

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4		PE NUMBER AND TITLE 0605017D8Z - Reduction in Total Ownership Cost (RTOC)						
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate					
P017 Reduction in Total Ownership Cost Projects	23.685	24.359	24.647					

A. Mission Description and Budget Item Justification:

The Under Secretary of Defense (Acquisition, Technology & Logistics), (USD(AT&L)), defined the mission for the Reduction in Total Ownership Cost (R-TOC) program is the reduction of ownership costs for defense systems. The R-TOC program funds activities and initiatives that will:

1. Increase the reliability, maintainability, supportability and thus increase readiness of new or existing defense systems
2. Reduce logistics footprint
3. Generate future cost reductions in total ownership cost

These individual initiatives are complete efforts within themselves that yield complete redesigns that the Services are committed to put into production and operation. The initiatives optimize cost avoidance, ultimately reducing the operating and support costs for systems.

The Department has set an FY 2010 R-TOC goal of reducing the total defense systems inflation increase in Operations and Support (O&S) cost by 30 percent between FY 2004 and FY 2010. This Program Element (PE) provides a major portion of the program funding to achieve this goal. The successful demonstration of the R-TOC program initiatives should stimulate additional initiatives by the Services to achieve even greater cost avoidances.

Individual R-TOC Project Management rests with the Services and their Project Managers. Each Service has an active R-TOC Point of Contact (POC) for the initial interface between OSD and the R-TOC Project Managers.

The average Return on Investment (ROI) for FY 2008 projects (based on discounted cash flow calculations) is approximately 28:1 with \$1.176 billion in cost avoidances across the life cycle of the affected systems. These cost avoidances will be lost without the requested funding in FY 2009, which is needed to complete the projects begun with FY 2008 funding. The average Return on Investment (ROI) for these FY 2009 new start projects (based on discounted cash flow calculations) is approximately 72:1 with \$2.006 billion in cost avoidances across the life cycle of the affected systems.

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4	PE NUMBER AND TITLE 0605017D8Z - Reduction in Total Ownership Cost (RTOC)
---	---

<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010	
Previous President's Budget (FY 2008/2009)	25.006	24.765	25.089	
Current BES/President's Budget (FY 2010)	23.685	24.359	24.647	
Total Adjustments	-1.321	-0.406	-0.442	
Congressional Program Reductions				
Congressional Rescissions		-0.136		
Congressional Increases				
Reprogrammings	-0.769	-0.270		
SBIR/STTR Transfer	-0.504			
Other	-0.048		-0.442	

C. Other Program Funding Summary: Not applicable for this item.

D. Acquisition Strategy:

There is an annual call for proposed project plans in October. Projects are submitted by the Services annually in January. The project plan format is provided with the call for submission of Service projects. Each project plan contains:

1. Problem statement
2. Impact statement
3. Technical description
4. Risk analysis
5. Proposed phases
6. Expected deliverables and results or outcomes
7. Program management
8. Cost/benefit analysis
9. Schedule
10. Implementation plan

The project evaluation criteria are also provided as part of the call for use by the Services in arriving at their prioritized project list. There are five objective and six subjective categories for evaluation.

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY

PE NUMBER AND TITLE

RDTE, Defense Wide BA# 4

0605017D8Z - Reduction in Total Ownership Cost (RTOC)

The Services receive project plans and make a Service priority ranking based on detailed analysis of each proposed initiative against the eleven evaluation criteria. This priority ranking is sent to the OSD lead. Upon acceptance and approval of the projects by OSD, the projects are briefed to the R-TOC Forum and Congressional staff, as required. Funding is distributed equally between the Services based on priority and the evaluation process results.

Upon final funding approval, OSD transfers individual project funding to the appropriate funding sites that are provided by the Services. After receiving the project funding, the Services are responsible for the funding and management of the projects. OSD retains oversight and direction of the R-TOC Initiative through the OSD lead office.

