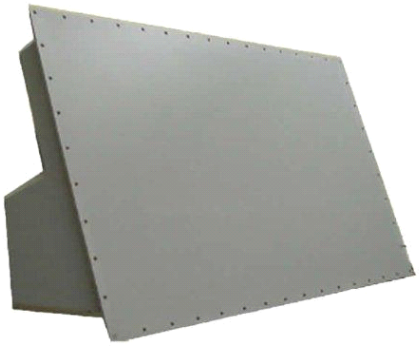
Selected Acquisition Report (SAR)

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, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Program Information

Designation And Nomenclature (Popular Name)

Cooperative Engagement Capability; shipboard (AN/USG-2), airborne (AN/USG-3), ground mobile (AN/USG-4), JLENS (AN/USG-5)

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)

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

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

Mission and Description

The Cooperative Engagement Capability (CEC) program provides a sensor network with Integrated Fire Control 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. 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 the distributed data into a single fire control quality air track picture that 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 (AN/USG-2). The program received incremental Low Rate Initial Production (LRIP) authority for the airborne system (AN/USG-3) over FY 2002 through FY 2005 and the Navy procured twenty-six (26) systems for the E-2C aircraft. In addition, CEC will be employed on the Ground Mobile (AN/USG-4) and Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) (AN/USG-5).

CEC added two new elements to the ships and E-2C’s combat systems: a Cooperative Engagement Processor (CEP) and a Data Distribution System (DDS). The addition of these new elements, along with the necessary changes to a unit’s combat system, allows 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 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 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

CEC AN/USG-2 and AN/USG-3 legacy configurations are currently in the Sustainment Phase with the focus on maintenance, upgrades, modernization 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 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 introduction of the E-2D CEC AN/USG-3B System, which introduces Signal Data Processor Sierra Chip (SDP-S) to replace the four Weapons Replaceable Assemblies (WRAs). Reliability 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, including maintenance evaluation in FY 2011. E-2D Initial Operational Test & Evaluation (IOT&E) is scheduled to complete in FY 2012. CEC is working on near term software interoperability fixes to correct track Identification (ID) migration issues.

The Under Secretary of Defense (USD) for Acquisition, Technology and Logistics (AT&L) Memorandum of February 12, 2010 for the Secretary of the Navy (SECNAV) authorized the second Low Rate Initial Production (LRIP) of up to six complete AN/USG-3B systems and the procurement of up to two additional SDP-S components to support the E-2D Advanced Hawkeye LRIP. The additional SDP-S procurements authorized partial system buys rather than an increase in total LRIP system quantities. The USD (AT&L) Memorandum of August 27, 2010 to the SECNAV authorized the Navy to procure one additional CEC AN/USG-3B system as part of the second LRIP Lot, increasing the total CEC LRIP Lot 2 quantity authorized to seven.

In addition, 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) by Resource Management Decision (RMD) 802 dated April 8, 2009 for the FY 2010 Budget Request, which terminated the Single Integrated Air Picture (SIAP) Program. The SIAP Joint PEO, subsequently named the Joint Integrated Air and Missile Defense (IAMD) Joint PEO, was directed to conduct a JTMC demonstration in FY 2011. A JTMC Integrated Product Team (IPT) was established to plan and conduct the JTMC demonstration, and to develop artifacts for the architecture and requirements that trace to the SIAP Capability Description Document (CDD). Preparations to conduct the JTMC demonstration in fourth quarter FY 2011 are on track.

