



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-293

### Multi-Platform Radar Technology Insertion Program (MP-RTIP) Equipped Global Hawk



## Multi-Platform Radar Technology Insertion Program (MP-RTIP)

As of FY 2011 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance  
ACAT - Acquisition Category  
ADM - Acquisition Decision Memorandum  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
\$B - Billions of Dollars  
BA - Budget Authority/Budget Activity  
Blk - Block  
BY - Base Year  
CAPE - Cost Assessment and Program Evaluation  
CARD - Cost Analysis Requirements Description  
CDD - Capability Development Document  
CLIN - Contract Line Item Number  
CPD - Capability Production Document  
CY - Calendar Year  
DAB - Defense Acquisition Board  
DAE - Defense Acquisition Executive  
DAMIR - Defense Acquisition Management Information Retrieval  
DoD - Department of Defense  
DSN - Defense Switched Network  
EMD - Engineering and Manufacturing Development  
EVM - Earned Value Management  
FOC - Full Operational Capability  
FMS - Foreign Military Sales  
FRP - Full Rate Production  
FY - Fiscal Year  
FYDP - Future Years Defense Program  
ICE - Independent Cost Estimate  
IOC - Initial Operational Capability  
Inc - Increment  
JROC - Joint Requirements Oversight Council  
\$K - Thousands of Dollars  
KPP - Key Performance Parameter  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MDA - Milestone Decision Authority  
MDAP - Major Defense Acquisition Program  
MILCON - Military Construction  
N/A - Not Applicable  
O&M - Operations and Maintenance  
ORD - Operational Requirements Document  
OSD - Office of the Secretary of Defense  
O&S - Operating and Support  
PAUC - Program Acquisition Unit Cost

PB - President's Budget  
PE - Program Element  
PEO - Program Executive Officer  
PM - Program Manager  
POE - Program Office Estimate  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
SCP - Service Cost Position  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting  
U.S. - United States  
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

## Program Information

**Program Name**

Multi-Platform Radar Technology Insertion Program (MP-RTIP) (MP-RTIP)

**DoD Component**

Air Force

## Responsible Office

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## References

**SAR Baseline (Development Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated December 4, 2003

**Approved APB**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 1, 2005

## Mission and Description

The Multi-Platform Radar Technology Insertion Program (MP-RTIP) is the result of a restructuring of the Joint Surveillance Target Attack Radar System (Joint STARS) Radar Technology Insertion Program (RTIP), formerly a Pre-Planned Product Improvement to Joint STARS. MP-RTIP will design modular, scalable 2-dimensional active electronically scanned array radars suitable for integration on various airborne platforms. The MP-RTIP Selected Acquisition Report includes only Research, Development, Test and Evaluation funding since radars will be procured and budgeted by the host platforms.

The design effort includes a Wide Area Surveillance (WAS) radar and a smaller radar for integration on the Global Hawk Unmanned Aerial Vehicle (UAV). At this time, the North Atlantic Treaty Organization (NATO) has chosen the Global Hawk RQ-4B (Block 40) as the UAV platform for the NATO Alliance Ground Surveillance program.

When installed on the Global Hawk UAV, MP-RTIP will provide improved Ground Moving Target Indicator (GMTI) and Synthetic Aperture Radar (SAR) imaging over current capability. The weight and power restrictions of the platform drive the smaller Global Hawk Radar design and determine its performance. The Global Hawk's air surveillance modes are suitable for detecting aircraft, but insufficient to readily detect cruise missiles. The Global Hawk MP-RTIP variant will provide persistent GMTI and SAR imaging on a long endurance platform.

MP-RTIP, Joint STARS, Global Hawk, Multi-Platform Common Data Link, Air Force Distributed Common Ground System, Army's Common Ground Station, Distributed Common Ground System-Army, Air Operations Center, Joint Tactical Radio Systems, Control and Reporting Center/Battle Control System-Mobile, and the Family of Advanced Beyond-Line-of-Sight Terminals are coordinated to ensure the MP-RTIP family of systems provides required capabilities enabled by MP-RTIP to the warfighter.