A semi-annual Project Report format has been defined, approved by the Services, and is required for each funded project. These reports are submitted to the OSD R-TOC Initiative lead office. OSD analyzes project status, progress and project statistics and informs the Service POCs of any project problems. Projects are also required to report verbally at the quarterly R-TOC Forums, as appropriate.

E. Performance Metrics:

FY	Strategic Goals Supported	Existing Baseline	Planned Performance Improvement / Requirement Goal	Actual Performance Improvement	Planned Performance Metric / Methods of Measurement	Actual Performance Metric / Methods of Measurement
08	See below					
09	See below					
10	See below					

Comment:

The vision is that all defense systems will perform with increasing readiness and capability while avoiding increased operations and support costs and improve logistics footprint by institutionalizing the continuous implementation of innovative process and hardware improvement. Existing Baseline: FYDP O&S Costs for FY 2004; Planned Performance Improvement/Requirement Goal: The goal is to "maximize cost avoidance on total defense systems FY 2010 O&S costs by offsetting 30 percent of the inflation predicted from a FY 2004 baseline. Actual Performance Improvement: Unknown at this time. FY 2007 and FY 2008 projects are still in development and implementation. Planned Performance Metric/Methods of Measurement: Return on Investment (ROI) measured over the Life Cycle (LC) of each system. Actual Performance Metric/Methods of Measurement: Return of Investment (ROI) measured over the Life Cycle (LC) of each system.

The objective of each of the projects is the reduction of operations and support (O&S) costs for the affected systems. ROI is the primary performance metric for the projects and for the R-TOC initiative. Each project plan includes a cost/benefit analysis, which is based on discounted cash flow calculations of project investment costs and projected cost avoidances. OMB discount rates are used to provide real comparisons of future value against current uses of resources. Projected cost avoidances are based on engineering estimates of the benefits provided by project implementations. Sources of cost avoidances are defined as part of the project submittal and come from any O&S cost source (fewer spares, lower maintenance hours, faster turnaround times, reduced scheduled maintenance, etc.). Updated ROI calculations are part of the required semi-annual project reports to provide tracking of this metric.

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4		PE NUMBER AND TITLE 0605017D8Z - Reduction in Total Ownership Cost (RTOC)				PROJECT P017	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate				
P017 Reduction in Total Ownership Cost Projects	23.685	24.359	24.647				

A. Mission Description and Budget Item Justification:

The Under Secretary of Defense (Acquisition, Technology & Logistics), (USD(AT&L)), defined mission for the Reduction in Total Ownership Cost (R-TOC) program is the reduction of ownership costs for defense systems. The R-TOC program funds activities and initiatives that will:

1. Increase the reliability, maintainability, supportability and thus increase readiness of new or existing defense systems
2. Reduce logistics footprint
3. Generate future cost reductions in total ownership cost

These individual initiatives are complete efforts within themselves that yield complete redesigns that the Services are committed to put into production and operation. The initiatives optimize cost avoidance, ultimately reducing the operating and support costs for systems.

The Department has set an FY 2010 R-TOC goal of reducing the total defense systems inflation increase in Operations and Support (O&S) cost by 30 percent between FY 2004 and FY 2010. This Program Element (PE) provides a major portion of the program funding to achieve this goal. The successful demonstration of the R-TOC program initiatives should stimulate additional initiatives by the Services to achieve even greater cost avoidances.

Individual R-TOC Project Management rests with the Services and their Project Managers. Each Service has an active R-TOC Point of Contact (POC) for the initial interface between OSD and the R-TOC Project Managers.

The average Return on Investment (ROI) for FY 2008 projects (based on discounted cash flow calculations) is approximately 28:1 with \$1.176 billion in cost avoidances across the life cycle of the affected systems. These cost avoidances will be lost without the requested funding in FY 2009, which is needed to complete the projects begun with FY 2008 funding. The average Return on Investment (ROI) for these FY 2009 new start projects (based on discounted cash flow calculations) is approximately 72 with \$2.006 billion in cost avoidances across the life cycle of the affected systems.

