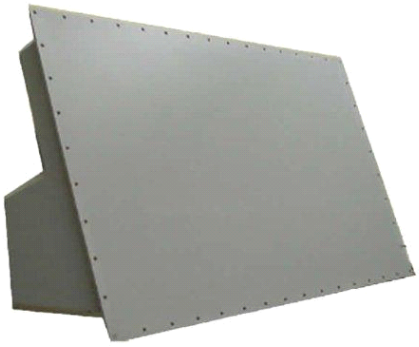
Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-582

Signal Data Processor with Sierra Chip (SDP-S)



Planar Array Antenna Assembly (PAAA)

CEC

As of December 31, 2011

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Program Information	3
Responsible Office	3
References	3
Mission and Description	4
Executive Summary	5
Threshold Breaches	6
Schedule	7
Performance	9
Track To Budget	10
Cost and Funding	12
Low Rate Initial Production	26
Nuclear Cost	27
Foreign Military Sales	27
Unit Cost	28
Cost Variance	31
Contracts	35
Deliveries and Expenditures	38
Operating and Support Cost	39

Program Information

Designation And Nomenclature (Popular Name)

Cooperative Engagement Capability (CEC)

DoD Component

Navy

Joint Participants

U.S. Air Force Airborne Early Warning and Control System (AWACS); U.S. Army (PATRIOT); Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)

CEC configurations include: shipboard (AN/USG-2), airborne (AN/USG-3), ground mobile (AN/USG-4), JLENS (AN/USG-5), and FMS (AN/USG-7)

Responsible Office

Responsible Office

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Date Assigned June 27, 2009

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 3, 2002

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 16, 2004

Mission and Description

Mission

The Cooperative Engagement Capability (CEC) brings revolutionary new capabilities to naval air and missile defense by distributing sensor and weapons data from existing systems by providing a sensor network with Integrated Fire Control (IFC) capability that significantly improves strike force air and missile defense capabilities by coordinating measurement data from strike force air search sensors on CEC-equipped units into a single, integrated real-time, composite track air picture.

Description

The CEC sensor netting system significantly improves Naval Strike and Expeditionary Group's (SG's and EG's) Area Air Defense (AAD) capabilities by extracting and distributing sensor-derived information such that the superset of this data is available to all participating CEC Cooperating Units (CUs). CEC fuses distributed data from shipboard (AN/USG-2) and airborne (AN/USG-3) systems. The high quality air track picture significantly improves own unit track precision, consistency and continuity, expands detection range, and increases reaction time. CEC also improves strike force effectiveness by improving overall Situational Awareness (SA) and by enabling longer range, cooperative, multiple, or layered engagement strategies.

The CEC program achieved a Milestone III Full Rate Production (FRP) decision in April 2002 for the shipboard system. The program received incremental Low Rate Initial Production (LRIP) authority for the airborne system starting in FY 2002. In addition, CEC is employed on the Ground Mobile (AN/USG-4) and Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) (AN/USG-5).

CEC includes a Cooperative Engagement Processor (CEP) and a Data Distribution System (DDS) for the shipboard and airborne systems. The addition of these two elements, along with the necessary changes to a unit’s combat system, has allowed ships and aircraft within a CEC equipped SG or EG to exchange fire control quality air sensor data on a real-time basis. This greatly improves the SG’s and EG’s reaction time and depth of fire.

The integral DDS network enables CEC to distribute sensor data from each CEC unit to all other CEC units in the strike force. The DDS is a real-time, high data rate and high delivery assurance, line of sight, fire control quality network which passes data to the host systems for display and operator action. Information from land-based, airborne and shipboard sensors is fed into the CEP, which reformats the data and sends it to the DDS. The DDS encrypts and transmits the data, via the CEC antenna, to other CEC CUs. The DDS simultaneously receives data from the CUs through the antenna and forwards it to the CEP. The CEP develops an air picture of composite tracks that is passed to the host combat systems of each individual CU platform.

The Pre-Planned Product Improvement (P3I) Cooperative Engagement Transmission Processing Set (CETPS) brought CEC into compliance with the Navy’s Open Architecture Computing Environment (OACE) Category 3 standards. The P3I Signal Data Processor (SDP) with the Sierra II chip (SDP-S) is designed to meet the form, fit, size, weight and power requirements for a 'one box fits all' sea, air and ground mobile platform integration and is compliant with OACE standards. The OACE approach focuses on improving system openness, joint interoperability, and program protection.

Executive Summary

The CEC program is continuing development efforts to keep pace with the security threats and ensure producibility. Currently, the focus is on upgrading legacy configurations through modernization efforts. The program remains focused on ensuring compatibility, appropriate maintenance, and ultimate disposal.

Commander Operational Test and Evaluation Force (COMOPTEVFOR) final report for Follow-On Test and Evaluation (FOT&E) found the AN/USG-3 (Airborne CEC System) remained operationally effective, but not operationally suitable. Working Groups (WGs) and Integrated Product Teams (IPTs) are currently working with COMOPTEVFOR and Office of the Chief of Naval Operations (OPNAV) to address and resolve the deficiencies. All major deficiencies identified have been resolved or reduced to minor with a plan for resolution except for Hardware Reliability and Availability (R&A). These R&A deficiencies will be resolved with the backfit on E-2C and the introduction of the E-2D CEC AN/USG-3B System, which introduces Signal Data Processor with Sierra II chip (SDP-S) to replace the four Weapons Replaceable Assemblies (WRAs). Module level testing was performed in FY 2010 on the SDP-S, leading to the Engineering and Developmental Testing (ET/DT) of AN/USG-3B on E-2D to include a maintenance evaluation to be complete in FY 2012. CEC received National Security Agency (NSA) Type I Certification for the CEC SDP-S in February 2011. SDP-S Reliability Qualification Testing (RQT) is scheduled for completion March 2012. E-2D Initial Operational Test & Evaluation (IOT&E), Operational Evaluation (OPEVAL) is planned in FY 2012, with the final report anticipated second quarter FY 2013. Along with other program offices, CEC is taking a three-phased (near, mid and far-term) approach to correcting software interoperability issues in order to correct track identification (ID) migration issues.

The Under Secretary of Defense (Acquisition Technology and Logistics) (USD (AT&L)) memorandum of August 27, 2010 authorized the Navy to procure one additional Low Rate Initial Production (LRIP) Lot 2 (FY 2010 increment) CEC AN/USG-3B system to support one additional E-2D Hawkeye (AHE) aircraft as included in the DoD Appropriations Act 2010, Public Law 111-118. The authority to procure one additional unit increased the total CEC LRIP Lot 2 quantity authorized to seven.

