of Interest for Stabilization and Reconstruction efforts after a major event (war, natural disaster, refugees) with a focus on net-centric information flow and distributed information systems.

FY 2006 Plans: ($2.218 million)

- Pursue research on new approaches to command and control suitable for 21st Century operations.
- Continue support for the Edge Institute at the NPS and expand this virtual institute to other universities.
- Continue research on implications of coalition and civil-military operations for command and control, military operations and organizations.
- Assess metrics and conceptual framework suitable for assessing network-centric operations.
- Continue to work with the DoD community and international partners to improve the understanding of Information Age command and control related issues.
- Continue C2 publications and outreach programs.

FY 2007 Plans: ($2.176 million)

- Continue research on new approaches to command and control suitable for 21st Century operations.
- Continue research on implications of coalition and civil-military operations for command and control, military operations, and organizations.
- Assess metrics and conceptual framework suitable for assessing network-centric operations.
- Continue to work with the DoD community and international partners to improve the understanding of Information Age command and control related concepts, technologies, and experiments.
- Conduct symposia and workshops to explore command and control related issues.
- Continue C2 publications and outreach programs.

B. **Program Change Summary:** (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget		11.490	11.483	11.703
Current President's Budget		37.304	10.706	10.819
Total Adjustments		25.814	-0.777	-0.884
Congressional program reductions				
Congressional rescissions, Inflation Adjustments		-1.286	0.323	0.316
Congressional increases		27.100		
Reprogrammings				
Transfer			-1.100	-1.200

Program Change Summary:
FY2005: Congressional Adds 27.100 million; IT reduction -0.395 million; Management Improvements -0.117 million; General Reduction -0.235 million; FFRDC Reduction -0.169 million; CAAS Reduction -0.370 million
FY 2006: ITMA Database Transfer to PA&E –1.100 million; Non-pay Purchase Inflation 0.370 million; Contract Support -0.047 million
FY 2007: ITMA Database Transfer to PA&E –1.200 million; Non-pay Purchase Inflation 0.366 million; Contract Support -0.050 million

C. Other Program Funding Summary: N/A

D. Acquisition Strategy. N/A

E. Performance Metrics:

- Community participation in command and control research program (CCRP) events.
- Number of requests for CCRP publications.
- Number of international countries engaged in net centric discussions and collaborative efforts.
- Successfully sponsored symposia/workshops to discuss command and control research initiatives.

Exhibit R-2a, RDT&E Project Justification						Date: February 2005		
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Command Information Superiority Architectures (CISA)/PE 0605170D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: Command Information Superiority Architectures		6.048	5.314	5.411	5.661	5.650	5.794	5.930

A. Mission Description and Budget Item Justification:

The CISA program continues to be a leader in the transformation of the Department of Defense (DoD). Using a common architecture planning process, CISA products have provided decision makers at all levels of the department with the knowledge and tools to make intelligent, cost effective decisions on key transformational elements and policies, to include Net-Centric Operations and Warfare (NCOW), and the Global War on Terrorism (GWOT). CISA is the prime catalyst for transforming the COCOMs to a net-centric environment. The program is focusing on architecture deliverables that focus on Net-Centric Transition Plans for the COCOMs and integrating Portfolio Management into the COCOMs information technology and capital planning processes. The CISA architecture products results will be used to determine the future DoD CIO IT issues and investment strategies for the COCOMs. In addition, the results will provide direct inputs into the COCOM Integrated Priorities Listings (IPLs), and provide rationale for Program Objective Memorandum (POM) decisions by identifying critical capability shortfalls. The CISA information technology (IT) architectures products; the tactics, techniques, and procedures (TTPs) documents; and the architecture reference models have earned an enviable reputation throughout DoD as the "ground truth". Several have resulted in directly impacting critical shifts in DoD policies which include the new capabilities process for Capital Planning and Investment under the Joint Staff Instruction 3170.01; the Unified Command Plan 2 (directs the standup of USNORTHCOM and the re-structuring of USSTRATCOM); expansion of the GWOT focusing on USSOCOM as the lead developer of a global two-tier net-centric approach; coalition interoperability through the use of USCENTCOM Combined Enterprise Regional Information Exchange System (CENTRIXS) world-wide architecture which links 60 nations in a unified effort; and lastly, Net-Centric Operations and Warfare (NCOW) through the Global Information Grid (GIG) architecture and the NCOW Reference Model (RM). CISA is a leader in supporting the DoD CIO focus on initiatives defined in the Information Technology Management Reform Act (ITMRA), (Clinger-Cohen Act) in the development of the GIG, the Department wide IT architecture. The GIG is considered the essential enabler of Information Superiority and Net-Centricity requirement expressed in the Department's Joint Vision 2020. The inputs include GIG Architecture V1.0 – the DoD baseline "as is" architecture; and GIG 2.0 approved by the DoD CIO on 9 Dec 2003 as the objective architecture for 20XX embedding NCOW transformational concepts. The NCOW RM represents the key compliance mechanism for evaluating IT-related capability, and mapping DoD acquisition programs to implement NCOW.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost		6.048	5.314	5.411
RDT&E Articles Quantity *(as applicable)				

FY 2004 Accomplishments : N/A

FY 2005 Plans: ($6.048 million)

- Continue development of GIG NCOW Reference Models to include information assurance and data management strategies
- Continue to develop Net-Centric assessment checklists for DoD Program Managers
- Continue net-centric implementation of GIG architecture.
- Continue development of executable COCOM architectures impacting operations, budget and transitions
- Develop COCOM Net-Centric Transition Plans and processes
- Link COCOM Net-Centric Transition Plans with key initiatives such as GIG Bandwidth Expansion (BE), Joint Tactical Radio System (JTRS), Net-Centric Enterprise Services (NES), Information Assurance (IA)
- Continue to expand and integrate COCOM Net-Centric transition assessment criteria
- Continue to develop and implement Portfolio Management criteria based on architecture data
- Continue to develop POM assessment criteria for information technology based on architecture data
- Investigate new ways of integrating COCOM architecture data with Portfolio Management for POM inputs, and Integrated Priority Listings (IPLs)
- Provide COCOM Net-Centric Assistance to integrate DoD programs within COCOM enterprise environment and link to COCOM inputs with DoD Enterprise Architecture Reference Models (DODEA RM) for OMB form 300 preparation.

FY 2006 Plans: ($5.314 million)

- Investigate and expand COCOM Net-Centric Transition plans
- Expand the integration of COCOM Portfolio Management and Net-Centric Transition plans
- Continue expansion of Net-Centric compliance assessments of DoD Acquisitions
- Expand and refine COCOM Net-Centric transition assessments
- Fully integrate COCOM Net-Centric transition plans and assessments into IT capital planning and acquisitions for COCOMs and OMB form 300 preparation

FY 2007 Plans: ($5.411 million)

- Implement second round of COCOM Net-Centric transition plans and assessments integrated with other DoD Program Net Centric assessments to ensure smooth "plug and play" capabilities
- Develop and provide integrated set of COCOM Net-Centric assessment capabilities for implementing transition plans
- Expand Implementation executable architecture capabilities within COCOM architectures and assessments of alternatives (AOA)
- Expand interactive use of architecture data for dynamic assembly of COCOM architectures to meet mission demands and changes for Unified Command Plans (UCPs)
- Continue expansion and integration with COCOM IT Capital Planning and Investments, and acquisitions

C. Other Program Funding Summary:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
O&M, DW (PE0902198D8Z)		5.769	4.885	5.004	5.019	5.122	5.202	5.342	37.343

D. Acquisition Strategy: N/A

E. Performance Metrics: Performance is based on the number of initiatives that transition to the net-centric environment to support operations.