## Executive Summary

The FY08 President's Budget (PB) eliminated funding for the E-10A version of the Multi-Platform Radar Technology Insertion Program (MP-RTIP) Wide Area Surveillance (WAS) radar in FY08 and beyond. Global Hawk (GH) MP-RTIP execution continued and the FY09-10 PBs included funding to continue Developmental and Operational Testing of the GH MP-RTIP variant on the GH Block 40 air vehicle platform.

Contractor Development Testing and Evaluation (CDT&E) of GH MP-RTIP radar modes on the Proteus surrogate test bed experienced various technical development challenges. The Air Force completed dedicated Synthetic Aperture Radar (SAR) and Ground Moving Target Indicator (GMTI) mode performance risk reduction flight tests in April 2009. This was key to the Defense Acquisition Board Lot 8 GH Block 40 production go-ahead decision.

The MP-RTIP hardware baseline is stable and ready for platform integration and subsequent GH Block 40 system test and evaluation starting June 2010. Certain advanced modes, such as Air Moving Target Indicator (AMTI) and High Range Resolution (HRR) have been deferred. Concurrent mode risk reduction activities continue in order to enable incremental capability.

Several GH program dates, including Initial Operational Test and Evaluation (IOT&E), have independently slipped, causing MP-RTIP budget and schedule adjustments.

Surveillance maritime mode development and initial design activities are proceeding as part of the North Atlantic Treaty Organization (NATO) Alliance Ground Surveillance GH variant.

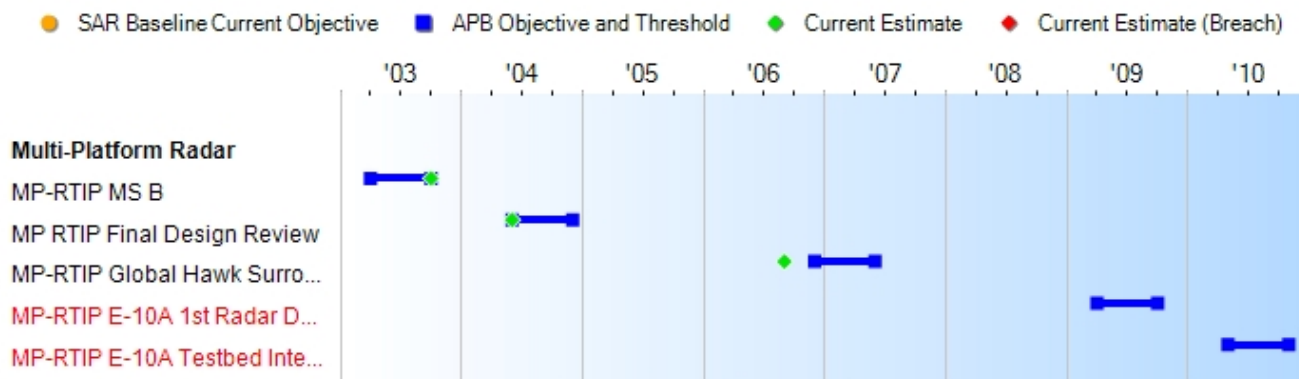
## Threshold Breaches

APB Breaches			Explanation of Breach
Schedule		<input checked="" type="checkbox"/>	<p>The FY08 President's Budget eliminated funding for the MP-RTIP Wide Area Surveillance radar development in FY08 and beyond. As a result of this budget decision, the following Acquisition Program Baseline (APB) Milestones will not be completed: MP-RTIP E-10A 1st Radar Development Unit Build/System Integration Lab (SIL) test and MP-RTIP E-10A Testbed Integration and First Flight.</p>
Performance		<input type="checkbox"/>	
Cost	RDT&E	<input type="checkbox"/>	
	Procurement	<input type="checkbox"/>	
	MILCON	<input type="checkbox"/>	
	Acq O&M	<input type="checkbox"/>	
O&S Cost		<input type="checkbox"/>	
Unit Cost	PAUC	<input type="checkbox"/>	
	APUC	<input type="checkbox"/>	