The USD (AT&L) memorandum of December 5, 2011 authorized the Navy to procure one additional CEC AN/USG-3B unit as part of the FY 2011 LRIP Lot 2, approved via Acquisition Decision Memorandum (ADM) on February 12, 2010. This decision authorized procurement of up to eight complete AN/USG-3B units as CEC LRIP Lot 2. In addition, an increase in the total CEC AN/USG-3A/B LRIP quantity to not more than 16 units was authorized.

The next LRIP Defense Acquisition Board (DAB) is scheduled for April 2012 to seek approval for a Lot 3 procurement of six additional AN/USG-3B systems for a total quantity of 16. The Full Rate Production Decision Review (FRP DR) is tentatively planned for late FY 2013.

CEC is investing in a family of antenna approach which will be used to lower life-cycle costs (procurement, installation, and maintenance) and reduce weight (on mast and below deck). These antennas, named the Common Array Block (CAB) antennas, enable future capability as well as providing a solution extensible to additional platforms.

CEC is participating as a key Program of Record (PoR) in a federation of programs to establish a Joint Track Management Capability (JTMC). The U.S. Army and U.S. Navy were directed to take the lead among the other services and the Missile Defense Agency (MDA). A successful JTMC demonstration took place in fourth quarter FY 2011. Joint Program Executive Office (JPEO) funded the Navy to carryout an additional integration event in FY 2012.

There are no significant software-related issues with this program at this time.

Threshold Breaches

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☑
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☐
	APUC	☐

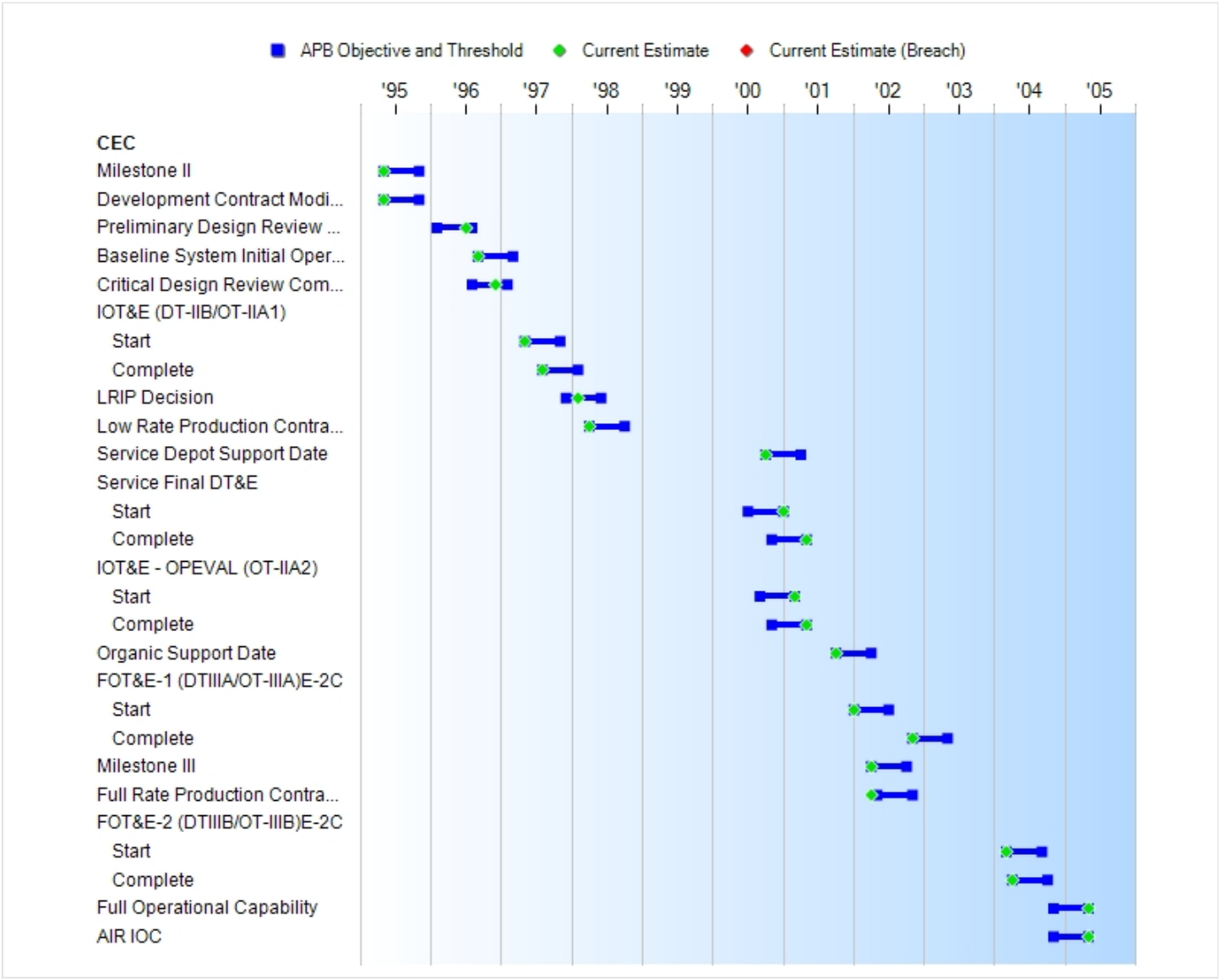
Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

The program will experience a 2.2 percent Research, Development, Test and Evaluation (RDT&E) threshold breach due to the extension of the RDT&E program to FY 2017 in the FY 2013 President's Budget. A Program Deviation Report (PDR) is being prepared for submittal.

The RDT&E threshold breach will be resolved when updated cost documents (Program Life Cycle Cost Estimate (PLCCE), Acquisition Program Baseline (APB), and the Cost Analysis Requirements Document (CARD)) are completed prior to Full-Rate Production (FRP) in FY 2013.

Schedule


APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'95
'96
'97
'98
'99
'00
'01
'02
'03
'04
'05
CEC
Milestone II
Development Contract Modi...
Preliminary Design Review ...
Baseline System Initial Oper...
Critical Design Review Com...
IOT&E (DT-IIB/OT-IIA1)
Start
Complete
LRIP Decision
Low Rate Production Contra...
Service Depot Support Date
Service Final DT&E
Start
Complete
IOT&E - OPEVAL (OT-IIA2)
Start
Complete
Organic Support Date
FOT&E-1 (DTIIIA/OT-IIIA)E-2C
Start
Complete
Milestone III
Full Rate Production Contra...
FOT&E-2 (DTIIIB/OT-IIIB)E-2C
Start
Complete
Full Operational Capability
AIR IOC

Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
Milestone II	MAY 1995	MAY 1995	NOV 1995	MAY 1995
Development Contract Modification	MAY 1995	MAY 1995	NOV 1995	MAY 1995
Preliminary Design Review Complete	FEB 1996	FEB 1996	AUG 1996	JUL 1996
Baseline System Initial Operational Capability	SEP 1996	SEP 1996	MAR 1997	SEP 1996
Critical Design Review Complete	AUG 1996	AUG 1996	FEB 1997	DEC 1996
IOT&E (DT-IIB/OT-IIA1)				
Start	MAY 1997	MAY 1997	NOV 1997	MAY 1997
Complete	AUG 1997	AUG 1997	FEB 1998	AUG 1997
LRIP Decision	DEC 1997	DEC 1997	JUN 1998	FEB 1998
Low Rate Production Contract Award	APR 1998	APR 1998	OCT 1998	APR 1998
Service Depot Support Date	OCT 2000	OCT 2000	APR 2001	OCT 2000
Service Final DT&E				
Start	JUL 2000	JUL 2000	JAN 2001	JAN 2001
Complete	NOV 2000	NOV 2000	MAY 2001	MAY 2001
IOT&E - OPEVAL (OT-IIA2)				
Start	SEP 2000	SEP 2000	MAR 2001	MAR 2001
Complete	NOV 2000	NOV 2000	MAY 2001	MAY 2001
Organic Support Date	OCT 2001	OCT 2001	APR 2002	OCT 2001
FOT&E-1 (DTIIIA/OT-IIIA)E-2C				
Start	JAN 2002	JAN 2002	JUL 2002	JAN 2002
Complete	AUG 2002	NOV 2002	MAY 2003	NOV 2002
Milestone III	APR 2002	APR 2002	OCT 2002	APR 2002
Full Rate Production Contract Award	MAY 2002	MAY 2002	NOV 2002	APR 2002
FOT&E-2 (DTIIIB/OT-IIIB)E-2C				
Start	MAR 2003	MAR 2004	SEP 2004	MAR 2004
Complete	JUL 2003	APR 2004	OCT 2004	APR 2004
Full Operational Capability	DEC 2003	NOV 2004	MAY 2005	MAY 2005
AIR IOC	DEC 2003	NOV 2004	MAY 2005	MAY 2005

Acronyms And Abbreviations

AIR IOC - Airborne Initial Operational Capability
DT - Developmental Test
DT&E - Developmental Test and Evaluation
FOT&E - Follow-on Test and Evaluation
IOT&E - Initial Operational Test and Evaluation
LRIP - Low Rate Initial Production
OPEVAL - Operational Evaluation
OT - Operational Test

Change Explanations

None

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Operational Availability	>=.95	>=.95	>=.90	>=.94	>=.95
Interoperability					
Information Exchange Requirements (IER)	100% of top-level IERs	100% of top-level IERs.	100% of top-level IERs designated critical	100% of top-level IERs designated critical	100% of top-level IERs designated critical
Track File Consistency	Integration will improve track file consistency in each host system	CEC integration will improve track file consistency as measured in each host system	CEC integration must not degrade track file consistency (0 % degradation) as measured in each host system	CEC integration will improve track file consistency as measured in each host system	CEC integration will improve track file consistency in each host system

Change Explanations

None

Classified Performance information is provided in the classified annex to this submission.

Track To Budget

General Memo

Project element 3501 added for Advanced Hawkeye.
Project element Y5EJ reported as sunk.

Updated PE 0204112N from CVN to CVN Replacement Program.
Updated PE 0204112N from Carrier Replacement Program to Refueling Complex Overhaul.
Updated BA 05 PE 0204228N DDG 1000 from BA 05 PE 0204228N to BA 02 PE 0204202N DDG 1000.

Updated PE 0204228N DDG Modernization from BA 02 to BA 01.
Updated PE 0204162N Cruiser Modernization from BA 02 to BA 01.
Updated PE 0204221N CEC from PE 0204221N to PE 0204228N CEC.

RDT&E

APPN 1319	BA 07	PE 0206313M	(Navy)	
	Project C2273	Marine Corps Communication Systems/Marine Corps Communication Systems	(Shared)	
APPN 1319	BA 04	PE 0603658N	(Navy)	
	Project K2039	Cooperative Engagement Capability (CEC)		
	Project K2616A	Cooperative Engagement Capability (CEC)/Cooperative Engagement Capability (CEC)		(Sunk)
APPN 1319	BA 05	PE 0604234N	(Navy)	
	Project 3501	Advanced Hawkeye	(Shared)	
	Project Y5EJ	Advanced Hawkeye	(Shared)	(Sunk)
APPN 2040	BA 07	PE 0102419A	(Army)	
	Project E55	Army Patriot JLENS	(Shared)	(Sunk)

Procurement

APPN 1109	BA 01	PE 0206313M	(Navy)	
	ICN 464017	Procurement, Marine Corps	(Shared)	
APPN 1506	BA 01	PE 0204152N	(Navy)	

	ICN 019500	E-2C (Early Warning) HAWKEYE (MYP)	(Shared)	
APPN 1611	BA 02	PE 0204112N	(Navy)	
	ICN 200100	CVN Replacement Program	(Shared)	
	ICN 208600	Refueling Complex Overhaul	(Shared)	
APPN 1611	BA 02	PE 0204202N	(Navy)	
	ICN 211900	DDG 1000		
APPN 1611	BA 05	PE 0204228N	(Navy)	
	ICN 211900	DDG 1000	(Shared)	(Sunk)
APPN 1611	BA 02	PE 0204222N	(Navy)	
	ICN 212200	DDG-51	(Shared)	
APPN 1611	BA 03	PE 0204411N	(Navy)	
	ICN 303500	LHD-1	(Shared)	(Sunk)
	ICN 303600	LPD-17	(Shared)	
	ICN 304100	LHA 6	(Shared)	
APPN 1810	BA 01	PE 0204228N	(Navy)	
	ICN 090000	DDG Modernization	(Shared)	
APPN 1810	BA 01	PE 0204162N	(Navy)	
	ICN 096000	Cruiser Modernization	(Shared)	
APPN 1810	BA 02	PE 0204221N	(Navy)	
	ICN 260600	Cooperative Engagement Capability (CEC)		(Sunk)
APPN 1810	BA 02	PE 0204228N	(Navy)	
	ICN 260600	Cooperative Engagement Capability (CEC)		

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2002 $M			BY2002 $M	TY $M		
Appropriation	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	2028.1	2435.7	2679.3	**2738.6**[1]	1946.5	2394.3	2825.2
Procurement	2095.2	2095.2	2304.7	1654.9	2364.2	2364.2	1949.1
Flyaway	1759.8	--	--	1410.8	1985.6	--	1638.5
Recurring	1759.8	--	--	1410.8	1985.6	--	1638.5
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	335.4	--	--	244.1	378.6	--	310.6
Other Support	335.4	--	--	244.1	378.6	--	310.6
Initial Spares	0.0	--	--	0.0	0.0	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	4123.3	4530.9	N/A	4393.5	4310.7	4758.5	4774.3

