Department of Defense
Fiscal Year (FY) 2015

March 2014

Operational Test and Evaluation, Defense

Defense Wide Justification Book Volume 5 of 5

Operational Test and Evaluation, Defense

Operational Test and Evaluation

Table of Volumes

Volume 5 Table of Contents

Defense-Wide
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

04 Feb 2014

Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base	Sec
1	0605118OTE	Operational Test and Evaluation	06	87,406	75,720		75,720	74,583	U
2	0605131OTE	Live Fire Test and Evaluation	06	49,713	48,423		48,423	45,142	U
3	0605814OTE	Operational Test Activities and Analyses	06	73,317	121,948		121,948	48,013	U
		Management Support		210,436	246,091		246,091	167,738	
Total Operational Test & Eval, Defense				210,436	246,091		246,091	167,738	

R-1C1: FY 2015 President's Budget (Published Version), as of February 4, 2014 at 15:08:06

Program Element Table of Contents (by Budget Activity then Line Item Number)

Budget Activity 06: RDT&E Management Support
Appropriation 0460: Operational Test and Evaluation, Defense

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605118OTE / *Operational Test and Evaluation (OT&E)*

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	62.215	87.406	75.720	74.583	-	74.583	77.351	79.066	80.830	82.646	Continuing	Continuing
0605118OTE: *OT&E*	62.215	87.406	75.720	74.583	-	74.583	77.351	79.066	80.830	82.646	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Director of Operational Test and Evaluation (DOT&E) was created by Congress in 1983. The Director is responsible under Title 10 for policy and procedures for all aspects of Operational Test and Evaluation (OT&E) within the Department of Defense (DoD). Particular focus is given to OT&E that supports major weapon system production decisions for acquisition programs included on the Office of Secretary of Defense Test and Evaluation Oversight List that is prepared and approved annually. Generally, there are about 300 programs on the oversight list including all Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS). MDAPs may not proceed beyond low-rate initial production (BLRIP) until OT&E of the program is complete. DOT&E is involved early in the planning phase of each program to ensure adequate testing is planned and executed. Key elements of DOT&E's oversight authority include:

- The approval of component Test and Evaluation Master Plans (TEMPS).
- The approval of component OT&E Test Plans (TPs).
- Oversight of Military Department preparation and conduct of field operational tests; analysis and evaluation of the resultant test data; the assessment of the adequacy of the executed test and evaluation programs; and assessment of the operational effectiveness and suitability of the weapon systems.
- Reporting results of OT&E that supports BLRIP decisions to the Secretary of Defense and Congress, as well as providing an annual report summarizing all OT&E activities and the adequacy of test resources within DoD during the previous fiscal year.
- The review and make recommendations to the Secretary of Defense on all budgetary and financial matters related to OT&E, including operational test facilities, resources and ranges.

DOT&E also oversees and resources OT&E community efforts to plan and execute joint operational evaluations of information assurance and interoperability (IA and IOP) of fielded systems and networks during major Combatant Command (CCMD) and Service exercises, and reports the trends and findings in the annual report.

DOT&E is also involved in increasing the capacity to access realistically advanced cyber warfighting capabilities to keep pace with heightened demand for those capabilities, advancing technologies and the growing cyber threat.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605118OTE / *Operational Test and Evaluation (OT&E)*

This Program Element includes funds to obtain Federally Funded Research and Development Center (FFRDC) support in performing the described tasks, travel funds to carry out oversight of the OT&E and IA and IOP programs, funds for Service teams performing information assurance and interoperability assessments during exercises, administrative support services, and engineering and technical support services related to the conduct of operational test and evaluation and exercise assessments.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	72.501	75.720	78.743	-	78.743
Current President's Budget	87.406	75.720	74.583	-	74.583
Total Adjustments	14.905	-	-4.160	-	-4.160
• Congressional General Reductions	-0.121	-			
• Congressional Directed Reductions	-4.110	-			
• Congressional Rescissions	-	-			
• Congressional Adds	19.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.136	-			
• SBIR/STTR Transfer	-	-			
• Budget Control Act	-	-	-4.160	-	-4.160

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2013	FY 2014
Project: 0605118OTE: *OT&E*		
Congressional Add: *Cyber Testing Shortfall*	15.000	-
Congressional Add: *National Cyber Range Shortfall*	4.000	-
Congressional Add Subtotals for Project: 0605118OTE	19.000	-
Congressional Add Totals for all Projects	19.000	-

C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Operational Test and Evaluation	68.406	75.720	74.583

FY 2013 Accomplishments:

Operational Test and Evaluation Oversight

This effort is in direct support of the Director's Title 10 responsibilities and is a continuing effort. Funding for FY 2013 provided Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605118OTE / *Operational Test and Evaluation (OT&E)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015

of DOT&E oversight authority are identified in Calendar Year 2013 Office of the Secretary of Defense Test and Evaluation Oversight List.

Information Assurance (IA) and Interoperability (IOP) Evaluations

DOT&E oversaw and resourced 9 Combatant Command (CCMD) level and 3 Service level assessments in FY 2013. Of these, 4 were full IA and IOP, 6 were IA only assessments, and 2 were IOP only assessments. Eight other approved assessments were cancelled due to the down-scoping or cancellation of the CCMD/Service exercise. The operational impact against specific critical mission threads was assessed in the 10 IA assessments conducted in FY 2013. A more rigorous process to incorporate advanced cyber threats and the use of validated cyber TTP's by the supporting Red Teams was initiated in FY 2013 and is expected to continue as a primary objective of the assessment program. Fiscal year 2013 IA and IOP evaluations included trend analyses across prior year results, both within and across CCMDs. Critical findings were transmitted to Service and DoD leadership for their awareness and remediation actions, as appropriate. DOT&E continued efforts to support the full implementation on the CJCS EXORD as part of the assessment planning process, including development of threat assessments of the advanced cyber adversary and alignment Red Teams with these threat assessments.

FY 2014 Plans:

Operational Test and Evaluation Oversight

This effort is in direct support of the Director's Title 10 responsibilities and is a continuing effort. Funding for FY 2014 provides Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements of DOT&E oversight authority are identified in Calendar Year 2014 Office of the Secretary of Defense Test and Evaluation Oversight List.