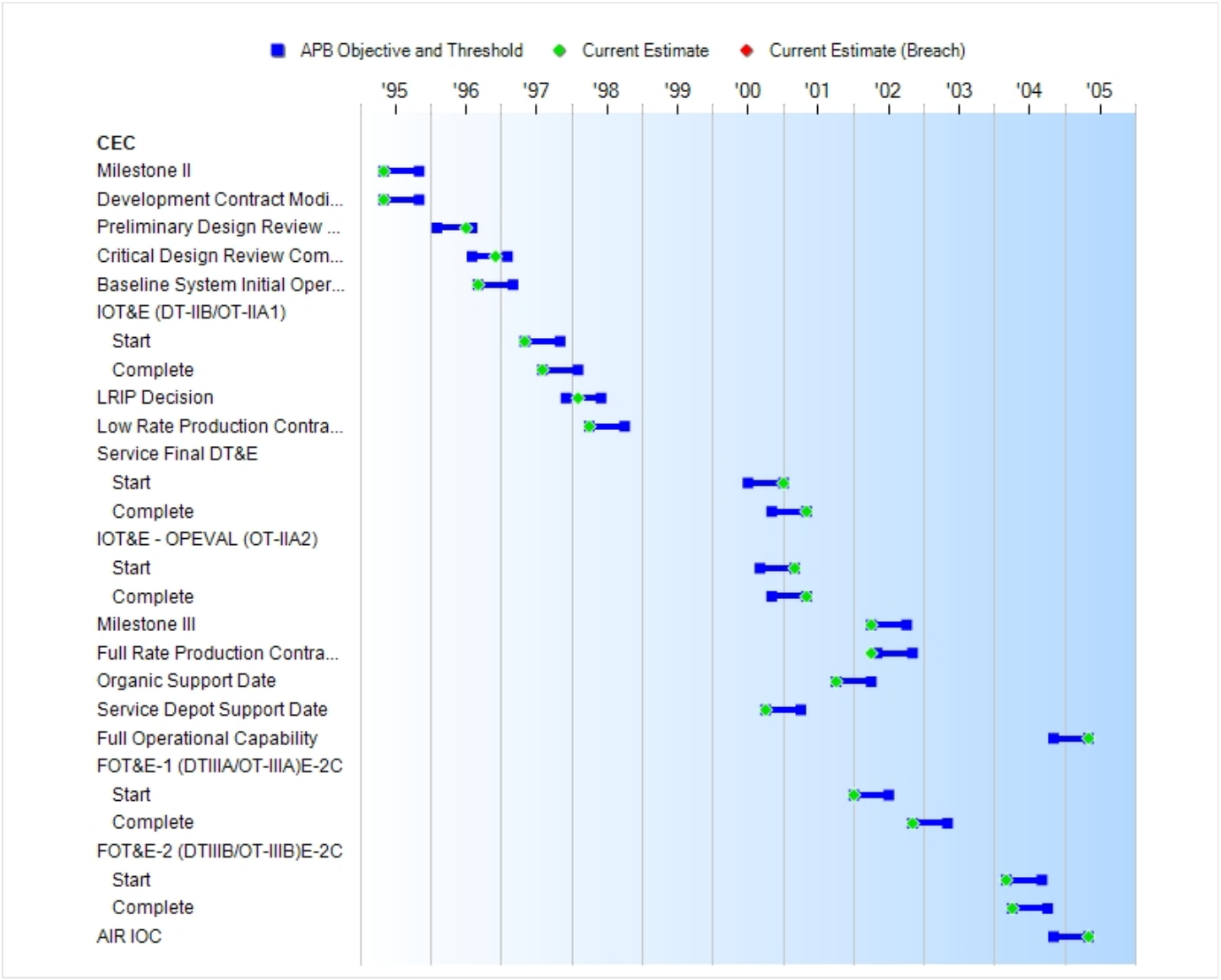
There are no significant software-related issues for this program at this time.