[1] ***APB Breach***

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	16	27	30
Procurement	256	256	239
Total	272	283	269

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2013 President's Budget / December 2011 SAR (TY$ M)

Appropriation	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
RDT&E	2407.4	60.1	57.0	71.9	64.5	86.9	77.4	0.0	2825.2
Procurement	1238.3	58.5	89.1	78.5	103.2	79.7	95.0	206.8	1949.1
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2013 Total	3645.7	118.6	146.1	150.4	167.7	166.6	172.4	206.8	4774.3
PB 2012 Total	3627.9	135.4	169.7	167.3	179.6	175.0	60.9	120.8	4636.6
Delta	17.8	-16.8	-23.6	-16.9	-11.9	-8.4	111.5	86.0	137.7

Quantity	Undistributed	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
Development	30	0	0	0	0	0	0	0	0	30
Production	0	135	7	12	9	14	10	12	40	239
PB 2013 Total	30	135	7	12	9	14	10	12	40	269
PB 2012 Total	30	134	10	17	14	16	12	12	26	271
Delta	0	1	-3	-5	-5	-2	-2	0	14	-2

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1994	--	--	--	--	--	--	203.2
1995	--	--	--	--	--	--	154.1
1996	--	--	--	--	--	--	256.4
1997	--	--	--	--	--	--	224.7
1998	--	--	--	--	--	--	200.8
1999	--	--	--	--	--	--	189.8
2000	--	--	--	--	--	--	179.8
2001	--	--	--	--	--	--	173.4
2002	--	--	--	--	--	--	106.7
2003	--	--	--	--	--	--	107.1
2004	--	--	--	--	--	--	91.1
2005	--	--	--	--	--	--	114.0
2006	--	--	--	--	--	--	99.8
2007	--	--	--	--	--	--	55.0
2008	--	--	--	--	--	--	53.4
2009	--	--	--	--	--	--	44.2
2010	--	--	--	--	--	--	65.8
2011	--	--	--	--	--	--	59.6
2012	--	--	--	--	--	--	57.3
2013	--	--	--	--	--	--	57.0
2014	--	--	--	--	--	--	71.9
2015	--	--	--	--	--	--	64.5
2016	--	--	--	--	--	--	86.9
2017	--	--	--	--	--	--	77.4
Subtotal	**22**	**--**	**--**	**--**	**--**	**--**	**2793.9**

Annual Funding BY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
1994	--	--	--	--	--	--	224.2
1995	--	--	--	--	--	--	166.8
1996	--	--	--	--	--	--	272.9
1997	--	--	--	--	--	--	236.3
1998	--	--	--	--	--	--	209.4
1999	--	--	--	--	--	--	195.7
2000	--	--	--	--	--	--	182.7
2001	--	--	--	--	--	--	173.8
2002	--	--	--	--	--	--	105.9
2003	--	--	--	--	--	--	104.7
2004	--	--	--	--	--	--	86.7
2005	--	--	--	--	--	--	105.7
2006	--	--	--	--	--	--	89.7
2007	--	--	--	--	--	--	48.3
2008	--	--	--	--	--	--	46.0
2009	--	--	--	--	--	--	37.6
2010	--	--	--	--	--	--	55.1
2011	--	--	--	--	--	--	49.0
2012	--	--	--	--	--	--	46.3
2013	--	--	--	--	--	--	45.3
2014	--	--	--	--	--	--	56.2
2015	--	--	--	--	--	--	49.5
2016	--	--	--	--	--	--	65.5
2017	--	--	--	--	--	--	57.3
Subtotal	**22**	**--**	**--**	**--**	**--**	**--**	**2710.6**

Annual Funding TY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1999	--	--	--	--	--	--	9.7
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	--
2002	--	--	--	--	--	--	--
2003	--	--	--	--	--	--	--
2004	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	8.6
2010	--	--	--	--	--	--	5.2
2011	--	--	--	--	--	--	5.0
2012	--	--	--	--	--	--	2.8
Subtotal	**8**	**--**	**--**	**--**	**--**	**--**	**31.3**

Annual Funding BY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
1999	--	--	--	--	--	--	10.0
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	--
2002	--	--	--	--	--	--	--
2003	--	--	--	--	--	--	--
2004	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	7.3
2010	--	--	--	--	--	--	4.3
2011	--	--	--	--	--	--	4.1
2012	--	--	--	--	--	--	2.3
Subtotal	**8**	**--**	**--**	**--**	**--**	**--**	**28.0**

Annual Funding TY$
1109 | Procurement | Procurement, Marine Corps

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2008	--	--	3.0	--	3.0	--	3.0
2009	10	16.0	--	--	16.0	--	16.0
2010	--	--	--	--	--	--	--
2011	--	--	11.3	--	11.3	--	11.3
2012	--	--	2.2	--	2.2	--	2.2
2013	--	--	--	--	--	--	--
2014	--	--	6.5	--	6.5	--	6.5
Subtotal	**10**	**16.0**	**23.0**	**--**	**39.0**	**--**	**39.0**

Annual Funding BY$
1109 | Procurement | Procurement, Marine Corps

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
2008	--	--	2.6	--	2.6	--	2.6
2009	10	13.5	--	--	13.5	--	13.5
2010	--	--	--	--	--	--	--
2011	--	--	9.2	--	9.2	--	9.2
2012	--	--	1.8	--	1.8	--	1.8
2013	--	--	--	--	--	--	--
2014	--	--	5.0	--	5.0	--	5.0
Subtotal	**10**	**13.5**	**18.6**	**--**	**32.1**	**--**	**32.1**

Annual Funding TY$
1506 | Procurement | Aircraft Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2000	6	35.0	--	--	35.0	--	35.0
2001	1	14.7	--	--	14.7	--	14.7
2002	5	27.6	--	--	27.6	--	27.6
2003	6	33.3	--	--	33.3	--	33.3
2004	6	27.9	--	--	27.9	--	27.9
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	2	7.7	--	--	7.7	--	7.7
2010	3	12.6	--	--	12.6	--	12.6
2011	5	16.3	--	--	16.3	--	16.3
2012	5	20.6	--	--	20.6	--	20.6
2013	5	21.0	--	--	21.0	--	21.0
2014	5	21.4	--	--	21.4	--	21.4
2015	7	30.5	--	--	30.5	--	30.5
2016	6	26.6	--	--	26.6	--	26.6
2017	7	31.6	--	--	31.6	--	31.6
2018	7	32.1	--	--	32.1	--	32.1
2019	7	32.7	--	--	32.7	--	32.7
2020	7	33.3	--	--	33.3	--	33.3
2021	4	19.4	--	--	19.4	--	19.4
Subtotal	**94**	**444.3**	**--**	**--**	**444.3**	**--**	**444.3**