Information Assurance (IA) and Interoperability (IOP) Evaluations

DOT&E will oversee and resource 12 CCMD level and 5 Service level IA and IOP assessments in FY 2014 and conduct one assessment of a unit deployed to warfighting theater of operations. Additionally in FY 2014, DOT&E will resource the observation of 3 CCMD/Service exercises as potential future assessment venues. The portrayal of advanced-cyber threats and executing focused assessments of critical mission accomplishment in representative threat environments is a primary objective for all approved FY14 assessments. Fiscal year 2014 evaluations will include trend analyses across prior year results, both within and across CCMDs. Critical findings will be transmitted to Service and DoD leadership for their awareness and remediation actions,

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605118OTE / *Operational Test and Evaluation (OT&E)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
as appropriate. The Joint Information Operations Range (JIOR) will support events across multiple CCMDs for added threat realism and required security during exercise assessments. New resources and emphasis will be added in FY 2014 to include expanded threat assessments of the advanced cyber adversary, more representative portrayal of the cyber adversary by Red Teams, and improvements to the JIOR that will support more operationally realistic and threat representative assessment and training events. ***FY 2015 Plans:*** Operational Test and Evaluation Oversight This effort is in direct support of the Director's Title 10 responsibilities and is a continuing effort. Funding for FY 2015 provides Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements of DOT&E oversight authority are identified in Calendar Year 2015 Office of the Secretary of Defense Test and Evaluation Oversight List. Information Assurance (IA) and Interoperability (IOP) Evaluations DOT&E will oversee and resource approximately 14 CCMD level and 5 Service level IA and IOP assessments in FY 2015. The ability of the assessed CCMD/Service to execute selected critical missions in a denied and/or degraded cyber environment is the primary objective for all FY 2015 assessments as it the portrayal of advanced-cyber threats. In partnership with US Cyber Command, DoD Red Team capabilities will be enhanced to reflect DIA cyber threat assessments, and application of these teams will be synchronized across Cyber Command and DOT&E priorities. Assessment support to units deploying to theaters of operation will continue as needed. Fiscal year 2015 IA and IOP evaluations will include trend analyses across prior year results, both within and across CCMDs. Critical findings will be transmitted to Service and DoD leadership for their awareness and remediation actions, as appropriate. The Joint Information Operations Range and other cyber range assets with Red Teams portraying advanced cyber adversaries will support the majority of CCMD exercises for added threat realism and required security.			
Accomplishments/Planned Programs Subtotals	68.406	75.720	74.583

	FY 2013	FY 2014
Congressional Add: Cyber Testing Shortfall	15.000	-
FY 2013 Accomplishments: $15M was provided and has been applied towards enhanced threat assessments of the advanced cyber adversary, development of Red Team capabilities to portray the advanced cyber		

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605118OTE *I Operational Test and Evaluation (OT&E)*

	FY 2013	FY 2014
adversary, and creating a persistent cyber OPFOR to develop accesses and set initial conditions for exercise assessments and tests in a more cost-effective and threat-representative fashion.		
Congressional Add: National Cyber Range Shortfall	4.000	-
FY 2013 Accomplishments: $4M was provided and has been applied towards continued testing of the National Cyber Range to understand its current capabilities and develop future requirements. These funds have also been applied towards the development and employment of cyber environments to demonstrate cyber effects which are not appropriate for operational networks.		
Congressional Adds Subtotals	19.000	-

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

N/A

F. Performance Metrics

Performance Measure: Percentage of required operational test planning documents, assessments, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time.

Actual Performance and Goals:

Operational Test and Evaluation	FY 2013 (Actual)	FY 2014 (Goal)	FY 2015 (Goal)
On-Time Completion Rate	94%	95%	96%

The on-time completion rate was computed on the basis of the number of required products that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year. Products included in the measure include beyond low-rate initial production reports, Test Plans, and Test and Evaluation Master Plans for operational test and evaluation oversight as well as assessment plans, “quick look” reports, and final reports for the information assurance and interoperability testing associated with scheduled test events. DOT&E plans to maintain its on-time completion rates for FY 2014 and FY 2015 through continued management emphasis on timely delivery of required products to customer activities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	12.126	49.713	48.423	45.142	-	45.142	47.196	49.438	49.886	51.164	Continuing	Continuing
0605131OTE: *LFT&E*	12.126	49.713	48.423	45.142	-	45.142	47.196	49.438	49.886	51.164	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Live Fire Test and Evaluation, Joint Aircraft Survivability Program (JASP), and Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME). Starting in FY 2013 the JASP and JTCG/ME programs were realigned from the Operational Test Activities and Analyses program element (0605814OTE) to the Live Fire Test and Evaluation program element (0605131OTE). The JASP focuses on survivability improvements supporting aircraft acquisition and JTCG/ME focuses on the lethality of currently fielded weapons systems; therefore, the two programs are more appropriately budgeted within the Live Fire Test and Evaluation program element.

This Program Element directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States (U.S.) and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense (OSD) charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

The Joint Aircraft Survivability Program is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the commanders of the USN Naval Air Systems Command, USA Aviation and Missile Command and USAF Aeronautical Systems Center to coordinate and conduct RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability modeling and simulation (M&S), facilitate information exchange on aircraft survivability and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group (PMSG), which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT), is the Executive Agent for the Joint Live Fire Aircraft Systems Program managed by the Live Fire Test office of DOT&E and is also an Executive Agent for the Survivability Vulnerability Information Analysis Center (SURVIAC), the repository for aircraft survivability information.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*

The Joint Logistics Commanders Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME) was chartered more than 40 years ago to serve as DoD's focal point for munitions effectiveness information. This has taken the form of widely used Joint Munitions Effectiveness Manuals (JMEMs) which address all major non-nuclear U.S. weapons. JTCG/ME authenticates weapons effectiveness data for use in operational weaponeering, strike mission planning, training, systems acquisition, weapon procurement, and combat modeling and simulation. JMEMs are used by the Armed Forces of the U.S., NATO, and other allies to plan operational missions, support training and tactics development, and support force-level analyses. JTCG/ME also develops and standardizes methodologies for evaluation of munitions effectiveness and maintains databases for target vulnerability, munitions lethality, and weapon system accuracy. The JMEM requirements and development processes continues to be driven by operational lessons learned (Enduring Freedom, Iraqi Freedom, and Odyssey Dawn) and the needs of Combatant Commands, Services, Military Targeting Committee, and Operational Users Working Groups input for specific weapon-target pairings and methodologies.