Nunn-McCurdy Breaches		
<b>Current UCR Baseline</b>		
	PAUC	None
	APUC	None
<b>Original UCR Baseline</b>		
	PAUC	None
	APUC	None



## Schedule



Schedule Events				
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate
MP-RTIP MS B	Apr 2003	Apr 2003	Oct 2003	Oct 2003
MP RTIP Final Design Review	Jun 2004	Jun 2004	Dec 2004	Jun 2004
MP-RTIP Global Hawk Surrogate Testbed Integration and First Flight	Dec 2006	Dec 2006	Jun 2007	Sep 2006
MP-RTIP E-10A 1st Radar DU Build/SIL Test	May 2008	Apr 2009	Oct 2009	N/A <sup>1</sup>
MP-RTIP E-10A Testbed Integration and First Flight	Oct 2009	May 2010	Nov 2010	N/A <sup>1</sup>

<sup>1</sup> APB Breach

### Change Explanations

None

### Notes

The Air Force will deliver the MP-RTIP DU#2 sensor for Global Hawk AF-18 Development Testing (DT) June 2010. There are no MP-RTIP sensor Acquisition Program Baseline (APB) milestones associated with the Global Hawk Block 40.

\* Under Secretary of Defense for Acquisition, Technology, & Logistics (USD/AT&L) Acquisition Decision Memorandum (ADM) of May 30, 2007 terminated the E-10A Technology Development Program (TDP). However, it directed the Air Force to continue a limited risk reduction effort in Wide Area Surveillance (WAS) radar development through May 2008. Because of the termination direction, the final two E-10A APB Milestones are no longer valid.

**Acronyms and Abbreviations**

DU - Development Unit

MP-RTIP - Multi-Platform Radar Technology Insertion Program

MS - Milestone

SIL - System Integration Lab

## Performance

No performance characteristics exist for Multi-Platform Radar.

## Track to Budget

RDT&E			
Appn	BA	PE	
Air Force	3600	05	0207449F
	<b>Project</b>	<b>Name</b>	
	675065	MC2C	(Sunk)
Air Force	3600	05	0207450F
	<b>Project</b>	<b>Name</b>	
	655132	MC2A	
Air Force	3600	05	0207581F
	<b>Project</b>	<b>Name</b>	
	670003	JS	(Shared) (Sunk)
Air Force	3600	06	0207450F
	<b>Project</b>	<b>Name</b>	
	655131	MC2A Airframe	
	655132	MC2A Sensors	
Air Force	3600	07	0207450F
	<b>Project</b>	<b>Name</b>	
	655131	MC2A Airframe	
	655132	MC2A Sensors	
Air Force	3600	08	0207450F
	<b>Project</b>	<b>Name</b>	
	655131	MC2A Airframe	
	655132	MC2A Sensors	
Air Force	3600	09	0305220F
	<b>Project</b>	<b>Name</b>	
	675144	MP-RTIP Allotment	
Air Force	3600	10	0305220F
	<b>Project</b>	<b>Name</b>	
	67RTIP	MP-RTIP 67RTIP	

### Notes

The above lines represent approved budgets for FYs 2006-2010. E-10A Wide Area Surveillance development utilized two BPACs, 655131 for the Airframe and 655132 for Sensor. Upon termination of E-10A, PE 0305220F/BPAC (Global Hawk) was used for FY2009. Subsequently, a new BPAC, 67RTIP, was created within PE 0305220F for FY2010 and beyond.

## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 2000 \$M			BY 2000 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	1449.3	1449.3	1594.2	1116.2	1568.4	1568.4	1246.5
Procurement	0.0	0.0	--	0.0	0.0	0.0	0.0
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	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	1449.3	1449.3	N/A	1116.2	1568.4	1568.4	1246.5

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E		0	0
Procurement		0	0
Total		0	0

## Cost and Funding

### Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY\$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	1099.6	71.9	27.2	11.4	11.8	12.1	12.5	0.0	1246.5
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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 2011 Total	1099.6	71.9	27.2	11.4	11.8	12.1	12.5	0.0	1246.5
PB 2009 Total	1225.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1225.0
Delta	-125.4	71.9	27.2	11.4	11.8	12.1	12.5	0.0	21.5

#### Funding Notes

Reductions attributed to corrections in previous year and revised estimates based upon E-10A cancellation.

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	0	0	0	0	0	0	0	0	0
PB 2011 Total	0	0	0	0	0	0	0	0	0	0
PB 2009 Total	0	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0

## Cost and Funding

### Annual Funding By Appropriation

Annual Funding							
3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2000	--	--	--	--	--	--	6.9
2001	--	--	--	--	--	--	41.8
2002	--	--	--	--	--	--	73.2
2003	--	--	--	--	--	--	200.6
2004	--	--	--	--	--	--	145.6
2005	--	--	--	--	--	--	192.6
2006	--	--	--	--	--	--	131.4
2007	--	--	--	--	--	--	198.1
2008	--	--	--	--	--	--	67.3
2009	--	--	--	--	--	--	42.1
2010	--	--	--	--	--	--	71.9
2011	--	--	--	--	--	--	27.2
2012	--	--	--	--	--	--	11.4
2013	--	--	--	--	--	--	11.8
2014	--	--	--	--	--	--	12.1
2015	--	--	--	--	--	--	12.5
Subtotal	--	--	--	--	--	--	1246.5

Annual Funding 3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2000 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2000	--	--	--	--	--	--	6.8
2001	--	--	--	--	--	--	40.9
2002	--	--	--	--	--	--	70.8
2003	--	--	--	--	--	--	191.4
2004	--	--	--	--	--	--	135.5
2005	--	--	--	--	--	--	174.8
2006	--	--	--	--	--	--	115.8
2007	--	--	--	--	--	--	170.1
2008	--	--	--	--	--	--	56.7
2009	--	--	--	--	--	--	35.0
2010	--	--	--	--	--	--	59.1
2011	--	--	--	--	--	--	22.1
2012	--	--	--	--	--	--	9.1
2013	--	--	--	--	--	--	9.3
2014	--	--	--	--	--	--	9.3
2015	--	--	--	--	--	--	9.5
Subtotal	--	--	--	--	--	--	1116.2



## **Low Rate Initial Production**

There is no LRIP for this program.