Annual Funding BY$
1506 | Procurement | Aircraft Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
2000	6	35.1	--	--	35.1	--	35.1
2001	1	14.6	--	--	14.6	--	14.6
2002	5	27.0	--	--	27.0	--	27.0
2003	6	32.0	--	--	32.0	--	32.0
2004	6	26.1	--	--	26.1	--	26.1
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	2	6.5	--	--	6.5	--	6.5
2010	3	10.4	--	--	10.4	--	10.4
2011	5	13.2	--	--	13.2	--	13.2
2012	5	16.4	--	--	16.4	--	16.4
2013	5	16.5	--	--	16.5	--	16.5
2014	5	16.5	--	--	16.5	--	16.5
2015	7	23.1	--	--	23.1	--	23.1
2016	6	19.8	--	--	19.8	--	19.8
2017	7	23.1	--	--	23.1	--	23.1
2018	7	23.0	--	--	23.0	--	23.0
2019	7	23.0	--	--	23.0	--	23.0
2020	7	23.0	--	--	23.0	--	23.0
2021	4	13.2	--	--	13.2	--	13.2
Subtotal	**94**	**362.5**	**--**	**--**	**362.5**	**--**	**362.5**

Annual Funding TY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1995	1	13.9	--	--	13.9	1.6	15.5
1996	1	11.3	--	--	11.3	0.1	11.4
1997	--	--	--	--	--	--	--
1998	3	31.8	--	--	31.8	3.2	35.0
1999	1	9.0	--	--	9.0	0.9	9.9
2000	2	14.3	--	--	14.3	1.7	16.0
2001	2	12.3	--	--	12.3	1.1	13.4
2002	2	15.4	--	--	15.4	1.7	17.1
2003	1	5.8	--	--	5.8	0.8	6.6
2004	1	6.3	--	--	6.3	0.6	6.9
2005	1	7.6	--	--	7.6	0.6	8.2
2006	2	12.6	--	--	12.6	1.3	13.9
2007	3	29.1	--	--	29.1	10.2	39.3
2008	2	12.8	--	--	12.8	3.3	16.1
2009	3	14.0	--	--	14.0	6.5	20.5
2010	1	7.7	--	--	7.7	0.7	8.4
2011	3	12.1	--	--	12.1	4.9	17.0
2012	2	12.6	--	--	12.6	3.8	16.4
2013	4	23.1	--	--	23.1	5.9	29.0
2014	2	7.9	--	--	7.9	2.2	10.1
2015	3	14.9	--	--	14.9	3.9	18.8
2016	1	10.0	--	--	10.0	2.5	12.5
2017	2	13.5	--	--	13.5	3.4	16.9
Subtotal	**43**	**298.0**	**--**	**--**	**298.0**	**60.9**	**358.9**

Annual Funding BY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
1995	1	14.7	--	--	14.7	1.7	16.4
1996	1	11.8	--	--	11.8	0.1	11.9
1997	--	--	--	--	--	--	--
1998	3	32.0	--	--	32.0	3.2	35.2
1999	1	8.9	--	--	8.9	0.9	9.8
2000	2	13.8	--	--	13.8	1.7	15.5
2001	2	11.5	--	--	11.5	1.0	12.5
2002	2	14.3	--	--	14.3	1.6	15.9
2003	1	5.1	--	--	5.1	0.7	5.8
2004	1	5.3	--	--	5.3	0.5	5.8
2005	1	6.2	--	--	6.2	0.5	6.7
2006	2	9.9	--	--	9.9	1.0	10.9
2007	3	21.8	--	--	21.8	7.7	29.5
2008	2	9.3	--	--	9.3	2.4	11.7
2009	3	9.9	--	--	9.9	4.6	14.5
2010	1	5.3	--	--	5.3	0.5	5.8
2011	3	8.2	--	--	8.2	3.3	11.5
2012	2	8.4	--	--	8.4	2.5	10.9
2013	4	15.1	--	--	15.1	3.9	19.0
2014	2	5.1	--	--	5.1	1.4	6.5
2015	3	9.4	--	--	9.4	2.5	11.9
2016	1	6.2	--	--	6.2	1.6	7.8
2017	2	8.2	--	--	8.2	2.1	10.3
Subtotal	**43**	**240.4**	**--**	**--**	**240.4**	**45.4**	**285.8**

Annual Funding TY$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1998	5	55.2	--	--	55.2	12.1	67.3
1999	5	79.7	--	--	79.7	1.7	81.4
2000	3	53.2	--	--	53.2	6.0	59.2
2001	6	36.4	--	--	36.4	--	36.4
2002	4	77.6	--	--	77.6	6.4	84.0
2003	6	64.9	--	--	64.9	6.1	71.0
2004	4	60.4	--	--	60.4	5.8	66.2
2005	3	60.9	--	--	60.9	6.2	67.1
2006	3	21.2	--	--	21.2	3.8	25.0
2007	5	34.4	--	--	34.4	3.6	38.0
2008	4	33.1	--	--	33.1	5.8	38.9
2009	4	29.3	--	--	29.3	4.9	34.2
2010	5	42.4	--	--	42.4	8.2	50.6
2011	5	48.6	--	--	48.6	9.8	58.4
2012	--	--	11.0	--	11.0	8.3	19.3
2013	3	25.8	--	--	25.8	13.3	39.1
2014	2	22.7	--	--	22.7	17.8	40.5
2015	4	21.6	--	--	21.6	32.3	53.9
2016	3	16.2	--	--	16.2	24.4	40.6
2017	3	21.9	--	--	21.9	24.6	46.5
2018	3	5.6	--	--	5.6	6.4	12.0
2019	2	4.5	--	--	4.5	7.8	12.3
2020	2	5.9	--	--	5.9	6.6	12.5
2021	2	6.0	--	--	6.0	6.7	12.7
2022	2	6.1	--	--	6.1	6.9	13.0
2023	2	6.3	--	--	6.3	7.0	13.3
2024	2	6.3	--	--	6.3	7.2	13.5
Subtotal	**92**	**846.2**	**11.0**	**--**	**857.2**	**249.7**	**1106.9**

