Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy						DATE: April 2013						
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*						R-1 ITEM NOMENCLATURE PE 0603658N: *Cooperative Engagement*						
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	329.287	54.422	56.512	69.312	-	69.312	66.001	87.766	77.204	78.532	Continuing	Continuing
2039: *COOP Engagement*	329.287	54.422	56.512	69.312	-	69.312	66.001	87.766	77.204	78.532	Continuing	Continuing
MDAP/MAIS Code(s): 582												

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

A. Mission Description and Budget Item Justification

Cooperative Engagement Capability (CEC) significantly improves Battle Force Anti-Air Warfare (AAW) capability by coordinating all Battle Force AAW sensors into a single, real-time, composite track picture capable of fire control quality. CEC distributes sensor data from each ship and aircraft, or cooperating unit (CU), to all other CUs in the battle force through a real-time, line of sight, high data rate sensor and engagement data distribution network. CEC is highly resistant to jamming and provides accurate gridlocking between CUs. Each CU independently employs high capacity, parallel processing and advanced algorithms to combine all distributed sensor data into a fire control quality track picture which is the same for all CUs. CEC data is presented as a superset of the best AAW sensor capabilities from each CU, all of which are integrated into a single input to each CU's combat weapons system. CEC significantly improves our Battle Force defense in depth, including both local area and ship defense capabilities against current and future AAW threats. Moreover, CEC provides critical connectivity and integration of over-land air defense systems capable of countering emerging air threats, including land attack cruise missiles, in a complex littoral environment.

CEC consists of the Data Distribution System (DDS), the Cooperative Engagement Processor (CEP), and interface with Combat Systems and sensors. The DDS encodes and distributes own-ship sensor and engagement data and is a high capacity, jam resistant, directive system providing a precision gridlocking and high throughput of data. The CEP is a high capacity distributed processor that processes force levels of data in near real-time. The data is passed to the ship's combat system as high quality data for which the ship can cue its onboard sensors or use the data to engage targets without actually tracking them. CEC incorporates Advanced Capability Build-12 (ACB-12) into the CEC baseline for FY09 - FY13.

The Navy implemented a Signal Data Processor (SDP) approach to modify the current equipment to meet reduced size, weight, cost, power and cooling objectives. This SDP approach also supports continuity for interoperability improvements and program protection, as well as supporting open architecture initiatives, and comms independence. The SDP will provide hardware which complies with Category 3 Open Architecture Computing Environment (OACE) standards with rehosted existing software, which will be fielded fleet-wide to allow affordable replacement of obsolete computing system components and eliminate dependencies on "closed" equipment, operating systems, and middleware.

Additionally, CEC is working with the Army to engineer a Joint Track Management (JTM) and sensor measurement fusion capability, which will be implemented in their respective programs to achieve interoperability across the battle space.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603658N: *Cooperative Engagement*

COMOPTEVFOR found the AN/USG-3 (E-2C Airborne CEC) Operationally Effective, but not Operationally Suitable. Reliability and availability issues are addressed by the replacement of four Weapons replaceable Assemblies (WRAs) with the new SDP-S. Backfit of the SDP-S in the E-2C will resolve suitability issues and satisfy National Security Agency (NSA) directed Crypto Modernization requirements. The SDP-S will also be used in E-2D.

A family of antennas approach will be used to satisfy CEC requirements with lower life cycle costs (procurement, installation, and maintenance) and reduced weight (on mast and below deck). These antennas enable future capability as well as providing a solution extensible to additional platforms. This effort for Common Array Block (CAB) antennas will be competed and awarded to a single Design Agent in FY12 and a competitive award for production is planned for FY14.

Large Nets respond to emergent needs of operational forces and missions, provides an extensible foundation for capability growth, provides interoperability with legacy units in Global Mode. This will provide an increase in DDS network size. This is needed to improve multiple battle group operations. Applicable ships and systems include all CEC deployed units and future fielding to include CG/DDG Modernization, and its Pathfinder Programs. Data Distribution System (DDS) must increase nodes to support the increasing number of fielded CEC assets.