Measures include:

- Requirements: Business products identified in need of change

Business products impacted or changed due to architecture analysis or products • Acquisitions: Number of system(s) or system functions identified as duplicate Number an/or type of system identified as necessary to complete capability Number of system(s) and/or applications impacted by architecture analysis • Portfolio Management: Number of systems included in portfolio Cost estimates provided for portfolio Number of duplicate systems identified in portfolio analysis Funds obtained as a result of portfolio analysis

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Defense Architecture Repository System (DARS)/PE 0605170D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: DARS		1.134	1.208	1.230	1.285	1.285	1.316	1.347

B. Mission Description and Budget Item Justification:

DARS is the enterprise wide repository to store, retrieve, and use DoD architecture data. DARS provides two different types of architecture data- unstructured and structured along with key reference data. The architecture data is available to all DoD users once they have registered. Currently versions exist on both the NIPRNET (unclassified) and SIPRNET (Collateral Classified). Plans are also underway to implement DARS on the Joint World Wide Intelligence Communications System (JWICS). Key features of the DARS program focus on: (1) reuse of common validated architecture data to build integrated architectures; (2) conducting architecture analysis; and, (3) integration architecture data into the DoD mainstream decision-making processes. The DARS data structure is based on the Core Architecture Data Model (CADM), and its data structure is fully CADM compliant. This data structure is under full configuration management, and has the goal of transporting architecture data between and among diverse enterprise architecture and other tools (tool agnostic capability), allowing collaboration among users. By using a standard universal applications process interface (API) CADM XML, DARS works with multiple tool vendors to achieve the collaborative tool agnostic environment. The FY 2005 DARS program will follow the results of the FY 2004 pilot effort to prove that the CADM XML XSD will be the standard Universal API, and allow COTS tool vendors to integrate this into their tool capabilities. DARS will additionally add additional architecture products to the structured capability which may include the OV 6 a,b,c products along with SV 4,5,6,9, and 10A,b,c. Also data exchange capabilities will include the Joint Resource Allocation Module (JRAM), and other executable or modeling and simulation tools. DARS goals for FY 05 are aggressive and include implementing DARS 3.0 in Feb 05. DARS will also support the transfer of CADM XML to the international data exchange standard AP 233 using the CADM XML XSLT as the core driver for the transformation. The Department of the Air Force, Army, and Navy CIO's are collaborating in the development of DARS to ensure the success of all. New DARS releases are scheduled for every six months during FY 2005 (DARS 5.0 and 4.0).

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost		1.134	1.208	1.230
RDT&E Articles Quantity *(as applicable)				

FY 2004 Accomplishments: N/A

FY 2005 Plans: ($1.134 million)

- Continue expansion of implementing architecture products for the structured capability using CADM XML
- Continue to explore the integration of CADM XML into an international data exchange standard by combining AP 233 (international data exchange standard for systems engineering and CADM XML)
- Expand data exchange capabilities between DARS and other data repositories
- Explore the capability to make architectures executable by providing data exchange capabilities with decision support and modeling and simulation systems such as Joint Resources Allocation Module (JRAM)
- Explore capabilities to authenticate authoritative data sources for architecture data
- Implement Net-Centric services within DARS and explore options for including DARS data as part of the Core Enterprise Services
- Implement capability for DoD program managers and others to build OMB form 300s from DARS architecture data
- Integrate both NCOW Reference Models and the DoD Enterprise Architecture Reference Models into the DARS and CADM data structures
- Implement two new DARS versions (4.0 and 5.0) based on new user requirements
- Implement ‘data harvesting” capabilities required to build integrated architecture packages, coupled with portfolio management and analytical capabilities for decision making regarding architecture data usage
- Explore and develop capability for architecture data reuse to dynamically assemble architectures or to build “tailorable” data sets based on architecture data to assist decision makers
- Initiate exploration of a “Federated DARS” Capability for architecture data exchange
- Initiate concept of “Earned Value” for architectures through establishment of a business rules model
- Initiate exploration of integration of a “Core Architecture Data Model (CADM) Business Rules

FY 2006 Plans: ($1.208 million)

- Demonstrate capabilities to operations by supporting both in garrison and deployed forces to move and analyze architecture data
- Implement changes required to DARS from the new DoD Architecture Framework requirements to include executable architectures, Net-Centric impacts on architecture products, new executive formats, portfolio management requirements in DARS 6.0
- Complete ability for DoD Program managers to use DARS data to build OMB form 300s and 53s
- Implement new international data exchange architecture standard based on CADM XML
- Expand DARS data exchange capabilities to modeling and simulation systems, decision support systems and budgetary systems
- Continue the exploration and expansion DARS as part of a "Federated Net-Centric" environment for data exchange
- Continue exploration of DARS integration into the "Core Enterprise Services" of Net-Centric Enterprise Services (NCES)
- Continue expansion of the "rules based model" to establish "earned value" for architecture data and architectures
- Continue to expand "authoritative data sources" processes and policies

FY 2007 Plans: ($1.230 million)

- Continue to implement capabilities required to meet changes to the DoD Architecture Framework (DoDAF) that will include capabilities to expand the "dynamic" assembly of architectures based on mission or process requirements or "tailorable packages based on architecture data for assistance in decision making (DARS 7.0)
- Continue integration of DARS data services into "Core Enterprise Services"
- Fully integrate DARS data harvesting capabilities into a Federated Data-Centric environment

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics:

- Getting key service program managers to use DARS to store and retrieve architecture data to include Future Combat System (FCS), Command and Control Constellation (C2C), FORCENET.
- Obtaining Intelligence Community Agencies such as National Security Agency (NSA), Defense Intelligence Agency (DIA),

National Geospatial Agency (NGA) architects and program managers to store and retrieve architecture data from DARS

- Participation from leading COTS enterprise architecture vendors to use and maintain currency with CADM XML with their version releases
- Acceptance of CADM XML as the basis for an international data exchange standard

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Integrated Planning and Management/PE 0605170D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: Integrated Planning & Management		1.843	1.966	2.002	2.096	2.091	2.143	2.195

A. Mission Description and Budget Item Justification:

Provide a single integrated C2 structure across the Department of Defense supporting every echelon of command from national to tactical. Transform the existing set of dedicated, single purpose command and control (C2) systems into an integrated framework to support the flow of information into the command structure and enhance decision. Assure policies and a strategy for a unified, flexible, and adaptable full-spectrum command and control capability for warfighters and senior leaders within a globally connected common information environment (CIE). Support the Joint Staff, JFCOM, and STRATCOM in development of an information integration and decision portfolio of services and applications that will decompose existing C2 programs of record into essential capabilities supporting Joint Operating Concepts and Joint Mission Essential Functions.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost		1.843	1.966	2.002
RDT&E Articles Quantity *(as applicable)				

FY 2004 Accomplishments: N/A

FY 2005 Plans: ($1.843 million)

- Produce Converged C2 Capabilities, C2 Vision, DoD C2 Policy and C2 Operational Concept
- Development, coordination and implementation of C2-related ontologies, taxnonomies, and registries.
- Development, coordination and implementation of policy and directives necessary to achieve the converged C2 capabilities.
- Development, evaluation and application of C2 metrics criteria to guide C2 convergence from national through Tactical levels of C2.
- Specify overarching system engineering process
- Development of Initial Capabilities Document (ICD)
- Development of global C2 applications and services information integration framework.

