Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Office of Secretary Of Defense											Date: March 2014	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604250D8Z / *Advanced Innovative Technologies*							
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	0.000	-	129.883	190.000	-	190.000	76.000	48.000	30.000	-	Continuing	Continuing
P250: *Advanced Innovative Technologies*	0.000	-	129.883	190.000	-	190.000	76.000	48.000	30.000	-	Continuing	Continuing

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

A. Mission Description and Budget Item Justification

The Strategic Capabilities Office (SCO) identifies, analyzes, demonstrates, and transitions game-changing applications of existing and near-term technology--and other U.S. Government capabilities--to shape and counter emerging threats. Currently focused on the Asia-Pacific Rebalance, SCO combines capability innovation with concepts of operation and information management to develop novel concepts often crossing Service, Defense-Intelligence, and multi-classification divides--to solve critical national security challenges in partnership with the Services, Combatant Commands, Joint Chiefs of Staff, Intelligence Community, and the Office of the Secretary of Defense. SCO analyzes, demonstrates, and red-teams these concepts on an accelerated time frame to enable subsequent programmatic decisions on alternative capabilities that have greater mission impact and lower cost.

The Advanced Innovative Technologies Program Element contains projects that include in-depth analysis to determine technical and operational performance and risk, component- and subsystem-level prototyping and testing to reduce risk, and operational demonstrations to prove concept viability prior to subsequent programmatic decisions. Due to nature of these projects, specific applications and detailed plans are available at higher classification levels.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	130.000	102.000	-	102.000
Current President's Budget	-	129.883	190.000	-	190.000
Total Adjustments	-	-0.117	88.000	-	88.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• FFRDC Adjustments	-	-0.117	-	-	-
• DoD Priorities and Requirements	-	-	88.000	-	88.000

Change Summary Explanation

FY 2015: Program increase is to support the higher priorities of agency operations.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense			Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604250D8Z / *Advanced Innovative Technologies*	Project (Number/Name) P250 / *Advanced Innovative Technologies*	

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
P250: *Advanced Innovative Technologies*	-	-	129.883	190.000	-	190.000	76.000	48.000	30.000	-	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 Strategic Capabilities Office (SCO) identifies, analyzes, demonstrates, and transitions game-changing applications of existing and near-term technology--and other U.S. Government capabilities--to shape and counter emerging threats. Currently focused on the Asia-Pacific Rebalance, SCO combines capability innovation with concepts of operation and information management to develop novel concepts--often crossing Service, Defense-Intelligence, and multi-classification divides--to solve critical national security challenges in partnership with the Services, Combatant Commands, Joint Chiefs of Staff, Intelligence Community, and the Office of the Secretary of Defense. SCO analyzes, demonstrates, and red-teams these concepts on an accelerated time frame to enable subsequent programmatic decisions on alternative capabilities that have greater mission impact and lower cost.