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

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 ...
Critical Design Review Com...
Baseline System Initial Oper...
IOT&E (DT-IIB/OT-IIA1)
Start
Complete
LRIP Decision
Low Rate Production Contra...
Service Final DT&E
Start
Complete
IOT&E - OPEVAL (OT-IIA2)
Start
Complete
Milestone III
Full Rate Production Contra...
Organic Support Date
Service Depot Support Date
Full Operational Capability
FOT&E-1 (DTIIIA/OT-IIIA)E-2C
Start
Complete
FOT&E-2 (DTIIIB/OT-IIIB)E-2C
Start
Complete
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
Critical Design Review Complete	AUG 1996	AUG 1996	FEB 1997	DEC 1996
Baseline System Initial Operational Capability	SEP 1996	SEP 1996	MAR 1997	SEP 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 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
Milestone III	APR 2002	APR 2002	OCT 2002	APR 2002
Full Rate Production Contract Award	MAY 2002	MAY 2002	NOV 2002	APR 2002
Organic Support Date	OCT 2001	OCT 2001	APR 2002	OCT 2001
Service Depot Support Date	OCT 2000	OCT 2000	APR 2001	OCT 2000
Full Operational Capability	DEC 2003	NOV 2004	MAY 2005	MAY 2005
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
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
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	>=.98	>=.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
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	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 revised from 2616A to K2616A to reflect correct nomenclature.

K3186 not reported since PE 0603755N (1997 and prior years) was incorporated into PE 0603658N in 1999. The December 1998 through December 2009 SARs reported PE 0603755N inadvertently as a separate line item.

ICN 100000 changed to ICN 208600 to reflect correct ICN associated with PE 0204112N.

ICN 221600 changed to ICN 211900 to reflect correct ICN associated with PE 0204228N.

ICN 227300 changed to ICN 464017 to reflect correct ICN associated with PE 0206313N.

All funding and quantities for APPN 2035 BA 02 PE 0214400N ICN 52860161 were removed in the 2009 SAR. The line item's Program element and ICN were removed from this SAR.

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 Y5EJ	Advanced Hawkeye	(Shared)	
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	(Shared)	
	ICN 208600	Carrier Replacement Program	(Shared)	
APPN 1611	BA 05	PE 0204228N	(Navy)	
	ICN 211900	DDG 1000	(Shared)	
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 02	PE 0204228N	(Navy)	
	ICN 090000	DDG Modernization	(Shared)	
APPN 1810	BA 02	PE 0204162N	(Navy)	
	ICN 096000	Cruiser Modernization	(Shared)	
APPN 1810	BA 02	PE 0204221N	(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	2659.3	1946.5	2394.3	2714.9
Procurement	2095.2	2095.2	2304.7	1657.4	2364.2	2364.2	1921.7
Flyaway	1759.8	--	--	1409.5	1985.6	--	1614.5
Recurring	1759.8	--	--	1409.5	1985.6	--	1614.5
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	335.4	--	--	247.9	378.6	--	307.2
Other Support	335.4	--	--	247.9	378.6	--	307.2
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	4316.7	4310.7	4758.5	4636.6

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	16	27	30
Procurement	256	256	241
Total	272	283	271

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	2342.8	57.8	58.3	45.4	62.8	67.4	80.4	0.0	2714.9
Procurement	1135.4	91.9	77.1	124.3	104.5	112.2	94.6	181.7	1921.7
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 2012 Total	3478.2	149.7	135.4	169.7	167.3	179.6	175.0	181.7	4636.6
PB 2011 Total	3519.2	155.4	140.6	160.4	149.9	128.8	112.9	177.9	4545.1
Delta	-41.0	-5.7	-5.2	9.3	17.4	50.8	62.1	3.8	91.5

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	30	0	0	0	0	0	0	0	0	30
Production	0	122	12	10	17	14	16	12	38	241
PB 2012 Total	30	122	12	10	17	14	16	12	38	271
PB 2011 Total	30	130	20	12	15	14	10	13	37	281
Delta	0	-8	-8	-2	2	0	6	-1	1	-10

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	--	--	--	--	--	--	53.9
2012	--	--	--	--	--	--	56.1
2013	--	--	--	--	--	--	44.4
2014	--	--	--	--	--	--	62.8
2015	--	--	--	--	--	--	67.4
2016	--	--	--	--	--	--	80.4
Subtotal	**22**	**--**	**--**	**--**	**--**	**--**	**2684.3**

