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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0204202N / DDG-1000							
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	952.750	189.580	202.517	103.199	-	103.199	20.126	13.132	-	-	-	1,481.304
2464: DD(X) Sys Design, Dev & Integration	952.750	189.580	202.517	103.199	-	103.199	20.126	13.132	-	-	-	1,481.304
Program MDAP/MAIS Code: 197												
A. Mission Description and Budget Item Justification												
This Program Element (PE) provides funds for development of the DDG 1000 Class of U.S. Navy surface combatants. The mission of the DDG 1000 class is to provide credible independent forward presence/deterrence and operate as an integral part of Naval, Joint or Combined Maritime Forces. DDG 1000 will provide advanced land attack capability in support of the ground campaign and contribute to Naval, Joint or Combined battlespace dominance in littoral operations. DDG 1000 will establish and maintain surface and sub-surface superiority, provide local air defense, and incorporate signature reduction to operate in all threat environments. DDG 1000 will have seamless Joint Interoperability to integrate all source information for battlespace awareness and weapons direction.												
B. Program Change Summary (\$ in Millions)				FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total				
Previous President's Budget				187.904	202.522	128.998	-	128.998				
Current President's Budget				189.580	202.517	103.199	-	103.199				
Total Adjustments				1.676	-0.005	-25.799	-	-25.799				
• Congressional General Reductions				-	-0.005							
• Congressional Directed Reductions				-	-							
• Congressional Rescissions				-	-							
• Congressional Adds				-	-							
• Congressional Directed Transfers				-	-							
• Reprogrammings				8.140	-							
• SBIR/STTR Transfer				-6.457	-							
• Program Adjustments				-	-	-25.800	-	-25.800				
• Rate/Misc Adjustments				-0.007	-	0.001	-	0.001				
Change Summary Explanation												
The FY 2014 increase supports continued RDTE efforts.												
The FY 2016 funding request was reduced by \$25.800 million to account for the delay in DDG 1000 delivery.												

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0204202N / DDG-1000				Project (Number/Name) 2464 / DD(X) Sys Design, Dev & Integration			
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
2464: DD(X) Sys Design, Dev & Integration	952.750	189.580	202.517	103.199	-	103.199	20.126	13.132	-	-	-	1,481.304
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project encompasses DDG 1000 development efforts required to deliver the Flight I DDG 1000 Class Ships. Major efforts include software requirements analysis, architectural and design code and unit testing, integration, qualification testing, and Independent Verification and Validation (IV&V) for Software Release 6 and Spiral Releases; execution of Integrated Power Systems (IPS) and ship control system testing and integration; Live Fire Test and Evaluation (LFT&E), Developmental Testing (DT), and Integrated Testing (IT) in support of the TEMP and development of Tactical Tomahawk Weapon Control System (TTWCS) software. Funding for previous years is included in PE 0604300N.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Product / Software Development								101.795	98.885	54.341	-	54.341
								Articles:				
Description: Product Development/Software Development												
FY 2014 Accomplishments:												
Completed development and test of Release 6 software build requirements for Self Defense Test Ship (SDTS)/ Post Delivery Availability (PDA). Completed Multi-Function Radar (MFR) with Volume Search software modifications. Developed capability required to launch and control missiles for Integrated Test ITB-1. Continued development of software build to support Post Shakedown Availability (PSA) required capabilities for full operation of Integrated Undersea Warfare (IUSW), Surface Electronic Warfare Improvement Program (SEWIP), Tomahawk, and Vertical Launch Anti-Submarine Rocket (VLA). Developed corrections to Hull, Mechanical & Electrical (HM&E) and combat systems code in support of ship activation. Development of interface specifications for Tactical Tomahawk Weapon Control Systems (TTWCS) with MK 57 for DDG 1000 Class unique implementation. Completed the Long Range Land Attached Projectile (LRLAP) Engineering & Manufacturing Development (E&MD) phase.												
FY 2015 Plans:												
Continue development of software build to support PSA required capabilities. Complete PDA combat systems activation. Continue development of corrections to HM&E and combat systems code in support of ship activation. Support ship activation and SDTS, PDA and PSA software builds. Develop, integrate and test as												