FY 2006 Plans: ($1.966 million)

- Continue all efforts initiated in FY 2005.
- Developing overarching policies to integrate or migrate C2 systems for senior leadership into a net-centric environment.
- Assist the COCOMS/Services in articulating C2 net-centric concepts and top level requirements that must be addressed by the JCIDS process.
- Work with Joint Staff, Services and COCOMs on the development of Net-centric C2 Functional Area Analysis (FAA/Functional Needs Analysis (FNA)/Functional SolutionAnalysis (FSA) as appropriate.

FY 2007 Plans: ($2.002 million)

- As the net-centric environment evolves, update published C2 policies and concepts.
- Build on all previous efforts to accomplish C2 capability gap, shortfall, and overlap assessments and institutionalize the process.
- Influence Programs of Record based on identified gaps and overlaps

C. Other Program Funding Summary:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
O&M, DW (PE0902198D8Z)		3.000	3.000	3.000	3.000	3.000	3.000	3.000	21.000

D. Acquisition Strategy: N/A

E. Performance Metrics:

- Successfully develop, coordinate, and publish DOD C2 policies and operational concepts.
- Establishment of an information integration and decision portfolio of C2 services and applications to demonstrate selected capabilities.
- Development of Dynamic Operational Communities of Interest services based on the capabilities provided by the NCES Program.
- Establishment of an ontological framework and XML data model to permit the meta-tagging of information integration decision portfolio data at the strategic and national C2 level in a manner consistent with other DoD data strategies and modeling efforts.

Exhibit R-2, RDT&E Budget Item Justification						Date: February 2005		
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: General Support to USD(Intelligence) PE 0605200D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0	7.690	5.282	5.445	5.689	5.677	5.720	5.853
Intelligence Support	0	0.721	.764	0.844	0.882	0.879	0.885	0.905
Resource Database Support	0	0.259	.281	0.285	0.286	0.283	0.287	0.298
Information Operations	0	3.710	4.237	4.316	4.521	4.515	4.548	4.650
Foreign Supplier Assessment Ctr	0	3.000	0.0	0.0	0.0	0.0	0.0	0.0

A. Mission Description and Budget Item Justification:
Intelligence and Resource Database Support are technical and resource management activities that serve the OUSD(I) organization. Information Operations contains classified efforts. Foreign Supplier Assessment Center is an FY05 Congressional add.

B. Program Change Summary: (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY2007
Previous President's Budget	0	4.830	5.164	5.326
Current President's Budget	0	7.690	5.282	5.445
Total Adjustments		+2.860	+0.118	+0.119
Congressional program reductions		-0.140		
Congressional rescissions				
Congressional increases		+3.000		
Other adjustment			+0.118	+0.119

Change Summary Explanation: FY 2005: New program element. These efforts were previously funded in 0605710D8Z.
$3.000 Congressional add for Foreign Supplier Assessment Center; $0.140 undistributed congressional reductions
FY 2006: Department adjustments
FY 2007: Department adjustments

A. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics: N/A

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E,DW BA 6				Project Name and Number: Intelligence Support				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Intelligence Support	0	0.721	0.764	0.844	0.882	0.879	0.885	0.905
RDT&E Articles Quantity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A. Mission Description and Budget Item Justification:

The program focuses on technologies and their applications on activities of the OUSD(I), and includes evaluations of concepts, technology development, and feasibility studies related to intelligence processes, shortfalls, and requirements, and affects intelligence policy, planning and operational guidance.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.0	0.721	0.764	0.844
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: Not applicable

FY 2005 Accomplishments: Mission Support $ 0.721

FY 2006 Plans: Mission Support $0.764

FY 2007 Plans: Mission Support $0.844

C. Other Program Funding Summary: Not Applicable

D. Acquisition Strategy: Not Applicable

E. Major Performers: Not applicable

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E,DW BA 6				Project Name and Number: Resource Database Support				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Resource Database Support	0 .0	0.259	0.281	0.285	0.286	0.283	0.287	0.298
RDT&E Articles Quantity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A. Mission Description and Budget Item Justification:

Provides on and offsite operational, technical and process support, to include development of major improvements to the existing mechanisms/applications used by OUSD(I) to meet PPBE requirements and the timely and accurate production of JMIP/TIARA Congressional Justification Book (CJB). Supports transition from current applications and databases to an integrated automated resource management system.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.0	0.259	0.281	0.285
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: Not applicable

FY 2005 Accomplishments: Initiated design and development of a resource database for the purpose of capturing, tabulating, and reporting all elements of Intelligence funding within the DoD to meet PPBE and CJB requirements.

FY 2006 Plans: Provide database maintenance, software updates, and technical support to system users and managers to meet PPBE and CJB requirements.

FY 2007 Plans: Continue to sustain database maintenance, software updates, and technical support to system users and managers to meet PPBE and CJB requirements.

C. Other Program Funding Summary: Not applicable

D. Acquisition Strategy: Not applicable

E. Major Performers: Not applicable

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E,DW BA 6				Project Name and Number: Information Operations				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Information Operations	0.0	3.710	4.237	4.316	4.521	4.515	4.548	4.650
RDT&E Articles Quantity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A. Mission Description and Budget Item Justification:
Information Operations contains classified programs.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0	3.710	4.237	4.316
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: Not applicable

FY 2005 Accomplishments: Details are classified.

FY 2006 Plans: Details are classified.

FY 2007 Plans: Details are classified.

C. Other Program Funding Summary: Not applicable

D. Acquisition Strategy: Not applicable

E. Major Performers: Details are classified.

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E,DW BA 6				Project Name and Number: Foreign Supplier Assessment Center (FSAC)				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Foreign Supplier Assessment Center	0.0	3.000	0.0	0.0	0.0	0.0	0.0	0.0
RDT&E Articles Quantity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A. Mission Description and Budget Item Justification:

The FSAC's goal is to ensure that the U.S. Government is fully aware of foreign involvement in DoD programs by conducting a counterintelligence and security due diligence in the review of foreign suppliers. The FSAC will assess current and prospective foreign suppliers of products and services, including components for weapons systems, automation hardware, and various forms of software, to the DoD. The number of foreign prime contractors identified in the WHS 350 database alone was over 4,500 in FY03, which does not include subcontractors. The FSAC effort is intended to provide a comprehensive look at the entire DoD supplier base – to eventually examine all tiers of suppliers, address the criticality of subsystems, components, piece-parts, and materials, identify linkages among transnational organizations, and to assess vulnerabilities and potential threats. The resulting product will include a company profile, threat assessment, and recommended countermeasures, which will be available in the FSAC database to U.S. Government decision-makers.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.0	3.000	0.0	0.0
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: See R-2 for PE 0605710D8Z.