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	--	--	--	--	--	--	55.4
2011	--	--	--	--	--	--	44.8
2012	--	--	--	--	--	--	45.9
2013	--	--	--	--	--	--	35.7
2014	--	--	--	--	--	--	49.7
2015	--	--	--	--	--	--	52.4
2016	--	--	--	--	--	--	61.5
Subtotal	**22**	**--**	**--**	**--**	**--**	**--**	**2631.8**

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	--	--	--	--	--	--	3.9
2012	--	--	--	--	--	--	2.2
2013	--	--	--	--	--	--	1.0
Subtotal	**8**	**--**	**--**	**--**	**--**	**--**	**30.6**

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	--	--	--	--	--	--	4.4
2011	--	--	--	--	--	--	3.2
2012	--	--	--	--	--	--	1.8
2013	--	--	--	--	--	--	0.8
Subtotal	**8**	**--**	**--**	**--**	**--**	**--**	**27.5**

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
Subtotal	**10**	**16.0**	**3.0**	**--**	**19.0**	**--**	**19.0**

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
Subtotal	**10**	**13.5**	**2.6**	**--**	**16.1**	**--**	**16.1**

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	4	16.8	--	--	16.8	--	16.8
2012	5	21.1	--	--	21.1	--	21.1
2013	7	29.5	--	--	29.5	--	29.5
2014	8	33.7	--	--	33.7	--	33.7
2015	8	33.7	--	--	33.7	--	33.7
2016	8	33.7	--	--	33.7	--	33.7
2017	8	33.7	--	--	33.7	--	33.7
2018	8	33.7	--	--	33.7	--	33.7
2019	9	38.5	--	--	38.5	--	38.5
Subtotal	**94**	**433.2**	**--**	**--**	**433.2**	**--**	**433.2**

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	10.5	--	--	10.5	--	10.5
2011	4	13.8	--	--	13.8	--	13.8
2012	5	17.1	--	--	17.1	--	17.1
2013	7	23.4	--	--	23.4	--	23.4
2014	8	26.3	--	--	26.3	--	26.3
2015	8	25.9	--	--	25.9	--	25.9
2016	8	25.5	--	--	25.5	--	25.5
2017	8	25.0	--	--	25.0	--	25.0
2018	8	24.6	--	--	24.6	--	24.6
2019	9	27.7	--	--	27.7	--	27.7
Subtotal	**94**	**361.1**	**--**	**--**	**361.1**	**--**	**361.1**

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	0.8	8.5
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	1	7.9	--	--	7.9	2.2	10.1
2015	3	14.9	--	--	14.9	3.9	18.8
2016	1	8.3	--	--	8.3	2.2	10.5
Subtotal	**40**	**282.8**	**--**	**--**	**282.8**	**57.3**	**340.1**

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	22.0	--	--	22.0	7.7	29.7
2008	2	9.4	--	--	9.4	2.4	11.8
2009	3	10.1	--	--	10.1	4.7	14.8
2010	1	5.5	--	--	5.5	0.5	6.0
2011	3	8.4	--	--	8.4	3.5	11.9
2012	2	8.6	--	--	8.6	2.7	11.3
2013	4	15.6	--	--	15.6	4.0	19.6
2014	1	5.2	--	--	5.2	1.5	6.7
2015	3	9.7	--	--	9.7	2.6	12.3
2016	1	5.3	--	--	5.3	1.4	6.7
Subtotal	**40**	**233.3**	**--**	**--**	**233.3**	**43.9**	**277.2**