This program element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described Live Fire Test and Evaluation tasks, as well as travel funds to carry out the LFT&E, JASP and JTCG/ME programs.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	49.201	48.423	49.587	-	49.587
Current President's Budget	49.713	48.423	45.142	-	45.142
Total Adjustments	0.512	-	-4.445	-	-4.445
• Congressional General Reductions	-0.065	-			
• Congressional Directed Reductions	-3.288	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.865	-			
• SBIR/STTR Transfer	-	-			
• Budget Control Act	-	-	-4.445	-	-4.445

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense			Date: March 2014
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	Project (Number/Name) 0605131OTE / *LFT&E*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
0605131OTE: *LFT&E*	12.126	49.713	48.423	45.142	-	45.142	47.196	49.438	49.886	51.164	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Live Fire Test and Evaluation, Joint Aircraft Survivability Program (JASP) and Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME). Starting in FY 2013 the JASP and JTCG/ME programs were realigned from the Operational Test Activities and Analyses program element (0605814OTE) to the Live Fire Test and Evaluation program element (0605131OTE). The JASP focuses on survivability improvements supporting aircraft acquisition and JTCG/ME focuses on the lethality of currently fielded weapons systems; therefore, the two programs are more appropriately budgeted within the Live Fire Test and Evaluation program element.

This Program Element directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States (U.S.) and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense (OSD) charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

The Joint Aircraft Survivability Program is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the commanders of the USN Naval Air Systems Command, USA Aviation and Missile Command and USAF Aeronautical Systems Center to coordinate and conduct RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability modeling and simulation (M&S), facilitate information exchange on aircraft survivability and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group (PMSG), which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT), is the Executive Agent for the Joint Live Fire Aircraft Systems Program managed by the Live Fire Test office of DOT&E and is also an Executive Agent for the Survivability Vulnerability Information Analysis Center (SURVIAC), the repository for aircraft survivability information.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

The Joint Logistics Commanders Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME) was chartered more than 40 years ago to serve as DoD's focal point for munitions effectiveness information. This has taken the form of widely used Joint Munitions Effectiveness Manuals (JMEMs) which address all major non-nuclear U.S. weapons. JTCG/ME authenticates weapons effectiveness data for use in operational weaponeering, strike mission planning, training, systems acquisition, weapon procurement, and combat modeling and simulation. JMEMs are used by the Armed Forces of the U.S., NATO, and other allies to plan operational missions, support training and tactics development, and support force-level analyses. JTCG/ME also develops and standardizes methodologies for evaluation of munitions effectiveness and maintains databases for target vulnerability, munitions lethality, and weapon system accuracy. The JMEM requirements and development processes continues to be driven by operational lessons learned (Enduring Freedom, Iraqi Freedom, and Odyssey Dawn) and the needs of Combatant Commands, Services, Military Targeting Committee, and Operational Users Working Groups input for specific weapon-target pairings and methodologies.

