Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	506.798	7.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6,150.883
2464: *DD(X) Sys Design, Dev & Integration*	332.440	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5,220.597
2735: *VSR - Volume Search Radar*	5.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	274.868
3106: *Combat System Integration*	13.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.895
3107: *CG(X) Development*	54.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	172.536
4009: *Advanced Gun System (AGS) on DD(X)*	95.907	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	367.247
9999: *Congressional Adds*	6.283	7.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	92.740

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 and CG(X), future cruiser development. The mission of the DDG 1000 class is to provide affordable and 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. CG(X) development efforts will mature the CG(X) design through Milestone B. Beginning in FY 10 all funding was realigned to PE 0204202N for DDG 1000 and to PE 0204201N for CG(X).

The following Congressional adds are contained in this Program Element:

FY09 Congressional Adds:
Floating Area Network (FAN) and Bio Nano Micro-Electro-Mechanical Systems (MEMS) Center for Defense Applications.

FY10 Congressional Adds:
FAN and Guidance, Navigation, Control and Targeting

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604300N: *SC-21 Total Ship System Eng*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	596.109	0.000	0.000	0.000	0.000
Current President's Budget	506.798	7.966	0.000	0.000	0.000
Total Adjustments	-89.311	7.966	0.000	0.000	0.000
• Congressional General Reductions		-0.034			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		8.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.319	0.000			
• SBIR/STTR Transfer	-16.030	0.000			
• Program Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional Recision Adjustments	-73.600	0.000	0.000	0.000	0.000

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Project: 9999: *Congressional Adds*		
Congressional Add: *Guidance, Navigation, Control, and Targeting*	0.000	3.983
Congressional Add: *FLOATING AREA NETWORK (FAN) INSTALLATION OF WIRELE*	4.787	3.983
Congressional Add: *BIO/NANO-MEMS CTR FOR DEFENSE APPLICATIONS*	1.496	0.000
Congressional Add Subtotals for Project: 9999	6.283	7.966
Congressional Add Totals for all Projects	6.283	7.966

Change Summary Explanation

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2464: *DD(X) Sys Design, Dev & Integration*	332.440	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5,220.597
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 releases 5-6; hull form testing at Naval Surface Warfare Center, Carderock; conducting testing communication and sensor aperture cosite and electromagnetic interference risk reductions testing for critical arrays; planning for Integrated Power Systems (IPS) and ship control system testing and integration; Tomahawk restrained firing test; integration of Line of Sight (LOS)/Below Line of Site (BLOS) communication capability. In FY 10, funding was realigned to PE 0204202N.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
DD(X) Sys Design, Dev & Integration	292.267	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: Development of the DDG 1000 Flight 1 software, Commercial Off the Shelf/Government Off the Shelf (COTS/GOTS) software acquisition, code and unit testing, integration, qualification testing, and Independent Verification and Validation (IV&V). Development of a total system software architecture that defines the relationships and interfaces among the software segments, elements, components and/or configuration items using an incremental release process (Software (SW) Releases 5-6). Conduct the following events for the remaining software releases: Software Release 5 - complete the Design, Code, Test and Integration phase; conduct Software Integration and Test (SWIT) and Software Integration Readiness Review (SIRR) activities in FY09; Software Release 6 - conduct Software Specification Review (SSR) and begin preliminary design activities in FY09; Conduct all developmental software test planning, conduct test data analysis and reporting in accordance with					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
the DDG 1000 TEMP. Perform total ship system design analysis. Perform systems engineering, develop, and fully integrate into the DDG 1000 System an Electric Ship (ES) system for DDG 1000. Integrate Next Generation Command and Control Processor (NGC2P) by finalizing Data Link Concept of Operations, complete hardware engineering, finalize software requirements definition, commence software development and integration, plan for software testing and certification. Develop, test and integrate the Common Display System (CDS) consoles and medium/large screen displays.					
Test and Evaluation *FY 2009 Accomplishments:* Completion and testing of ship and warfare system engineering development models. Complete hull form testing at Naval Surface Warfare Center (NSWC)Carderock. Planning for IPS and ship control system (SCS) testing and integration at NSWC Philadelphia. Conduct communication and sense aperture cosite and electromagnetic interference risk reduction testing for critical arrays at the Wallops Island Test Facility. Conducted Tomahawk restrained firing test to verify Advanced Vertical Launching System (AVLS) protection measures. Conduct developmental testing and operation evaluation in accordance with TEMP. Conduct Live Fire Testing & Vulnerability Analysis in accordance with TEMP. Conduct signature range Non-Recurring Engineering (NRE) to upgrade ranges to support DDG 1000 test and evaluation.	33.519	0.000	0.000	0.000	0.000
Self Defense Test Ship (SDTS) *FY 2009 Accomplishments:* Funding is to support DDG 1000 specific testing on the Self Defense Test Ship.	5.000	0.000	0.000	0.000	0.000
Defense Acquisition Workforce Development Fund (DAWDF) *FY 2009 Accomplishments:* Defense Acquisition Workforce Development Fund (DAWDF)	1.654	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	332.440	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEN/0204202N: *DDG 1000*	0.000	524.269	549.241	0.000	549.241	337.564	124.079	177.579	171.945	Continuing	Continuing
• SCN/2119: *DDG 1000*	1,504.297	1,378.532	186.312	0.000	186.312	139.388	133.168	126.325	50.871	Continuing	Continuing

D. Acquisition Strategy

A revised acquisition strategy is being reviewed by the Navy and OSD that supports the DDG-1000/DDG-51 restart shipyard allocation workload MOAs.