Annual Funding BY$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
1998	5	57.3	--	--	57.3	12.5	69.8
1999	5	81.6	--	--	81.6	1.8	83.4
2000	3	53.7	--	--	53.7	6.1	59.8
2001	6	36.3	--	--	36.3	--	36.3
2002	4	76.3	--	--	76.3	6.3	82.6
2003	6	62.6	--	--	62.6	5.9	68.5
2004	4	56.9	--	--	56.9	5.4	62.3
2005	3	55.8	--	--	55.8	5.6	61.4
2006	3	18.8	--	--	18.8	3.4	22.2
2007	5	29.8	--	--	29.8	3.2	33.0
2008	4	28.2	--	--	28.2	5.0	33.2
2009	4	24.7	--	--	24.7	4.1	28.8
2010	5	35.2	--	--	35.2	6.8	42.0
2011	5	39.6	--	--	39.6	7.9	47.5
2012	--	--	8.8	--	8.8	6.6	15.4
2013	3	20.3	--	--	20.3	10.5	30.8
2014	2	17.6	--	--	17.6	13.7	31.3
2015	4	16.4	--	--	16.4	24.5	40.9
2016	3	12.1	--	--	12.1	18.2	30.3
2017	3	16.1	--	--	16.1	18.0	34.1
2018	3	4.0	--	--	4.0	4.6	8.6
2019	2	3.2	--	--	3.2	5.5	8.7
2020	2	4.1	--	--	4.1	4.6	8.7
2021	2	4.1	--	--	4.1	4.6	8.7
2022	2	4.1	--	--	4.1	4.6	8.7
2023	2	4.1	--	--	4.1	4.7	8.8
2024	2	4.1	--	--	4.1	4.6	8.7
Subtotal	**92**	**767.0**	**8.8**	**--**	**775.8**	**198.7**	**974.5**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	3/2/1998	12/5/2011
Approved Quantity	7	74
Reference	LRIP-1 – ASN (RDA) ADM	LRIP-12 – USD (AT&L) ADM
Start Year	1998	1998
End Year	1998	2011

A total of 74 AN/USG-2 (shipboard) and AN/USG-3 (airborne) Low-Rate Initial Production (LRIP) systems have been authorized and procured. The procurement of LRIP units exceeded 10 percent of the units planned to be procured under the Engineering and Manufacturing Development (EMD) and production programs. The procurement of LRIP units in excess of 10 percent was necessary to (1) meet ship installation schedules, (2) outfit Land Based Test Sites (LBTS) in preparation for completion of Operational Testing (OT), and (3) maintain the Minimum Sustaining Rate (MSR) for production of CEC systems pending completion of OT and entry into Full Rate Production (FRP).

The LRIP quantity of 74 systems were authorized as follows:

LRIP-1 – The Office of the Assistant Secretary of the Navy (Research Development and Acquisition) (ASN(RDA)) memorandum of March 2, 1998 to the Program Executive Office (PEO) for Theater Air Defense; and ASN (RDA) memorandum of August 24, 1998 to the PEO for Theater Air Defense and Surface Combatants authorized the procurement of seven systems. These seven systems represented two percent of the total procurement quantity of 295 planned at that time.

LRIP-2 – The ASN(RDA) memorandum of May 14, 1999 to the PEO for Theater Surface Combatants authorized the procurement of seven systems.

LRIP-3 – The ASN(RDA) memorandum of April 7, 2000 to the PEO for Theater Surface Combatants authorized the procurement of 12 systems.

LRIP-4 – The Under Secretary of Defense (Acquisition, Technology and Logistics) (USD (AT&L)) memorandum of May 4, 2001, to the Secretary of the Navy (SECNAV) authorized the procurement of seven systems and four foundations for E-2C aircraft. (Four backfit kits were later procured to complete four LRIP systems for E-2C.)

LRIP-5/6 – The USD (AT&L) memorandum of April 3, 2002, to the SECNAV and the Chairman, Joint Chiefs of Staff (CJCS) authorized the procurement of five AN/USG-3 (airborne) systems in FY 2002 and six AN/USG-3 systems in FY 2003.

LRIP-7/8 – The USD (AT&L) memorandum of September 4, 2003 to the SECNAV authorized two more years of LRIP for the airborne version (AN/USG-3), two in FY 2004 and two in FY 2005, with FRP pending successful completion of Follow-On Test and Evaluation (FOT&E).

LRIP-9 – The USD (AT&L) memorandum of January 19, 2009 to the SECNAV authorized an increase in the total LRIP quantity for the CEC program of an additional 14 AN/USG-3A systems to support the production of E-2D Advanced Hawkeye (AHE) aircraft beginning in FY 2009.

LRIP-10 – The USD (AT&L) memorandum of February 12, 2010 to the SECNAV authorized the second LRIP of up to six complete AN/USG-3B systems and the procurement of up to two additional Single Data Processor with Sierra II chip (SDP-S) components to support the E-2D AHE LRIP. SDP-S procurement authorizes partial system buy, and does not constitute an increase in total LRIP system quantities.

LRIP-11 – The USD (AT&L) memorandum of August 27, 2010 authorized the Navy to procure one additional LRIP Lot 2 (FY 2010 increment) CEC AN-USG 3B system to support one additional E-2D Hawkeye (AHE) aircraft as included in the Department of Defense Appropriations Act 2010, Public Law 111-118. The authority to procure one additional unit increased the total authorized CEC LRIP Lot 2 quantity to seven.

LRIP 12 - The USD (AT&L) memorandum of December 5, 2011 authorized the Navy to procure one additional CEC AN/USG-3B unit as part of the FY 2011 LRIP Lot 2. The authority to procure one additional unit increased the total authorized CEC LRIP Lot 2 quantity to eight. This decision also authorized an increase in the total CEC AN/USG-3A/B LRIP quantity to not more than 16 units.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Memo
United Kingdom	10/27/2011		17.0	MOA signed per Case # UK-P-Lll.
Australia	12/30/2010	1	4.1	FMS Australia (Case # AT-P-LCQ) procured one AN/USG-7B in December 2010. This cost is part of the $39.0M MOA signed in April 2010.
Australia	4/12/2010		39.0	MOA signed per Case # AT-P-LCQ (AMD 4). The $39.0M value includes the procurement of 2 units in December 2008 ($8.2M) and 1 unit in December 2010 ($4.1M).
Canada	4/6/2010		1.8	MOA signed per Case # CN-P-FBU.
Australia	12/19/2008	2	8.2	FMS Australia (Case # AT-P-LCQ) procured two AN/USG-7Bs in December 2008. This cost is part of the $39.0M MOA signed in April 2010.

The CEC Program Office, in conjunction with the Integrated Warfare Systems (IWS) International Program Office, has active Foreign Military Sales (FMS) cases with the United Kingdom, Australia and Canada towards integration of the CEC capability across their respective fleets in compliance with U.S. Government directives and FMS requirements.