This program element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described Live Fire Test and Evaluation tasks, as well as travel funds to carry out the LFT&E, JASP and JTCG/ME programs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Live Fire Test and Evaluation	49.713	48.423	45.142
Description: This Program Element consists of three programs: Live Fire Test and Evaluation, Joint Aircraft Survivability Program (JASP) and Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME).			
FY 2013 Accomplishments: Live Fire Test and Evaluation Major Test and Evaluation Programs The FY 2013 budget provided Live Fire Test and Evaluation input for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and Beyond Low Rate Initial Production (BLRIP) reports for those programs designated for oversight by DOT&E and OUSD(AT&L). The oversight list is developed and published annually. JLF Programs and LFT&E Initiatives Conducted tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs to support DOT&E and operator needs. The need for these tests results from systems being exposed to new threats, used in new unanticipated tactics, or being operated in new combat environments, and the subsequent need for an assessment of their performance. Continued efforts in support of Personnel Protection Equipment, including testing protocols for combat helmets and body armor. Addressed urgent requests from theater that directly supported deployed Joint Combat Assessment Team investigation and report to operators. Performed JLF projects to provide survivability data on currently fielded U.S. systems. JLF Air projects tested the vulnerability of PT6 turboprop engines and evaluated the effects of internal configuration on helicopter crew compartment fires, as well as			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
technologies/techniques to reduce generic vulnerabilities to all aircraft, such as to MANPADS, small arms, and the performance of self-sealing fuel tanks using bio-fuels. New projects investigated the effect of yawed projectiles and missile debris on aircraft vulnerability, the lethality of advanced projectile lethality, and a performed a comparison of commonly used test threats. JLF Land projects continued to investigate the vulnerability of vehicles to underbody blast and the lethality of U.S. weapons against typical in-theater targets, and improved modeling and simulation tools by providing validation data. New projects studied the use and validity of manikins, helmets, and improvements to material characteristics used in modeling and simulation. JLF Sea projects continued to investigate ship vulnerabilities in the areas of commercial standards, equipment and component damage, and investigated vulnerabilities of designs and components for new ships. New projects evaluated fire damage to ship components, including bulkheads, insulation, and reconfigurable spaces, investigated asymmetric boat threats, and began work on developing small boat vulnerability models. Joint Aircraft Survivability Program (JASP) In FY 2013 the JASP continued work on 33 multi-year RDT&E projects and initiated 19 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. In the area of susceptibility reduction, the JASP addressed improving the effectiveness and reducing the space, weight and power required for directed energy infrared countermeasures, electronic countermeasures technology and techniques, integrated aircraft survivability equipment, and aircrew situational awareness. In the area of vulnerability reduction, the JASP continued to address requirements for lighter and more effective vulnerability reduction technology (e.g., armor, fuel containment, fire suppression, and aircrew and passenger protection). In aircraft survivability Modeling and Simulation (M&S), the JASP continued to improve survivability M&S credibility, address operator requirements for survivability data, integrate DIA threat missile models into threat engagement codes, improve the assessment of aircrew and passenger injuries, and address M&S requirements identified by the joint aircraft survivability community. The JASP completed 38 reports documenting efforts accomplished in FY 2013. The JCAT continued to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP continued supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors. Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME) JTCG/ME Joint Munitions Effectiveness Manual Weaponeering System (JWS) v2.1.1 software and JTCG/ME generated Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3160.01 Collateral Effects Radii (CER) tables were used for operational			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
weaponeering and collateral damage estimation calls in direct support of operations in the AFRICOM and CENTCOM Areas of Responsibilities. To provide continued support to operational commanders, DoD targeteers, weaponeers, and planners, the JTCG/ME developed various analytical and operational methodologies and target geometric models. Additionally JTCG/ME's air-to-air and surface-to-air planning model, the Joint-Anti-air Combat Effectiveness System (J-ACE) v5.2 was released in September 2013 to provide aircraft survivability data. The fielded JWS v2.1.1 contains the Fast Integrated Structural Tool (FIST). FIST is the JMEM operational-level methodology that incorporates the integral modules from the Building Analysis Module (BAM) and Hardened Target Module (HTM) to create a merged tool that generates weapon effectiveness and damage assessments against infrastructure targets to include buildings, bunkers, and tunnels. JWS v2.1.1 also contains approximately 180 new/updated targets, 15 new/updated munitions, new Explosive Equivalent Weights based on blast testing, and an improved 3-D viewer. In addition, JWS v2.2 development is on-going to support coalition partners. The JTCG/ME in conjunction with the JWS Configuration Control Board and the JMEM Production Contractor (JPC) are implementing a re-marking effort in order to facilitate the documentary release of JWS. J-ACE v5.2 simulates air-to-air and surface-to-air engagements. Blue, Red, and Gray air-to-air missile (AAM) models; and, Red and Gray surface-to-air missile (SAM) flyout models are included. J-ACE v5.2 provides updated Joint Anti-Air Model (JAAM) missile fly out model including hundreds of weapon target pairings and JAAM-Enhanced Surface-to-Air Missile Simulation (ESAMS) countermeasures interface. J-ACE v5.2 also provides the new "Endgame Manager (EM)" software and data sets. The EM is a new application which adds missile lethality and target vulnerability. EM allows explicit evaluation of weapon miss distance, fuse performance, weapon lethality and target vulnerability. EM provides the Probability of kill given an intercept (Pk/i). To more effectively support operational mission planning, particularly at USSTRATCOM, the J-ACE v5.2 release also provides a direct interface to force level simulations. The fidelity is adequate for studying tactics, training evaluation, relative missile performance and scenario planning. In support of the Combatant Commands and the CJCSI 3160.01, JTCG/ME provided updates for CER values for newly fielded/ updated systems (e.g., M1130 Projectile, AGM-65-E2/L and AGM-176-3/2M). In addition, the JTCG/ME supported the Digital Precision Strike Suite (DPSS) Collateral Damage Estimation (DCiDE) tool for operational use. This tool displays accredited Collateral Damage Estimate Level 1-5 A-C series effective radii reference tables. Additionally, JTCG/ME trained nearly 250 users at 10 different Commands to support Collateral Damage Estimation decisions. The JTCG/ME assessed fielded and emerging Information Operations (IO) systems as part of early efforts to create an Effects Based Operations (EBO) evaluation capability set. The scope includes weapon characterization, coordinating test and target data development and providing operational tools for the IO elements of Computer Network Attack, Computer Network Defense,			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Military Information Support Operations (MISO) and Electronic Warfare. This weapon effectiveness and associated confidence level data are critical enablers for application of these weapons as it will provide senior leaders and warfighters with information to develop policy and concepts of operations for their use. ***FY 2014 Plans:*** Live Fire Test and Evaluation Major Test and Evaluation Programs This is a continuing effort. The FY 2014 budget provides for Live Fire Test and Evaluation input for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and BLRIP reports for those programs designated for oversight by DOT&E and OUSD(AT&L). The oversight list is developed and published annually. JLF Programs and LFT&E Initiatives Conduct tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs to support DOT&E and operator needs. The need for these tests results from systems being exposed to new threats, used in new unanticipated tactics, or being operated in new combat environments, and the subsequent need for an assessment of their performance. Continue efforts in support of Personnel Protection Equipment, including combat helmets and body armor. Continue to address urgent requests that directly support deployed operators and issues of importance to the Congress as they arise. Continue to perform JLF projects to provide survivability data on currently fielded U.S. systems. JLF Air projects will continue to evaluate generic technologies and techniques to decrease vulnerabilities to all aircraft, such as to MANPADS, small arms, and the performance of self-sealing fuel tanks. New projects will investigate threat munitions and aircraft fire and explosion vulnerabilities. JLF Land projects will continue to investigate the vulnerability of vehicles to underbody blast and the lethality of U.S. weapons against typical in-theater targets, as well as improving modeling and simulation tools by providing validation data. New projects will study helmets and improvements to material characteristics used in modeling and simulation. JLF Sea projects will continue to develop key components of alternatives to traditional shock trials of ships and submarines, will continue to investigate ship vulnerabilities in the areas of commercial standards, equipment and component damage, and will investigate vulnerabilities of designs and components for new ships. Joint Aircraft Survivability Program (JASP) In FY 2014 the JASP will continue work on at least 38 multi-year RDT&E projects and initiate 20 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. In the area of susceptibility reduction, the JASP will address improving the effectiveness and reducing the space, weight and power required for directed energy infrared countermeasures,			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