E. Performance Metrics

TBD

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 2735: *VSR - Volume Search Radar*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2735: *VSR - Volume Search Radar*	5.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	274.868
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project provides funds for the development of the S-Band Volume Search Radar (VSR) in association with DDG 1000. This provides DDG 1000 and other applicable surface ships with an affordable, high performance air search radar. This system is based on solid state, active array radar technology and will provide search, detect, and track while dramatically reducing manning and life-cycle costs associated with multiple systems that perform these functions today. VSR provides long range above-the-horizon surveillance and timely cuing to Multi-Function Radar (MFR).

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Volume Search Radar (VSR) Engineering *FY 2009 Accomplishments:* Government Technical Engineering Services for VSR Engineering and Manufacturing Development. Perform oversight and assessment of VSR Engineering and Manufacturing Development efforts including Test and Evaluation. Support VSR Land Based Testing at the Surface Warfare Engineering Facility (SWEF) at NWSC PHD. VSR will be moved to Wallops Island Engineering Test Center (WIETC) to continue VSR Land Based Testing.	4.976	0.000	0.000	0.000	0.000
Defense Acquisition Workforce Development Fund (DAWDF) *FY 2009 Accomplishments:* Defense Acquisition Workforce Development Fund (DAWDF)	0.024	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	5.000	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 2735: *VSR - Volume Search Radar*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEN/0204202N: *DDG 1000*	0.000	524.269	549.241	0.000	549.241	337.564	124.079	177.579	171.945	Continuing	Continuing
• SCN/2119: *DDG 1000*	1,504.297	1,378.532	186.312	0.000	186.312	139.388	133.168	126.325	50.871	Continuing	Continuing

D. Acquisition Strategy

A revised acquisition strategy is being reviewed by the Navy and OSD that supports the DDG-1000/DDG-51 restart shipyard allocation workload MOAs.

E. Performance Metrics

Milestone Review

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 3106: *Combat System Integration*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3106: *Combat System Integration*	13.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.895
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

CG(X), the next generation cruiser, will focus on providing multi-mission capabilities as part of the 21st Century family of surface combatants. CG(X) is the follow-on to the CG-47 class as they reach the end of their 35 year service life. This project encompasses efforts for the integration of the CG(X) Combat System, C4I, Air, and Ship systems including materiel analysis, and integration of the Combat System with the CG(X) Mission System. Integration efforts will include communications, electronics, air, command and control, Combat System interface requirements, definition, system integration, and test and evaluation. In FY10, funding has been transferred to PE 0204201N which encompasses all CG(X) Projects.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Requirements Development *FY 2009 Accomplishments:* Conduct requirements development for combat system to include architecture, performance analysis, C4ISR integrated system design, air, modeling and simulation, and test planning.	11.246	0.000	0.000	0.000	0.000
Technology Risk Reduction *FY 2009 Accomplishments:* Mature combat system, C4I, and air risk reduction for technology elements including technology maturity and integration risks.	0.447	0.000	0.000	0.000	0.000
Acquisition & Requirements Documentation	1.233	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 3106: *Combat System Integration*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continue development of top level C4I, air, and combat system acquisition and requirements documents to support CG(X) decision reviews (Gate and Milestone).					
Defense Acquisition Workforce Development Fund (DAWDF) *FY 2009 Accomplishments:* Defense Acquisition Workforce Development Fund (DAWDF)	0.176	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	13.102	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEN/0204201N: *CG(X)*	0.000	45.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.400
• RDTEN/0604501N: *Advanced Above Water Sensors (PU3186)*	92.998	189.078	228.436	0.000	228.436	123.053	132.390	141.771	141.608	Continuing	Continuing

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 3107: *CG(X) Development*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3107: *CG(X) Development*	54.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	172.536
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

