

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0303238N: Consolidated Afloat Network Ent SVCS(CANES)-MIP							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	0.000	6.602	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.602
9C87: CANES Integration	0.000	6.602	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.602
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note CANES Military Intelligence Program (MIP) related funding under PE 0303238N investment ended in FY 2012. MIP requirements transition to PE 0303138N beginning in FY 2013.												
A. Mission Description and Budget Item Justification Consolidated Afloat Networks & Enterprise Services (CANES) is the Navy's only Program of Record (POR) to replace existing afloat networks and provide the necessary infrastructure for applications, systems, and services required for NAVY to dominate the Cyber Warfare domain. CANES is the technical and infrastructure consolidation of existing, separately managed afloat networks currently under PE 0204163N (LI 3050) Ship Communications Automation, including Integrated Shipboard Network Systems (ISNS), Combined Enterprise Regional Information Exchange System - Maritime (CENTRIXS-M), Sensitive Compartmented Information (SCI) Networks, and Submarine Local Area Network (SubLAN). These legacy afloat network designs are currently End of Life and CANES will replace these existing, unaffordable, and obsolete networks. The fundamental goal of CANES is to bring Infrastructure and Platform as a Service (IaaS / PaaS), within which current and future iterations of Tasking, Collection, Processing, Exploitation and Dissemination (TCPED) computing and storage capabilities will reside. CANES will provide complete infrastructure, inclusive of hardware, software, processing, storage and end user devices for Unclassified, Coalition, Secret and SCI for all basic network services (email, web, chat, collaboration) to a wide variety of Navy surface combatants, submarines, Maritime Operations Centers, and Aircraft. In addition, approximately 36 hosted applications and systems inclusive of Command and Control, Intelligence, Surveillance and Reconnaissance, Information Operations, Logistics and Business domains require the CANES infrastructure to operate in the tactical environment. Integrating these applications and systems is accomplished through Application Integration (AI), the engineering process used to evaluate and validate compatibility between CANES and the Navy-validated applications, systems and services that will utilize the CANES infrastructure and services. Specific programs, such as Distributed Common Ground System - Navy (DCGS-N), Global Command and Control System - Maritime (GCCS-M), Naval Tactical Command Support System (NTCSS), and Undersea Warfare Decision Support System (USW-DSS), are dependent on the CANES Common Computing Environment (CCE) to field, host, and sustain their capability because they no longer provide their own hardware. CANES requires that Automated Digital Network System (ADNS)field prior to or concurrently with CANES due to architectural reliance between the two programs. CANES will develop updates on a rolling four year hardware baseline and a two year software baseline. CANES is based on the overarching concept of reducing the number of afloat network baselines and providing enhanced efficiency through a single engineering focus on integrated technical solutions. This will allow for streamlined acquisition, contracting test events, and significant lifecycle efficiencies through consolidation of multiple current configuration management baselines,												

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy	DATE: April 2013
---	-------------------------

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303238N: <i>Consolidated Afloat Network Ent SVCS(CANES)-MIP</i>
---	---

logistics, and training efforts into a unified support structure. Platform sets 1, 2, 3, and 4 define phases of CANES system development efforts. Each platform set consists of a different ship class design baseline.