electronic countermeasures technology and techniques, and aircrew situational awareness. In the area of vulnerability reduction, the JASP will continue to address requirements for lighter and more effective vulnerability reduction technology (e.g., armor, fuel containment, fire suppression, and aircrew and passenger protection). In aircraft survivability M&S, the JASP will continue to improve survivability M&S credibility, address operator requirements for survivability data, integrate DIA threat missile models into threat engagement codes, improve the assessment of aircrew and passenger injuries, and address M&S requirements identified by the joint aircraft survivability community. The JCAT will continue to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP will continue supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors. The JASP will initiate, continue and complete other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E. Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME) In support of operational commanders, DoD targeteers, weaponeers, and planners, the JTCG/ME will release JMEM Weaponeering System (JWS) v2.2 and the Joint-Anti-air Combat Effectiveness System (J-ACE) Air Superiority (AS) v5.3 in FY 2014. JWS v2.2 will add approximately two hundred calculated and surrogated targets; approximately thirteen Air-to-Surface Weapons and Warhead; three Surface-to-Surface Direct Fire Weapons; and ten Surface-to-Surface Indirect Fire Platforms, Weapons and Warheads; Fast Integrated Structural Tool (FIST) v1.1; Ship Weaponeering Estimation Tool (SWET) v2.0.1; Digital Precision Strike Suite (DPSS) Collateral Damage Estimation (DCiDE) Tool Version 1.1 linkage; and an enhanced viewer. Based on the current guidance and direction from Joint Staff, this JWS version will be released to several key coalition partners in support of current operations at International Security Assistance Force (ISAF), Combined Air Operations Centers and Other Joint Commands. J-ACE v5.3 will provide extended and updated data sets for missile and aircraft target aero-performance, anti-air missile lethality and air target vulnerability. In particular, a total of 15 new or updated Air-to-Air (AA) or Surface-to-Air (SA) Government furnished missile or weapon fly out models will be integrated. Additionally, advanced pseudo six DoF BlueMax6 and Hercules aircraft aero performance models will be provided. BlueMax6 and Hercules provide a large library of BLUE and RED aircraft models developed by the acquisition and intelligence communities. Electronic Counter-Measure (ECM) will be developed and tested for an aircraft's ECM system jamming coverage. Initially, dynamic visualization of an aircraft's ECM systems zones of coverage will			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
allow pilots, while developing threat engagement or evasive maneuvers, to consider ECM protection with respect to the threat position. In support of Combatant Commands and the CJCSI 3160.01, JTCG/ME will accredit the Collateral Damage Estimation (CDE) Collateral Effects Radii (CER) xml file for use in Digital Precision Strike Suite CDE (DCiDE) Operational Tool. In accordance with the Office of Secretary of Defense Chief Information Officer Memorandum, JTCG/ME will also prepare a memorandum that grants an Authorization to Operate (ATO) and Authorization to Connect (ATC) for the DCiDE Tool Version 1.1. JTCG/ME will continue to monitor the DCiDE tool configuration management process to ensure that subsequent versions of DCiDE accurately reflect the latest JTCG/ME accredited tables; Combatant Command specified population density factors and associated user input. The DCiDE tool will evolve to be the foundation for collateral damage estimation on JWS. JTCG/ME will develop JMEM data for most critical Combatant Commander identified systems and also reduce DVD-ROM update cycles through incremental updates. Accreditation of tri-Service JMEM operational tools will continue as well as expanding existing databases to incorporate newly fielded weapons (i.e., Air-to-Surface, Surface-to-Surface Direct/Indirect Fire, and Anti-air). Finally providing connectivity to real time planning systems assessing time sensitive targets will be addressed. ***FY 2015 Plans:*** Live Fire Test and Evaluation Major Test and Evaluation Programs This is a continuing effort. The FY 2015 budget provides Live Fire Test and Evaluation input for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and BLRIP reports for those programs designated for oversight by DOT&E and OUSD(AT&L). The oversight list is developed and published annually. JLF Programs and LFT&E Initiatives Conduct tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs to support DOT&E and warfighter needs to the extent funding allows. The need for these tests result from systems being exposed to new threats, used in new unanticipated tactics, or being operated in new combat environments, and the subsequent need for an assessment of their performance. Projects will address urgent requests that directly support deployed warfighters and issues of importance to the Congress. Joint Aircraft Survivability Program (JASP)			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
In FY 2015 the JASP will continue work on at least 33 multi-year RDT&E projects and initiate 12-18 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. In the area of susceptibility reduction, the JASP will address improving the effectiveness and reducing the space, weight and power required for directed energy infrared countermeasures, electronic countermeasures technology and techniques, aircrew situational awareness and urgent operator needs. In the area of vulnerability reduction, the JASP will continue to address requirements for lighter and more effective vulnerability reduction technology (e.g., armor, fuel containment, fire suppression, and aircrew and passenger protection). In aircraft survivability M&S, the JASP will continue to improve survivability M&S credibility, address operator requirements for survivability data, integrate DIA threat missile models into threat engagement codes, improve the assessment of aircrew and passenger injuries, and address M&S requirements identified by the joint aircraft survivability community. The JCAT will continue to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP will continue supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors. The JASP will initiate, continue and complete other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E. Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME) In support of operational commanders, DoD targeteers, weaponeers, and planners, the JTCG/ME will develop and release JMEM Weaponeering System (JWS) v2.3 and Joint-Anti-air Combat Effectiveness System (J-ACE) Air Superiority (AS) v5.4 during FY 2015. JWS v2.3 efforts will include connectivity (Mission Planning & Collateral Damage) and personnel vulnerability data updates. Additional updates will include an export to Microsoft software capabilities. Improvements on the JWS Parameterization Routine in JWS will be provided along with enhanced bomb-burial methodology and small precision methodology. In support of hard target development, JWS will integrate new and updated Defense Threat Reduction Agency's (DTRA) Integrated Munitions Effects Assessment (IMEA) tools into the Fast Integrated Structural Tool (FIS). In support of vulnerability data generation, maneuver and maritime targets that address the total target spectrum from the COCOMs and MRP will be developed. Other Key methodology improvements are Rotary Wing Delivery Accuracy Program (RWDAP), Joint Weapon Accuracy Model (JWAM), Risk Estimation tool, and blast/fragmentation methodologies for small precision munitions. J-ACE v5.4 will continue to field and add Browse descriptive material to support new weapons in the Joint Anti-air Model (JAAM); expand Suite of Anti-air Kill-chain Models and Data (SAK-MD) capability; and update existing weapons and aircraft missile and			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
aircraft target aero-performance, anti-air missile lethality and air target vulnerability required by the operational community in JAAM. Additionally, J-ACE Electronic Counter Measures (ECM) program will be updated to integrate and test JAAM-HIVE/ ESAMS capability to evaluate RED Radio Frequency (RF) Air-to-Air Missile capability against a Blue target with countermeasures. JTCG/ME will continue to develop a predictive capability to assess blast effects, body-on-body penetration, and blast-fragment synergism and incorporate these mechanisms in the JTCG/ME estimation process for small precision weapons. Furthermore, JTCG/ME will expand the use of computational physics to improve test design and data analysis to support both analytical model development and the characterization of weapons addressing blast interactions with structures, weapon fragmentation, and penetration mechanics. Additionally, JTCG/ME will continue to enhance Joint Capability Analysis and Assessment System (JCAAS) and Network Attack Weaponeering System (NWS) in support of Information Operations.			
Accomplishments/Planned Programs Subtotals	49.713	48.423	45.142

