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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0303238N: Concolidated Afloat Network Ent SVCS(CANES)-MIP							
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	0.000	0.000	8.375	0.000	8.375	7.406	0.000	0.000	0.000	0.000	15.781
9C87: CANES Integration	0.000	0.000	8.375	0.000	8.375	7.406	0.000	0.000	0.000	0.000	15.781

**Note**  
FY11-12 funding transistioned from PE 0303138N.

**A. Mission Description and Budget Item Justification**  
CANES will consolidate and reduce the number of Navy afloat networks with state-of-the-art, high-speed networks and infrastructure. CANES will provide a robust, survivable, secure, scalable Afloat Core Services (ACS) enabled Common Computing Environment (CCE) for ships, submarines, and selected shore sites in addition to providing some proportional capability for aircraft. CANES will provide this ACS enabled CCE capability across all security domains from unclassified through Sensitive Compartmented Information (SCI). CANES is the physical single Program of Record (POR) replacement for the existing afloat networks PORs, Integrated Shipboard Network Systems (ISNS), Combined Enterprise Regional Information Exchange Systems Maritime (CENTRIXS-M), SCI Networks and Submarine LAN (SubLAN). In addition, CANES will provide functionality currently provided in the Video Information Exchange System (VIXS) and portions of Computer Network Defense (CND). CANES will field on a four year hardware baseline and a two year rolling software baseline providing application. The CANES vision is based on the overarching concept of reducing the number of afloat networks and providing enhanced efficiency through a single engineering focus on integrated technical solutions. This will allow for streamlined acquisition, contracting, and test events, and significant lifecycle efficiencies through consolidation of multiple current configuration management baselines, logistics and training efforts into a unified support structure. The primary goals of the CANES program are to: 1) reduce the number of networks through the use of mature, certified, cross domain technologies; 2) reduce the infrastructure footprint and associated costs for hardware afloat; and 3) provide increased capability to meet current and projected warfighter requirements.

CANES will enable application developers to begin decoupling applications and services software away from independent, unique hardware stacks and host them on a common interoperable environment. This approach will incrementally deploy and will provide a basis for overall Navy Return on Investment (ROI) over the existing strategies.

With the evolution of afloat network programs migrating into the CANES program, funding increases will provide even more comprehensive technology capabilities across the fleet. While the networks capabilities of the ISNS, CENTRIXS-M, SubLAN, Automated Digital Network System, and their associated personal computer hardware and software continue to be supported, CANES will reduce the infrastructure footprint and collapse a significant amount of Afloat Networks through the use of mature cross domain technologies. FY11 will focus on CANES System Design and Development (SDD), close out of the SDD phase for transition to Low-

