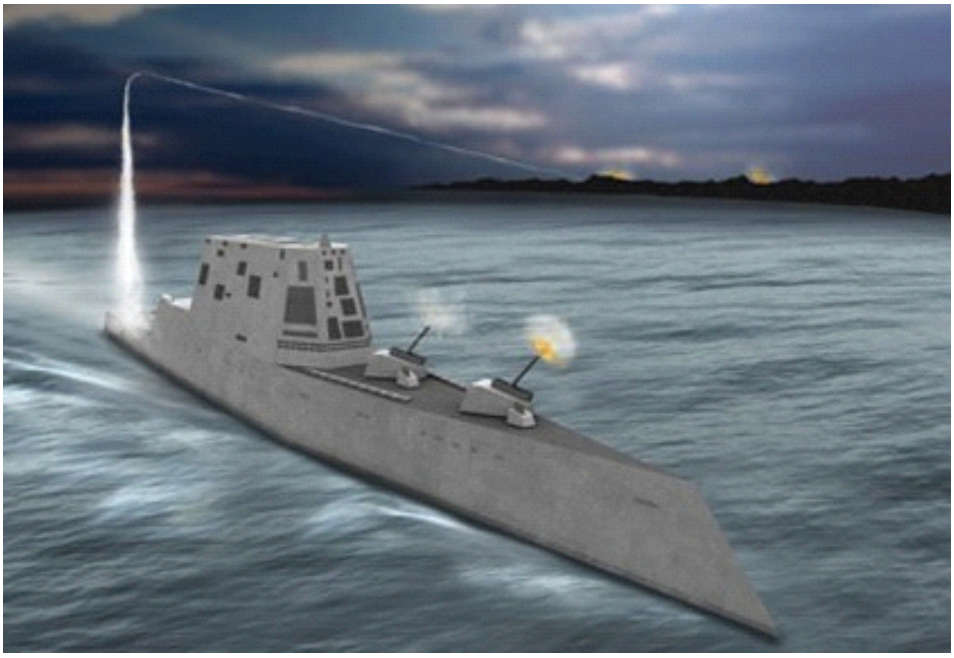
Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-197



DDG 1000

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

DDG 1000 Destroyer

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned August 6, 2010

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated November 23, 2005

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated March 25, 2011

Mission and Description

DDG 1000 will be a multi-mission surface combatant designed to provide littoral dominance and fulfill volume firepower and precision strike requirements. This advanced warship will provide credible forward naval presence while operating independently or as an integral part of Naval, Joint or Combined Expeditionary Strike Forces. Armed with an array of weapons, DDG 1000 will provide offensive, distributed and precision firepower at long ranges in support of forces ashore. To ensure effective operations in the littoral, DDG 1000 will incorporate full-spectrum signature reduction, active and passive self-defense systems and cutting-edge survivability features.

Executive Summary

In April 2009, the Navy, Bath Iron Works (BIW), and Northrop Grumman Shipbuilding (NGSB) signed Memorandums of Agreement (MOA) regarding the allocation of ship construction workload for DDG 1000 and DDG 51 Class ships. Reflecting the agreements within the MOAs, the DDG 1000 Acquisition Strategy for a 3-ship program was approved by the Under Secretary of Defense for Acquisition, Technology & Logistics (USD(AT&L)) in August 2009.

The President's Budget (PB) FY 2011 budget submission in February 2010 confirmed the reduction of the DDG 1000 Program to three ships as a result of the Future Surface Combatant Radar Hull Study where the Navy concluded a modified DDG 51 with an Advanced Missile Defense Radar (AMDR) is the most cost-effective solution to fleet air and missile defense requirements. The Secretary of the Navy notified Congress on February 1, 2010 of a critical DDG 1000 Program Nunn-McCurdy breach to the Program Acquisition Unit Cost (PAUC) and Average Procurement Unit Cost (APUC) due to the quantity change, not program performance. On June 1, 2010 USD(AT&L) certified a restructured three ship program that included removal of the Volume Search Radar (VSR) from the ship design, changed the Initial Operational Capability (IOC) from Fiscal Year (FY) 2015 to FY 2016, and revised test and evaluation requirements. Additionally, the DDG 1000 Program was directed to be funded to the Director of Cost Assessment and Program Evaluation (D,CAPE) cost estimate in FY 2011 - FY 2015 and to the Navy estimate in FY 2016 and beyond. A revised Acquisition Program Baseline (APB) was approved March 25, 2011 by USD(AT&L).