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

(U) PERFORMANCE METRICS:

Performance Measure: Percentage of required live fire test planning documents, assessments, munition effectiveness manuals, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time. Percentage of required products, such as test planning documnets, munitions effectiveness manuals, tactic-techniques and reports that are developed and delivered to program managers and customers on time.

Actual Performance and Goals:

Live Fire Test and Evaluation	FY 2013 (Actual)	FY 2014 (Goal)	FY 2015 (Goal)
On-Time Completion Rate	92%	93%	94%

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 0605131OTE / *LFT&E*

The on-time completion rate was computed on the basis of the number of beyond low-rate initial production live fire test and evaluation reports, Joint Live Fire Quick Look Reports, Joint Live Fire Test reports and other required products that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year. DOT&E plans to achieve its goals for FY 2014 and FY 2015 through continued management emphasis on timely delivery of required reports to customer activities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605814OTE / *Operational Test Activities and Analyses*

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	113.467	73.317	121.948	48.013	-	48.013	47.754	48.538	49.506	50.462	Continuing	Continuing
0605814OTE: *OTA&A*	113.467	73.317	121.948	48.013	-	48.013	47.754	48.538	49.506	50.462	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Starting in FY 2013 the Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME) and the Joint Aircraft Survivability Program (JASP) initiatives were realigned from the Operational Test Activities and Analyses program element (0605814OTE) to the Live Fire Test and Evaluation program element (0605131OTE). Since the JTCG/ME and JASP programs focus on the survivability of currently fielded systems the two programs are more appropriately funded within the Live Fire Test and Evaluation program element.

A. Mission Description and Budget Item Justification

The Operational Test Activities and Analyses (OTA&A) programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The OTA&A programs consist of three activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); and Center for Countermeasures (CCM).

Joint Test and Evaluation complements the DoD Acquisition System by developing new tactics, techniques, and procedures (TTPs) to improve the effectiveness of existing fielded systems. JT&E projects are test and evaluation activities conducted in a joint military environment that develop process improvements. These multi-Service projects, chartered by the Office of the Secretary of Defense and coordinated with the Joint Staff, appropriate combatant commanders, and the Services, provide nonmaterial solutions that improve: joint interoperability of Service systems, technical and operational concepts, joint operational issues, development and validation of joint test methodologies, and test data for validating models, simulations, and test beds. The JT&E projects address relevant joint war fighting issues in a joint test and evaluation environment by developing and providing new TTPs to improve joint test capabilities and methodologies.

Threat Systems, based on a memorandum of agreement between the Director, Operational Test and Evaluation (DOT&E) and the Defense Intelligence Agency, provides DOT&E support in the areas of threat resource analysis, intelligence support and threat systems investments. Threat Systems provides threat resource analyses on the availability, capabilities and limitations of threat representations (threat simulators, targets, models, U.S. surrogates and foreign materiel) and analysis of test resources used for operational testing to support DOT&E's assessment of the adequacy of testing for those programs designated for oversight by DOT&E and the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD(AT&L)). Threat Systems provides DOT&E assessment officers and other DOT&E activities with program specific threat intelligence support. Threat Systems also funds management, oversight, and development of common-use threat specifications for threat simulators, threat representative targets, and digital threat models used for test and evaluation.

The Center for Countermeasures (The Center), a Joint Service Countermeasure (CM) Test and Evaluation Center, serves as DoD's independent evaluator for electro-optical systems with emphasis on rotary wing survivability, precision guided weapons (PGWs), CMs/counter-countermeasures (CCMs) employment, and warning

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Operational Test and Evaluation, Defense	Date: March 2014
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605814OTE / *Operational Test Activities and Analyses*

devices. The Center conducts tests, analyzes test results and provides CM expertise that benefits the Services, Joint activities, T&E Agencies, DoD Acquisition Community, the Intelligence Community, Homeland Defense and Overseas Contingency Operations (OCO). Data collected during Center test activities provides valuable information to OSD assessment officers for select oversight programs. The Center assesses current and developing systems, using carefully developed test and evaluation methodologies to provide the basis for understanding how CMs might affect systems used in current and future battlefields. Additionally, the Center develops CM specific test equipment that can be used for both Title 10 Acquisition Systems and OCO urgent operational needs.

This Program Element is budgeted in Budget Activity 6, RDT&E Management Support, to support management activities for the DOTE oversight responsibilities of test and evaluation functions.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	63.566	62.157	63.545	-	63.545
Current President's Budget	73.317	121.948	48.013	-	48.013
Total Adjustments	9.751	59.791	-15.532	-	-15.532
• Congressional General Reductions	-0.110	-			
• Congressional Directed Reductions	-5.641	-0.709			
• Congressional Rescissions	-	-			
• Congressional Adds	19.500	60.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.998	-			
• SBIR/STTR Transfer	-	-			
• Budget Control Act	-	-	-15.434	-	-15.434
• Travel Efficiencies	-	-	-0.098	-	-0.098

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2013	FY 2014
Project: 0605814OTE: *OTA&A*		
Congressional Add: *Unjustified reduction*	19.500	-
Congressional Add: *Electronic WarfareTest Capability*	-	60.500
Congressional Add Subtotals for Project: 0605814OTE	19.500	60.500
Congressional Add Totals for all Projects	19.500	60.500

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense			Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605814OTE / *Operational Test Activities and Analyses*	**Project (Number/Name)** 0605814OTE / *OTA&A*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
0605814OTE: *OTA&A*	113.467	73.317	121.948	48.013	-	48.013	47.754	48.538	49.506	50.462	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Operational Test Activities and Analyses (OTA&A) programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The OTA&A programs consist of three activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); and the Center for Countermeasures (CCM). Starting in FY 2013 the JTCG/ME and JASP programs were realigned from the Operational Test Activities and Analyses program element (0605814OTE) to the Live Fire Test and Evaluation program element (0605131OTE). Since the JTCG/ME and JASP programs focus on the survivability of currently fielded systems the two programs are more appropriately funded within the Live Fire Test and Evaluation program element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Operational Test Activities and Analyses	53.817	61.448	48.013

FY 2013 Accomplishments:

Joint Test and Evaluation (JT&E)

In FY 2013 the JT&E Program leadership implemented changes to the program's business processes due to a 43 percent budget reduction starting this fiscal year. The JT&E staff and the program's stakeholders developed a concept of operations (CONOPS) in FY 2012 that provided the details of the new business model, based on the revised budget. The most significant changes in the new model are shorter timelines for project development and execution, as well as the designation of permanent facilities to house test teams. These two changes will allow test teams to share resources, as well as staff and execute new projects quickly. Additionally, the selection cycles of the program's quick reaction tests and joint tests will be aligned so that the program's governing bodies will meet concurrently to maximize effectiveness and minimize travel costs.