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	48.3	--	--	48.3	9.8	58.1
2012	3	27.8	--	--	27.8	11.8	39.6
2013	6	43.4	--	--	43.4	22.4	65.8
2014	5	34.5	--	--	34.5	26.2	60.7
2015	5	24.0	--	--	24.0	35.7	59.7
2016	3	20.4	--	--	20.4	30.0	50.4
2017	4	12.8	--	--	12.8	14.4	27.2
2018	3	7.5	--	--	7.5	8.4	15.9
2019	3	6.0	--	--	6.0	10.2	16.2
2020	3	6.1	--	--	6.1	10.4	16.5
Subtotal	**97**	**879.5**	**--**	**--**	**879.5**	**249.9**	**1129.4**

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	5.7	61.5
2006	3	18.8	--	--	18.8	3.4	22.2
2007	5	29.9	--	--	29.9	3.1	33.0
2008	4	28.3	--	--	28.3	5.0	33.3
2009	4	24.8	--	--	24.8	4.1	28.9
2010	5	35.4	--	--	35.4	6.8	42.2
2011	5	39.7	--	--	39.7	8.1	47.8
2012	3	22.5	--	--	22.5	9.6	32.1
2013	6	34.6	--	--	34.6	17.8	52.4
2014	5	27.0	--	--	27.0	20.5	47.5
2015	5	18.5	--	--	18.5	27.5	46.0
2016	3	15.4	--	--	15.4	22.8	38.2
2017	4	9.5	--	--	9.5	10.7	20.2
2018	3	5.5	--	--	5.5	6.1	11.6
2019	3	4.3	--	--	4.3	7.4	11.7
2020	3	4.3	--	--	4.3	7.4	11.7
Subtotal	**97**	**799.0**	**--**	**--**	**799.0**	**204.0**	**1003.0**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	3/2/1998	8/27/2010
Approved Quantity	7	73
Reference	LRIP-1 – ASN (RDA) ADM	LRIP-10 – USD (AT&L) ADM
Start Year	1998	1998
End Year	1998	2010

A total of sixty-nine (69) AN/USG-2 (shipboard) and AN/USG-3 (airborne) Low Rate Initial Production (LRIP) systems have been 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 Operational Test (OT), and (3) maintain the Minimum Sustaining Rate (MSR) for production of CEC systems pending completion of operational testing and entry into Full Rate Production (FRP).

The LRIP quantity of seventy-three (73) 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.

The USD (AT&L) memorandum of August 27, 2010 to the SECNAV authorizes the Navy to procure one additional CEC AN/USG-3B system as part of the second LRIP Lot, increasing the total CEC LRIP Lot 2 quantity authorized to seven.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Memo
Australia	12/30/2010	1	4.1	FMS Australia (Case # AT-P-LCQ) procured one AN/USG-7B in December 2010.
Australia	12/19/2008	2	7.4	FMS Australia (Case # AT-P-LCQ) procured two AN/USG-7Bs in December 2008. These units were inadvertently excluded from prior SARs.

The CEC Program Office, in conjunction with the Integrated Warfare Systems (IWS) International Program Office, is jointly coordinating efforts 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. Approval of CEC Foreign Military Sales (FMS) Cases are based on using the same hardware (HW) and software (SW) and the implementation of a negotiated adaptive layer to ensure interoperability in the same manner as it is assured for U.S. systems.

As reflected in the table above, Australia is currently participating in the CEC program through FMS. In addition, Canada opened an FMS Case in February 2010 to gather technical and operational information to assess CEC's suitability for the Canadian Fleet. Interoperability requirements for future FMS requirements will be addressed on a case-by-case basis.

Nuclear Cost

None.