B. Accomplishments/Planned Program:

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY 2008 Accomplishments	23.685		

Cost avoidances established for the below efforts are based on engineering estimates of the benefits provided by project implementations. Sources of cost avoidances are defined as part of the project submittal and come from any O&S cost source (fewer spares, lower maintenance hours, faster turnaround times, reduced scheduled maintenance, etc.). The average Return on Investment (ROI) for FY 2008 projects (based on discounted cash flow calculations) was approximately 28:1 with \$1.176 billion in cost avoidances across the life cycle of the affected systems.

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
RDTE, Defense Wide BA# 4	0605017D8Z - Reduction in Total Ownership Cost (RTOC)	P017

Army Projects: Two test units have been delivered and performance testing has been conducted on the first 2-Pallet Environmental Control System (ECS) prototypes for the HH-60M. Insensitive Munitions (IM) have been developed to make the GMLRS rockets less likely to violently react prematurely from external stimuli. Testing a modification to existing Stryker software to allow it to be loaded from a single connection and display the current software versions through the onboard equipment. Developed Condition Based Maintenance Software (CBMS) for Shadow aircraft that will deliver a fully qualified prognostic system ready for use by the field maintainers to predict whether the aircraft and/or system is physically capable of executing its assignment.

Stryker Software Load Version VDT

New Barrel Coating (120mm Abrams, FCS, NLOS-C)

HH-60M ECS

M113 X200 Spline Drive

UAS Prognostic Sensors

HIMARS IM

ECBC

SKOT Tools Sets

HIMARS GDU/FCU

Extraction Parachute (Cargo Drop)

M9 Mortar Base

Navy Projects: Gained efficiencies in the validation screening and brokering of shipboard maintenance projects and began implementation of Item Unique Identification (IUID) onboard operational Navy ships. Began shipboard demonstration of maintenance-free magnetic couplings on CVNs, which will reduce wear and improve life span of bearings and pump seals; as well as reduce the high cost of alignment and use of hazardous materials. Began procurement and use of infrared cameras to identify undersized or overloaded components and worn parts that increase heat and may result in shipboard fires. Developed tools to assist in determining hull fouling that creates drag and fuel inefficiencies, thereby aiding power conservation. Began transition to fiber optic built-in test equipment on F/A-18 E/F aircraft, which is minimizing aircraft downtime.

Common Ship: Ship's Material Condition Model

Common Ship: CVN Magnetic Coupling

H-60: Torque Shaft Lever / Support Bearings

Common Ship: IR Camera

Common: Power Conservation Management

F/A-18E/F: Fiber Optic Network

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4	PE NUMBER AND TITLE 0605017D8Z - Reduction in Total Ownership Cost (RTOC)	PROJECT P017
--	--	-------------------------------

Air Force Projects: Prototyped reliability predictor tools for select Air Force aircraft engines in support of AF Reliability Centered Maintenance program. Completed preliminary design and subsystem testing on a prototype system used to analyze lubricant debris particles in select turbofan engines in order to reduce replacement and maintenance costs. Delivered production-ready prototype of portable, extended wear, self powered, automatic bladder relief system for aircrew; re-designed device allows crewmember relief without unbuckling from ejection seat while reducing unit production cost.

B-1B: F101-GE-102

F-15/F-16: F110 X-Ray Fluorescence Portable Lube System Debris Analyzer

Advanced Composite Tower

Multiple Systems: Restoration of Dimensional Tolerances

F-16: Field Backstop Test data Collection and Analysis System

F-22: F119 Engine Ti Repair

F-22: F119 Engine Ni 100 Integrally Bladed Rotor Repair

AEWS: FPS-117 Radome Fleet Replacement

F-16: F110-GE-129/129B RCM Calculator

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
FY 2009 Plans		24.359		

The objective of each of the projects, listed below, is the reduction of operations and support (O&S) costs for the affected systems. ROI is the primary performance metric for the projects and for the R-TOC initiative. Each project plan includes a cost/benefit analysis, which is based on discounted cash flow calculations of project investment costs and projected cost avoidances. OMB discount rates are used to provide real comparisons of future value against current uses of resources. Projected cost avoidances are based on engineering estimates of the benefits provided by project implementations. Sources of cost avoidances are defined as part of the project submittal and come from any O&S cost source (fewer spares, lower maintenance hours, faster turnaround times, reduced scheduled maintenance, etc.). Updated ROI calculations are part of the required semi-annual project reports to provide tracking of this metric. The estimated Return on Investment (ROI) for FY 2009 projects (based on discounted cash flow calculations) is 72:1 with \$2.006 billion in cost avoidances across the life cycle of the affected systems.