The program had three joint tests close and four joint tests continue in the fiscal year. One of the three tests to close was the Joint Integration of Maritime Domain Awareness for Homeland Defense Joint Test, which developed joint tactics, techniques, and procedures to synchronize information concerning the maritime domain for key decision markers across operations centers for homeland defense, completed in October 2012. The next test to close, Joint Cyber Operations Joint Test, developed and evaluated tactics, techniques, and procedures to enable the use of an adaptive cyber defense strategy for critical C2 services against cyber threats across the DoD Global Information Grid. The third test that closed at the end of the fiscal year was the Joint Unmanned Aircraft Systems (UAS) Digital Information Exchange Joint Test, which developed joint tactics, techniques, and procedures to standardize the information exchange methods and dissemination paths to integrate UAS-derived information across the Services to support both deliberate and dynamic targeting requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605814OTE / *Operational Test Activities and Analyses*	**Project (Number/Name)** 0605814OTE / *OTA&A*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015

The program did not start any new joint tests in FY 2013 due to the lack of nominations that met the new submission guidelines. The program did initiate ten quick reaction tests, which are short term projects directed to work on problems of limited scope. The program also initiated one special project. Four feasibility studies will be conducted in the second half of the fiscal year instead of the programmed two studies. Out of the four studies, two will be selected to conduct joint tests to place the program on track for project execution in FY 2014.

Threat Systems

Threat Systems continued test planning working group participation to identify threat shortfalls; conducted special studies and provided current intelligence support tailored to specific U.S. weapon systems acquisitions; continued the development of Global Positioning Satellite jamming capabilities to increase threat realism at our test ranges, and continued the development of an ammunition and rocket propelled grenade signature model for use in hostile fire indicator systems.

In FY 2013, Threat Systems became the lead for implementing the threat M&S roadmap to ensure threats to US and Allied infrared countermeasure systems are available for testing. Threat Systems established a formal configuration management system for the development, maintenance, anomaly resolution and distribution of threat performance models with tri-Service and Allied representation. Threat Systems also initiated an investigation of ballistic missile related threats; began development of the follow-on next generation threat GPS jammer; and identified representative cyber warfare threats for testing. In addition, Threat Systems managed a series of technical analyses of WESTPAC threats by each of the Intelligence Production Centers to determine characteristics the test community needs to adequately emulate current threats and their densities in potential engagements.

These activities help DOT&E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs.

The Center

The Center completed over 50 T&E activities and analyzed and reported on more than 40 different systems, with special emphasis on rotary wing survivability, CM/CCM employment, warning and targeting systems, and PGWs. Most programs supported received an independent assessment of our data/findings and test support for their CM/CCM evaluations. Approximately 49% of the Center's efforts were spent on aircraft survivability equipment (ASE) testing; with the majority of these efforts in support of rotary wing aircraft. About 11% of the Center's efforts were spent on PGW, foreign systems, and other types of field testing not related to ASE. Approximately 6% of the Center's efforts were dedicated to OCO support, with