FY 2005 Accomplishments:

- Conduct analysis of prime DoD contractors in order to identify foreign suppliers of services and products.
- Using open source data and commercially available services to include Dun & Bradstreet and LexisNexis, conduct a review of contractors claiming they provide supplies and services to DoD. Analyze these suppliers and compare the results with the analysis of prime DoD contractors in an attempt to identify foreign content and assess vulnerabilities inherent in that content

- Using collateral all-source intelligence sources determine if foreign suppliers or potential suppliers supporting DoD programs have attempted or will attempt to control, influence or illegally acquire technologies critical to U.S. war fighting capabilities.
- Conduct threat assessments of specific foreign suppliers identified by DoD.
- Develop and implement a Quality Assurance Program to ensure analytical methodology and product deliverable remain consistent with Government-identified requirements.
-Develop a Request For Information (RFI) management and tracking mechanism to ensure all tasks are fully serviced.

FY 2006 Plans: Not applicable

FY 2007 Plans: Not applicable

C. Other Program Funding Summary: Not applicable

D. Acquisition Strategy: Not applicable

E. Major Performers: MZM Inc.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: Classified Programs C3I PE 0605710D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	34.093	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

Classified efforts. FY2004 received two Congressional adds, Automated Speech Recognition Technology, and Foreign Supplier Assessment Center.

Program Accomplishments and Plans:

FY 2004 Accomplishments:

- Automated Speech Recognition Technology ($18.000)

  - Develop and test technological modifications to the CVC helmet to improve armored crewman communications in an operational Bradley/Abrams operating environment

  - Evaluate and refine existing technologies to support PEO Soldier/Land Warrior voice communications, specifically, providing clear voice communications for the dismounted infantry

  - Explore technology that can be developed and integrated into signal recognition and identification to provide functionality which can be used to identify, manipulate and defeat the threat posed by remotely controlled IEDs

  - Conduct research of signal separation and manipulation. The ability to identify specific wave lengths, manipulate the wave and control the wave will improve the battlefield application of radars.

  - Integration of the Automated Speech Recognition for Command and Control to authenticate crewman voices providing improved levels of safety/security and impact reduction in total cost of ownership with full integration

- Foreign Supplier Assessment Center ($3.600)

  - Conduct analysis of prime DoD contractors in order to identify foreign suppliers of services and products

  - Using open sources and commercially available services to include Dun & Bradstreet and LexisNexis, conduct a survey of contractors claiming they provide supplies and services to DOD. Analyze these suppliers and compare the results with analysis of prime DoD contractors in an attempt to identify foreign content and assess vulnerabilities inherent in that content.

  - Using open sources and commercially available services to include Dun & Bradstreet and LexisNexis, determine if foreign suppliers or potential suppliers supporting DOD programs have attempted or will attempt to control, influence or illegally acquire technologies critical to U.S. warfighting capabilities.

- Classified ($12.493)

FY 2005 Accomplishments:

- Not applicable

FY 2006 Plans:

- Not applicable

FY 2007 Plans:

- Not applicable

B. **Program Change Summary:** (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	34.281	0	0	0
Current President's Budget	34.093	0	0	0
Total Adjustments	-0.188			
Congressional program reductions				
Congressional rescissions				
Congressional increases				
Other adjustments	-0.188			

Change Summary Explanation:
FY 2004: Miscellaneous reductions

C. Other Program Funding Summary: Not Applicable

D. Acquisition Strategy: Not Applicable

E. Performance Metrics: Not Applicable.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E/Defense Wide BA6				R-1 Item Nomenclature: Small Business Innovation Research (SBIR) Administration, PE 0605790D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	1.484	3.440	1.983	2.041	2.194	2.195	2.240	2.291

A. Mission Description and Budget Item Justification:

(U) The Small Business Innovation Research (SBIR) Program and the Small Business Technology Transfer (STTR) Program fund approximately $1.1 billion annually in mission oriented research and development projects at small technology companies. The purpose of the program is to stimulate the development of new technologies to improve U.S. military and economic capabilities. The SBIR/STTR Program is mandated by public laws (PL) 97-219, PL 99-443, PL 102-564, PL 106-554, and PL 107-50 and is codified in 15 USC 638. The Department of Defense (DoD) SBIR/STTR Program strives to encourage scientific and technical innovation in areas specifically identified by participating DoD components.

(U) DoD components participating in the SBIR/STTR Program include the: Army , Navy, Air Force, Defense Advanced Research Projects Agency (DARPA), Missile Defense Agency (MDA), Defense Threat Reduction Agency (DTRA), U.S. Special Operations Command (SOCOM), Chemical-Biological Defense Program, National Geospatial-Intelligence Agency (NGA), and the Office of Secretary of Defense (OSD). DoD components participating in the STTR Program include the: Army, Navy, Air Force, DARPA, MDA, and OSD.

(U) The SBIR/STTR Program is executed in three phases. The purpose of Phase I is to determine, insofar as possible, the scientific technical and commercial merit, and feasibility of ideas submitted under the SBIR/STTR Program. Phase II awards are made to firms that have been awarded a Phase I contract on the basis of the results of their Phase I effort and the scientific, technical, and commercial merit of the Phase II proposal. Phase II is the principal research or research and development effort and is expected to produce a well-defined deliverable prototype. Phase III SBIR/STTR efforts are not funded with SBIR/STTR funds and can be considered “follow-on” contracts to Phase II efforts. Under Phase III, companies participating in the SBIR/STTR Program are expected to obtain funding from the private sector and/or non-SBIR/STTR government sources to develop the prototype into a viable product or non-R&D service for sale in military and/or private sector markets.

(U) Since PL 102-564 prohibits the use of any of the SBIR budget to fund administrative costs of the program, program element (PE) 0605790D8Z is the only source of funds for the coordination, administration and execution of the Department’s SBIR/STTR Program. In addition to funding costs for program administration, coordination and execution, PE 0605790D8Z funds essential elements of the SBIR/STTR Program that are required by law including: (a) the development and maintenance of information systems and software

required for the measurement, evaluation, and effective management of the Department's SBIR/STTR R&D Program; (b) outreach to small technology companies, potential investors in such companies, SDBs WOSBs HBCU/MIs and others, to encourage and facilitate their participation in the SBIR/STTR Programs (e.g. conferences, trade shows, etc.); (c) preparation of the SBIR/STTR R&D solicitations and related publications; (d) support efforts such as administration of the various SBIR/STTR process action teams; (e) development and promulgation of guidance and reference materials to DoD contracting officers, technical monitors, and other personnel involved in administering the SBIR/STTR Programs; and (f) responding to requests for information relative to DoD's SBIR/STTR Program.