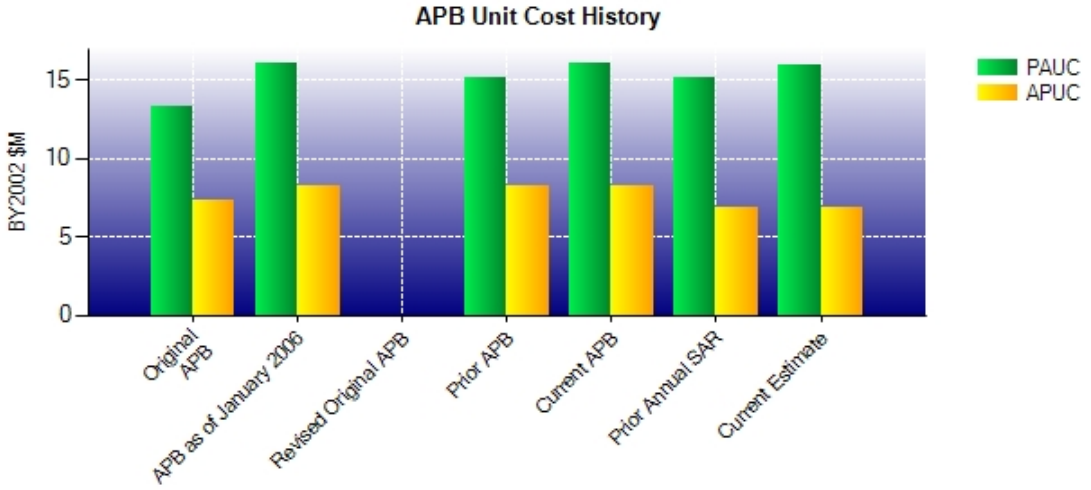
Unit Cost

Unit Cost Report

Unit Cost	BY2002 $M Current UCR Baseline (JUN 2004 APB)	BY2002 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	4530.9	4316.7	
Quantity	283	271	
Unit Cost	16.010	15.929	-0.51
Average Procurement Unit Cost (APUC)			
Cost	2095.2	1657.4	
Quantity	256	241	
Unit Cost	8.184	6.877	-15.97

Unit Cost	BY2002 $M Original UCR Baseline (JUL 1995 APB)	BY2002 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2443.4	4316.7	
Quantity	183	271	
Unit Cost	13.352	15.929	+19.30
Average Procurement Unit Cost (APUC)			
Cost	1262.8	1657.4	
Quantity	174	241	
Unit Cost	7.257	6.877	-5.24

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 2009	15.156	6.810	16.175	7.853
Current Estimate	DEC 2010	15.929	6.877	17.109	7.974

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	0.198	-0.807	0.102	1.012	0.654	0.000	0.102	1.261	17.109

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	0.110	-0.613	0.115	-0.679	-0.308	0.000	0.115	-1.261	7.974

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	4636.6
Total Quantity	N/A	183	272	271
Prog. Acq. Unit Cost (PAUC)	N/A	14.061	15.848	17.109

Initial Operational Capability (IOC) identified above refers to the Cooperative Engagement Capability (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	+27.4	+26.0	--	+53.4
Quantity	+51.6	-208.7	--	-157.1
Schedule	--	+34.9	--	+34.9
Engineering	+437.9	-183.4	--	+254.5
Estimating	+110.7	-111.2	--	-0.5
Other	--	--	--	--
Support	--	+49.2	--	+49.2
Subtotal	+627.6	-393.2	--	+234.4
Current Changes				
Economic	-0.1	+0.4	--	+0.3
Quantity	--	-77.6	--	-77.6
Schedule	--	-7.3	--	-7.3
Engineering	--	+19.8	--	+19.8
Estimating	+140.9	+36.9	--	+177.8
Other	--	--	--	--
Support	--	-21.5	--	-21.5
Subtotal	+140.8	-49.3	--	+91.5
Total Changes	+768.4	-442.5	--	+325.9
CE - Cost Variance	2714.9	1921.7	--	4636.6
CE - Cost & Funding	2714.9	1921.7	--	4636.6