## **Foreign Military Sales**

None

## **Nuclear Costs**

None

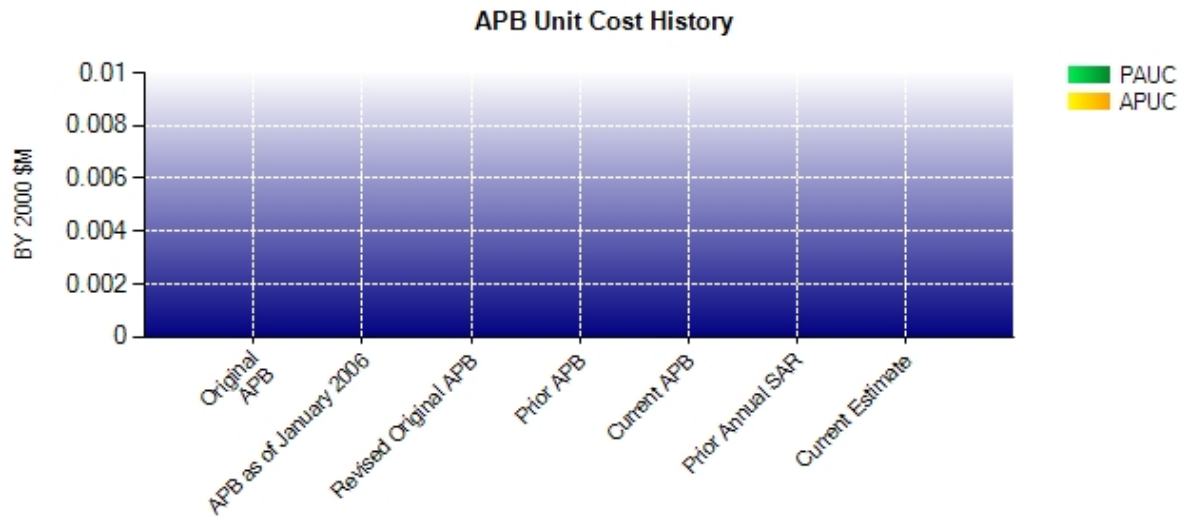
## Unit Cost

### Unit Cost Report

Item	BY 2000 \$M	BY 2000 \$M	% Change
	Current UCR Baseline (Mar 2005 APB)	Current Estimate (Dec 2009 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	1449.3	1116.2	
Quantity	0	0	
Unit Cost	--	--	--
<b>Average Procurement Unit Cost</b>			
Cost	--	0.0	
Quantity	--	0	
Unit Cost	--	--	--

Item	BY 2000 \$M	BY 2000 \$M	% Change
	Original UCR Baseline (Dec 2003 APB)	Current Estimate (Dec 2009 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	1449.3	1116.2	
Quantity	0	0	
Unit Cost	--	--	--
<b>Average Procurement Unit Cost</b>			
Cost	--	0.0	
Quantity	--	0	
Unit Cost	--	--	--

**Unit Cost History**



Item	Date	BY 2000 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Dec 2003	N/A	N/A	N/A	N/A
APB as of January 2006	Mar 2005	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Dec 2003	N/A	N/A	N/A	N/A
Current APB	Mar 2005	N/A	N/A	N/A	N/A
Prior Annual SAR	Dec 2007	N/A	N/A	N/A	N/A
Current Estimate	Dec 2009	N/A	N/A	N/A	N/A

**SAR Unit Cost History**

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.000	--	--	--	--	--	--	--	--	0.000

A PAUC Unit Cost History is not available, since no Initial PAUC Estimate had been calculated due to a lack of defined quantities.

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.000	--	--	--	--	--	--	--	--	0.000

An APUC Unit Cost History is not available, since no Initial APUC Estimate had been calculated due to a lack of defined quantities.

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Apr 2003	N/A	Oct 2003
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	N/A	N/A	N/A
Total Cost (TY \$M)	N/A	1568.4	N/A	1246.5
Total Quantity	N/A	N/A	N/A	0
PAUC	N/A	N/A	N/A	N/A

## Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	1568.4	--	--	1568.4
Previous Changes				
Economic	+43.4	--	--	+43.4
Quantity	--	--	--	--
Schedule	+156.1	--	--	+156.1
Engineering	-351.0	--	--	-351.0
Estimating	-191.9	--	--	-191.9
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-343.4	--	--	-343.4
Current Changes				
Economic	-0.2	--	--	-0.2
Quantity	--	--	--	--
Schedule	+21.5	--	--	+21.5
Engineering	--	--	--	--
Estimating	+0.2	--	--	+0.2
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+21.5	--	--	+21.5
Total Changes	-321.9	--	--	-321.9
Current Estimate	1246.5	--	--	1246.5

Summary BY 2000 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	1449.3	--	--	1449.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+129.4	--	--	+129.4
Engineering	-289.7	--	--	-289.7
Estimating	-174.3	--	--	-174.3
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-334.6	--	--	-334.6
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+1.3	--	--	+1.3
Engineering	--	--	--	--
Estimating	+0.2	--	--	+0.2
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+1.5	--	--	+1.5
Total Changes	-333.1	--	--	-333.1
Current Estimate	1116.2	--	--	1116.2

Previous Estimate: December 2007

#### Cost Variance Notes

Reductions due to cancellation of E-10A and additions in 2010 through 2015 are due to Global Hawk (GH) Block 40 schedule extensions.