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	1.997	1.999	2.004	2.058
Current FY 2006 President's Budget	1.484	3.440	1.983	2.041
Total Adjustments	-0.513	1.441	-0.021	-0.017
Congressional program reductions	-0.085	-0.059		
Congressional rescissions				
Congressional increases		1.500		
Reprogrammings	-0.371			
SBIR/STTR Transfer	-0.057			
Other			-0.021	-0.017

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics: These funds are the only source for the coordination, administration and execution of the Department's SBIR/STTR Program. These funds provide for (1) the administration of at least 3 SBIR and 1 STTR Solicitation in FY 2005, (2) At least one Process Action Team during FY 2005, (3) Continual maintenance and upgrading of the information system and database of the DoD SBIR/STTR Program.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E: Defense Wide/Office of Force Transformation/BA 6				R-1 ITEM NOMENCLATURE PE: 0605799D8Z Force Transformation				
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	19.333	38.670	19.927	19.928	20.744	20.753	21.451	21.948

(U) A. Mission Description and Budget Item Justification:

The Office of Force Transformation efforts are directly linked to the broad elements of national and military strategy. This funding request supports the Director's five organizational objectives detailed in the R2a. This program is intended to perform general support of transformational RDT&E activities. Within these activities the office is sponsoring groundbreaking research and prototyping in selected areas that are considered vital to the advancement of transformation within the Department. Funding will be used to catalyze transformational activities such as experimentation and exploration of the ramifications of new concepts and technologies and their combination. Activities include; research, testing, studies, analysis and development of transformation articles ("prototype-like" system surrogates), which will enable advanced experimentation for the co-evolution of concepts and technologies. Examples of such activities include 1) the fielding of a prototype full-spectrum effects platform for use in urban operations that will have an integrated set of tactical capabilities that provide options to the ground warrior beyond those currently available, giving the warrior the most effective means to engage across the mission spectrum — essentially creating a new engagement model by shrinking the enemy's engagement zone in both time and space while expanding ours to create maximum advantage; and 2) the development of a transformational capability to re-direct directed energy (specifically laser energy) at the tactical level for tactical applications/effects. This initiative would pair a ground-based laser with a re-directed energy pod carried on a Predator B. If successful, it would provide ground commanders with a semi-persistent, ISR-strike platform that would perform all functions across the find-fix-track-target-engage (at the speed of light) - assess kill chain.

(U) B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	19.388	19.591	19.381	19.404
Current Budget Estimate Submission	19.333	38.670	19.927	19.928
Total Adjustments:	0.0	19.079	0.0	0.0
Congressional program reductions:	0.0	0.0	0.0	0.0
Congressional rescissions:	0.0	0.0	0.0	0.0

Exhibit R-2, RDT&E Budget Item Justification				Date: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E: Defense Wide/Office of Force Transformation/BA 6		R-1 ITEM NOMENCLATURE PE: 0605799D8Z Force Transformation		
Congressional increases:	0.0	20.0	0.0	0.0
Reprogrammings:	0.0	0.0	0.0	0.0
SBIR/STTR Transfer:	0.0	0.0	0.0	0.0
Other Adjustments:	-0.055	-0.921	0.546	0.524

(U) C. Other Program Funding Summary: Not Applicable.

(U) D. Acquisition Strategy: Not Applicable.

(U) E. Performance Metrics: The Office of Force Transformation (OFT) applies funding to achieve potentially high payoff transformational capabilities to satisfy deficiencies highlighted during a previous year Strategic Transformation Appraisal developed and presented by the Director, OFT to the Secretary of Defense. This appraisal identifies potential gaps and shortfalls in the overall DoD transformation effort thereby permitting a very focused application of RDT&E funding to help close those gaps the following year. To determine the impact of those selectively applied funds, the OFT assesses the extent to which the outcome of each project is embraced and furthered by either the military services and/or joint organizations such as Combatant Commands. Therefore, as the catalyst for transformation, the OFT continues to investigate areas where major impact can be derived from a selective application of limited RDT&E funds based on annual assessments of the state of transformation within the Department and the gaps highlighted as a result of those assessments.

Exhibit R-2a, RDT&E Project Justification							Date: September 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide, Office of Force Transformation/BA 6			PROGRAM ELEMENT: 0605799D8Z		PROJECT NAME AND NUMBER Force Transformation/Project #799		
Cost ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	19.333	38.670	19.927	19.928	20.744	20.753	20.451	21.948

(U) A. **Mission Description and Budget Item Justification.** The Office of Force Transformation (OFT) is the principal advisor to the SecDef on transformation within the DoD and is tasked to be the catalyst for transformation within the Department. This funding request supports the Director's five organizational objectives for this office, which are described below. This program is designed to provide general support to the overall DoD transformation effort through the implementation of a variety of focused RDT&E activities. Within these activities the office is sponsoring groundbreaking research and prototyping in selected areas that are considered vital to the advancement of and provide the greatest leverage for transformation within the Department. Funding will be used to catalyze transformational activities such as experimentation and exploration new concepts and technologies. Activities include; research, testing, studies, analysis and development of transformation articles ("prototype-like" system surrogates), which will enable advanced experimentation for the co-evolution of concepts and technologies.

(U) B. **Accomplishments/Planned Program.** In FY 2005 this funding supported activities such as:

1) The development of an operationally responsive, tailorable, space capability, with two major and distinct parts – the launch vehicle and the payload. Characteristics of the launch vehicle desired included low-cost and launch on-demand. The payload seeks to be highly modular, contain highly automated micro-satellite buses, common interfaces, and tasking and data dissemination using SIPRNET protocols — a concept now known as Operationally Responsive and Experimental Adaptability for Space Based Systems;
2) The development of an advanced technology water craft that can feature high-speed with efficiency (flat power curves), smooth ride quality in high sea states (shock mitigation), high payload-fractions (ease of re-configurability), and stability at all speeds— an effort known as "Stiletto";
3) The experimentation with advanced technology ground platforms and their associated support systems to include active defense systems, rapid fire denial systems, and non-lethal, projectile delivery systems—an effort known as Project Sheriff;
4) The examination of the feasibility of redirecting laser energy through an airborne relay mirror system to provide firepower/ signal affects beyond line of sight/ over the horizon.

Through this program, the Office of Force Transformation assisted in furthering the U.S. military transformation efforts in support of the overall transformation goals of the Department. This support was guided by the following set of objectives to maximize these efforts with funding budgeted for and applied to each area:

FY 2004	FY 2005	FY 2006	FY 2007	Description
	($ in Millions)			
$0.973	$0.979	$0.967	$0.968	Objective 1: To make force transformation an integral element of DoD corporate and national defense strategy effectively supporting the four strategic pillars of national military strategy.
$5.9	$5.881	$5.6	$5.6	Objective 2: To change the force and its culture from the bottom up through the use of experimentation, operational prototyping and the creation of new knowledge.
$3.93	$3.921	$4.18	$4.18	Objective 3: To implement Network Centric Warfare (NCW) as the theory of war for the information age and the organizing principle for joints concepts, capabilities, and systems.
$1.78	$1.789	$1.8	$1.8	Objective 4: To get the decision rules and metrics right and cause them to be applied enterprise wide.
$6.75	$26.100	$7.38	$7.38	Objective 5: To discover, create or cause to be created new military capabilities to broaden the capabilities base and to mitigate risk.
$19.333	$38.670	$19.927	$19.928	TOTAL

In addition to the FY 2005 accomplishments described above, an important secondary output of these efforts was the establishment of new business models for DoD to further investigate, new concept/technology pairing that created large leaps in capabilities, and potential cultural changes within DoD as a result of understanding the impact of this R&D effort.