In support of Interoperability, CEC will continue to work collaboratively with other Combat Systems programs (AWS, E-2C, E-2D, SSDS, CDLMS, C2P, and SGS/AC) to develop the software and implement design corrections and system changes. CEC will analyze the interactions of interoperability issues and impacts and provide collaboration for development of CEC and other system changes. Develop the long term solutions, including the engineering process to validate small parts of developmental software ideas, and utilize M&S to validate design approaches in the systems engineering realm.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	54.783	56.512	71.776	-	71.776
Current President's Budget	54.422	56.512	69.312	-	69.312
Total Adjustments	-0.361	0.000	-2.464	-	-2.464
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.000	0.000			
• SBIR/STTR Transfer	-1.361	0.000			
• Program Adjustments	0.000	0.000	-1.984	-	-1.984
• Rate/Misc Adjustments	0.000	0.000	-0.480	-	-0.480

Change Summary Explanation

Reduced FY14 funding to properly phase program requirements in accordance with expenditures.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603658N: *Cooperative Engagement*	PROJECT 2039: *COOP Engagement*	

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
2039: *COOP Engagement*	329.287	54.422	56.512	69.312	-	69.312	66.001	87.766	77.204	78.532	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

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Additionally, CEC is working with the Army to engineer a Joint Track Management (JTM) and sensor measurement fusion capability, which will be implemented in their respective programs to achieve interoperability across the battle space.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603658N: *Cooperative Engagement*	PROJECT 2039: *COOP Engagement*

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: E-2D	3.310	1.000	1.000
Articles:	0	0	0
FY 2012 Accomplishments: Commenced preparation for the E-2D and AN/USG-3B initial operational test and provided technical support to that event. Supported NIFC-CA integration and demonstration preparation events. Provided analysis, debug and fixes. ***FY 2013 Plans:*** Support NIFC-CA execution events with analysis, debug and fixes. ***FY 2014 Plans:*** Support NIFC-CA execution events with analysis, debug and fixes.			
Title: B/L 2.1 INTEGRATION AND FOT&E TESTING	7.900	6.700	8.900
Articles:	0	0	0
FY 2012 Accomplishments: Continued development, integration and testing of computer program Baseline 2.1 for AEGIS and SSDS platforms. Performed Operational Testing (OT) of AN/USG-3B on E-2D, Engineering and Developmental testing of AN/USG-2B with AEGIS ACB12			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Engineering and Developmental testing of CEC as part of NIFC-CA. Performed Operational Testing (OT) of AN/USG-2A on DDG-51 class. Supported developmental testing of Mid-term interoperability enterprise upgrade. ***FY 2013 Plans:*** Support demonstration and OT testing of NIFC-CA. Perform Operational Testing (OT) of AN/USG-2B with AEGIS ACB12. Support operational testing of Mid-term interoperability enterprise upgrade. ***FY 2014 Plans:*** Support demonstration and OT testing of NIFC-CA. Perform Operational Testing (OT) of AN/USG-2B with AEGIS ACB12. Support operational testing of Mid-term interoperability enterprise upgrade.			
Title: NIFC-CA	3.390	2.730	2.000
Articles:	0	0	0
FY 2012 Accomplishments: Supported NIFC-CA FTS SoS SE. Provided CEC test support, model updates, post test analysis, debug and fix. Established CEC capability at White Sands Missile Range Desert Ship in support of NIFC-CA. ***FY 2013 Plans:*** Support NIFC-CA FTS SoS SE leading to FY13 live fire testing at WSMR and At Sea. Provide CEC test support, model updates, post test analysis, debug and fix leading to deployable CEC baseline with NIFC-CA capability. ***FY 2014 Plans:*** Support NIFC-CA FTS SoS SE leading to FY14 live fire testing at WSMR and At Sea. Provide CEC test support, model updates, post test analysis, debug and fix leading to deployable CEC baseline with NIFC-CA capability.			
Title: SYSTEM IMPROVEMENTS	20.082	14.100	15.536
Articles:	0	0	0
FY 2012 Accomplishments: Continued CEC system improvements including enhanced communications, expansion of networking capability, development of system protection, Cryptologic Modernization, design agent and engineering services. ***FY 2013 Plans:*** Continue CEC system improvements with large network development, and netted surface tracking, program protection and DDS breakup. ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue CEC system improvements with large network development, and netted surface tracking, program protection and DDS breakup. Continue Joint Track Management Capability (JTMC) development planning.			
Title: NETWORK ENABLED ELECTRONIC DEFENSE SYSTEM (NEEDS) ***Articles:*** ***FY 2013 Plans:*** Commence concept exploration, technology assessment, system trade studies, event data collection for NEEDS capability to respond to emergent operational needs to provide improved surveillance, tracking , ID, and engagement capabilities. Commence development of NEEDS requirements, algorithms, Modeling & Simulation (M&S) capability to model both threats and NEEDS, and support for Technical Interchange Meetings (TIM). ***FY 2014 Plans:*** Continue development of NEEDs requirements, algorithms, and M&S capabilities to respond to emergent operational needs to provide improved surveillance, tracking, ID, and engagement capabilities. Commence analysis, definition and development of NEEDS capability, system architecture and design, external interface requirements, development of prototype implementations, evaluation of real time processing load, development of WASP capabilities, development of recorded data playback capability, and support for TIM, Interface Control Working Groups (ICWG) and In-Process Review (IPR).	0.000 0	6.160 0	9.137 0
Title: FIELD ACTIVITIES ***Articles:*** ***FY 2012 Accomplishments:*** Continued field activity support of CEC development and fielding efforts (i.e. SE/IA, Technical Direction Agent, In-Service Engineering, Integrated Logistics Support Planning) and program management support. ***FY 2013 Plans:*** Continue field activity support of CEC development and fielding efforts (i.e. SE/IA, Technical Direction Agent, In-Service Engineering, Integrated Logistics Support Planning) and program management support. ***FY 2014 Plans:*** Continue field activity support of CEC development and fielding efforts (i.e. SE/IA, Technical Direction Agent, In-Service Engineering, Integrated Logistics Support Planning) and program management support.	8.200 0	8.294 0	8.300 0
Title: COMMON ARRAY BLOCK (CAB) ANTENNA ***Articles:*** ***FY 2012 Accomplishments:***	5.400 0	10.600 0	5.300 0