Nuclear Cost

None

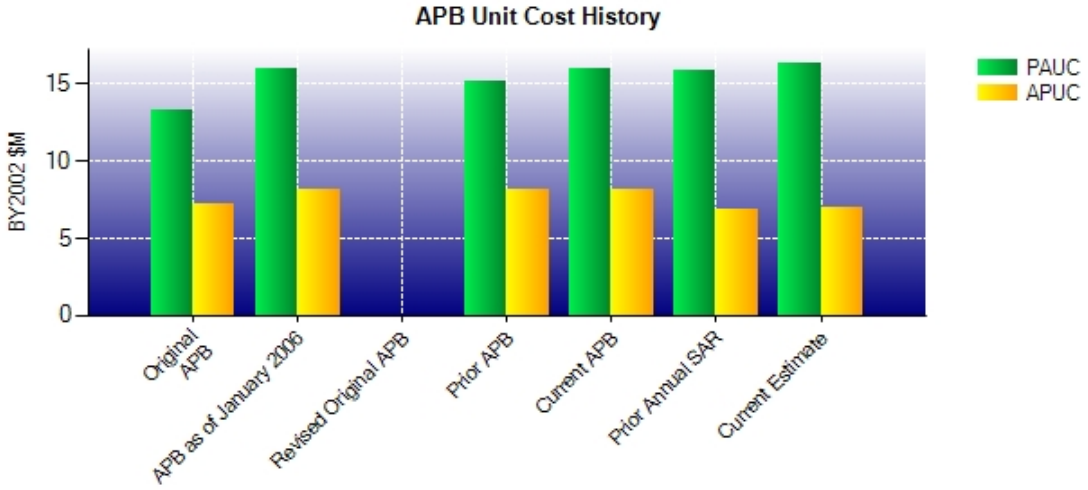
Unit Cost

Unit Cost Report

Unit Cost	BY2002 $M Current UCR Baseline (JUN 2004 APB)	BY2002 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	4530.9	4393.5	
Quantity	283	269	
Unit Cost	16.010	16.333	+2.02
Average Procurement Unit Cost (APUC)			
Cost	2095.2	1654.9	
Quantity	256	239	
Unit Cost	8.184	6.924	-15.40

Unit Cost	BY2002 $M Original UCR Baseline (JUL 1995 APB)	BY2002 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2443.4	4393.5	
Quantity	183	269	
Unit Cost	13.352	16.333	+22.33
Average Procurement Unit Cost (APUC)			
Cost	1262.8	1654.9	
Quantity	174	239	
Unit Cost	7.257	6.924	-4.59

Unit Cost History



		BY2002 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	JUL 1995	13.326	7.257	14.061	8.222
APB as of January 2006	JUN 2004	16.010	8.184	16.814	9.235
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	APR 2002	15.159	8.184	15.848	9.235
Current APB	JUN 2004	16.010	8.184	16.814	9.235
Prior Annual SAR	DEC 2010	15.929	6.877	17.109	7.974
Current Estimate	DEC 2011	16.333	6.924	17.748	8.155

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial PAUC Dev Est	Changes								PAUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
14.060	-0.656	-2.840	0.590	0.420	5.010	0.000	-0.736	1.788	15.848

Current SAR Baseline to Current Estimate (TY $M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
15.848	0.273	-0.732	0.452	1.223	0.581	0.000	0.103	1.900	17.748

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial APUC Dev Est	Changes								APUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
8.220	-0.532	-0.797	0.291	-0.439	1.761	0.000	0.731	1.015	9.235

Current SAR Baseline to Current Estimate (TY $M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
9.235	0.171	-0.581	0.167	-0.674	-0.278	0.000	0.115	-1.080	8.155

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	MAY 1995	MAY 1995	MAY 1995
Milestone III	N/A	OCT 1998	APR 2002	APR 2002
IOC	N/A	SEP 1996	SEP 1996	SEP 1996
Total Cost (TY $M)	N/A	2573.1	4310.7	4774.3
Total Quantity	N/A	183	272	269
Prog. Acq. Unit Cost (PAUC)	N/A	14.061	15.848	17.748

Initial Operational Capability (IOC) identified above refers to the CEC Shipboard configuration, AN/USG-2. Full Operational Capability (FOC) occurred in conjunction with Air IOC in May 2005.

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	1946.5	2364.2	--	4310.7
Previous Changes				
Economic	+27.3	+26.4	--	+53.7
Quantity	+51.6	-286.3	--	-234.7
Schedule	--	+27.6	--	+27.6
Engineering	+437.9	-163.6	--	+274.3
Estimating	+251.6	-74.3	--	+177.3
Other	--	--	--	--
Support	--	+27.7	--	+27.7
Subtotal	+768.4	-442.5	--	+325.9
Current Changes				
Economic	+5.2	+14.5	--	+19.7
Quantity	--	-9.7	--	-9.7
Schedule	+81.7	+12.4	--	+94.1
Engineering	+52.3	+2.4	--	+54.7
Estimating	-28.9	+7.9	--	-21.0
Other	--	--	--	--
Support	--	-0.1	--	-0.1
Subtotal	+110.3	+27.4	--	+137.7
Total Changes	+878.7	-415.1	--	+463.6
CE - Cost Variance	2825.2	1949.1	--	4774.3
CE - Cost & Funding	2825.2	1949.1	--	4774.3

Summary Base Year 2002 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	2028.1	2095.2	--	4123.3
Previous Changes				
Economic	--	--	--	--
Quantity	+47.8	-228.9	--	-181.1
Schedule	--	-36.9	--	-36.9
Engineering	+387.0	-126.0	--	+261.0
Estimating	+196.4	+41.5	--	+237.9
Other	--	--	--	--
Support	--	-87.5	--	-87.5
Subtotal	+631.2	-437.8	--	+193.4
Current Changes				
Economic	--	--	--	--
Quantity	--	-9.0	--	-9.0
Schedule	+60.5	-0.3	--	+60.2
Engineering	+40.4	+2.0	--	+42.4
Estimating	-21.6	+8.6	--	-13.0
Other	--	--	--	--
Support	--	-3.8	--	-3.8
Subtotal	+79.3	-2.5	--	+76.8
Total Changes	+710.5	-440.3	--	+270.2
CE - Cost Variance	2738.6	1654.9	--	4393.5
CE - Cost & Funding	2738.6	1654.9	--	4393.5

Previous Estimate: December 2010

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+5.2
Adjustment for current and prior escalation. (Estimating)	-1.5	-1.8
Stretch-out of Research, Development, Test and Evaluation, Navy (RDT&E, N) from FY 2016 to FY 2017 (Schedule)	+60.5	+81.7
Increased RDT&E, N funding for Accelerated Mid-Term Interoperability Improvement Project (AMIIP) (Engineering)	+5.2	+6.4
Increased RDT&E, N funding for Network Enabled Electronic Defense System (NEEDS) (Engineering)	+35.2	+45.9
Reduced funding for Air and Missile Defense Radar (AMDR) (Estimating)	-11.8	-15.9
Miscellaneous RDT&E, N budget reductions (Estimating)	-8.3	-11.2
RDT&E Subtotal	+79.3	+110.3