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
required to correct issues to the existing code base. Populate Data Centers to enable shipboard integrated training capability, support Overall Combat Systems Operability Test (OCSOT) implementation, and provide system redundancy in the event of operational casualty.  <b>FY 2016 Base Plans:</b> Complete software to support Sail Away. Develop, integrate, and test as required corrections to HM&E and Mission System code through completion of fully capable Software Delivery in FY16. Continue development of interface specifications of TTWCS.  <b>FY 2016 OCO Plans:</b> N/A						
<b>Title:</b> Test and Evaluation  <div>Articles:</div> <b>Description:</b> Test and Evaluation Master Plan Execution  <b>FY 2014 Accomplishments:</b> Procured STANDARD Missile 2 (SM-2) test ordnance to conduct Integrated Test (ITB1-Self Defense Test Ship (SDTS) and ITB3-Lead Ship) for Anti-Air Warfare Mission Testing. Procured Long Range Land Attack Projectile (LRLAP) blast shapes, propellant charges and pallets to conduct Integrated Test (ITB3-Lead Ship) Land Attack Mission Testing. Conducted SDTS suite land based test at Wallops Island. Conducted DTB3-414 SPY 3 volume surveillance testing at SCSC Wallops Island. Prepared for installation of the AAW suite on the SDTS. Continued development of Modeling and Simulation (M&S) Probability of Raid Annihilation (PRA) and Measures of Effectiveness (MOE).  <b>FY 2015 Plans:</b> Initiate Integrated Testing (ITB1-120) Evolved Sea Sparrow Missiles (ESSM) engagements using the SDTS. Procure test ordnance SM-2 to conduct Operational Testing (OT) and Follow-on Test and Evaluation (FOT&E) for Anti-Air Warfare Mission Testing. Plan Integrated Test (ITB4 - Lead Ship). Procure LRLAP rounds and pallets to conduct Integrated Test (ITB4 - Lead Ship) Land Attack Mission. Continue development of M&S PRA and MOE. Initiate test planning for lead ship Developmental Testing (DT) and Integrated Testing (IT).  <b>FY 2016 Base Plans:</b> Complete ITB1-120 ESSM engagements using the SDTS. Demonstrate safe firing of an SM-2 on the SDTS. Initiate ITB3 Integrated Testing Radar Cross Section Measurements, characterize Medium Frequency Sonar,		87.385 -	103.282 -	48.503 -	- -	48.503 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
and perform accuracy check to High Frequency Sonar. Continue test planning for lead ship DT and IT. Initiate test planning for Operational Evaluation (OPEVAL).												
FY 2016 OCO Plans: N/A												
Title: Management Support								0.400	0.350	0.355	-	0.355
Articles:								-	-	-	-	-
Description: Government and Contractor Engineering Support.												
FY 2014 Accomplishments: Continue to provide travel.												
FY 2015 Plans: Continue to provide travel.												
FY 2016 Base Plans: Continue to provide travel.												
FY 2016 OCO Plans: N/A												
Accomplishments/Planned Programs Subtotals								189.580	202.517	103.199	-	103.199
C. Other Program Funding Summary (\$ in Millions)												
Line Item	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	
• SCN / 2119: DDG 1000	231.694	419.532	433.404	-	433.404	139.479	-	-	-	-	4,026.791	
• OMN / 3B1K: Specialized Skill Training (BSO 24)	3.351	3.173	1.018	-	1.018	1.078	3.126	3.198	3.261	-	25.593	
• RDTE / 0439: Standard Missile Improvement	12.706	8.825	0.170	-	0.170	-	-	-	-	-	61.309	
• PANMC / 0198: LRLAP 6	4.687	113.092	11.596	-	11.596	71.022	73.000	75.960	77.309	-	433.219	
• OPN/9020: OPN Spares	0.017	-	-	-	-	-	-	-	-	-	0.017	
• SCN/5110: Outfitting/Post Delivery	49.259	60.382	87.060	-	87.060	77.882	23.284	35.038	39.061	143.600	527.392	
• OPN/0947: DDG 1000 Class Support Equipment	-	-	-	-	-	35.099	33.610	2.548	2.613	-	73.870	