In FY 2006 and beyond, the office will continue the development and fielding of a prototype full-spectrum effects platform for use in urban operations that will have an integrated set of tactical capabilities that provide options to the ground warrior beyond those currently available. Other focus areas will include developing near-term paths to ***Coordinate with Coherence*** large numbers of geographically dispersed networked assets providing a venue for developing operational experience for Distributed Operations and the development of a capability to re-direct directed laser energy at the tactical level for tactical applications/effects.

(U) C. **Other Program Funding Summary**. N/A

(U) D. **Acquisition Strategy**: This program represents a continuing level of effort supporting the research, the study and analysis, and the development of a wide range of new concepts and technologies that directly support the transformation vision and goals of the Secretary of Defense and the Department. The deliverables from each project represent a keen understanding of the national and military strategies and the linkages with the transformation effort, and what new capabilities, if discovered and delivered, better support the execution of those strategies.

(U) E. **Major Performers:** The following government faculties received $10 million or more to support FY 2004 Office of Force Transformation projects: Naval Research Laboratory. We anticipate that the Air Force Research Laboratory and the Naval Underwater and Surface Warfare Centers will each receive $10 Million or more in funding to support FY 2005 projects.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
DEFENSE-WIDE, RDT&E (400) BUDGET ACTIVITY SIX				DEVELOPMENTAL TEST AND EVALUATION PE 0605804D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	11,119	8,676	8,873	9,060	9,473	9,498	9,692	9,913

A. Mission Description and Budget Item Justification: This Research Category 6.5 Program Element supports technical analysis and evaluation by Developmental Test & Evaluation (DT&E) of the Department's weapons systems to determine the adequacy of system test program structure and development plans, substantiation of technical performance requirements achievement, identification of weapon system cost performance trade-offs / design risks, system certification for Operational Test & Evaluation, and ensures DT&E Programs are sound, well-executed and sufficiently address system's ability to meet Warfighter's needs.

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	8.808	8.882	8.962	9.143
Current FY 2006 President's Budget Submission:	11.119	8.676	8.873	9.060
Total Adjustments	+2.311	-0.206	-0.089	-0.083
Congressional program reductions	-0.266	-0.206		
Congressional rescissions				
Congressional increases				
Reprogrammings	+2.800			
SBIR / STTR Transfer	-0.223			
Other:			-0.089	-0.083

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics: Performance in this program is monitored using instances of the incorporation of DT&E policies, best practices, procedures, methods, and tools for the conduct of sound, well-executed developmental test programs; completion of rebaselining DAU T&E certification courses; completion of a DoD M&S Master Plan for Acquisition; and development of an OTRR readiness evaluation process.

Exhibit R-2a, RDT&E Project Justification								February 2005
DEFENSE-WIDE, RDT&E (400) BUDGET ACTIVITY SIX				DEVELOPMENTAL TEST AND EVALUATION PE 0605804D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Developmental Test and Evaluation	11,119	8,676	8,873	9,060	9,473	9,498	9,692	9,913

A. Mission Description and Budget Item Justification: This Research Category 6.5 PE supports technical analysis and evaluation by Developmental Test and Evaluation (DT&E) of the Department's weapons systems to determine the adequacy of system test program structure and development plans, substantiation of technical performance requirements achievement, identification of weapon system cost performance trade-offs/design risks, system certification for Operational Test and Evaluation (OT&E), and ensures DT&E Programs are sound, well-executed and sufficiently address system's ability to meet Warfighter's needs.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/Effort/Cost	11,119	8,676	8,873	9,060

(U) FY 2004 Accomplishments:

T&E Independent Activities:

- Review, coordination, and approval of 49 Test and Evaluation Master Plans (TEMPs) (Draft and Service Approved). Reduced Departmental TEMP processing time 12% over previous year.
- Review and coordination on all significant program documentation to include: Defense Acquisition Executive Summaries (DAES); Acquisition Decision Memoranda (ADM); and, other documents.
- Analyses of programs for compliance with DT&E policies identified in DoD 5000 acquisition policy, and monitoring of on-going developmental test program activities, through participation in local and out-of-town developmental test program fora.
- Defined vigorous and well-executed test programs, and requirements for conducting more robust Operational Test Readiness Reviews across the DoD, through development of T&E chapter of new DoD 5000 Series Guidebook.
- Comprehensive, detailed review of F/A-22 test program readiness to enter IOT&E identified areas needing additional testing. This resulted in USD(AT&L) direction to Air Force to complete that testing to ensure successful IOT&E.
- Kept leadership aware of V-22 progress and emerging issues, with no surprises. Ensured Navy had rigorous plan to resolve software technical problem. V-22 test program remains event driven—increased likelihood of IOT&E success.
- Laid out alternatives, justification, and rationale why testing and maintaining the Self Defense Test Ship (SDTS) capability is critical, resulting in USD(AT&L) directing Navy to fund SDTS and incorporate this testing into ship programs as a core test resource for critical defensive system testing by multiple ship systems in development.
- Ensured DTRMC Budget Certification Report and Strategic Plan clearly defined acquisition and DT&E community needs and requirements.

- Identified issues with Services' aerial target capabilities and availability, resulting in USD(AT&L) direction to Air Force and Navy to develop plans to reduce shortfalls in these critical test assets.
- Ensured Navy had rigorous plan to resolve V-22 software technical problem. V-22 test program remains event driven—increased likelihood of IOT&E success.
- Led effort to identify actions necessary to move Joint Distributed Engineering Plant program forward. Enhanced likelihood that key capability needed to support Department joint mission capability will be accomplished.

(U) FY 2005 Plans:

T&E Independent Activities: Includes funding for technical analysis and evaluation of the developmental testing of the more than 220 major weapon acquisition programs. Specifically, the DT&E organization, within Defense Systems, is the USD(AT&L) focal point for all activities related to developmental test and evaluation as outlined in Section 133, Title 10, United States Code.

- Develop plan to expand Joint Distributed Engineering Plant (JDEP). Investigate JUCAS JDEP plan.
- Provide for a professional SE workforce by rebaselining DAU T&E certification courses and updating DAU TST 301 course. Lead T&E FIPT.
- Participate in M&S / EXCIMS / Working Groups. Review DoD M&S Master Plan for Acquisition.
- Develop OTRR readiness evaluation Process.
- Participate in Business Initiative Council (BIC) on TEMP preparation, review, and approval process by developing streamlined coordination and approval process for OSD. Assess integration of a common Test and Training Enabling Architecture into all new range systems.
- Improve and expand industry and professional association (ITEA / NDIA) interfaces.
- Address Congressional, GAO, IG Actions regarding general T&E / policy issues.
- As USD(AT&L) representative to the DOT&E-led IPT to develop Joint Test Transformation Roadmaps, assured DT&E infrastructure and capabilities support joint mission capability testing were included in SPG action on what changes the DoD needs to make.
- Ensured Joint Test and Evaluation test programs are adequate, feasible, executable, and designed to accomplish chartered goals.
- Serve as interface to DTRMC, participate on Strategic Planning Working Group by conducting range and resource investment planning, participate in Range Commander's Council, and Defense Test and Training Steering Group. Make recommendations on range improvement and modernization requirements and funding.
- Develop effective DT&E policies, best practices, procedures, methods, and tools. Ensure DT&E policy is adequate for directing the conduct of sound, well-executed developmental test programs.
- Evaluate target requirements, status, shortfalls, and impact on weapon system testing adequacy. Oversee plans to reduce shortfalls in these critical test assets and assure these critical assets, necessary for adequate testing, are available. Support SM-6 Target IPT.
- Participate in Systems Mission and Integration (SMI) Executive Working Group.
- Support NAS T&E Study.