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continued development of a lower cost and modular family of antennas approach called CAB. ***FY 2013 Plans:*** Continue development of the CAB-S antenna. ***FY 2014 Plans:*** Continue development of the CAB-S antenna.			
Title: LINK 16/INTEROPERABILITY	6.140	3.390	2.800
Articles:	0	0	0
FY 2012 Accomplishments: Collaborated Link 16/interoperability efforts with other Combat Systems programs (AWS, E-2C, E-2D, SSDS, CDLMS, C2P, and SGS/AC). Developed and analyzed impacts of software and implement foundational changes, design corrections, and other system changes. Participated in testing of the resulting Mid-term interoperability changes aboard USN fleet during Trident Warrior 12. ***FY 2013 Plans:*** Test, debug, certify and field the Mid-term interoperability upgrade. ***FY 2014 Plans:*** Test, debug, certify and field the Mid-term interoperability upgrade.			
Title: AIR AND MISSILE DEFENSE RADAR (AMDR)	0.000	0.500	5.500
Articles:		0	0
FY 2013 Plans: Commence development of CEC/AMDR Interface Requirements Specification (IRS), AMDR/CEP Interface Design Description (IDD) outline; identify and resolve AMDR/CEC integration engineering issues, support Technical Interchange Meetings (TIM), Interface Control Working Groups (ICWG), and CEC/AMDR In-Process Review (IPR) #1. ***FY 2014 Plans:*** Continue development of updated IRS and commence development of full CEC/AMDR IDD, development and analysis of integration adaptive layer algorithms Ballistic Missile Defense (BMD) functionality, design of CEC adaptive layer code, initial development of CEC Wrap Around Simulator Processor (WASP) capability, support TIM, ICWG and CEC/AMDR IPR #2.			
Title: E-2C BACKFIT	0.000	3.038	10.839
Articles:		0	0
FY 2013 Plans:			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Commence Non-Recurring Engineering (NRE) efforts to backfit the SDP-S in E-2C to support NSA mandated crypto requirements. Support includes conduct of Technical Interchange Meetings (TIM) to develop requirements to integrate design with the E-2C aircraft. ***FY 2014 Plans:*** Continue NRE efforts to include test planning and support, porting of CEC software from AN/USG-3 to SDP-S based architecture, design hardware installation including structural attachment and power, cooling, wiring of SDP-S with legacy Radio Frequency components; update and approve applicable drawings, conduct TIMs and Systems Engineering Technical Reviews (i.e.; PDR/ CDR).			
Accomplishments/Planned Programs Subtotals	54.422	56.512	69.312