Army Projects: Continue to pursue operation and maintenance savings thru projects that improve reliability, maintainability and supportability of Army systems. Qualify a smaller off-the-shelf FLIR System for use on the HH-60M MEDEVAC Helicopter. Develop and integrate a reflective barrier into the system skin between the refrigeration system and the sun thereby transferring heat to the surrounding environment and minimizing/diffusing heat transfer to the surface of the fielded refrigerated container. Determining material changes in the canopy fabric, suspension lines and/or structural enhancements to the basic design, will result in a much more robust design appropriate for high speed drogue applications.

HH-60M ECS

HIMARS IM

ECBC

Extraction Parachute (Cargo Drop)

Refrigeration Improvements (Container System)

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)**May 2009**

APPROPRIATION/ BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

RDTE, Defense Wide BA# 4**0605017D8Z - Reduction in Total Ownership Cost (RTOC)****P017**

AH-64 Hydraulic Hand Pump

AH-64 Servo

HH-60 FLIR

81mm Monopack

Guardrail AQL RF Antenna Panel

120mm Mortar M9 Baseplate

Navy Projects: Continue three current projects and begin eleven new projects. Power conservation measures and gained efficiencies through standardization are the major themes for Navy's FY09 projects. Navy will enhance propeller performance by minimizing surface roughness from bio-fouling and calcareous deposits. NAVSEA will define requirements for cathodic protection of Marine 5000 series aluminum alloys to reduce corrosion. NAVSEA will develop a solvent-free, high-build antifouling coating for ships and submarines, which will support the 12-year docking cycle for aircraft carriers. Improve shipboard surface coatings life span by implementing validated repeatable quantitative measures.

Common Ship: Power Conservation Management

F/A-18E/F: Fiber Optic Network

V-22 NLG Mech Improvement

Common Ship: Coating Surface Ship Propellers

ASE: F/A-18 SRA Pinpoint Routines

Common Ship: High Solids Antifoulant Coating

Common Ship: Cathodic Protection of Aluminum

ASE: Spectrometer Modification

NAVAIR: CMIS TDSA-KITMIS Migration

Common Ship: Surface Profile Tool

H-60: Blade D-ice Controller

F/A-18E/F: Fiber Optic Cable Restore

LCS PMO: S1000/SCORM Integration

Air Force Projects: Deliver updated F-16 avionics test stands capable of detecting intermittent faults in chassis wiring under realistic environmental conditions. Continue development and testing of reliability predictor tools for select Air Force aircraft engines to include interfacing with real-time data. Begin development of a system for the collection, storage, and retrieval and analysis of F-16 avionics test data; system will automate comparison of field and depot test results to determine and reduce the causes of non-repeatable faults. Develop a methodology to apply individual engine flight data, rather than average fleet statistics, to predict and schedule engine maintenance. Deliver and complete a field trial on a production-ready, cost-effective, lubricant debris particle analyzer to identify bearing failures on turbofan engines.

F-16: Field Backstop Test Data Collection and Analysis System

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4	PE NUMBER AND TITLE 0605017D8Z - Reduction in Total Ownership Cost (RTOC)	PROJECT P017
---	---	------------------------

F-22: F-119 Engine Ti Repair
 F-22: F-119 Engine NI 100 Integrally Bladed rotor (IBR) Repair
 AEWS: FPS-117 Radome Fleet Replacement
 F-16: F-110-GE-129/129B RCM Calculator
 F-16: F-110 Engine Interval Extension

