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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity												
R-1 Program Element (Number/Name)												
1319: Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development												
PE 0204136N / F/A-18 Squadrons												
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	4,712.891	110.487	86.216	133.265	-	133.265	233.175	185.194	166.243	116.013	Continuing	Continuing
1662: F/A-18 Improvement	4,006.957	107.472	83.152	118.243	-	118.243	233.175	185.194	166.243	116.013	Continuing	Continuing
2065: F/A-18 Radar Upgrade	705.934	3.015	3.064	15.022	-	15.022	-	-	-	-	-	727.035
A. Mission Description and Budget Item Justification												
<p>The F/A-18 is required to perform multiple missions. Capabilities of the F/A-18 weapon system and ancillary equipment can be upgraded to accommodate and incorporate new or enhanced weapons as well as advances in technology to respond effectively to emerging future threats. Continued F/A-18 E/F and EA-18G "Flight Plan" spiral capability development is critical to the baseline of the Super Hornet next generation mission system capability and maintaining tactical relevance in support of Navy Aviation Plan 2030. Development continues for a platform solution to threat Advanced Electronic Attack and Counter-Electronic Attack (CEA). F/A-18 solutions to CEA include upgrades to existing sensors such as F/A-18 Radar Upgrade, Infrared Search and Track Block I, and development of a fused picture between these sensors, such as Multi-Sensor Integration Phase III (the phases of Multi-Sensor Integration are being rolled up under the title of Multi-System Integration in FY15, programmatic name change only). Additionally, continued advanced development engineering for improvements in reliability and maintainability are required to ensure maximum benefit is achieved through reduced cost of ownership and to provide enhanced availability.</p>												
JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate funding in the current or subsequent fiscal year.												
B. Program Change Summary (\$ in Millions)												
Previous President's Budget		112.618		76.216		56.193						56.193
Current President's Budget		110.487		86.216		133.265						133.265
Total Adjustments		-2.131		10.000		77.072						77.072
• Congressional General Reductions		-		-		-						-
• Congressional Directed Reductions		-		-		-						-
• Congressional Rescissions		-		-		-						-
• Congressional Adds		-		10.000								
• Congressional Directed Transfers		-		-		-						-
• Reprogrammings		-		-		-						-
• SBIR/STTR Transfer		-2.130		-		-						76.500
• Program Adjustments		-		-		-						0.572
• Rate/Misc Adjustments		-0.001		-		-						-
Change Summary Explanation												
The FY 2016 funding request was reduced by \$5.442 million to account for the availability of prior year execution balances.												

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015											
Appropriation/Budget Activity										Project (Number/Name)											
1319 / 7										1662 I F/A-18 Improvement											
R-1 Program Element (Number/Name)										Cost To											
PE 0204136N I F/A-18 Squadrons										Complete											
COST (\$ in Millions)										Total											
Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	FY 2019	FY 2020										
4,006.957	107.472	83.152	118.243	-	118.243	233.175	185.194	166.243	116.013	166.243	116.013										
Quantity of RDT&E Articles																					
Note																					
Multi-Sensor Integration Phases II and III efforts are continued but renamed Multi-System Integration since FY15.																					