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
• SCN: *Navy, SCN*	11.880	23.872	6.500		6.500	11.400	19.000	18.322	11.600	0.000	356.853
• APN/0204152N: *Navy, APN*	15.595	15.863	16.144		16.144	16.435	20.077	27.251	27.741	0.000	313.540
• OPN/2606: *CEC*	19.332	27.881	34.692		34.692	38.105	29.370	34.691	35.273	0.000	908.495
• OPN/0960: *CG Mod*	15.284	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	46.921
• OPN/0900: *DDG Mod*	0.000	11.107	0.000		0.000	0.000	0.000	0.000	0.000	0.000	62.918
• OPN/0206313M: *USMC*	3.845	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	50.924
• RDT&E/0206313M: *USMC*	5.606	2.383	7.266		7.266	4.664	1.180	0.571	0.335	0.000	29.829
• RDT&E,A/0102419A: *JLENS*	5.606	2.370	0.000		0.000	0.000	0.000	0.000	0.000	0.000	41.842
• O&M,N/0206626M: *USMC*	0.963	1.000	2.200		2.200	1.300	1.300	1.300	1.300	0.000	9.363

Remarks

D. Acquisition Strategy

CEC Acquisition Strategy (AS) was approved by OSD (AT&L) on 19 January 2010. CEC Acquistion Plan (AP) dated August 2012 is currently being routed for signature to reflect revised competition efforts/dates.

Contracts:
SDP-S Contract Awarded - Q1 FY12.
Common Array Block (CAB) antenna - New Contract will be competitively awarded in FY13.
CEC Production - New Contract will be competitively awarded in FY14.
DA/ES - New contract will be competitively awarded in FY15.