CG(X), the next generation cruiser, will focus on providing multi-mission capabilities as part of the 21st Century family of surface combatants. CG(X) is the follow-on to the CG-47 class as they reach the end of their 35 year service life. This project encompasses efforts for total ship system development and integration of Hull, Mechanical and Electrical (HM&E) and shipboard systems into the CG(X) class, as well as integration of communications, electronics, air, command and control, surveillance, shipboard systems, and mission system computer programs into the CG(X) class mission system. These development and integration efforts include materiel analysis, technology development, systems engineering, computer program development, interface design, technical documentation, and system testing to ensure a fully functional CG(X) system design. This project will mature the CG(X) design through several ship design cycles and baselines. Preparation and execution of a program level Preliminary Design Review (PDR) and Critical Design Review (CDR) will occur through these efforts. In FY10, funding was transferred to PE 0204201N.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Advanced Nuclear Propulsion Systems	14.250	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: Conduct research and development of Advanced Nuclear Propulsion Systems for CG(X).					
Technology Risk Reduction	2.977	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: Continued risk reduction for Technology Elements including technology maturity and manufacturing feasibility.					
Acquisition Documentation	36.320	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 3107: *CG(X) Development*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continue development of program documentation to support CG(X) decision reviews (Gate and Milestone). Continue to refine requirements, capabilities, cost, and technical feasibility of the total ship system.					
Defense Acquisition Workforce Development Fund (DAWDF) *FY 2009 Accomplishments:* Defense Acquisition Workforce Development Fund (DAWDF)	0.519	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	54.066	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEN/0204201N: *CG(X)*	0.000	45.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.400
• RDTEN/0604501N: *Advanced Above Water Sensors (PU3186)*	92.998	189.078	228.436	0.000	228.436	123.053	132.390	141.771	141.608	Continuing	Continuing

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 4009: *Advanced Gun System (AGS) on DD(X)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
4009: *Advanced Gun System (AGS) on DD(X)*	95.907	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	367.247
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

These funds provide for the development of the Advanced Gun System (AGS) and the development and qualification of the Long Range Land Attack Projectile (LRLAP) associated with the development of DDG 1000. The AGS will consist of a major caliber gun, an automated ammunition handling system, and a family of munitions/propelling charges. The AGS will, at a minimum, meet the Land Attack and Surface Dominance Missions assigned to the gun system. The system will provide a high rate of fire (approximately 10 rounds per minute) with a magazine capacity sufficient in size for meeting USMC operational requirements. LRLAP will be stored throughout its life cycle in an 8 round pallet which is handled by the AGS magazine. By palletizing the munition, AGS is able to significantly reduce manning and improve munition reliability, safety and resupply. The LRLAP Engineering Development Model (EDM) guided flight tests began in Dec 2004. System Design and Development began in FY06 with final land based qualification testing planned in FY09. LRLAP will deliver a high explosive unitary payload with Global Positioning System (GPS) accuracy. In FY 10, funding has been realigned to PE 0204202N.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Advanced Gun System (AGS) Qualification Test assets *FY 2009 Accomplishments:* Procurement of AGS Qualification test assets.	26.542	0.000	0.000	0.000	0.000
Long Range Land Attack Projectile (LRLAP) System Design & Test *FY 2009 Accomplishments:* LRLAP System Design, Development and qualification testing.	47.830	0.000	0.000	0.000	0.000
LRLAP Test Round Procurement	21.058	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 4009: *Advanced Gun System (AGS) on DD(X)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Procurement of LRLAP rounds for qualification testing.					
Defense Acquisition Workforce Development Fund (DAWDF) *FY 2009 Accomplishments:* Defense Acquisition Workforce Development Fund (DAWDF)	0.477	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	95.907	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEN/0204202N: *DDG 1000*	0.000	524.269	549.241	0.000	549.241	337.564	124.079	177.579	171.945	0.000	1,884.677
• SCN/2119: *DDG 1000*	1,504.297	1,378.532	186.312	0.000	186.312	139.388	133.168	126.325	50.871	0.000	3,518.893

D. Acquisition Strategy

A revised acquisition strategy is being reviewed by the Navy and OSD that supports the DDG-1000/DDG-51 restart shipyard allocation workload MOAs.

E. Performance Metrics

TBD

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: *Congressional Adds*	6.283	7.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	92.740
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

As a result of all other funding within this PE being realigned in FY 2010 and in order to meet Congressional intent the Navy plans to request a realignment FY 2010 Congressional Add funding for the Floating Area Network (FAN) and the Guidance, Navigation, Control and Targeting to PE0204202N.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: Guidance, Navigation, Control, and Targeting *FY 2010 Plans:* Congressional Add will fund the design, development, and flight test of a high performance Guidance Navigation Control and Targeting System that provides the capability to guide future Navy and Army projectiles to within 1 meter of a maneuvering surface target in adverse weather.	0.000	3.983
Congressional Add: FLOATING AREA NETWORK (FAN) INSTALLATION OF WIRELE *FY 2009 Accomplishments:* Congressional add funds the development of a Floating Area Network (FAN) enabling a direct Line of Sight (LOS), wireless, Transmission Control Protocol/Internet Protocol (TCP/IP) network among intra-battle group ships.	4.787	3.983

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604300N: *SC-21 Total Ship System Eng*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
FY 2010 Plans: Congressional add funds the development of a Floating Area Network (FAN) enabling a direct Line of Sight (LOS), wireless, Transmission Control Protocol/Internet Protocol (TCP/IP) network among intra-battle group ships.		
Congressional Add: BIO/NANO-MEMS CTR FOR DEFENSE APPLICATIONS *FY 2009 Accomplishments:* Congressional add funds the University of Louisville Bio/Nano-MEMS Center that will create a multi-disciplinary science and engineering team to carry out comprehensive research, design and testing directed toward insertion of advanced, reliable MEMS devices into fielded military systems.	1.496	0.000
Congressional Adds Subtotals	6.283	7.966

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Congressional adds.