A. Mission Description and Budget Item Justification																					
F/A-18 Improvement (1662): The F/A-18 is a multi-mission strike fighter aircraft that is used in Air-to-Air, strike, surveillance, reconnaissance and tanking roles through selected use of external equipment (fuel tanks, tactical and reconnaissance pods, and various ordnance launching racks). Additional capabilities are required for interoperability in a network-centric tactical environment. In order to respond effectively to emerging future threats, F/A-18 aircraft capabilities are being expanded and upgraded to incorporate new/enhanced weapons systems and avionics including Dual Mode Weapons, a Counter-Electronic Attack, Infra-red Search and Track integrated with the Active Electronically Scanned Array Radar to provide Narrow Band High Gain Electronic Attack, Distributed Targeting precision strike capability through a Distributed Targeting System, and Sensor Integration through Multi-Sensor Integration Phase I/II/III capability which is renamed beginning in FY15 as Multi-System Integration. Continued advanced development engineering and analysis of hardware/software is required to successfully optimize fleet F/A-18 weapon systems for interoperability in a network-centric tactical environment (such as Naval Integrated Fire Control-Counter Air), to include: enhanced software capabilities, potential new hardware development, enhanced existing hardware, and enhanced network-centric capabilities. Additionally, continued effort is needed to perform technical evaluations, modeling and simulations, investigative flight testing, enhanced software modifications based on reported fleet deficiencies and beginning in FY14 the development and testing of design modifications to address obsolescence issues with the F/A-18 weapon system and ancillary equipment. Funding has been added starting in FY 2012 for the Automatic Ground Collision Avoidance System/Automated Terrain Avoidance and Warning System which will integrate currently implemented manual methodologies to provide not only aural and visual cues/advisories but also automatic initiation of aircraft recovery and subsequent return of control to the pilot following recovery. This funding line continues F/A-18E/F "Flight Plan" spiral capability development, to include Multi-Sensor Integration Phase II and Phase III capability (programmatic name change began in FY15 to Multi-System Integration) and further Flight Plan Engineering and System Configuration Set development and integration. This budget continues funding for F/A-18A-F Test Wing Maintenance support, funds development efforts needed for integration of air launched laser guided rockets on F/A-18 A+/C/D and the development and testing required for the integration of the Small Diameter Bomb II and Joint Miniature Munitions-Bomb Rack Unit on the F/A-18E/F Super Hornet.																					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)																					
Title: Electro-Optical Infra-Red Search and Track (IRST) Phase I																					
Description: Technology development and engineering and manufacturing development of an IRST sensor for the F/A-18 E/F.																					
FY 2014 Accomplishments:																					
<table border="1"> <thead> <tr> <th>FY 2014</th> <th>FY 2015</th> <th>FY 2016 Base</th> <th>FY 2016 OCO</th> <th>FY 2016 Total</th> </tr> </thead> <tbody> <tr> <td>57.717</td> <td>40.157</td> <td>43.365</td> <td>-</td> <td>43.365</td> </tr> </tbody> </table>												FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	57.717	40.157	43.365	-	43.365
FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total																	
57.717	40.157	43.365	-	43.365																	
Articles:																					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015				
Appropriation/Budget Activity 1319 / 7		Project (Number/Name) 1662 / F/A-18 Improvement				
R-1 Program Element (Number/Name) PE 0204136N / F/A-18 Squadrons						
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A		6.500	8.000	6.846	-	6.846
Title: Test Wing Maintenance Conversion	Articles:					
Description: Funding supports maintenance of aircraft at NAVAIR Test Wing used to support Program Office objectives.						
FY 2014 Accomplishments:						
Performed aircraft maintenance on Test Wing Aircraft. Decrease in planned flight testing over FY13 as a result of reduced budget authority and planned efforts.						
FY 2015 Plans:						
Perform aircraft maintenance on Test Wing aircraft. FY15 restores Test Wing funding to previously planned levels.						
FY 2016 Base Plans:						
Perform aircraft maintenance on Test Wing aircraft.						
FY 2016 OCO Plans:						
N/A						
Title: Flight Plan Engineering/Brimstone (Cong add)	Articles:	-	10.000	-	-	-
Description: This funding is for Brimstone weapon system qualification for the F/A-18 aircraft.						
FY 2014 Accomplishments:						
N/A						
FY 2015 Plans:						
Conduct missile and launcher subsystem qualification efforts, characterization of system performance and airworthiness analyses with Boeing Aircraft Company (BAC). Conduct qualification testing which will culminate in the delivery of specific reports of test results for each test effort and in the delivery of BAC analyses for weapon/launcher interfaces with the F/A-18.						
FY 2016 Base Plans:						
N/A						
FY 2016 OCO Plans:						