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY 2010 Plans			24.647

The objective of each of the projects, listed below, is the reduction of operations and support (O&S) costs for the affected systems. ROI is the primary performance metric for the projects and for the R-TOC initiative. Each project plan includes a cost/benefit analysis, which is based on discounted cash flow calculations of project investment costs and projected cost avoidances. OMB discount rates are used to provide real comparisons of future value against current uses of resources. Projected cost avoidances are based on engineering estimates of the benefits provided by project implementations. Sources of cost avoidances are defined as part of the project submittal and come from any O&S cost source (fewer spares, lower maintenance hours, faster turnaround times, reduced scheduled maintenance, etc.). Updated ROI calculations are part of the required semi-annual project reports to provide tracking of this metric. The estimated Return on Investment (ROI) for FY 2010 projects (based on discounted cash flow calculations) is 57:1 with \$2.232 billion in cost avoidances across the life cycle of the affected systems.

Army Projects: Leverage missile program technology to incorporate state of the art Common-ESAF (C-ESAF) components that will reduce obsolescence on the GMLRS. Redesign H-60 Hydraulic Power Supply (HPS) reducing the primary causes of failure are internal and external leaks, overheating and excessive wear. Design and prototype howitzer front split ring using higher strength steel to double functional life improving durability and reliability.

HH-60 FLIR
 120mm Mortar M9 Baseplate (TENT)
 HIMARS/GMLRS ESAF
 HH-60 Hand Pump
 SOA CAAS Training Simulation
 Overwatch Display Control Module (TENT)

Navy Projects: Continue nine projects begun earlier and four new Common Ship projects. Improving maintenance technologies that will reduce cost and add efficiency are the primary theme for FY10 projects. NAVSEA will provide underwater hull condition based maintenance that will reduce maintenance requirements and improve warfighting readiness. NAVSEA will also introduce the use of vapor corrosion inhibitors in ship voids to reduce the effects of corrosion causing moisture within voids in order to double the maintenance interval. NAVSEA will work with NAVAIR to design a new machined hinge replacement for Main Landing Gear door hinges to meet current loading requirements.

Common Ship: Coating Surface Ship Propellers
 ASE: F/A-18E/F SRA Pinpoint Routines
 Common Ship: High Solid Solids Antifoulant Coating

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
RDTE, Defense Wide BA# 4	0605017D8Z - Reduction in Total Ownership Cost (RTOC)	P017
<p>Common Ship: Cathodic Protection of Aluminum</p> <p>ASE: Spectrometer Modification</p> <p>NAVAIR: CMIS TDSA-KITMIS Migration</p> <p>Common Ship: Surface Profile Tool</p> <p>H-60: Blade De-ice Controller</p> <p>F/A-18E/F: Fiber Optic Cable Restore</p> <p>LCS PMO: S1000/SCORM Integration</p> <p>Common Ship: Underwater Hull CBM</p> <p>Common Ship: High Solid Silica Alkyds</p> <p>Common Ship: VCIs for Voids</p> <p>Common Ship: Main Landing Gear Door Hinge</p> <p>Air Force Projects: Deliver prototype composite material replacement radomes and towers that meet or exceed the structural requirements of current radomes and towers, while reducing total ownership cost and environmental impacts. Develop and validate through prototyping a process for repairing single titanium and nickel blades that are part of the Integrally Bladed Rotor (IBR); develop process to reduce need to replace entire IBR assembly, if single blade is damaged. Revise and update multiple aircraft and engine repair and coating processes to reflect modern processes that are more cost effective and environmentally sound. Implement a system that will apply individual engine flight data, rather than average fleet statistics, to predict and schedule engine maintenance. Test prototype digital heads up display for the F-15 to replace current cathode ray tube (CRT) based displays that are costly to maintain.</p> <p>F-16: Field Backshop Test Data Collection and Analysis System</p> <p>F-22: F-119 Engine Ti Repair</p> <p>F-22: F-119 Engine NI 100 Integrally Bladed rotor (IBR) Repair</p> <p>F-16: F-110-GE-129/129B RCM Calculator</p> <p>F-16: F-110 Engine Interval Extension</p> <p>Multiple Systems: Stripping Solution</p> <p>F-22/F-35: Laser Shock Peening</p> <p>Multiple Systems: Powder Coating</p> <p>Multiple Systems: No-Strip Touch-Up Repair</p> <p>Multiple Systems: Coating Removal Process</p> <p>Multiple Systems: Laser Inspection of GTE</p> <p>F-15/F-16: Laser Cladding/LAM</p> <p>Multiple Systems: Low Radioactivity Thermal Barrier</p>		