CANES Military Intelligence Program (MIP) related funding under PE 0303238N investment ended in FY 2012. MIP requirements transition to PE 0303138N beginning in FY 2013.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014 Base</u>	<u>FY 2014 OCO</u>	<u>FY 2014 Total</u>
Previous President's Budget	6.602	0.000	0.000	-	0.000
Current President's Budget	6.602	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Funding: CANES Military Intelligence Program (MIP) related funding under PE 0303238N investment ended in FY 2012. MIP requirements transition to PE 0303138N beginning in FY 2013.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0303238N: Consolidated Afloat Network Ent SVCS(CANES)-MIP				PROJECT 9C87: CANES Integration			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
9C87: CANES Integration	0.000	6.602	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.602
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note CANES Military Intelligence Program (MIP) related funding under PE 0303238N investment ended in FY12. MIP requirements transition to PE 0303138N beginning in FY13.												
A. Mission Description and Budget Item Justification Consolidated Afloat Networks & Enterprise Services (CANES) is the Navy's only Program of Record (POR) to replace existing afloat networks and provide the necessary infrastructure for applications, systems, and services required for NAVY to dominate the Cyber Warfare domain. CANES is the technical and infrastructure consolidation of existing, separately managed afloat networks currently under PE 0204163N (LI 3050) Ship Communications Automation, including Integrated Shipboard Network Systems (ISNS), Combined Enterprise Regional Information Exchange System - Maritime (CENTRIXS-M), Sensitive Compartmented Information (SCI) Networks, and Submarine Local Area Network (SubLAN). These legacy afloat network designs are currently End of Life and CANES will replace these existing, unaffordable, and obsolete networks. The fundamental goal of CANES is to bring Infrastructure and Platform as a Service (IaaS / PaaS), within which current and future iterations of Tasking, Collection, Processing, Exploitation and Dissemination (TCPED) computing and storage capabilities will reside. CANES will provide complete infrastructure, inclusive of hardware, software, processing, storage and end user devices for Unclassified, Coalition, Secret and SCI for all basic network services (email, web, chat, collaboration) to a wide variety of Navy surface combatants, submarines, Maritime Operations Centers, and Aircraft. In addition, approximately 36 hosted applications and systems inclusive of Command and Control, Intelligence, Surveillance and Reconnaissance, Information Operations, Logistics and Business domains require the CANES infrastructure to operate in the tactical environment. Integrating these applications and systems is accomplished through Application Integration (AI), the engineering process used to evaluate and validate compatibility between CANES and the Navy-validated applications, systems and services that will utilize the CANES infrastructure and services. Specific programs, such as Distributed Common Ground System - Navy (DCGS-N), Global Command and Control System - Maritime (GCCS-M), Naval Tactical Command Support System (NTCSS), and Undersea Warfare Decision Support System (USW-DSS), are dependent on the CANES Common Computing Environment (CCE) to field, host, and sustain their capability because they no longer provide their own hardware. CANES requires that Automated Digital Network System (ADNS)field prior to or concurrently with CANES due to architectural reliance between the two programs. CANES will develop updates on a rolling four year hardware baseline and a two year software baseline. CANES is based on the overarching concept of reducing the number of afloat network baselines 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,												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0303238N: <i>Consolidated Afloat Network</i> Ent SVCS(CANES)-MIP				PROJECT 9C87: <i>CANES Integration</i>				
logistics, and training efforts into a unified support structure. Platform sets 1, 2, 3, 4 define phases of CANES system development efforts. Each platform set consists of a different ship class design baseline.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Title: CANES Integration										6.602	0.000	0.000
Articles:										0		
FY 2012 Accomplishments: Completed development of statutory and regulatory acquisition documentation in support of CANES Milestone C (MS C). Revised Cost Analysis Requirements Description (CARD) and Life Cycle Cost Estimate (LCCE) in support of Navy's Service Cost Position (SCP) for MS C. Conducted Operational Assessment (OA) in support of MS C. Continued hosted system integration testing and Application Integration (AI) as they migrate to CANES baseline. Prepared Enterprise Engineering and Certification (E2C) lab for testing on platform set 1 and 2 baselines. Performed systems engineering efforts following down select to complete functional baselines and updates to technical data packages.												
Accomplishments/Planned Programs Subtotals										6.602	0.000	0.000
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• OPN/2915: <i>CANES (Excluding ADNS)</i>	78.239	281.247	288.469		288.469	308.308	330.315	345.964	341.294	4,574.868	6,560.089	
• OPN/2925: <i>CANES INTELL</i>	73.363	79.427	59.652		59.652	65.329	33.983	56.755	49.707	1,012.331	1,433.670	
• RDTE/09C87: <i>CANES INTEGRATION (NON-MIP)</i>	12.039	15.415	23.474		23.474	21.693	22.231	22.507	22.927	256.828	484.854	
• RDTE/9C87C: <i>CANES Congressional Add</i>	12.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	12.000	
Remarks												
D. Acquisition Strategy CANES is an ACAT IAM MAIS. Formal program initiation occurred at MS B (2QFY11). The program office is employing a multiple-phase, multiple-award down-select contract strategy to reduce program risks and maintain competition in both design development and production during contract performance. Two competitive contracts were awarded to design, develop, and deliver all hardware and the associated operating system, virtualization and other commercial software needed to deliver a functional network. February 1, 2012 the Limited Deployment (LD) contract was awarded to Northrop Grumman (NG). Milestone C achieved in 1QFY13. In 1QFY14, a separate full and open production contract will be awarded for Full Deployment (FD).												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303238N: <i>Consolidated Afloat Network</i> Ent SVCS(CANES)-MIP	PROJECT 9C87: <i>CANES Integration</i>
E. Performance Metrics Early RDT&E investment and sustainment of dual design contractors through the development phase saved 44% 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.		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE				PROJECT					
1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development						PE 0303238N: Consolidated Afloat Network Ent SVCS(CANES)-MIP				9C87: CANES Integration					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Product Development	C/CPFF	Northrup Grumman:Herndon, VA	0.000	1.818	Feb 2012	0.000		0.000		-		0.000	0.000	1.818	
Primary Product Development	C/CPFF	Lockheed Martin:San Diego, CA	0.000	1.400	Feb 2012	0.000		0.000		-		0.000	0.000	1.400	
Systems Engineering	WR	SPAWAR Systems Center Pacific:San Diego, CA	0.000	1.647	Feb 2012	0.000		0.000		-		0.000	0.000	1.647	
Systems Engineering	WR	SPAWAR Systems Center Atlantic:Charleston, SC	0.000	0.845	Feb 2012	0.000		0.000		-		0.000	0.000	0.845	
Subtotal			0.000	5.710		0.000		0.000		0.000		0.000	0.000	5.710	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	0.000	0.220	Mar 2012	0.000		0.000		-		0.000	0.000	0.220	
Subtotal			0.000	0.220		0.000		0.000		0.000		0.000	0.000	0.220	
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program and Acqusition Support	C/CPFF	Booz Allen Hamilton:San Diego, CA	0.000	0.368	Feb 2012	0.000		0.000		-		0.000	0.000	0.368	
Program and Acqusition Support	C/CPFF	SRA:San Diego, CA	0.000	0.304	Mar 2012	0.000		0.000		-		0.000	0.000	0.304	
Subtotal			0.000	0.672		0.000		0.000		0.000		0.000	0.000	0.672	

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy											DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0303238N: Consolidated Afloat Network Ent SVCS(CANES)-MIP					PROJECT 9C87: CANES Integration				
		All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		0.000	6.602		0.000		0.000		0.000		0.000	0.000	6.602	

Remarks