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• WPN/2356: STANDARD Missile Mods	-	-	-	-	-	8.581	11.829	12.042	12.259	-	44.711
• OMN/1B5B: DDG 1000	-	-	10.918	-	10.918	9.162	9.327	4.495	-	-	33.902
Remarks											
D. Acquisition Strategy											
A revised acquisition strategy has been determined that supports the DDG-1000/DDG-51 restart shipyard allocation workload Memorandum of Agreements (MOAs). Execution of the MOAs shifted primary construction of all three DDG-1000 class ships to Bath Iron Works (BIW). Award of the DDG 1001/1002 to BIW occurred in September 2011.											
E. Performance Metrics											
Successfully achieve Milestone C. Successfully achieve Initial Operational Capability. Successfully complete Operation Test Readiness Review. Successfully complete Developmental Test/Operational Test.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0204202N / DDG-1000				Project (Number/Name) 2464 / DD(X) Sys Design, Dev & Integration					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Ship Integration Development Phase IV (SW)	SS/CPAF	Raytheon : Tewksbury MA	714.632	87.198	Jan 2014	77.531	Dec 2014	38.100	Dec 2015	-		38.100	89.700	1,007.161	-
Ship Integration Development (Prod Dev)	SS/CPFF	Various : Various	12.250	12.167	Mar 2014	21.354	Dec 2014	16.241	Dec 2015	-		16.241	-	62.012	-
LRLAP	Various	Various : Various	0.000	2.430	Aug 2014	-		-		-		-	-	2.430	-
Subtotal			726.882	101.795		98.885		54.341		-		54.341	89.700	1,071.603	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SDTS (ITB1-120) / PRA TB	SS/CPFF	Raytheon : Portsmouth, RI	74.125	15.100	Jan 2014	13.325	Jan 2015	10.525	Dec 2015	-		10.525	11.800	124.875	-
T&E Engineering	C/CPIF	CSC : Washington, DC	1.730	0.870	Feb 2014	0.200	Jan 2015	0.200	Dec 2015	-		0.200	-	3.000	-
SDTS/PRA	Various	Various : Various	10.372	7.690	Dec 2013	5.369	Nov 2014	14.972	Nov 2015	-		14.972	40.069	78.472	-
PRA/MOE	C/CPIF	NSMA : Arlington, VA	3.496	1.038	Feb 2014	2.145	Dec 2014	-		-		-	5.300	11.979	-
Eng/M&S/Cert Agents	WR	NSWC : Dahlgren, VA	5.928	1.599	Dec 2013	0.200	Nov 2014	0.200	Nov 2015	-		0.200	0.300	8.227	-
Integrated Test	WR	NSWC : Bethesda, MD	9.910	1.157	Dec 2013	0.310	Nov 2014	2.860	Nov 2015	-		2.860	8.478	22.715	-
SDTS/PRA/Test Bed	Various	Various : Various	7.483	1.300	Nov 2013	2.000	Nov 2014	1.300	Nov 2015	-		1.300	1.100	13.183	-
SDTS	WR	SCSC : Wallops, Is, VA	3.531	1.100	Dec 2013	0.835	Dec 2014	-		-		-	-	5.466	-
Live Fire Test & Evaluation	C/CPIF	ROI : Mullica Hills, NJ	7.950	-		-		-		-		-	-	7.950	-
Live Fire Test and Evaluation	Various	Various : Various	1.800	-		-		-		-		-	-	1.800	-
OA/DT Assist	WR	COTF : Norfolk, VA.	4.872	0.868	Dec 2013	2.248	Jan 2015	2.201	Dec 2015	-		2.201	5.353	15.542	-
Int Test/Undersea Warfare	WR	Various : Various	0.000	-		-		0.747	Nov 2015	-		0.747	2.507	3.254	-

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Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LRLAP Test Article Procurement ITB3/ITB4 (EMD)	C/CPIF	BAE : Minneapolis, MN	0.000	18.400	Feb 2014	35.214	Jan 2015	4.500	Dec 2015	-		4.500	0.900	59.014	-
LFT&E Engineering	C/CPIF	ROI : Mullica Hills, NJ	28.352	3.800	Feb 2014	0.700	Jan 2015	0.800	Dec 2015	-		0.800	3.400	37.052	-
ESSM/SM2 Procurement	C/CPIF	Raytheon : Tucson, AZ	9.460	15.828	Feb 2014	14.250	Jan 2015	-		-		-	-	39.538	-
MOE Test Bed	WR	NUWC : Various	0.578	0.582	Nov 2013	0.350	Dec 2014	0.250	Nov 2015	-		0.250	0.800	2.560	-
TTWCS	C/CPIF	Lockheed Martin : Valley Forge, PA	0.000	-		-		-		-		-	-	-	-
Travel	Various	NAVSEA : Washington, DC	0.048	0.049	Oct 2013	-		-		-		-	0.300	0.397	-
SDTS and Integrated Test	Various	PEO IWS : Washington, DC	1.049	17.949	Dec 2013	25.936	Nov 2014	6.948	Nov 2015	-		6.948	6.126	58.008	-
ITB4	C/CPFF	General Dynamics : ME	0.000	-		-		-		-		-	-	-	-
T&E Engineering	WR	NSWC : Panama City, FL	0.275	0.055	Nov 2013	0.200	Jan 2015	3.000	Nov 2015	-		3.000	-	3.530	-
Subtotal			170.959	87.385		103.282		48.503		-		48.503	86.433	496.562	-
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	NAVSEA : Washington, DC	2.470	0.400	Dec 2013	0.350	Dec 2014	0.355	Nov 2015	-		0.355	0.400	3.975	-
Government Services Engineering	Various	Various : Various	52.439	-		-		-		-		-	-	52.439	-
Subtotal			54.909	0.400		0.350		0.355		-		0.355	0.400	56.414	-