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

RDTE, Defense Wide BA# 4

0605017D8Z - Reduction in Total Ownership Cost (RTOC)

P017

Multiple Systems: Parent Material Restoration

F-15: Digital Heads Up Display

Multiple Systems: Single Part Wheel Paint

C. Other Program Funding Summary: Not applicable for this item.

D. Acquisition Strategy:

There is an annual USD(AT&L) call for proposed project plans in October. Projects are submitted by the Services annually in January. The project plan format is provided with the call for submission of Service projects. Each project plan contains:

1. Problem statement
2. Impact statement
3. Technical description
4. Risk analysis
5. Proposed phases
6. Expected deliverables and results or outcomes
7. Program management
8. Cost/benefit analysis
9. Schedule
10. Implementation plan

The project evaluation criteria are also provided as part of the call for use by the Services in arriving at their prioritized project list. There are five objective and six subjective categories for evaluation.

The Services receive project plans and make a Service priority ranking based on detailed analysis of each proposed initiative against the eleven evaluation criteria. This priority ranking is sent to the OSD lead. Upon acceptance and approval of the projects by OSD, the projects are briefed to the R-TOC Forum and Congressional staff, as required. Funding is distributed equally between the Services based on priority and the evaluation process results.

Upon final funding approval, OSD transfers individual project funding to the appropriate funding sites that are provided by the Services. After receiving the project funding, the Services are responsible for the funding and management of the projects. OSD retains oversight and direction of the R-TOC Initiative through the OSD lead office.

A semi-annual Project Report format has been defined, approved by the Services, and is required for each funded project. These reports are submitted to the OSD R-TOC Initiative lead office. OSD analyzes project status, progress and project statistics and informs the Service POCs of any project problems. Projects are also required to report verbally at the quarterly R-TOC Forums, as appropriate.

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

RDTE, Defense Wide BA# 4

0605017D8Z - Reduction in Total Ownership Cost (RTOC)

P017

E. Major Performers: Not applicable for this item.

OSD RDT&E COST ANALYSIS (R3)

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT				
4 - Advanced Component Development and Prototypes (ACDP)			0605017D8Z - Reduction in Total Ownership Cost (RTOC)							P017				
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
Army			15333	7745	1Q	7970	1Q	8321	1Q					
Navy			16138	7745	1Q	7969	1Q	8321	1Q					
Air Force			16139	7744	1Q	7969	1Q	8005	1Q					
Subtotal:			47610	23234		23908		24647						
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
Subtotal:														
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
Subtotal:														
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
RTOC Program Support and Analysis (IDA)			1200	451	1Q	451	1Q							
Subtotal:			1200	451		451								
Project Total Cost:			48810	23685		24359		24647						

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes (ACDP)

PE NUMBER AND TITLE
0605017D8Z - Reduction in Total Ownership Cost (RTOC)

PROJECT
P017

Event Name	FY 08				FY 09				FY 10																																							
	1	2	3	4	1	2	3	4	1	2	3	4																																				
(1) Contract Preparation																																																
(2) System Development																																																
(3) Quality Design and Build																																																
(4) Developmental Technical Testing																																																
(5) Developmental Evaluation																																																

Schedule Profile (R4a Exhibit)

May 2009

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes (ACDP)

PE NUMBER AND TITLE
0605017D8Z - Reduction in Total Ownership Cost (RTOC)

PROJECT
P017

<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>					
Contract Preparation	2Q - 4Q	1Q - 4Q	1Q - 2Q					
System Development	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Quality Design and Build	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Developmental Technical Testing	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Developmental Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q					