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BA 7: Operational Systems Development					
Rate Initial Production (LRIP) phase and LRIP contract development. Initiate acquisition and Capabilities Production Document (CPD) for Milestone (MS) C. Procure two Engineering Development Models (EDM) units in FY11. The EDM units function as pre-production units for Environmental Qualification Test and operational assessment, which require funding for necessary installation design and installation costs.					
FY09 funded in PE 0604231N, project 2307 and PE 0305208N, project 2174.					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	8.375	0.000	8.375
Total Adjustments	0.000	0.000	8.375	0.000	8.375
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Adjustments	0.000	0.000	8.375	0.000	8.375
Change Summary Explanation					
Technical: CANES Increment & Configuration Build (C(B)2) language have been removed and acquisition strategy has been modified to identify new versions as Technical Insertion (TI-1, TI-2, etc.).					
Schedule: Program initiation occurs at Milestone (MS) B, following pre-acquisition risk reduction efforts to refine the technological approach. CANES System Design and Development (SDD) contract award shifted one quarter to Q2FY10. Due to the delay of the contract award the schedule has moved to the right, following activities also were shifted to the right: Preliminary Design Review (PDR), Critical Design Review (CDR), Developmental Testing (DT), delivery of Engineering Development Model (EDM) . CANES Increment 1 and C(B)2 language has been removed and acquisition strategy has been modified to identify new versions as Technical Insertion (TI-1, TI-2, etc.) and Milestone B (MS B) for C(B)2 has been removed.					
FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0303238N: <i>Concolidated Afloat Network</i> Ent SVCS(CANES)-MIP				<b>PROJECT</b> 9C87: <i>CANES Integration</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
9C87: <i>CANES Integration</i>	0.000	0.000	8.375	0.000	8.375	7.406	0.000	0.000	0.000	0.000	15.781
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<p><b>Note</b> FY 2009 and prior funded in Program Element (PE) 0604231N, project 2307 and PE 0305208N, project 2174. FY 2010 funded in PE 0303138N, project 9C87.</p> <p><b>A. Mission Description and Budget Item Justification</b> CANES will consolidate and reduce the number of Navy afloat networks with state-of-the-art, high-speed networks and infrastructure. CANES will provide a robust, survivable, secure, scalable Afloat Core Services (ACS) enabled Common Computing Environment (CCE) for ships, submarines, and selected shore sites in addition to providing some proportional capability for aircraft. CANES will provide this ACS enabled CCE capability across all security domains from unclassified through Sensitive Compartmented Information (SCI). CANES is the physical single Program of Record (POR) replacement for the existing afloat networks PORs, Integrated Shipboard Network Systems (ISNS), Combined Enterprise Regional Information Exchange Systems Maritime (CENTRIXS-M), SCI Networks and Submarine LAN (SubLAN). In addition, CANES will provide functionality currently provided in the Video Information Exchange System (VIXS) and portions of Computer Network Defense (CND). CANES will field on a four year hardware baseline and a two year rolling software baseline providing application. The CANES vision is based on the overarching concept of reducing the number of afloat networks and providing enhanced efficiency through a single engineering focus on integrated technical solutions. This will allow for streamlined acquisition, contracting, and test events, and significant lifecycle efficiencies through consolidation of multiple current configuration management baselines, logistics and training efforts into a unified support structure. The primary goals of the CANES program are to: 1) reduce the number of networks through the use of mature, certified, cross domain technologies; 2) reduce the infrastructure footprint and associated costs for hardware afloat; and 3) provide increased capability to meet current and projected warfighter requirements.</p> <p>CANES will enable application developers to begin decoupling applications and services software away from independent, unique hardware stacks and host them on a common interoperable environment. This approach will incrementally deploy and will provide a basis for overall Navy Return on Investment (ROI) over the existing strategies.</p> <p>FY 2011 Overseas Contingency Operation (OCO) - Not applicable</p> <p><b>B. Accomplishments/Planned Program (\$ in Millions)</b></p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
CANES Integration  FY09 funded in PE 0604231N, project 2307 and PE 0305208N, project 2174. FY10 funded in ISNS Inc 2/CANES to CANES under PE 0303138N, project 9C87.  FY 2011 Base Plans: Beginning in FY11, Military Intelligence Program (MIP) funding transitions from Program Element (PE) 0303138N to PE 0303238N. FY11 plan will continue CANES statutory and regulatory acquisition documentation to achieve CANES Milestone (MS) C. Continue Developmental Testing (DT) and begin Operational Testing (OT). Close out system development contract and complete down-select of the prime system developer to continue into Low-Rate Initial Production (LRIP). Maintain a tight government-managed interface between the system development and Afloat Core Services (ACS) contracts. MIP funding will focus on development of the MIP components of CANES that will deliver the Common Computing Infrastructure and Core Services (Sensitive Compartmented Information & Related Comms) required to host Intelligence (INT)/Intelligence, Surveillance and Reconnaissance (ISR) applications and services.						0.000	0.000	8.375	0.000	8.375	
Accomplishments/Planned Programs Subtotals						0.000	0.000	8.375	0.000	8.375	
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
• OPN/2915: CANES	0.000	1.177	34.398	0.000	34.398	190.528	283.786	323.824	331.648	Continuing	Continuing
• OPN/2925: CANES INTELL	0.000	0.000	10.432	0.000	10.432	67.542	74.214	67.144	68.317	Continuing	Continuing
	0.000	45.324	63.563	0.000	63.563	10.270	12.659	14.022	14.255	Continuing	Continuing

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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
• RDTE/0303138n: CANES INTEGRATION											
D. Acquisition Strategy											
System Design & Development (SDD), procurement, integration, and installation efforts for CANES are accomplished through Program Executive Offices (PEO) C4I contracts.											
E. Performance Metrics											
Early RDT&E investment and sustainment of dual design contractors through the development phase will save 10-30% of Total Ownership Cost (TOC) over the life cycle of the program. Cost avoidance throughout the life of the program is based on performance gains that are measured (not quantified) by 1) reducing the number of networks through the use of mature, certified, cross domain technologies; 2) reducing the infrastructure footprint and associated costs for hardware afloat; and 3) providing increased capability to meet current and projected warfighter requirements.											

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>											<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0303238N: <i>Concolidated Afloat Network</i> Ent SVCS(CANES)-MIP				<b>PROJECT</b> 9C87: <i>CANES Integration</i>						
<b>Product Development (\$ in Millions)</b>														
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>				
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
Primary Hardware Development	C/CPFF	Vendor A TBD TBD	0.000	0.000		3.747	Nov 2010	0.000		3.747	Continuing	Continuing	Continuing	
Primary Hardware Development	C/CPFF	Vendor B TBD TBD	0.000	0.000		3.747	Nov 2010	0.000		3.747	Continuing	Continuing	Continuing	
Systems Engineering	C/CPFF	Vendor A TBD TBD	0.000	0.000		0.265	Nov 2010	0.000		0.265	Continuing	Continuing	Continuing	
Systems Engineering	C/CPFF	Vendor B TBD TBD	0.000	0.000		0.266	Nov 2010	0.000		0.266	Continuing	Continuing	Continuing	
<b>Subtotal</b>			0.000	0.000		8.025		0.000		8.025				
<b>Remarks</b>														
<b>Test and Evaluation (\$ in Millions)</b>														
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>				
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
Developmental Test & Evaluation	C/FP	Vendor A TBD TBD	0.000	0.000		0.175	Nov 2010	0.000		0.175	0.000	0.175	Continuing	
Developmental Test & Evaluation	C/FP	Vendor B TBD TBD	0.000	0.000		0.175	Nov 2010	0.000		0.175	0.000	0.175	Continuing	
<b>Subtotal</b>			0.000	0.000		0.350		0.000		0.350	0.000	0.350		
<b>Remarks</b>														