USD(AT&L) approved DDG 1000 Milestone B and reentry into the Engineering and Manufacturing Development Phase on October 8, 2010. In addition, USD(AT&L) approved the continued production of the DDG 1000 and DDG 1001 and start of production of the DDG 1002; phased procurement, activation, and test of the Mission Systems Equipment for the class; and a reduction in low rate initial production quantity from eight to three ships.

As a result of the truncated program and consistent with the workload swap MOAs, Bath Iron Works submitted their Fixed Priced Incentive (FPI) proposal for DDG 1001 and 1002 on February 12, 2010. The Nunn-McCurdy breach and rescission of Milestone B delayed the award of contracts. Negotiations are ongoing.

The House and Senate reduced the DDG 1000 PB11 request by $108.8M SCN ($186.312M to $77.512M) for VSR removal. The VSR removal was accounted for in the Nunn-McCurdy cost estimate to offset increased program costs due to the quantity change. This reduction will result in impact to core SCN construction efforts including production of Mission Systems Equipment, resulting in the inability to meet shipyard delivery dates. In addition, the Senate reduced the PB11 request by $13M RDTE,N for the Full Ship Shock Trial (FSST) Alternative. The FSST was also accounted for in the Nunn-McCurdy cost estimate to offset increased program cost. These reductions result in program funding below the USD(AT&L) funding approved in the June 1, 2010 Acquisition Decision Memorandum (ADM).

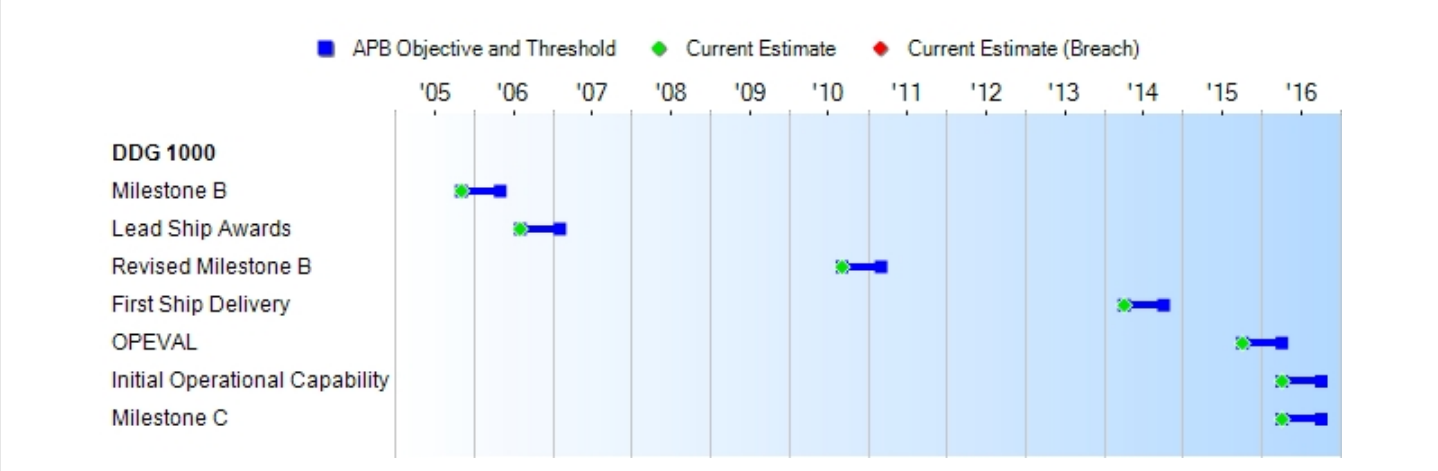
There are no significant software-related issues for this program at this time.

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



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	
Milestone B	NOV 2005	NOV 2005	MAY 2006	NOV 2005	
Lead Ship Awards	JAN 2006	AUG 2006	FEB 2007	AUG 2006	
Revised Milestone B	N/A	SEP 2010	MAR 2011	SEP 2010	
First Ship Delivery	SEP 2012	APR 2014	OCT 2014	APR 2014	(Ch-1)
OPEVAL	SEP 2013	OCT 2015	APR 2016	OCT 2015	(Ch-1)
Initial Operational Capability	JAN 2014	APR 2016	OCT 2016	APR 2016	(Ch-1)
Milestone C	MAR 2015	APR 2016	OCT 2016	APR 2016	(Ch-1)

Acronyms And Abbreviations

OPEVAL - Operational Evaluation

Change Explanations

(Ch-1) Schedule changes reflect revised ship Initial Operational Capability in FY 2016 in accordance with the approved Nunn-McCurdy certification by USD (AT&L) on June 1, 2010. A revised Acquistion Program Baseline (APB) was approved March 25, 2011 by USD (AT&L).