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E. Performance Metrics

- Complete the adaptive layer development for the E-2D aircraft. Provide technical support for installation and integration in the Northrop Grumman Systems Integration Laboratory, on board the test aircraft and support the Developmental testing.
- Continue AEGIS Advance Capability Builds CEC integration and demonstration efforts.
- Continue Naval Integrated Fire Control - Counter Air (NIFC-CA) CEC integration and demonstration efforts.
- Continue E-2D Advanced Hawkeye aircraft CEC integration efforts.
- Continue Crypto Modernization Tech Refresh efforts.
- Award contract to develop Common Array Block (CAB).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/USG-2/3 Design Agent/Engineering Services	C/CPFF	Raytheon:St. Petersburg, FL	75.759	9.270	Feb 2012	7.500	Dec 2012	8.900	Dec 2013	-		8.900	Continuing	Continuing	Continuing
AN/USG-2/3 Development/ TDA	C/CPFF	JHU/APL:Laurel, MD	40.446	8.102	Feb 2012	8.051	Nov 2012	9.443	Nov 2013	-		9.443	Continuing	Continuing	Continuing
SI/DA	C/CPAF	General Dynamics:Fairfax, VA	23.979	0.000		0.000		0.000		-		0.000	0.000	23.979	
SI/DA	C/CPAF	Award Fees:Not Specified	2.903	0.000		0.000		0.000		-		0.000	0.000	2.903	
DDG 1000	C/CPAF	Raytheon:Massachusetts	10.983	0.000		0.000		0.000		-		0.000	0.000	10.983	
DDG 1000	C/CPAF	Award Fees:Not Specified	0.447	0.000		0.000		0.000		-		0.000	0.000	0.447	
NIFC-CA Integration	TBD	Various:Not Specified	33.639	3.390	Dec 2011	2.730	Dec 2012	2.000	Nov 2013	-		2.000	Continuing	Continuing	Continuing
In-Service Engineering Activity	WR	NSWC:Port Hueneme, CA	0.857	0.250	Nov 2011	0.250	Nov 2012	0.250	Nov 2013	-		0.250	Continuing	Continuing	Continuing
Software Support Activity/ SEIA	WR	NSWC:Dahlgren, VA	11.338	0.449	Nov 2011	0.449	Nov 2012	0.446	Nov 2013	-		0.446	Continuing	Continuing	Continuing
Production Engineering Activity	WR	NSWC:Crane, IN	5.094	0.600	Nov 2011	0.250	Nov 2012	0.300	Nov 2013	-		0.300	Continuing	Continuing	Continuing
JTRS	TBD	Various:Not Specified	8.500	0.000		0.000		0.000		-		0.000	0.000	8.500	
Various	TBD	Miscellaneous:Not Specified	15.832	13.301	Feb 2012	9.022	Dec 2012	13.836	Nov 2013	-		13.836	Continuing	Continuing	Continuing
NAVSSI	WR	SPAWAR:San Diego, CA	0.368	0.000		0.000		0.000		-		0.000	0.000	0.368	
Certification	MIPR	NSA:Fort Meade, MD	0.850	0.250	Feb 2012	0.100	Nov 2012	0.100	Nov 2013	-		0.100	Continuing	Continuing	Continuing
Certification	WR	SPAWAR:Charleston, SC	0.930	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Exercises	WR	Various:Not Specified	3.744	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
LBTS Testing	WR	CDSA Damneck:Virginia Beach, VA	5.070	0.500	Nov 2011	0.500	Nov 2012	0.500	Nov 2013	-		0.500	Continuing	Continuing	Continuing
LBTS Testing	Reqn	SCSC:Wallops Island, VA	3.930	0.700	Nov 2011	1.700	Nov 2012	1.700	Nov 2013	-		1.700	Continuing	Continuing	Continuing
E-2D Integration	TBD	Various:Not Specified	36.948	3.310	Nov 2011	1.000	Nov 2012	1.000	Nov 2013	-		1.000	Continuing	Continuing	Continuing
MSI/NCCT	MIPR	Wright Patterson AFB:Dayton, OH	1.228	0.000		0.000		0.000		-		0.000	0.000	1.228	
Common Array Block Development	C/CPFF	TBD:Not Specified	0.000	5.400	Dec 2011	10.600	Jan 2013	5.300	Jan 2014	-		5.300	0.000	21.300	
NEEDS	TBD	Various:Not Specified	0.000	0.000		6.160	Dec 2012	9.137	Dec 2013	-		9.137	0.000	15.297	
AMDR	TBD	Various:Not Specified	0.000	0.000		0.500	Dec 2012	5.500	Dec 2013	-		5.500	0.000	6.000	
JTMC	TBD	Various:Not Specified	0.000	0.000		0.000		1.000	Dec 2013	-		1.000	0.000	1.000	
		Subtotal	282.845	45.522		48.812		59.412		0.000		59.412			

Remarks

Explanations for the use of "WR, MP, and Reqn" in the Contract method & type" column are as follows:
- When using "MIPR", these documents are issued to DOD activities that are outside of the Department of the Navy.
- When using "Reqn" for Wallops Island, this document is used because this is the only document we can provide to the activity to accomplish taskings for the CEC program.
- When using "WR", these documents are sent to Navy activities who obligate funding on their vehicles to accomplish tasking for CEC. These activities are the only ones who can accomplish these tasks for the program.
- E-2D Integration/NIFC-CA "Various/TBDs" are for classified programs and several document types.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603658N: *Cooperative Engagement*	PROJECT 2039: *COOP Engagement*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test/ACB Support	C/CPFF	Raytheon:St. Petersburg, FL	1.334	1.563	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Test/ACB Support	C/CPFF	JHU/APL:Laurel, MD	0.198	0.261	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Test Support	WR	NRL:Washington, DC	0.313	0.000		0.000		0.000		-		0.000	0.000	0.313	
Test/ACB Support	WR	NSWC:Port Hueneme, CA	15.608	1.436	Nov 2011	1.836	Nov 2012	2.437	Nov 2013	-		2.437	Continuing	Continuing	Continuing
Air Operations Test Support	WR	NAVAIR (PMA207):Patuxent River, MD	6.461	1.700	Nov 2011	0.800	Nov 2012	1.460	Nov 2013	-		1.460	Continuing	Continuing	Continuing
Test Data Reduction Analysis	WR	NWAS:Corona, CA	10.821	0.300	Nov 2011	0.900	Nov 2012	1.196	Nov 2013	-		1.196	Continuing	Continuing	Continuing
Test Support	WR	COMOPTEVFOR:Norfolk, VA	6.277	2.500	Nov 2011	0.300	Nov 2012	3.807	Nov 2013	-		3.807	Continuing	Continuing	Continuing
Test/ACB Support	WR	NSWC:Dahlgren, VA	1.000	0.140	Nov 2011	0.144	Nov 2012	0.000	Nov 2013	-		0.000	0.000	1.284	
Test/ACB Support	C/CPFF	TBD:Not Specified	0.000	0.000		2.720	Dec 2012	0.000		-		0.000	0.000	2.720	
		Subtotal	42.012	7.900		6.700		8.900		0.000		8.900			