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+14.5
Total Quantity variance resulting from an increase of 3 Ship Conversion, Navy (SC,N) systems from 40 to 43 (Navy). (Subtotal)	+12.1	+19.7
Quantity variance resulting from an increase of 3 SC,N systems from 40 to 43 (Navy). (Quantity)	(+15.8)	(+25.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+0.5)	(+0.8)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-2.8)	(-4.5)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-1.4)	(-2.3)
Total Quantity variance resulting from a net decrease of 5 Other Procurement, Navy (OP,N) units (+4 LHDs and -9 CG Mods) from 97 to 92 (Navy). (Subtotal)	-18.6	-26.6
Quantity variance resulting from a decrease of 5 OP,N systems from 97 to 92 (Navy). (Quantity)	(-24.8)	(-35.4)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.8)	(-1.1)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+4.8)	(+6.9)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+2.2)	(+3.0)
Stretch-out of procurement buy profile from FY 2020 to FY 2024 for the 3 OP,N systems. (Schedule)	0.0	+4.5
Stretch-out of procurement buy profile to extend Air Procurement, Navy (AP,N) from FY 2019 to FY 2021 (Navy). (Schedule)	0.0	-0.3
Stretch-out of procurement buy profile to extend AP,N from FY 2019 to FY 2021 (Navy). (Schedule)	0.0	+8.5
Adjustment for current and prior escalation. (Estimating)	-2.6	-3.2
Revised estimate due to quantity change OP,N. (Estimating)	-3.6	-6.5
Revised estimate for Marine Corps Procurement support. (Estimating)	+15.9	+20.0
Revised estimate for AP, N procurement profile changes. (Estimating)	+2.1	+2.9
Revised estimate for realignment of OP,N. (Estimating)	-4.0	-6.0
Adjustment for current and prior escalation. (Support)	-0.8	-1.1
Increase in Other Support to reflect actuals (Navy). (Support)	+1.9	+3.2
Decrease in Other Support (Navy). (Support)	-4.9	-2.2

Procurement Subtotal	-2.5	+27.4

(QR) Quantity Related

Contracts

Appropriation: RDT&E

Contract Name	**Design Agent/Engineering Services**
Contractor	Raytheon - Network Centric Systems
Contractor Location	Largo, FL 33777-1444
Contract Number, Type	N00024-08-C-5202, CPFF
Award Date	January 17, 2008
Definitization Date	June 06, 2008

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
9.7	N/A	N/A	336.9	N/A	N/A	336.9	336.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/27/2012)	+0.3	0.0
Previous Cumulative Variances	+0.4	0.0
Net Change	-0.1	+0.0

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to efforts associated with descoping tasks to meet funding limitations.

Contract Comments

This contract is more than 90% complete; therefore, this is the final report for this contract.

The difference between the initial contract price target and the current contract price target is due to increases in current target price for additional Design Agent /Engineering Services (DA/ES) efforts.

This contract includes labor, facilities, engineering, and technical support services required for CEC System Design Agent Services, support equipment, and computer program installations as well as Engineering and Technical services in support of existing CEC assets, Common Equipment Sets (CES), auxiliary equipment, and stand alone equipment.

The Program Manager (PM), Contractor, and Performance Estimated Price at Completion (EPAC) reflect the EPAC for the Design Agent Services portion of the contract only.

Appropriation: Procurement

Contract Name	**FY08 - FY11**
Contractor	Raytheon
Contractor Location	Largo, FL 33777-1444
Contract Number, Type	N00024-08-C-5203, FFP
Award Date	July 21, 2008
Definitization Date	July 21, 2008

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
29.4	N/A	13	175.3	N/A	54	175.3	175.3

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this FFP contract.

Contract Comments

The difference between the initial contract price target and the current contract price target is due to increases from the first increment of funding provided at the base year of the contract and the value of the total contract price at award, including incentive fees to be earned.

This contract includes CEC production requirements for CEC systems. Requirements for associated Installation and Checkout (INCO) kits and Planar Array Antenna Assemblies (PAAA) backfit are also included.

Appropriation: Procurement

Contract Name	**CEC SDP-S**
Contractor	Sechan Electronics Inc
Contractor Location	525 Furnace Hills Pike Lititz, PA 17543-8902
Contract Number, Type	N00024-12-D-5203/1, CPFF
Award Date	December 20, 2011
Definitization Date	December 20, 2011

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
13.8	N/A	N/A	13.8	N/A	N/A	68.0	68.0

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances	--	--
Net Change	+0.0	+0.0

Cost And Schedule Variance Explanations

None

Contract Comments

This contract was awarded December 20, 2011 so this is the first time the contract is reported in the SAR. Therefore, no cost and schedule variances are reflected.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	30	30	30	100.00%
Production	242	103	239	43.10%
Total Program Quantities Delivered	272	133	269	49.44%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	4774.3	Years Appropriated	19
Expenditures To Date	3562.0	Percent Years Appropriated	61.29%
Percent Expended	74.61%	Appropriated to Date	3764.3
Total Funding Years	31	Percent Appropriated	78.85%

Operating and Support Cost

Assumptions And Ground Rules

The Operating and Support (O&S) cost estimate reflected in the Office of the Secretary of Defense Cost Analysis improvement Group (CAIG) Report dated February 19, 2002 supported the AN/USG-2 Milestone III Production and Deployment (P&D) (formerly Full Rate Production (FRP)) decision. Cost estimates will be updated prior to the AN/USG-3 FRP scheduled for FY 2013.

UNIT-LEVEL MANPOWER (formerly Mission Pay & Allowance): CEC requires no system specific operating personnel. The cost of ship maintenance personnel as defined in the October 2001 Manpower Estimate Report is included.

UNIT OPERATIONS (formerly Unit Level Consumption) and MAINTENANCE (formerly Intermediate and Depot Maintenance): Labor, overhead, material, repair parts, and transportation costs projected to be performed at Organization and Depot-level maintenance activities have been included.

SUSTAINING SUPPORT (formerly Contractor Support and Sustaining Support): Costs for prime contractor in-service engineering support are included. The costs of continuing engineering support for Navy in-house facilities and software maintenance costs have been included. Also included are costs to operate and maintain CEC training and support equipment. Modification kit procurement and installation costs are included beyond FY 2010.

INDIRECT SUPPORT: Costs for operational and maintenance training are included.

QUANTITY/SERVICE LIFE: The O&S costs are based on 251 total systems with a service-life of 20 years. Disposal costs are based on a 20-year service-life from initial deployment and are five percent of the system procurement cost.

There is no antecedent system.

Costs BY2002 $K		
Cost Element	**CEC Avg Annual Sys Cost**	**No Antecedent System**
Unit-Level Manpower	3.4	--
Unit Operations	270.5	--
Maintenance	16.5	--
Sustaining Support	228.0	--
Continuing System Improvements	--	--
Indirect Support	6.5	--
Other	--	--
Total Unitized Cost (Base Year 2002 $)	524.9	--

Total O&S Costs $M	CEC	No Antecedent System
Base Year	2668.4	--
Then Year	3749.6	--