(U) FY 2006 Plans:

T&E Independent Activities: Includes funding for technical analysis and evaluation of the developmental testing of the more than 220 major weapon acquisition programs. Specifically, the DT&E organization, within Defense Systems, is the USD(AT&L) focal point for all activities related to developmental test and evaluation as outlined in Section 133, Title 10, United States Code.

- Continue planning to expand Joint Distributed Engineering Plant (JDEP).
- Provide for a professional SE workforce. Continue rebaselining DAU T&E certification courses and updating DAU TST courses.
- Participate in M&S / EXCIMS / Working Groups.
- Improve and expand industry and professional association (ITEA / NDIA) interfaces.
- Address Congressional, GAO, IG Actions regarding general T&E / policy issues.
- Ensure Joint Test and Evaluation test programs are adequate, feasible, executable, and designed to accomplish chartered goals.
- Serve as interface to DTRMC, participate on Strategic Planning Working Group. Conduct range and resource investment planning, participate in Range Commander's Council, and Defense Test and Training Steering Group. Make recommendations on range improvement and modernization requirements and funding.
- Develop effective DT&E policies, best practices, procedures, methods, and tools. Ensure DT&E policy is adequate for directing the conduct of sound, well-executed developmental test programs.
- Participate in SMI Executive Working Group.
- Support NAS T&E Study.

(U) FY 2007 Plans:

T&E Independent Activities: Includes funding for technical analysis and evaluation of the developmental testing of the more than 220 major weapon acquisition programs. Specifically, the DT&E organization, within Defense Systems, is the USD(AT&L) focal point for all activities related to developmental test and evaluation as outlined in Section 133, Title 10, United States Code.

- Continue planning to expand Joint Distributed Engineering Plant (JDEP).
- Provide for a professional SE workforce. Continue rebaselining DAU T&E certification courses and updating DAU TST courses.
- Participate in M&S / EXCIMS / Working Groups.
- Improve and expand industry and professional association (ITEA / NDIA) interfaces
- Address Congressional, GAO, IG Actions regarding general T&E / policy issues.
- Ensure Joint Test and Evaluation test programs are adequate, feasible, executable, and designed to accomplish chartered goals.
- Serve as interface to DTRMC, participate on Strategic Planning Working Group. Conduct range and resource investment planning, participate in Range Commander's Council, and Defense Test and Training Steering Group. Make recommendations on range improvement and modernization requirements and funding.

- Develop effective DT&E policies, best practices, procedures, methods, and tools. Ensure DT&E policy is adequate for directing the conduct of sound, well-executed developmental test programs.
- Participate in SMI Executive Working Group.
- Support NAS T&E Study.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-2, RDT&E Budget Item Justification						Date: February 2005		
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: IT Rapid Acquisition PE 0303169D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		4.639	5.580	4.909	5.160	5.185	4.637	5.129

A. Mission Description and Budget Item Justification:

The Department must rapidly transform its processes in order to better support the agile warfighter. This PE is dedicated to Rapid Acquisition Incentives – Net Centricity (RAI-NC) which serve DoD by providing RDT&E proof-of-concept early implementation of key initiatives targeted at advancing and moving the Mission Areas of DoD towards Net Centricity. For example, a coherent and timely transition across DoD Enterprise networks and infrastructure to the next generation of the Internet Protocol, IP version 6 (IPv6) is critical to leveraging the power of information by the business and warfighting mission areas through net-centric operations/warfare. The PE permits accelerating domain support processes thru rapid proof of concept development and early implementation.

RAI-NC provides funding for Net Centric initiatives that directly support and facilitate the transformation of the DoD enterprise. This effort is consistent with the Department's strategic goals to: enable net-centric operations and warfare, reduce costs; improve efficiency; increase effectiveness by improving the efficiency and effectiveness of process redesign; business systems modernization; strategic sourcing; infrastructure reductions; and optimal-sized inventories. The objective of RAI-NC is to accelerate DoD's net centric transformation in support of the warfighter. Fully achieving net-centricity requires the ubiquity, mobility, security and performance achievable through implementation of the value added features of IPv6. The scope of Rapid Acquisition Incentives – Net Centricity encompasses defense policies, processes, people, technologies and systems that guide, perform or support aspects of warfighter support processes within the Department. Each RAI-NC initiative provides proof of concept sustainability, as well as the scalability necessary for Domain enterprise wide implementation that will allow end-to end accessibility to net-centric based decision-making information. Successful implementation will result in more reliable, accurate and timely net centric management information upon which managers can make more effective business decisions in a timely manner for the Department.

RAI-NC enables the acceleration of DoD efforts to implement network centric operational environments while providing a secure, flexible, reliable, affordable, integrated network to achieve high effectiveness in joint and combined operations. This program employs RDT&E funds to plan, develop, prototype and oversee proof of concept initiatives. Successful initiatives with supporting business cases demonstrating the achieved goals and outcomes and mission area support will be allowed to enter full deployment. This program is funded under BA-6, Management Support because it includes studies and analyses in support of R&D efforts.

FY 2004 Accomplishments: N/A

FY 2005 Plans: ($4.639 million)

The requested FY 2005 funding will allow the Department to continue prototyping net centric initiatives within a controlled environment to fully assess emerging net centric technologies and tools. The RAI-NC process employed for FY 2005 places increased emphasis on Net Centricity and Domain oversight, as well as incorporation of lessons learned from the FY 2004 process. Selected initiatives are required to demonstrate net centric capabilities that will:

- Effectively merge the visions and goals of DoD transformation and net centricity into rapidly deployed, common solutions that will accelerate the transformation of DoD business Domains.
- Accelerate achieving end-to-end net-centric operations/warfare through the timely, secure and coherent transition across DoD networks, applications and infrastructure to a common networking protocol, IPv6,
- Promote Domain teaming and help overcome existing barriers to executing the Department's transformation goals and obtaining a net centric environment.
- Permit more efficient DoD mission support by enabling quicker fielding of both net centric information systems and weapons systems
- Accelerate force transformation and enable DoD processes to be more timely and efficient (reduce cost of support), to include eBusiness solutions
- Permit DoD to accelerate the rate of lowering the cost of doing business
- Reduce information systems risks and costs, by speeding up proof of concept demonstrations and providing business case based implementation decisions.