First Ship Delivery changed from September 2013 to April 2014
OPEVAL changed from February 2015 to October 2015
Initial Operational Capability changed from August 2015 to April 2016
Milestone C changed from February 2016 to April 2016

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Number of Advanced Gun Systems	2	2	2	TBD	2
Number of Advanced Vertical Launch Cells	128	128	80	TBD	80
Total Ship Advanced Gun System Magazine Capacity	1200 rounds (600 rounds per magazine)	1200 rounds (600 rounds per magazine)	600 rounds total ship magazine capacity	TBD	600 rounds (300 rounds per magazine)
Number of ship's company personnel (helicopter detachment included)	125	125	175	TBD	125
Operational Availability (Ao) for mission critical systems:					
Ao for 120-day wartime profile	0.95	0.95	0.90	TBD	0.95
Ao for 18 month extended forward deployment	0.95	0.95	0.90	TBD	0.95
Interoperability: All top-level IERs will be satisfied to the standards specified in the Threshold and Objective values.	Achieve 100% of top-level IERs. DD(X) joint tactical battle management and command and control computer programs shall conform to the SIAP System Engineer' s Integrated Architecture and Integrated Architecture Behavior Model now being developed.	Achieve 100% of top-level information Exchange Requirement s. DD(X) joint tactical battle management and command and control computer programs shall conform to the Single Integrated Air Picture (SIAP) System Engineer's Integrated Architecture and	Achieve 100% top-level Information Exchange Requirement s designated as critical. DD(X) joint tactical battle mangage-ment and command and control computer programs shall conform to the Single Integrated Air Picture (SIAP) System Engineer's Integr-ed	TBD	Achieve 100% of top-level IERs. DD (X) joint tactical battle manage-ment and command and control computer programs shall conform to the SIAP System Engineer's Integrated Architecture and Integrated Architecture Behavior Model now being

	DD(X) will remain in compliance with CJCSI 6212.01 (Series), Inter-operability and Support-ability of IT and NSS, including future updates.	Integrated Architecture Behavior Model now being developed. DD(X) will remain in compliance with CJCSI 6212.01 (Series), Inter-operability and Support-ability of Information Technology and National Security Systems (IT and NSS), including future updates.	Architecture and Integrated Archi-techture Behavior Model for Track Management now being developed. DD(X) will remain in compliance with CJCSI 6212.0 (Series), Inter-operability and Support-ability of Information Technology and National Security Systems (IT and NSS), Including future updates.		developed. DD(X) will remain in compliance with CJCSI 6212.01 (Series), Inter-operability and Support-ability of IT and NSS, including future updates.

Requirements Source:
DDX Operational Requirements Document (ORD) Change 1, Navy Serial #678-76-06, validated by Joint Requirements Oversight Council 008-06 on January 23, 2006.

Acronyms And Abbreviations

IER - Information Exchange Requirement
IT - Information Technology
NSS - National Security System
SIAP - Single Integrated Air Picture
TBD - To Be Determined

Change Explanations

None

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

Track To Budget

RDT&E

APPN 1319	BA 05	PE 0204202N	(Navy)	
	Project 2464			
	Project 4009			
APPN 1319	BA 04	PE 0603513N	(Navy)	
	Project 2465			(Sunk)
	Project 2467			(Sunk)
	Project 2468			(Sunk)
	Project 2469			(Sunk)
	Project 2470			(Sunk)
	Project 2471			(Sunk)
	Project 4019			(Sunk)
APPN 1319	BA 05	PE 0604300N	(Navy)	
	Project 2463			(Sunk)
	Project 2464			(Sunk)
	Project 2465			(Sunk)
	Project 2466			(Sunk)
	Project 2735			(Sunk)
	Project 4009			(Sunk)
	Project 4010			(Sunk)
APPN 1319	BA 05	PE 0604755N	(Navy)	
	Project 2735			(Sunk)

The congressional adds in PE 0603513N and PE 0604300N are not part of the core DDG 1000 Program. There is a data entry correction on PE 0604755N, which had been mis-identified in the prior SAR as PE 0604775N.