Remarks

Explanation for the use of "WR" in the "Contract method & type" column are as follows:

When using "WR", these documents are sent to Navy activities who obligate funding on their vehicles to accomplish tasking for CEC. These activities are the only ones who can accomplish these tasks for the program.

Test support also includes ACB the following funding:
FY12 - $1.0M
FY13 - $3.0M
FY14 - $3.0M

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603658N: *Cooperative Engagement*	PROJECT 2039: *COOP Engagement*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/FFP	Booz Allen & Hamilton:Washington, DC	4.190	0.880	Dec 2011	0.880	Dec 2012	0.880	Dec 2013	-		0.880	Continuing	Continuing	Continuing
Program Management Support	C/FFP	Tech Marine Business:Washington, DC	0.240	0.120	Dec 2011	0.120	Dec 2012	0.120	Dec 2013	-		0.120	Continuing	Continuing	Continuing
		Subtotal	4.430	1.000		1.000		1.000		0.000		1.000			

	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	329.287	54.422		56.512		69.312		0.000		69.312			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603658N: *Cooperative Engagement*	**PROJECT** 2039: *COOP Engagement*

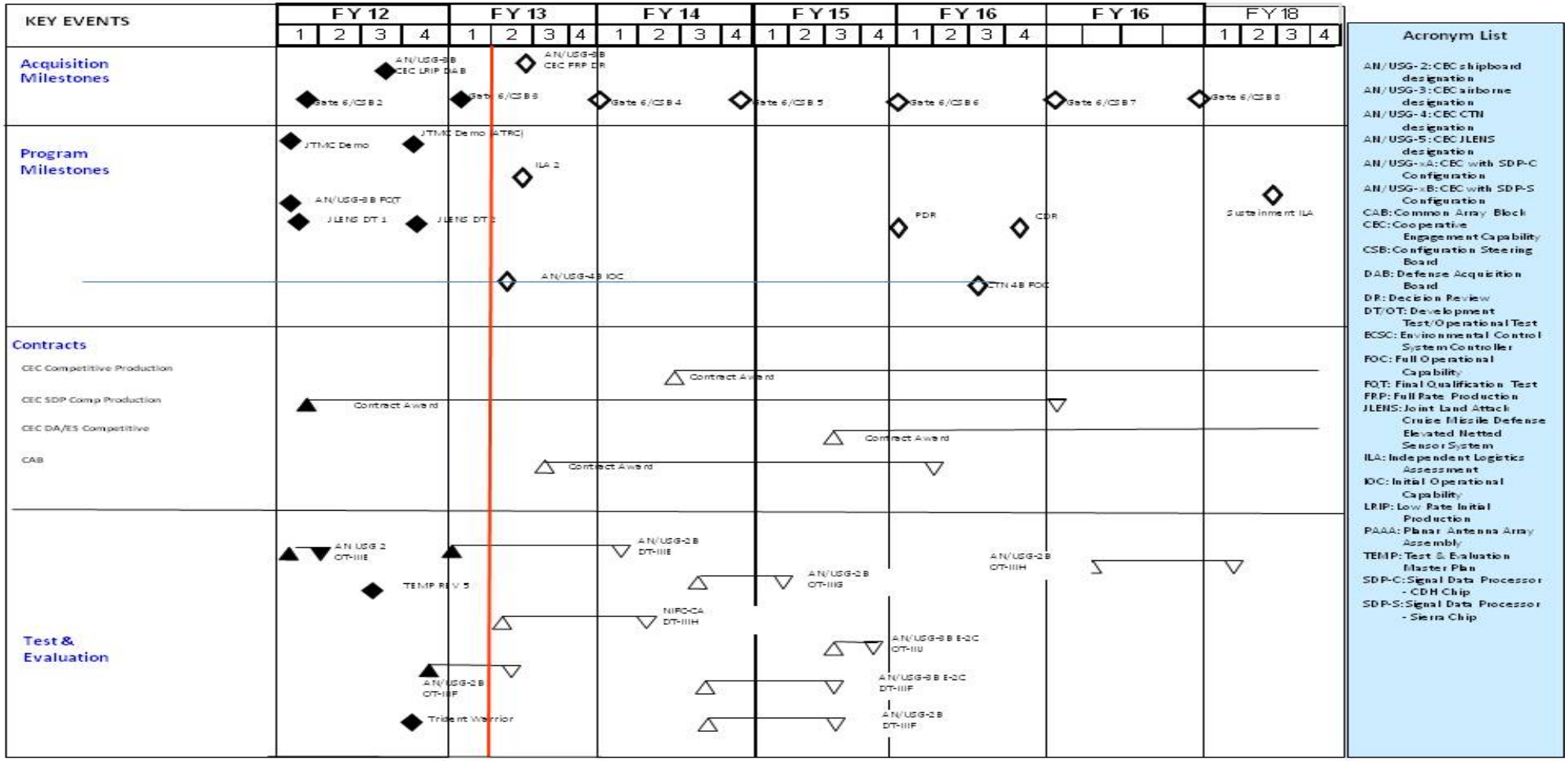