FY 2006 Plans: ($5.580 million); FY 2007 Plans ($4.909 million)

Conduct proofs of concept early implementation that advance the transformation of DoD processes, further net centric operations and provide business case based enterprise solutions. RAI-NC efforts will focus on enabling a coherent and timely transition across DoD Enterprise networks and infrastructure to the next generation of the Internet Protocol, IP version 6 (IPv6) that will allow the business and warfighting mission areas to leverage the power of information through net-centric operations/warfare. While the base IPv6 standards are robust and provide rough parity with IPv4 capabilities; many of the advanced features of IPv6 needed to fully enable net-centricity are still being developed. A DoD-wide development, engineering, testing and evaluation effort provides an opportunity to drive DoD needs into those features and accelerate the availability of products with those needed features (such as quality of service, mobility, support of convergence). It is expected that these FY 2006 efforts will deliver significant improvements to the

Domains and serve as change agents across DoD, thereby accelerating both the timeliness and quality of decision-making and information flow. RAI-NC initiatives that accelerate DoD's net centric transformation in direct support of the warfighter will include:

- Identify and promote commodity-based software programmable radio technologies to rapidly respond to warfighter requirements and reduce costs
- Provide for rapid prototyping, test and demonstration of commodity-based software programmable radio solutions utilizing evolving technologies for near and long term solutions.
- Focus on incorporating solutions from outside programs of records:
  - Modular software programmable radio approach enables incorporation of new offerings such as high band transceiver modules into open architecture designs
  - Encourage and provide a mechanism for test of commercial module upgrade offerings or alternative techniques to enhance capability and reduce cost
  - Foster P3I technology improvements into spirals of programs of records
  - Rapid development and demonstration of specific capabilities
  - Utilize COTS, IRAD, NDI, and CRADA Products
  - Take advantage of exercises and demonstrations to test products
  - Industry, Academia, and Government Lab participation
- Provide migration path to warfighter systems

B. Program Change Summary: (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget		19.958	19.854	19.843
Current President's Budget		4.639	5.580	4.909
Total Adjustments		-15.319	-14.274	-14.934
Congressional program reductions		-14.958		
Congressional rescissions, Inflation adjustments		-0.361	0.560	0.066
Congressional increases				
SBIR/STTR Transfer				
Reprogrammings			-14.834	-15.000

Change Summary Explanation:
FY 2005: Congressional Reduction–14.958 million; IT Reduction -0.249 million; Management Improvements -0.015 million; General Reduction -0.030 million; FFRDC Reduction -0.021 million; CAAS Reduction -0.046 million
FY 2006: Realigned for Net Centric Activities –14.834 million; Non-pay Purchase Inflation 0.641 million; Contracting Support -0.081 million
FY 2007: Realigned for Net Centric Activities –15.000 million; Non-pay Purchase Inflation 0.0151 million; Contracting Support -0.085 million

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics:

1. Effectively merge the visions and goals of DoD transformation and net centricity into rapidly deployed, common solutions that will accelerate the transformation of DoD business Domains.
2. Promote Domain teaming and help overcome existing barriers to executing the Department's transformation goals and obtaining a net centric environment.
3. Permit more efficient DoD mission support by enabling quicker fielding of both net centric information systems and weapons systems
4. Accelerate force transformation and enables business processes to be more timely and efficient (reduce cost of support), to include eBusiness solutions
5. Permit DoD to accelerate the rate of lowering the cost of doing business
6. Reduce information systems risks and costs, by speeding up proof of concept demonstrations and providing business case based implementation decisions

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: Intelligence Support to Information Operations PE 0305193D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	0	12.578	13.940	13.908	14.890	14.604	14.944	15.308
E-Space	0	0.731	0.786	0.785	0.798	.760	0.777	0.805
Human Factors and Intel Fusion	0	10.188	11.241	11.203	12.044	11.830	12.106	12.393
IO Indications and Warning	0	1.659	1.913	1.920	2.048	2.014	2.061	2.110

A. Mission Description and Budget Item Justification:
Intelligence Support to Information Operations contains classified programs. Details are provided in the classified Congressional Justification Book.

B. Program Change Summary: (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	0	12.878	13.350	13.336
Current President's Budget	0	12.578	13.940	13.908
Total Adjustments		-0.300	+0.590	+0.572
Congressional program reductions		-0.300		
Congressional rescissions				
Congressional increases				
Other Adjustments			+0.590	+0.572

Change Summary Explanation:

FY 2004: Not Applicable
FY 2005: New program element; Undistributed congressional reductions
FY 2006: Department adjustments
FY 2007: Department adjustments

C. Other Program Funding Summary: Not Applicable

D. Acquisition Strategy: Not Applicable

E. Performance Metrics: Details are provided in the classified Congressional Justification Book.

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E,DW BA 6				Project Name and Number: E-Space				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
E-Space	0	0.731	0.786	0.785	0.798	0.760	0.777	0.805
RDT&E Articles Quantity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A. Mission Description and Budget Item Justification:
Intelligence Support to Information Operations (E-Space) contains classified programs. Details are provided in the classified Congressional Justification Book.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0	0.731	0.786	0.785
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: Not applicable

FY 2005 Accomplishments: Details provided in the classified Congressional Justification Book.

FY 2006 Plans: Details provided in the classified Congressional Justification Book.

FY 2007 Plans: Details provided in the classified Congressional Justification Book.

C. Other Program Funding Summary: Not applicable

D. Acquisition Strategy: Not applicable

E. Major Performers: Details provided in the classified Congressional Justification Book.

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E,DW BA 6				Project Name and Number: Human Factors and Intelligence Fusion				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Human Factors and Intelligence Fusion	0	10.188	11.241	11.203	12.044	11.830	12.106	12.393
RDT&E Articles Quantity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A. Mission Description and Budget Item Justification:
Intelligence Support to Information Operations (Human Factors and Intelligence Fusion) contains classified programs. Details are provided in the classified Congressional Justification Book.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0	10.188	11.241	11.203
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: Not Applicable

FY 2005 Accomplishments: Details provided in the classified Congressional Justification Book.

FY 2006 Plans: Details provided in the classified Congressional Justification Book.

FY 2007 Plans: Details provided in the classified Congressional Justification Book.

C. Other Program Funding Summary: Not applicable

D. Acquisition Strategy: Not applicable

E. Major Performers: Details provided in the classified Congressional Justification Book.

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E,DW BA 6				Project Name and Number: Information Operations Indications and Warning				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
IO Indications and Warning	0	1.659	1.913	1.920	2.048	2.014	2.061	2.110
RDT&E Articles Quantity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A. Mission Description and Budget Item Justification:
Intelligence Support to Information Operations (IO Indications and Warning) contains classified programs. Details are provided in the classified Congressional Justification Book.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0	1.659	1.913	1.920
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: Not applicable

FY 2005 Accomplishments: Details provided in the classified Congressional Justification Book.

FY 2006 Plans: Details provided in the classified Congressional Justification Book.

FY 2007 Plans: Details provided in the classified Congressional Justification Book.

C. Other Program Funding Summary: Not applicable

D. Acquisition Strategy: Not applicable

E. Major Performers: Details provided in the classified Congressional Justification Book.