Procurement

APPN 1611	BA 02	PE 0204202N	(Navy)
	ICN 211900	DDG 1000	
	FY10 and follow		
APPN 1611	BA 02	PE 0204222N	(Navy)

	ICN 211900 FY08-09	DDG 1000		(Sunk)
APPN 1611	BA 02	PE 0204228N	(Navy)	
	ICN 211900 FY05-07	DDG 1000		(Sunk)
APPN 1611	BA 05	PE 0204222N	(Navy)	
	ICN 511000	Outfitting/Post Delivery	(Shared)	

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2005 $M			BY2005 $M	TY $M		
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	8313.2	8994.0	9893.4	9108.1	8483.0	9325.5	9453.1
Procurement	23234.7	10195.3	11214.8	9308.9	27813.3	12497.8	11438.3
Flyaway	23234.7	--	--	9308.9	27813.3	--	11438.3
Recurring	21726.7	--	--	7733.8	26170.8	--	9619.7
Non Recurring	1508.0	--	--	1575.1	1642.5	--	1818.6
Support	0.0	--	--	0.0	0.0	--	0.0
Other Support	0.0	--	--	0.0	0.0	--	0.0
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	31547.9	19189.3	N/A	18417.0	36296.3	21823.3	20891.4

The Current Estimate reflects the FY 2012 President's Budget (PB12) submission. DDG 1000/1001 are funded in FY 2007 (split funded in FY 2008) and DDG 1002 is funded in FY 2009 (split funded FY 2010). In PB11 the Navy truncated the program from ten ships to three. A revised Acquisition Program Baseline (APB) reflecting a three ship profile was approved March 25, 2011 by USD (AT&L).

The confidence factor associated with the APB signed March 25, 2011 is based on the Independent Cost Estimate (ICE) provided by the Cost Assessment and Program Evaluation (CAPE) for the Milestone B Review in October 2010. The ICE memorandum issued by the CAPE on October 6, 2010 stated "Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about equally likely that the estimate will prove too low or too high for execution of the program described".

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	0	0	0
Procurement	10	3	3
Total	10	3	3

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	7869.6	549.2	261.6	340.0	168.3	164.1	100.3	0.0	9453.1
Procurement	9568.9	206.5	458.4	516.6	326.0	357.2	4.7	0.0	11438.3
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	17438.5	755.7	720.0	856.6	494.3	521.3	105.0	0.0	20891.4
PB 2011 Total	17247.3	755.7	524.8	363.8	369.0	279.7	160.0	71.1	19771.4
Delta	191.2	0.0	195.2	492.8	125.3	241.6	-55.0	-71.1	1120.0

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	3	0	0	0	0	0	0	0	3
PB 2012 Total	0	3	0	0	0	0	0	0	0	3
PB 2011 Total	0	3	0	0	0	0	0	0	0	3
Delta	0	0	0	0	0	0	0	0	0	0

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
1995	--	--	--	--	--	--	7.0
1996	--	--	--	--	--	--	10.0
1997	--	--	--	--	--	--	12.0
1998	--	--	--	--	--	--	53.5
1999	--	--	--	--	--	--	215.1
2000	--	--	--	--	--	--	281.3
2001	--	--	--	--	--	--	532.5
2002	--	--	--	--	--	--	490.4
2003	--	--	--	--	--	--	895.4
2004	--	--	--	--	--	--	1002.2
2005	--	--	--	--	--	--	1120.2
2006	--	--	--	--	--	--	1040.6
2007	--	--	--	--	--	--	755.8
2008	--	--	--	--	--	--	516.5
2009	--	--	--	--	--	--	433.3
2010	--	--	--	--	--	--	503.8
2011	--	--	--	--	--	--	549.2
2012	--	--	--	--	--	--	261.6
2013	--	--	--	--	--	--	340.0
2014	--	--	--	--	--	--	168.3
2015	--	--	--	--	--	--	164.1
2016	--	--	--	--	--	--	100.3
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**9453.1**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 $M	Non End Item Recurring Flyaway BY 2005 $M	Non Recurring Flyaway BY 2005 $M	Total Flyaway BY 2005 $M	Total Support BY 2005 $M	Total Program BY 2005 $M
1995	--	--	--	--	--	--	8.0
1996	--	--	--	--	--	--	11.3
1997	--	--	--	--	--	--	13.4
1998	--	--	--	--	--	--	59.1
1999	--	--	--	--	--	--	234.8
2000	--	--	--	--	--	--	302.7
2001	--	--	--	--	--	--	565.2
2002	--	--	--	--	--	--	515.3
2003	--	--	--	--	--	--	927.3
2004	--	--	--	--	--	--	1009.8
2005	--	--	--	--	--	--	1099.8
2006	--	--	--	--	--	--	990.7
2007	--	--	--	--	--	--	702.4
2008	--	--	--	--	--	--	471.5
2009	--	--	--	--	--	--	390.8
2010	--	--	--	--	--	--	449.3
2011	--	--	--	--	--	--	483.0
2012	--	--	--	--	--	--	226.6
2013	--	--	--	--	--	--	289.7
2014	--	--	--	--	--	--	141.0
2015	--	--	--	--	--	--	135.2
2016	--	--	--	--	--	--	81.2
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**9108.1**