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Navy							<b>DATE:</b> February 2010				
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	<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	0.000	0.000		8.375		0.000		8.375			
<b>Remarks</b>											

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy**

**DATE:** February 2010

## APPROPRIATION/BUDGET ACTIVITY

1319: *Research, Development, Test & Evaluation, Navy*  
BA 7: *Operational Systems Development*

## R-1 ITEM NOMENCLATURE

PE 0303238N: *Concolidated Afloat Network*  
Ent SVCS(CANES)-MIP

## PROJECT

9C87: *CANES Integration*

Fiscal Year	2009				2010 (see note 1)				2011				2012				2013				2014				2015				
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Acquisition Milestones (see note 4)					CANES Transition △		CANES MS B △					CANES MS C △	IOC △			CANES FRP DR △													
System Development (see note 4)							PDR △	CDR △																					
							CANES System Development - Surface													CANES System Dev - Sub									CANES TI-1 Sys Dev
Software Development ACS (See Note 3)							ACS v 1.1																						
Test & Evaluation Milestones																													
Development Test																													
Operational Test																													
Production Milestones																													
LRIP																													
FRP																													
Deliveries (see note 4,5)							ACS 1.1 △	CANES EDM Unit △					CANES FOT EDM △								FRP △							FRP △	

### Notes:

1/ FY10 efforts funded under PE 0303138N.

2/ EDM Unit included in LRIP quantities to meet Target Inventory Objective, prior to MS C.

3/ ACS v1.1 software development funded by ISNS.

4/CANES System Design and Development (SDD) contract award shifted one quarter to Q2FY10. Due to the delay of the contract award the schedule has moved to the right, following activities also were shifted to the right: Initial Operational Capability (IOC), Preliminary Design Review (PDR), Critical Design Review (CDR), Developmental Testing (DT), Operational Testing (OT), Low-Rate Initial Production (LRIP), delivery of Engineering Development Models (EDM).

5/ACS v1.1 delivery date has been corrected.

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2011 Navy</b>			<b>DATE:</b> February 2010
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## Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Acquisition Milestone - CANES MS B	3	2010	3	2010
Acquisition Milestone - CANES Transition	1	2010	1	2010
Acquisition Milestone - MS C	4	2011	4	2011
Acquisition Milestone - IOC	1	2012	1	2012
Acquisition Milestone - FRP Decision Review	4	2012	4	2012
System Development - Surface	2	2010	2	2011
System Development - PDR	3	2010	3	2010
System Development - CDR	4	2010	4	2010
System Development - Sub	2	2013	1	2014
System Development - Technical Insertion 1	2	2015	4	2015
Development Test	3	2010	2	2011
Development Test - Technical Insertion 1	3	2015	4	2015
Operational Test - (LRIP)	4	2011	4	2012
Operational Test - FOT&E	2	2013	2	2014
Production Milestone - LRIP	3	2011	4	2012
Production Milestone - FRP	1	2013	4	2015
Deliveries - CANES EDM Unit	4	2010	4	2010
Deliveries - CANES EDM Unit (EQT)	4	2011	4	2011

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010																									
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		<table> <tr> <th rowspan="2">Event</th><th colspan="2">Start</th><th colspan="2">End</th></tr> <tr> <th>Quarter</th><th>Year</th><th>Quarter</th><th>Year</th></tr> <tr> <td>Deliveries - LRIP</td><td align="center">4</td><td align="center">2011</td><td align="center">4</td><td align="center">2012</td></tr> <tr> <td>Deliveries - FRP</td><td align="center">3</td><td align="center">2013</td><td align="center">4</td><td align="center">2015</td></tr> <tr> <td>Software Delivery - ACS 1.1</td><td align="center">3</td><td align="center">2010</td><td align="center">3</td><td align="center">2010</td></tr> </table>			Event	Start		End		Quarter	Year	Quarter	Year	Deliveries - LRIP	4	2011	4	2012	Deliveries - FRP	3	2013	4	2015	Software Delivery - ACS 1.1	3	2010	3	2010
Event	Start		End																									
	Quarter	Year	Quarter	Year																								
Deliveries - LRIP	4	2011	4	2012																								
Deliveries - FRP	3	2013	4	2015																								
Software Delivery - ACS 1.1	3	2010	3	2010																								

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