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.2
Global Hawk (GH) Block 40 Development Testing/Operational Testing (DT/OT) schedule extensions drove Multi-Platform Radar Technology Insertion Program (MP-RTIP) costs. (Schedule)	+1.3	+21.5
Adjustment for current and prior escalation. (Estimating)	+0.2	+0.2
<b>RDT&amp;E Subtotal</b>	<b>+1.5</b>	<b>+21.5</b>



## Contracts

### Contract Identification

**Appropriation:** RDT&E  
**Contract Name:** MP-RTIP - SDD Phase II  
**Contractor:** Northrop Grumman  
**Contractor Location:** El Segundo, CA 90245  
**Contract Number:** F19628-00-C-0100/2  
**Contract Type:** Cost Plus Award Fee (CPAF)  
**Award Date:** April 30, 2004  
**Definitization Date:** April 30, 2004

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
887.9	N/A	0	859.5	N/A	0	922.3	922.3

### Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/25/2009)	+1.4	-7.7
Previous Cumulative Variances	0.0	0.0
Net Change	+1.4	-7.7

### Cost and Schedule Variance Explanations

### General Contract Variance Explanation

Variances currently being reported are to an Over Target Baseline (OTB) of \$62.8M. The OTB is due to Contractor Developmental Test and Evaluation (CDT&E) delays. The net unfavorable schedule variance is due to delays in completion of Concurrent Modes CDT&E. The net favorable cost variance is due to contractor efficiencies since OTB implementation.

**Notes**

The overall decrease in current contract price was due to Engineering Change Proposal (ECP)-015 contract descope reflecting the cancelation of E-10A Wide Area Surveillance (WAS) requirements. Other contract actions that added requirements include: ECP-017 which extend the period of performance for Global Hawk (GH) integration due to delays in the availability of a GH Block 40 platform for MP-RTIP system integration; ECP-019, Phase I Anti-Tamper (AT); ECP-020, Joint STARS Radar Modernization (JSRM) Phase I; ECP-021, JSRM Phase II.

Additional contract actions pending contract definitization include: ECP-016, Maritime Modes; ECP-018, WAS Equipment disposition; ECP-022, schedule alignment to GH Initial Operational Test and Evaluation (IOT&E) slip and ECP-023, shipping container; and ECP 024, AT Phase II.

The Program manager's Estimate at Completion (EAC) is consistent with contractor's Cost Performance Report (CPR) of 922.3M.

## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	3	0	0	--
Production	0	0	0	--
Total Program Quantity Delivered	3	0	0	--

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	1246.5	Years Appropriated	11
Expended to Date	1027.1	Percent Years Appropriated	68.75%
Percent Expended	82.40%	Appropriated to Date	1171.5
Total Funding Years	16	Percent Appropriated	93.98%

System Development & Demonstration (SDD) to include Development Units (DU): DU1, DU2, and DU3.

## Operating and Support Cost

### Assumptions and Ground Rules

The Multi-Platform Radar Technology Insertion Program (MP-RTIP) effort includes the Research, Development, Test and Evaluation of radars for the Global Hawk (Block 40). This is in accordance with the MP-RTIP Single Acquisition Management Plan, Milestone B, and revised Acquisition Program Baseline. The cost for MP-RTIP Production and Operations and Support is allocated in the respective host weapon system.

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY2000 \$M		
Cost Element	Multi-Platform Radar	Antecedent System (Antecedent)
Mission Pay & Allowance	--	--
Unit Level Consumption	--	--
Intermediate Maintenance	--	--
Depot Maintenance	--	--
Contractor Support	--	--
Sustaining Support	--	--
Indirect	--	--
Other	--	--
Total	--	--

Unitized Cost Comments:

None

Item	Total O&S Cost \$M			
	Multi-Platform Radar		Antecedent System (Antecedent)	
	Current Development APB Objective/Threshold	Current Estimate		
Base Year	N/A	N/A	N/A	N/A
Then Year	N/A	N/A	N/A	N/A

Total O&S Cost Comment

None

### Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2000 \$M):