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
2005	--	--	--	304.0	304.0	--	304.0
2006	--	--	--	706.2	706.2	--	706.2
2007	2	1748.9	--	808.4	2557.3	--	2557.3
2008	--	3118.6	--	--	3118.6	--	3118.6
2009	1	1504.3	--	--	1504.3	--	1504.3
2010	--	1378.5	--	--	1378.5	--	1378.5
2011	--	206.5	--	--	206.5	--	206.5
2012	--	458.4	--	--	458.4	--	458.4
2013	--	516.6	--	--	516.6	--	516.6
2014	--	326.0	--	--	326.0	--	326.0
2015	--	357.2	--	--	357.2	--	357.2
2016	--	4.7	--	--	4.7	--	4.7
Subtotal	**3**	**9619.7**	**--**	**1818.6**	**11438.3**	**--**	**11438.3**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 $M	Non End Item Recurring Flyaway BY 2005 $M	Non Recurring Flyaway BY 2005 $M	Total Flyaway BY 2005 $M	Total Support BY 2005 $M	Total Program BY 2005 $M
2005	--	--	--	275.4	275.4	--	275.4
2006	--	--	--	618.7	618.7	--	618.7
2007	2	1473.4	--	681.0	2154.4	--	2154.4
2008	--	2558.0	--	--	2558.0	--	2558.0
2009	1	1208.5	--	--	1208.5	--	1208.5
2010	--	1088.8	--	--	1088.8	--	1088.8
2011	--	160.6	--	--	160.6	--	160.6
2012	--	350.9	--	--	350.9	--	350.9
2013	--	388.9	--	--	388.9	--	388.9
2014	--	241.3	--	--	241.3	--	241.3
2015	--	260.0	--	--	260.0	--	260.0
2016	--	3.4	--	--	3.4	--	3.4
Subtotal	**3**	**7733.8**	**--**	**1575.1**	**9308.9**	**--**	**9308.9**

Cost Quantity Information
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2005 $M
2005	--	--
2006	--	--
2007	2	5519.5
2008	--	--
2009	1	2214.3
2010	--	--
2011	--	--
2012	--	--
2013	--	--
2014	--	--
2015	--	--
2016	--	--
Subtotal	**3**	**7733.8**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	11/22/2005	10/8/2010
Approved Quantity	8	3
Reference	ADM	ADM
Start Year	2007	2007
End Year	2014	2009

The LRIP quantity as stated in the Acquisition Decision Memorandum (ADM) of October 8, 2010 reduced the quantity to three ships. These three ships represent the total quantity remaining on the program.