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603658N: *Cooperative Engagement*	**PROJECT** 2039: *COOP Engagement*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2039				
Gate 6/CSB 1	1	2012	1	2012
AN/USG-3B CEC LRIP DAB	3	2012	3	2012
Gate 6/CSB 2	1	2013	1	2013
AN/USG-3B CEC FRB DR	3	2013	3	2013
Gate 6/CSB 3	1	2014	1	2014
Gate 6/CSB 4	1	2015	1	2015
Gate 6/CSB 5	1	2016	1	2016
Gate 6/CSB 6	1	2017	1	2017
Gate 6/CSB 7	1	2018	1	2018
JTMC Demo	1	2012	1	2012
JTMC Demo (ATRC)	4	2012	4	2012
ILA	3	2013	3	2013
AN/USG 4B IOC	2	2013	2	2013
Sustainment ILA	3	2018	3	2018
AN/USG-3B FQT	1	2012	1	2012
JLENS DT 1	1	2012	2	2012
JLENS DT 2	4	2012	4	2012
PDR	1	2016	1	2016
CDR	4	2016	4	2016
CTN 4B FOC	3	2016	3	2016
CEC Competitive Production	3	2014	2	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603658N: *Cooperative Engagement*	PROJECT 2039: *COOP Engagement*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
CEC SDP Comp Production	1	2012	1	2016
CEC DA/ES Competitive	3	2015	1	2018
CAB	3	2013	2	2016
AN/USG-2 OT-IIIE	1	2012	2	2012
AN/USG-2B OT-IIIF	1	2013	2	2013
AN/USG-2B DT-IIIE	1	2013	2	2014
TEMP Rev 5	3	2012	3	2012
AN/USG-2B OT-IIIE	4	2014	2	2015
NIFC-CA/DT-IIIH	2	2013	2	2014
AN/USG-3B/E-2C DT-IIIG	4	2014	3	2015
AN/USG-3B/E-2C OT-IIIJ	3	2015	4	2015
AN/USG-2B/OT-IIIH	4	2014	3	2015
AN/USG-2B/DT-IIIF	1	2016	4	2016
Trident Warrior	4	2012	4	2012