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605814OTE / *Operational Test Activities and Analyses*	**Project (Number/Name)** 0605814OTE / *OTA&A*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
emphasis on CM–based, pre-deployment training for rotary wing units. Thirty two percent of the Center's efforts were spent on internal programs to improve test capabilities and to develop test methodologies for new types of T&E activities, much of which was accomplished in concert with the Central Test and Evaluation Investment Program (CTEIP). Programs include the CTEIP-sponsored, Joint Mobile Infrared Countermeasure Test System (JMITS), Towed Aerial Plume Simulator (TAPS) and Multi-Spectral Sea and Land Target Simulator (MSALTS). The Center is expanding in the electronic warfare (EW) realm with a new internally funded Portable Range Threat Simulator (PRTS) capability. These systems, as well as the new remote launch systems (RLS) and the Hostile Fire Signature (HSIG) Models, will be used in support of testing for both Title 10 programs and OCO ASE urgent operational needs. Our support was distributed across all the Services, as well as intelligence agencies and research and development activities. About 2% of the Center's efforts consisted of providing subject matter expertise and other support not directly related to scheduled test activities. The Center provided expertise to many organizations and was actively involved in the following panels: Joint Expendable Countermeasures (JECM) Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), Joint Aircraft Survivability Program (JASP), Foreign Material Exploitation Working Group, Foreign Material Program T&E Subcommittee, Joint Project Mallari Working Group, Joint Countermeasures T&E Working Group (JCMT&E WG), and JCMT&E WG Hostile Fire Indicator (HFI) subgroup lead. ***FY 2014 Plans:*** Joint Test and Evaluation (JT&E) By FY 2014, the program will be on the nomination-selection-execution cycle developed in FY 2012, but will continually adjust the business model to improve the process. In FY 2014 JT&E has two joint test projects slated to close out of the four joint test projects ongoing from FY 2013. The Joint Advanced Capability Employment Joint Test, anticipated to close in August 2014, will to develop and test tactics, techniques, and procedures to enable the joint task force commander to employ advanced capabilities to overcome complex targeting challenges. The Joint Deployable Integrated Air and Missile Defense Joint Test, scheduled to close in June 2014, will develop, test, and evaluate tactics, techniques, and procedures to enable the joint task force commander to employ integrated deployable air, cruise missile, and theater ballistic missile defense capabilities. Four new feasibility studies will be conducted in FY 2014, two of which will be selected to conduct joint tests. Threat Systems			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Operational Test and Evaluation, Defense		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Beginning in FY 2014, Threat Systems will re-scope its DOT&E-funded investment program. This action will eliminate the technical threat analyses needed for the development of modern and advanced threat test assets which are currently test limitations for electronic warfare and advanced avionics programs. All other Threat Systems support will continue. Threat Systems will continue test planning working group participation and perform technical analyses to identify threat shortfalls; conduct special studies and provide current intelligence support tailored to specific U.S. weapon systems acquisitions; continue managing intelligence “deep dives” to produce intelligence in sufficient detail to develop new threat test assets; operate and maintain the modeling and simulation configuration control board for threat models and simulation used in test facilities; and continue the development and implementation of a tri-Service and Allied threat M&S roadmap to ensure infrared countermeasure systems have sufficient threat test assets. Threat Systems will propose, manage and oversee threat test assets that support DOT&E-identified threat shortfalls, identifying candidate threat systems from the various intelligence agencies for possible development of models for use in test and evaluation. Threat Systems will also continue efforts to maintain a standard set of threat performance models and incorporate the initial hostile fire indicator model for small arms and RPGs for use in test and evaluation facilities and continue investigating ballistic missile related threats. These activities help DOT&E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs. The Center The Center will test, analyze, and report on more than 30 systems, with emphasis on rotary wing survivability, CMs/CCMs employment, warning and targeting systems, and PGWs. Each program supported will receive an independent assessment of our data/findings and test support for CM/CCM evaluations. The Center will continue to emphasize support of the DOT&E enterprise, with a clear focus on Title 10 weapons systems, aircraft survivability and hostile fire initiatives. It will continue to conduct ongoing investigations towards determining and filling the gaps in EW and multimode system testing. In addition to these test activities, the Center will continue to provide CM expertise in pre-deployment events and training, as well as CM/CCM-focused tactics, techniques and procedures (TTP) development. The Center will complete the initial development of the CTEIP-sponsored MSALTS, which will be used in support of testing for both Title 10 programs and ASE urgent operational needs. The Center will work with CTEIP and AEDC on the development of JSIS to add enhanced data collection for radiometric events. The Center will complete the development of a new RLS capable of launching larger diameter missiles. The Center plans to complete development of the PRTS, expanding its output power and our capability to support multimode guidance T&E. The Center will continue working with the Threat Simulator Working Group (TSWG)-sponsored HSIG model. Our support will be distributed across all the Services, as well as intelligence agencies and research and development activities.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
The Center will provide expertise to many organizations and will continue to be actively involved in the following panels: JECM Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), JASP, Foreign Material Exploitation Working Group, Foreign Material Program T&E Subcommittee, Joint Project Mallari Working Group, JCMT&E WG, and JCMT&E WG HFI subgroup lead. ***FY 2015 Plans:*** In FY 2015 JT&E has two projects slated to close and an estimated four projects ongoing from FY 2014. The Joint Counter Low, Slow, Small UAS Joint Test, anticipated to close in April 2015, will develop and test integrated air and missile defense operator procedures to increase their ability to detect, track, and identify low, slow, and small UASs and provide timely notification to the area air defense commander. The Unmanned Aircraft Systems Airspace Integration Joint Test, scheduled to close in July 2015, will develop, test, and evaluate standardized DoD UAS procedures to support effective UAS flight operations in the National Airspace System. Four new feasibility studies will be conducted in FY 2015, two of which will be selected to conduct joint tests. Threat Systems In FY 2015, Threat Systems will continue test planning working group participation and perform technical analyses to identify threat shortfalls; conduct special studies and provide current intelligence support tailored to specific U.S. weapon systems acquisitions. Threat Systems will: - Provide intelligence support to DOT&E staff to address specific questions on threat systems affecting programs on the OSD T&E Oversight list and provide briefings and special intelligence reports when necessary - Sustain and manage threat M&S to support test and evaluation by overseeing and coordinating intelligence community developed threat models, performing threat model anomaly resolution resolving differences from live fire testing, integrating threat models into T&E facilities and distributing performance and signature models to T&E users. - Manage Integrated Technical Evaluation and Analysis of Multiple Sources (ITEAMS) efforts supporting F-35 and other EW programs by conducting intelligence “deep dives” to produce intelligence in sufficient detail to develop new threat test assets. - Represent DOT&E at foreign material exchanges, inter-agency coordinating groups, and non-proliferation groups to raise awareness of T&E needs for foreign material, coordinate service requirements, and de-conflict and prioritize foreign material requirements for T&E. - Represent DOT&E at the Intelligence Mission Data Oversight Board responsible for development, production and sharing issues affecting the intelligence data supporting weapons systems acquisition. - Oversee new and legacy threat system investments.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
These activities help DOT&E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs. The Center The Center will test, analyze, and report on more than 30 systems, with special emphasis on aircraft survivability, CMs/CCMs employment, warning and targeting systems, and PGWs. Each program supported will receive an independent assessment of our data/findings and test support for CM/ CCM evaluations. The Center will continue to emphasize support of the DOT&E enterprise, with a clear focus on Title 10 weapons systems, aircraft survivability and hostile fire initiatives. Furthermore, the Center will continue to provide CM expertise in pre-deployment events and training, as well as CM/CCM-focused TTP development. The Center will continue Improvement and Modernization (I&M) efforts to improve our T&E capabilities. The Center will continue to work with the TSWG-sponsored HSIG model. Our support will be distributed across all the Services, as well as intelligence agencies and research and development activities. The Center will provide expertise to many organizations and will continue to be actively involved in the following panels: JECM Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), JASP, Foreign Material Exploitation Working Group, Foreign Material Program T&E Subcommittee, Joint Project Mallari Working Group, JCMT&E WG, and JCMT&E WG HFI subgroup lead.			
Accomplishments/Planned Programs Subtotals	53.817	61.448	48.013

	FY 2013	FY 2014
Congressional Add: Unjustified reduction	19.500	-
FY 2013 Accomplishments: JT&E started several new projects in August 2013: 1) four Joint Feasibility Studies (JFS), an increase of two JFSs over the baseline budget, and 2) eight Quick Reaction Tests (QRTs), an increase of four over the baseline budget. Ultimately, seven QRTs were directed because the Miniature Air Launched Decoy Support to Stand-off Weapons QRT candidate was not technically supportable. ***FY 2014 Plans:*** Rather than the normally planned six QRTs, JT&E is planning to select 10 QRTs. The 26 February 14 SAC will select two Joint Tests and two new JFSs, resulting in an increase of one Joint Test.		
Congressional Add: Electronic WarfareTest Capability	-	60.500
FY 2014 Plans: In FY14 $60.5M was transferred to DOT&E to rapidly develop and procure open loop emitter systems for open-air range testing of F-35 and other air warfare weapon systems. These systems will be utilized		

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	FY 2013	FY 2014
by developmental and operational testing, and eventually for training scenarios. They will provide realistic density and emulate behavior of numerous advanced threat systems.		
Congressional Adds Subtotals	19.500	60.500

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not Applicable

E. Performance Metrics

(U) PERFORMANCE METRICS:

Performance Measure: Percentage of required products, such as test planning documents, tactics, techniques, procedures, threat characteristics, assessments, and reports that are developed and delivered to program managers and customers on time.

Actual Performance and Goals:

Operational Test Activities and Analyses	FY 2013 (Actual)	FY 2014 (Goal)	FY 2015 (Goal)
On-Time Completion Rate	94%	95%	96%

The on-time completion rate was computed on the basis of the number of required products that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year. DOT&E plans to maintain its on-time completion rates for FY 2014 and FY 2015 through increased management emphasis on timely delivery of required products to customer activities.