Foreign Military Sales

None

Nuclear Cost

None

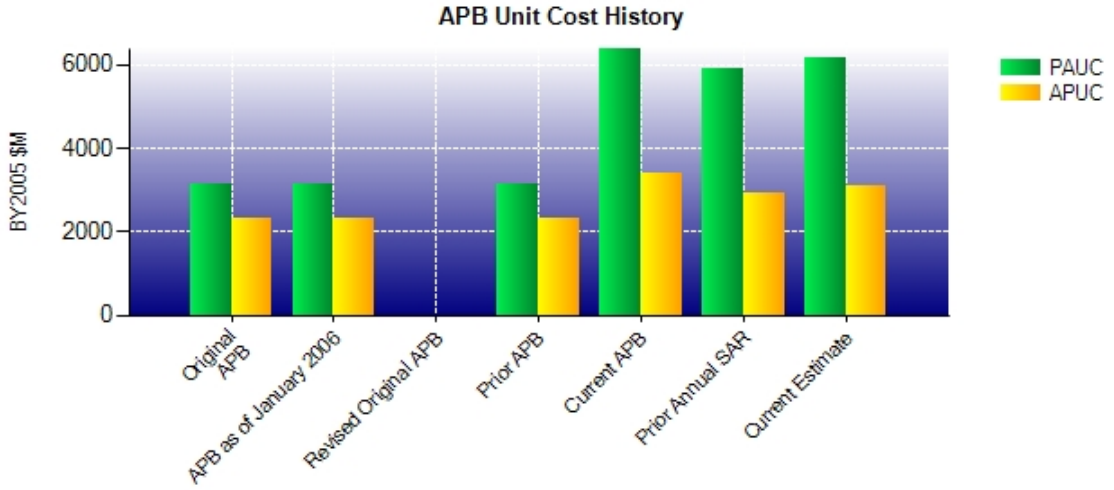
Unit Cost

Unit Cost Report

Unit Cost	BY2005 $M Current UCR Baseline (MAR 2011 APB)	BY2005 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	19189.3	18417.0	
Quantity	3	3	
Unit Cost	6396.433	6139.000	-4.02
Average Procurement Unit Cost (APUC)			
Cost	10195.3	9308.9	
Quantity	3	3	
Unit Cost	3398.433	3102.967	-8.69

Unit Cost	BY2005 $M Revised Original UCR Baseline (MAR 2011 APB)	BY2005 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	19189.3	18417.0	
Quantity	3	3	
Unit Cost	6396.433	6139.000	-4.02
Average Procurement Unit Cost (APUC)			
Cost	10195.3	9308.9	
Quantity	3	3	
Unit Cost	3398.433	3102.967	-8.69

Unit Cost History



		BY2005 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	NOV 2005	3154.790	2323.470	3629.620	2781.320
APB as of January 2006	NOV 2005	3154.790	2323.470	3629.620	2781.320
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	NOV 2005	3154.790	2323.470	3629.620	2781.320
Current APB	MAR 2011	6396.433	3398.433	7274.433	4165.933
Prior Annual SAR	DEC 2009	5882.500	2901.967	6590.467	3506.967
Current Estimate	DEC 2010	6139.000	3102.967	6963.800	3812.767

The increase in both PAUC and APUC current estimate is driven by the reduction from ten ships in the November 2005 APB to the PB11/PB12 profile of three ships.

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC	Changes								PAUC
Dev Est	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Current Est
3629.630	500.067	2104.836	19.233	22.067	687.967	0.000	0.000	3334.170	6963.800

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
2781.330	503.400	125.471	19.233	-126.500	509.833	0.000	0.000	1031.437	3812.767

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 B	NOV 2005	NOV 2005	N/A	NOV 2005
Milestone C	MAR 2015	MAR 2015	N/A	APR 2016
IOC	JAN 2014	JAN 2014	N/A	APR 2016
Total Cost (TY $M)	36296.2	36296.3	N/A	20891.4
Total Quantity	10	10	N/A	3
Prog. Acq. Unit Cost (PAUC)	3629.620	3629.630	N/A	6963.800

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	8483.0	27813.3	--	36296.3
Previous Changes				
Economic	-10.4	+1378.5	--	+1368.1
Quantity	--	-19092.9	--	-19092.9
Schedule	--	+57.7	--	+57.7
Engineering	+445.7	-379.5	--	+66.2
Estimating	+332.2	+743.8	--	+1076.0
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+767.5	-17292.4	--	-16524.9
Current Changes				
Economic	+0.4	+131.7	--	+132.1
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+202.2	+785.7	--	+987.9
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+202.6	+917.4	--	+1120.0
Total Changes	+970.1	-16375.0	--	-15404.9
CE - Cost Variance	9453.1	11438.3	--	20891.4
CE - Cost & Funding	9453.1	11438.3	--	20891.4

Summary Base Year 2005 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	8313.2	23234.7	--	31547.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	-14646.0	--	-14646.0
Schedule	--	+63.8	--	+63.8
Engineering	+385.3	-369.4	--	+15.9
Estimating	+243.1	+422.8	--	+665.9
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+628.4	-14528.8	--	-13900.4
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+166.5	+603.0	--	+769.5
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+166.5	+603.0	--	+769.5
Total Changes	+794.9	-13925.8	--	-13130.9
CE - Cost Variance	9108.1	9308.9	--	18417.0
CE - Cost & Funding	9108.1	9308.9	--	18417.0

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.4
Adjustment for current and prior escalation. (Estimating)	-0.9	-0.9
Revised cost estimate to fund the program to the truncated level of 3 ships. (Estimating)	+212.0	+254.8
Revised estimate for miscellaneous adjustments (Undistributed Congressional Marks, Navy Budget actions, future inflation) (Estimating)	-39.4	-45.6
Revised estimate for reduction in Automated Test and Re-Test (ATRT) (Estimating)	-5.2	-6.1
RDT&E Subtotal	+166.5	+202.6