The Advanced Innovative Technologies Program Element contains projects that include in-depth analysis to determine technical and operational performance and risk, component- and subsystem-level prototyping and testing to reduce risk, and operational demonstrations to prove concept viability prior to subsequent programmatic decisions. Due to nature of these projects, specific applications and detailed plans are available at higher classification levels.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Land-Based Rail Gun (LBRG)	-	129.883	102.000
Description: Exisiting Navy Science and Technology (S&T) Railgun program will be leveraged into Land-based Railgun (LBRG) analysis, prototyping, and experimentation. Cost-effective land-based defense will be demonstrated by closing the fire control loop between existing sensors and prototype ground-launched Railgun projectiles. To facilitate this, LBRG will integrate the Railgun launcher, power, projectile, and sensor so that projectiles may be command guided during a series of flight tests. These tests will verify performance and lethality results from modeling and simulation. Testing will conclude by demonstrating projectile fly-out and control, sensor tracking of projectiles, communication from sensor to projectile, integrated guidance, navigation and control, culminating in an FY2015 live-fire, closed-loop, command-guided launch from a 20 mega-joule Railgun. This is a new PE for FY 2014 that contains OSD land-based Railgun investments to accelerate fire control loop closure. In FY 2011 and FY 2012, ramp investments were provided from alternate RDT&E PEs to enable the following accomplishments: • Initiated development of high fidelity models and simulations for gun launched guided projectile engagements. • Anchored projectile models with wind tunnel and flight test data in collaboration with the Navy's Office of Naval Research (ONR). • Analyzed several effective sensor architectures using existing sensors to support gun launched guided projectile engagements.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
• Selected sensors to support FY 2014 flight tests of prototype projectile airframes. • Conducted several projectile airframe flight tests in the first quarter—a quarter ahead of schedule—in collaboration with ONR. • Installed tracker hardware and successfully tracked a projectile flight with tactically relevant measurement accuracies in the first quarter in collaboration with ONR and the Army's Armament Research Development and Engineering Center. ***FY 2014 Plans:*** • Initiate development of prototype projectiles. • Initiate procurement of 20MJ Railgun launcher system (power and energy, launcher, cables, test stand, and launcher/power controls). • Initiate development of close-loop-control for testing of prototype projectiles. • Initiate launcher testing of prototype projectile. • Initiate design and fabrication of high power prototype gun mount system. • Initiate systems engineering for Railgun System (power, gun, projectile and sensor). ***FY 2015 Plans:*** • Continue development of prototype projectiles. • Continue development of closed loop control for testing of prototype projectiles. • Continue launcher testing of prototype projectiles. • Continue design and fabrication of high power prototype gun mount system. • Continue integration of Railgun System (power, gun projectile, and sensor). • Investigate alternative lethality methods.			
Title: Assured Tactical C2 ***Description:*** Leverage existing technologies to analyze and demonstrate an alternative Command and Control solution for contested environments. Due to nature of this project, specific descriptions and detailed plans are available at higher classification levels. ***FY 2015 Plans:*** Project will apply existing Department of Defense investments in novel way to increase command and control reliability in contested environments. FY2015 efforts will include design and prototyping for subsequent proof-of-principle demonstrations.	-	-	35.000
Title: Advanced Navigation ***Description:*** Leverage existing technologies to analyze and demonstrate a prototype advanced navigation technique for contested environments. Due to nature of this project, specific descriptions and detailed plans are available at higher classification levels.	-	-	21.300

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2015 Plans: Projects will apply existing technologies to demonstrate advanced navigation techniques. FY2015 efforts will include design, prototyping, data collections, and tests. Test results will be used to anchor modeling and simulation performance results and develop operationally-relevant proof-of-principle demonstrations.			
Title: Intelligence, Surveillance, and Reconnaissance (ISR) Denial ***Description:*** Leverage existing technologies to analyze and demonstrate a prototype solution to disrupt enemy targeting of critical U.S. assets. Due to nature of this project, specific descriptions and detailed plans are available at higher classification levels. ***FY 2015 Plans:*** Project will apply existing technologies to demonstrate ISR denial techniques. FY2015 efforts will include design, prototyping, and field testing. Results will be used to anchor modeling and simulation performance results and develop and execute operationally-relevant proof-of-principle demonstrations.	-	-	20.000
Title: Enhanced Munitions ***Description:*** Leverage existing technologies to analyze and prototype enhancements to current and future munitions. Due to nature of this project, specific descriptions and detailed plans are available at higher classification levels. ***FY 2015 Plans:*** Projects will apply existing technology to enhance the effectiveness of current and future munitions. FY2015 efforts will include analysis, prototyping, and subsystem testing to develop operationally-relevant proof-of-principle demonstrations.	-	-	11.700
Accomplishments/Planned Programs Subtotals	-	129.883	190.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics are specific to each aspect of the Land-Based Rail Gun (LBRG), Assured Tactical C2, Advanced Navigation, ISR Denial and Enhanced Munitions efforts, funded under the Advanced Innovative Technologies Program Element. All of which include measures identified in the management approach, Statement of

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Work (SOW) and Period of Performance (POP). In addition, completions and successes are monitored against schedules and deliverables stated in the initiative's management approach. Specific applications and plans are available at a higher classification level, upon request.