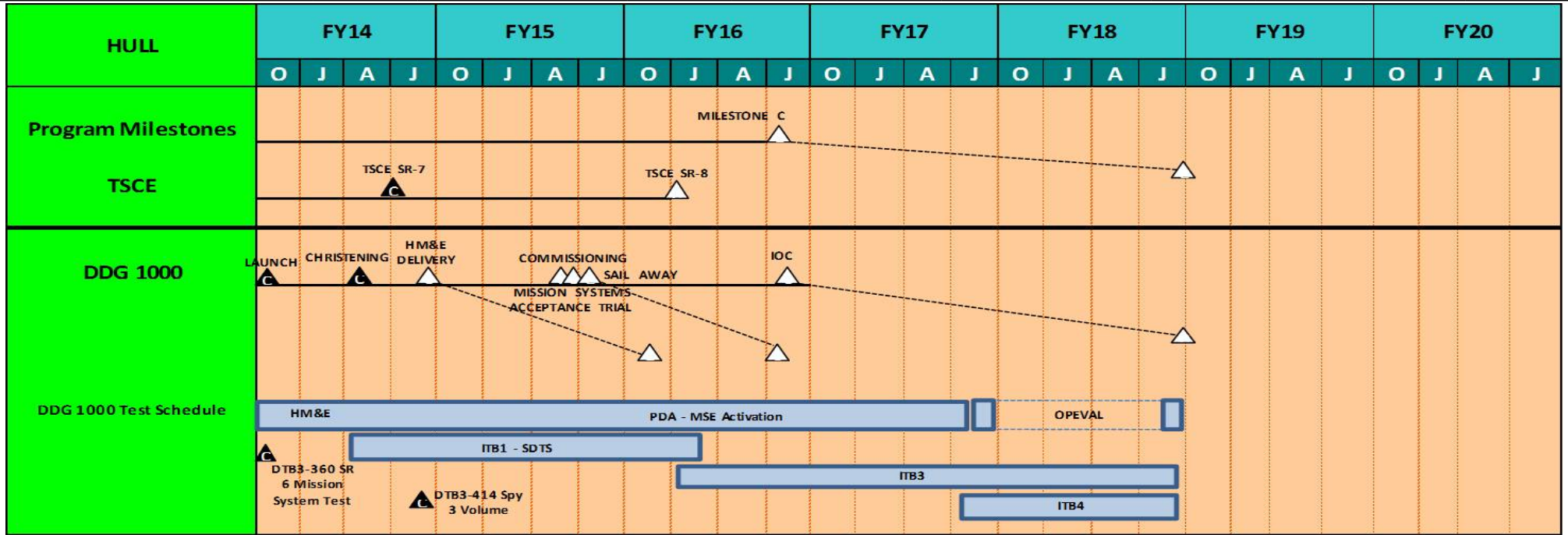
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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2016 Navy</b>										<b>Date:</b> February 2015			
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0204202N / <i>DDG-1000</i>					<b>Project (Number/Name)</b> 2464 / <i>DD(X) Sys Design, Dev &amp; Integration</i>			
	<b>Prior Years</b>	<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	952.750	189.580		202.517		103.199		-		103.199	176.533	1,624.579	-
<b>Remarks</b>													



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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy			Date: February 2015		
Appropriation/Budget Activity		R-1 Program Element (Number/Name)		Project (Number/Name)	
1319 / 5		PE 0204202N / DDG-1000		2464 / DD(X) Sys Design, Dev & Integration	



KEY

IOC

SR

OPEVAL

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HM&E

SDTS

PDA

INITIAL OPERATIONAL CAPABILITY

SOFTWARE RELEASE

OPERATIONAL EVALUATION

COMPLETED EVENT

HULL, MECHANICAL & ELECTRICAL

SELF-DEFENSE TEST SHIP

POST DELIVERY AVAILABILITY

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Navy		<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0204202N / <i>DDG-1000</i>	<b>Project (Number/Name)</b> 2464 / <i>DD(X) Sys Design, Dev &amp; Integration</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Proj 2464</i></b>				
Conduct ITB1-120 - SDTS	3	2014	2	2016
Software Release 8 - Spiral Post Shakedown Availability	2	2016	2	2016
Conduct ITB3	2	2016	4	2018
Conduct ITB4	4	2017	4	2018