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+131.7
Adjustment for current and prior escalation. (Estimating)	-93.5	-115.0
Revised cost estimate to fund the program to the truncated level of 3 ships (Estimating)	+717.0	+928.3
Revised estimate for miscellaneous adjustments (Undistributed Congressional Marks, Navy Budget actions, future inflation) (Estimating)	-20.5	-27.6
Procurement Subtotal	+603.0	+917.4

Contracts

Appropriation: RDT&E

Contract Name	**Phase IV AGS Equipment Completion**
Contractor	BAE Systems
Contractor Location	Minneapolis, MN 55421
Contract Number, Type	N00024-05-C-5117, CPAF
Award Date	May 23, 2005
Definitization Date	September 30, 2006

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
376.0	N/A	4	956.8	N/A	4	994.8	994.8

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (11/26/2010)	-33.8	-14.7
Previous Cumulative Variances	-20.5	-5.0
Net Change	-13.3	-9.7

Cost And Schedule Variance Explanations

The net unfavorable cost and net unfavorable schedule variance is due to Advanced Gun System (AGS) Magazine fabrication, AGS Gun mount fabrication, and Long Range Land Attack Projectile (LRLAP) systems engineering and Test Projectile Design. In addition, rate increases have occurred due to cancellation of other Army programs and the lack of a DDG 1002 Gun/magazine contract that was planned.

Contract Comments

The scope of the BAE contract includes development and land based qualification of the LRLAP, completion of detail design for the AGS, transition to production for AGS and procurement of four Advanced Gun Systems for final test and installation aboard DDG 1000 and DDG 1001.

The difference between the initial contract price and the current contract price is due to the addition of transition to production and procurement efforts.

Appropriation: RDT&E

Contract Name	**Phase IV System Design and Integration**
Contractor	Raytheon
Contractor Location	Tewskbury, MA 01876
Contract Number, Type	N00024-05-C-5346, CPAF
Award Date	May 24, 2005
Definitization Date	May 17, 2006

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
2750.0	N/A	N/A	5421.5	N/A	N/A	5636.8	5636.8

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (11/21/2010)	-124.4	-50.7
Previous Cumulative Variances	-39.1	-45.2
Net Change	-85.3	-5.5

Cost And Schedule Variance Explanations

The net unfavorable cost and net unfavorable schedule variance to date has been driven primarily by software development (SW) and design verification and Mission Systems Equipment (MSE) production. The SW and design verification efforts include development of SW Releases four (4) through six (6). SW cost growth to date has primarily been associated with first time SW builds.

Contract Comments

The scope of the Raytheon contract includes the remaining development of selected components of the DDG 1000 Mission System, the development of software releases 4-6 and procurement of the first two ship sets of Mission System Equipment and associated detail design and transition to production for DDG 1000 and DDG 1001. In addition, the procurement of the Dual Band Radar (DBR) for CVN-78 is included within the scope of this contract. Contract effort remains on track to support shipbuilder in-yard need dates.

The DDG 1000 MSE for the first two ship sets was definitized on March 18, 2009.

The difference between the initial contract price and the current contract price is due to the addition of procurement of the first two ship sets of MSE and associated transition to production for DDG 1000 and 1001.

Appropriation: Procurement

Contract Name	**Phase IV BIW DD&C**
Contractor	Bath Iron Works
Contractor Location	Bath, ME 04530-2574
Contract Number, Type	N00024-06-C-2303, CPAF
Award Date	August 08, 2006
Definitization Date	September 08, 2006

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
373.5	N/A	1	2514.6	N/A	1	2573.1	2681.3

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (11/28/2010)	-157.4	-42.4
Previous Cumulative Variances	-77.3	+31.8
Net Change	-80.1	-74.2

Cost And Schedule Variance Explanations

The net unfavorable cost and net unfavorable schedule variances are due to process issues in detail design associated with CATIA, and late functional design caused by engineering change proposals. The DDG 1000 Program has implemented an on-site Navy Engineering Review Board (NERB) at both shipbuilders to control change. Navy participation is resulting in a significant decrease in the number of changes which is expected to improve cost performance. The Program Management Baseline (PMB) was re-baselined due to the Nunn-McCurdy change in the Initial Operational Capability (IOC) of the DDG 1000 from FY 2015 to FY 2016. The revised shipbuilding schedule was approved by the Navy and the shipbuilders will revise their PMB through their Earned Value Management System (EVMS) accordingly. A review of the shipbuilders EVMS by the Defense Management Agency (DCMA) was completed in the 2nd quarter, FY 2011.