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	-157.6	--	-109.8
Schedule	--	-33.8	--	-33.8
Engineering	+387.0	-142.4	--	+244.6
Estimating	+86.5	+11.9	--	+98.4
Other	--	--	--	--
Support	--	-64.0	--	-64.0
Subtotal	+521.3	-385.9	--	+135.4
Current Changes				
Economic	--	--	--	--
Quantity	--	-71.3	--	-71.3
Schedule	--	-3.1	--	-3.1
Engineering	--	+16.4	--	+16.4
Estimating	+109.9	+29.6	--	+139.5
Other	--	--	--	--
Support	--	-23.5	--	-23.5
Subtotal	+109.9	-51.9	--	+58.0
Total Changes	+631.2	-437.8	--	+193.4
CE - Cost Variance	2659.3	1657.4	--	4316.7
CE - Cost & Funding	2659.3	1657.4	--	4316.7

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-0.1
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
Additional Research Development Test and Evaluation, Navy (RDT&E,N) funding in FY 2016 for the CEC program. (Estimating)	+36.2	+47.3
Additional RDT&E,N funding for CEC Signal Data Processor (SDP) Anti-Tamper. (Estimating)	+32.5	+42.1
Additional RDT&E,N funding for CEC Air and Missile Defense Radar (AMDR) hardware. (Estimating)	+23.2	+30.0
Additional RDT&E,N funding for CEC/ Link 16 Interoperability. (Estimating)	+12.5	+15.4
Increased requirement associated with Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS). (Estimating)	+8.5	+10.2
RDT&E,N miscellaneous budget corrections such as Navy Working Capital Fund (NWCF) rate adjustments to the CEC program. (Estimating)	-2.8	-3.9
RDT&E Subtotal	+109.9	+140.8

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.4
Quantity variance resulting from an increase of seven AN/USG-2 systems from 33 to 40 (Shipbuilding and Conversion, Navy (SC,N)). (Quantity)	+27.5	+41.7
Total Quantity variance resulting from a decrease of 17 AN/USG-4 systems from 27 to 10 (Procurement, Marine Corps (P,MC)). (Subtotal)	-75.5	-91.2
Quantity variance resulting from a decrease of 17 systems from 27 to 10 (P,MC). (Quantity)	(-98.8)	(-119.3)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-3.1)	(-3.7)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+16.4)	(+19.8)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+10.0)	(+12.0)
Acceleration of procurement buy profile (Aircraft Procurement, Navy (AP,N)). (Schedule)	0.0	-0.1
Acceleration of procurement buy profile (SC,N). (Schedule)	0.0	-4.1
Stretch-out of procurement buy profile from FY 2012 to FY 2017 (Other Procurement, Navy (OP, N)). (Schedule)	0.0	+0.6
Adjustment for current and prior escalation. (Estimating)	-0.4	-0.8
Revised estimates due to increase cost as a result of rate increases associated with the reduction of 17 AN/USG-4 systems (P,MC). (Estimating)	+55.9	+67.4
Reduced projected unit cost estimate for FY 2013 to FY 2019 AP,N systems. (Estimating)	-3.5	-4.4
Adjusted FY 2012 and all prior year SC,N systems profiles to reflect year of system appropriation vice year of system procurement and to reflect update from estimated funding to actual funding in prior years. (Estimating)	-14.1	-13.9
Increased unit cost for single AN/USG-2 SC,N system procurements (DDG 119 in FY 2014 and DDG 122 in FY 2016). (Estimating)	+2.4	+4.0
Decreased unit cost for multiple AN/USG-2 SC,N system procurements (DDG 117 and DDG 118 in FY 2013, and DDG 120 and DDG 121 in FY 2015). (Estimating)	-3.5	-5.3

DDG Modernization (DDG MOD) procurement of 10 AN/USG-2 OP,N systems from FY 2012 through FY 2015 changed to FY 2013 through FY 2015, causing learning curve adjustments from no DDG MOD procurements in FY 2012. (Estimating)	-12.2	-15.4
OP, N miscellaneous budget reductions such as Technical Corrections, contractor services reduction, and Navy Working Capital Fund (NWCF) rate adjustments. (Estimating)	-6.2	-8.1
Revised estimate for changes in learning curve due to shift in one AN/USG-3 AP,N system from FY 2012 into FY 2010. (Estimating)	+1.2	+1.4
Adjustment for current and prior escalation. (Support)	-0.3	-0.3
Decrease in Other Support to adjust prior year recurring flyaway cost to support cost ratio from estimated funding to actual funding (Shipbuilding and Conversion, Navy (SC,N)). (Support)	-13.0	-7.8
Decrease in Other Support due to revised CEC and CG Modernization (CG MOD) system estimates (Other Procurement, Navy (OP,N)). (Support)	-10.2	-13.4
Procurement Subtotal	-51.9	-49.3