Contract Comments

Currently, the scope of the BIW contract is for the detail design and construction of lead ship of the DDG 1000 ZUMWALT Class Destroyer program. The construction of the mid fore-body for DDG 1001 under a class work share agreement with NGSB, pending the outcome of the DDG 1001 termination contract with NGSB and re-award to BIW in accordance with the MOA. The scope also includes the award of Class Common Equipment (CCE) for DDG 1001.

The difference between the initial contract price and the current contrat price is due to the addition of transition to production and exercise of the ship construction Contract Line Item (CLIN) and the deobligation for Class Common Equipment (CCE) for DDG 1001.

Appropriation: Procurement

Contract Name	**Phase IV NGSS DD&C**
Contractor	Northrop Grumman Ship Systems
Contractor Location	Pascagoula, MS 39568-7003
Contract Number, Type	N00024-06-C-2304, CPAF
Award Date	August 31, 2006
Definitization Date	August 31, 2006

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
364.0	N/A	1	1836.9	N/A	1	1829.9	1823.4

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (11/28/2010)	-25.2	-69.3
Previous Cumulative Variances	-6.2	-19.8
Net Change	-19.0	-49.5

Cost And Schedule Variance Explanations

The net unfavorable cost variance is attributable to higher than expected rework rates for the composite deckhouse and hanger. Improvement is being seen in successive composite panel assemblies. The DDG 1000 Program has implemented an on-site Production Tiger Team (PTT) to resolve not only the high rework rates but all other technical and production issues that are driving the negative variance. These corrective actions, as they are implemented, are expected to improve the negative cost performance.

The net unfavorable schedule variance is due to process issues in detail design associated with CATIA, and late functional design caused by engineering change proposals. The Program Management Baseline (PMB) was re-baselined due to the Nunn-McCurdy change in the Initial Operational Capability (IOC) of the DDG 1000 from FY 2015 to FY 2016. The revised shipbuilding schedule was approved by the Navy and the shipbuilders will revise their PMB through their Earned Value Management System (EVMS) accordingly. A review of the shipbuilders EVMS by the Defense Management Agency (DCMA) was completed in the 2nd quarter, FY 2011.

Contract Comments

The current scope of the NGSB contract is for the detail design and construction of the DDG 1001, the second ship of the DDG 1000 ZUMWALT Class Destroyer program, pending the outcome of the DDG 1001 termination contract in accordance with the MOA. NGSB will maintain construction of the Deckhouse and Aft Peripheral Vertical Launching System (PVLS) for DDG 1000 under a class work share agreement with BIW for all three DDG 1000 Class ships. The scope has been decreased due to the deobligation of Class Common Equipment (CCE) for DDG 1001, and partial termination of construction of the DDG 1001.

The Estimates at Completion, as reported by NGSB, are adjusted to reflect the pending negotiations for the DDG 1001 termination contract modification.

The difference between the initial contract price and the current contrat price is due to the addition of transition to production and exercise of the ship construction Contract Line Item (CLIN) and the deobligation for Class Common Equipment (CCE) for DDG 1001.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	3	0.00%
Total Program Quantities Delivered	0	0	3	0.00%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	20891.4	Years Appropriated	17
Expenditures To Date	14161.6	Percent Years Appropriated	77.27%
Percent Expended	67.79%	Appropriated to Date	18194.2
Total Funding Years	22	Percent Appropriated	87.09%

Operating and Support Cost

Assumptions And Ground Rules
Operating and Support cost estimates are based on the DDG 1000 Program Life Cycle Cost Estimate dated July 2010. The PLCCE provided costs in 2010 dollars. The estimate is based on an average unit cost of three ships with an average 35 year service life. Disposal costs are $11.205 million per ship ($FY05), or $33.615 million for the program. The O&S costs are provided in revised cost elements based on the October 2007 O&S Cost Estimating Guide.

Costs BY2005 $M		
Cost Element	**DDG 1000 Avg. Annual Cost per ship**	**Antecedent System**
Unit-Level Manpower	10.440	--
Unit Operations	6.788	--
Maintenance	18.543	--
Sustaining Support	1.918	--
Continuing System Improvements	26.382	--
Indirect Support	5.022	--
Other	--	--
Total Unitized Cost (Base Year 2005 $)	69.093	--

Total O&S Costs $M	DDG 1000	Antecedent System
Base Year	7288.4	--
Then Year	9271.7	--