(QR) Quantity Related

Contracts

Appropriation: RDT&E

Contract Name	**Systems Integrator / Design Agent**
Contractor	General Dynamics Advanced Information Systems
Contractor Location	Fairfax, VA 22030
Contract Number, Type	N00024-05-C-5100, CPAF
Award Date	March 11, 2005
Definitization Date	March 11, 2005

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
19.2	N/A	N/A	95.0	N/A	N/A	95.0	95.0

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/30/2011)	-0.7	+0.1
Previous Cumulative Variances	0.0	-0.2
Net Change	-0.7	+0.3

Cost And Schedule Variance Explanations

Incremental funding impacts performance data and variances. End of January 2011 data was processed at the end of a prior incremental funding period. However, the unfavorable net cost variance and favorable net schedule variance are insignificant and have no known impact on contract performance.

Contract Comments

This contract includes labor, facilities, and engineering services to support the development of single-track manager. The contract also includes modification of Government Furnished Information (GFI) to implement and maintain the Joint Track Manager (JTM) and its integration onto Navy specific platforms.

The $19.2M value represents the first increment of funding provided at the base year of the contract. The $95M value represents the total contract price at award, including award fees to be earned.

This contract is over 90 percent complete. This is the last time this contract will be reported in the CEC SAR.

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	220.2	N/A	N/A	220.2	220.2

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/28/2011)	+0.4	0.0
Previous Cumulative Variances	+0.2	0.0
Net Change	+0.2	+0.0

Cost And Schedule Variance Explanations

The favorable net cost and net schedule variances are insignificant and have no known impact on the contract performance.

Contract Comments

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 Estimate at Completion (EAC) reflect the proper EAC for the Design Agent Services portion of the contract only.

The $9.7M value represents the first increment of funding provided at the base year of the contract. The $220.2M value represents the total contract price at award, including all options.

The current target price increased due to additional design agent engineering services efforts.

Appropriation: RDT&E

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	21	175.3	175.3

Cost And Schedule Variance Explanations

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

Contract Comments

This contract includes CEC production requirements for AN/USG-2A/B, AN/USG-3A/B, AN/USG-4, AN/USG-5, and AN/USG-7. Requirements for associated Installation and Checkout (INCO) kits and Planar Array Antenna Assemblies (PAAA) backfit are also included.

The $29.4M value represents the first increment of funding provided at the base year of the contract. The $175.3M value represents the total contract price at award, including incentive fees to be earned.

The current target price increased due to exercising the FY 2010 contract option to procure seven additional AN/USG-2B systems, three AN/USG-3B systems, one PAAA backfit kit, and two Signal Data Processor with Sierra II Chips.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	27	27	30	90.00%
Production	93	93	241	38.59%
Total Program Quantities Delivered	120	120	271	44.28%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	4636.6	Years Appropriated	18
Expenditures To Date	3335.5	Percent Years Appropriated	66.67%
Percent Expended	71.94%	Appropriated to Date	3627.9
Total Funding Years	27	Percent Appropriated	78.24%

Operating and Support Cost

Assumptions And Ground Rules

The Operating and Support (O&S) cost estimate was generated in January 2002 and supported the Milestone III Production and Deployment (P&D) (formerly Full Rate Production) decision.

UNIT-LEVEL MANPOWER (formerly Mission Pay & Allowance): Cooperative Engagement Capability (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 twenty (20) years.

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	--