

UNCLASSIFIED

PE NUMBER: 0603421F
 PE TITLE: GLOBAL POSITIONING SYSTEM

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603421F GLOBAL POSITIONING SYSTEM
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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	446.197	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4993 GPS III	446.197	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based position, navigation and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS III space vehicles (SV) and the next generation GPS Control Segment (OCX) through FY08. This includes, but is not limited to, advanced concept development, systems engineering and analysis, satellite systems development, the study of augmentation systems, modernized control segment development, user equipment interfaces, training simulators, Integrated Logistics Support (ILS) products, developmental test resources, and technology needs forecasting.

In FY09, remaining funding from this PE is divided and transferred into the following PEs:

PE 0305265F - GPS III Space Segment (RDT&E and MPAF for GPS III Space Vehicles)

PE 0603423F - Global Positioning System III - Operational Control Segment (GPS III OCX Blocks II, III & IV)

FY09 Funding established in PE 0603427F, GPS Operational Control Segment - Backwards Compatibility, is combined with PE 0603423F for FY09.

Beginning in FY10, all OCX RDT&E, AF funding will be combined under the GPS III PE, 0305265F, and reside in a separate Budget Program Activity Code (BPAC) from the Space Vehicle development funding.

This program is Budget Activity 4 - Advanced Component Development and Prototypes because it is in Phase A (Concept Development).

(U) B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	482.845	0.000	0.000
(U) Current PBR/President's Budget	446.197	0.000	0.000
(U) Total Adjustments	-36.648	0.000	
(U) Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-9.409		
SBIR/STTR Transfer	-27.239		
(U) <u>Significant Program Changes:</u>			
-\$9.409M for higher priorities.			

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)							PE NUMBER AND TITLE 0603421F GLOBAL POSITIONING SYSTEM		PROJECT NUMBER AND TITLE 4993 GPS III	
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
4993 GPS III	446.197	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based position, navigation and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS III space vehicles (SV) and the next generation GPS Control Segment (OCX) through FY08. This includes, but is not limited to, advanced concept development, systems engineering and analysis, satellite systems development, the study of augmentation systems, modernized control segment development, user equipment interfaces, training simulators, Integrated Logistics Support (ILS) products, developmental test resources, and technology needs forecasting.

In FY09, remaining funding from this PE is divided and transferred into the following PEs:

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FY09 Funding established in PE 0603427F, GPS Operational Control Segment - Backwards Compatibility, is combined with PE 0603423F for FY09.

Beginning in FY10, all OCX RDT&E, AF funding will be combined under the GPS III PE, 0305265F, and reside in a separate Budget Program Activity Code (BPAC) from the Space Vehicle development funding.

This program is Budget Activity 4 - Advanced Component Development and Prototypes because it is in Phase A (Concept Development).

(U) B. Accomplishments/Planned Program (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Continue GPS III Space Vehicle (SV) Development	180.689	0.000	0.000
(U) Continue Next Generation Control Segment (OCX)	251.522	0.000	0.000
(U) Continue Program Support for GPS III SV/OCX, to include Systems Engineering and Integration	13.986	0.000	0.000
(U) Total Cost	446.197	0.000	0.000

(U) C. Other Program Funding Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) AF RDT&E										
(U) PE 0305265F GPS III Space Segment, (Project 67A019; BA-07; R-197)	0.000	392.276	425.634							TBD

Exhibit R-2a, RDT&E Project Justification	DATE May 2009
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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603421F GLOBAL POSITIONING SYSTEM	PROJECT NUMBER AND TITLE 4993 GPS III
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(U) C. Other Program Funding Summary (\$ in Millions)

(U) PE 0305265F OCX, (Project 67A020; BA-07;R-XXX)	0.000	0.000	389.948		TBD
(U) PE 0603423F Global Positioning System III Operational Control Segment (OCX), (Project 64A021; BA-04; R-36)	0.000	306.502	0.000		306.502
(U) Other APPN					
(U) Missile Procurement: PE 0305265F, BA-04, P-xx, P-xx)	0.000	0.000	0.000		TBD
(U) Other Procurement: PE 0305265F, BP 83, WSC 836730, P-37	0.000	0.000	0.000		TBD

(U) D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to GPS III space vehicle (SV) development and the next generation GPS control segment (OCX) to rapidly respond to warfighter capability requirements. The Block acquisition approach utilizes a disciplined systems engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery.

GPS III SV funding in this PE was transferred in FY09 to PE 030265F, and OCX funding was transferred in FY09 to PEs 0603423F and 0603427F; the funding in 0603427F was then transferred to PE 0603423F in FY09. Beginning in FY10, OCX development will be combined in a single Program Element, PE 0305265F with separate Budget Program Activity Codes (BPACs) for the space and ground segment.

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Exhibit R-3, RDT&E Project Cost Analysis

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<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u>												
Phase A Continuation Contracts											0.000	
Phase A Contracts - GPS III (Boeing)	CPFF	Huntington Beach, CA	106.220	0.000		0.000		0.000		0.000	106.220	24.257
Phase A Contracts - GPS III (Lockheed Martin)	CPFF	King of Prussia, PA	117.006	0.000		0.000		0.000		0.000	117.006	24.234
Phase A OCX (Raytheon)	CPFF	Aurora, CO	8.695	105.673	Jan-08	0.000		0.000		0.000	114.368	
Phase A OCX (Northrop Grumman)	CPFF	Carson, CA	8.695	105.673	Jan-08	0.000		0.000		0.000	114.368	
Block IIIA Subsystem Risk Reduction	CPAF	TBD	7.504	53.599	Jan-08	0.000		0.000		0.000	61.103	
GPS III Development PRDAs	Various	Various	13.537	0.000		0.000		0.000		0.000	13.537	
Mod System Engineering & Technical Support	Various	Various	178.241	70.867	Jan-08	0.000		0.000		0.000	249.108	
Blk IIIA Contract	TBD	TBD	0.000	96.399	Jan-08	0.000		0.000		0.000	96.399	
Subtotal Product Development			439.898	432.211		0.000		0.000		0.000	872.109	48.491
Remarks:												
<u>(U) Support</u>												
Wing Support for GPS III / OCX	Various	Various	70.466	11.085	Jan-08	0.000		0.000		0.000	81.551	
Other Agency Support for GPS III/ OCX	Various	Various	16.771	2.901	Jan-08	0.000		0.000		0.000	19.672	
Subtotal Support			87.237	13.986		0.000		0.000		0.000	101.223	0.000
Remarks:												
<u>(U) Test & Evaluation</u>												
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Total Cost</u>			527.135	446.197		0.000		0.000		0.000	973.332	48.491

Exhibit R-4, RDT&E Schedule Profile

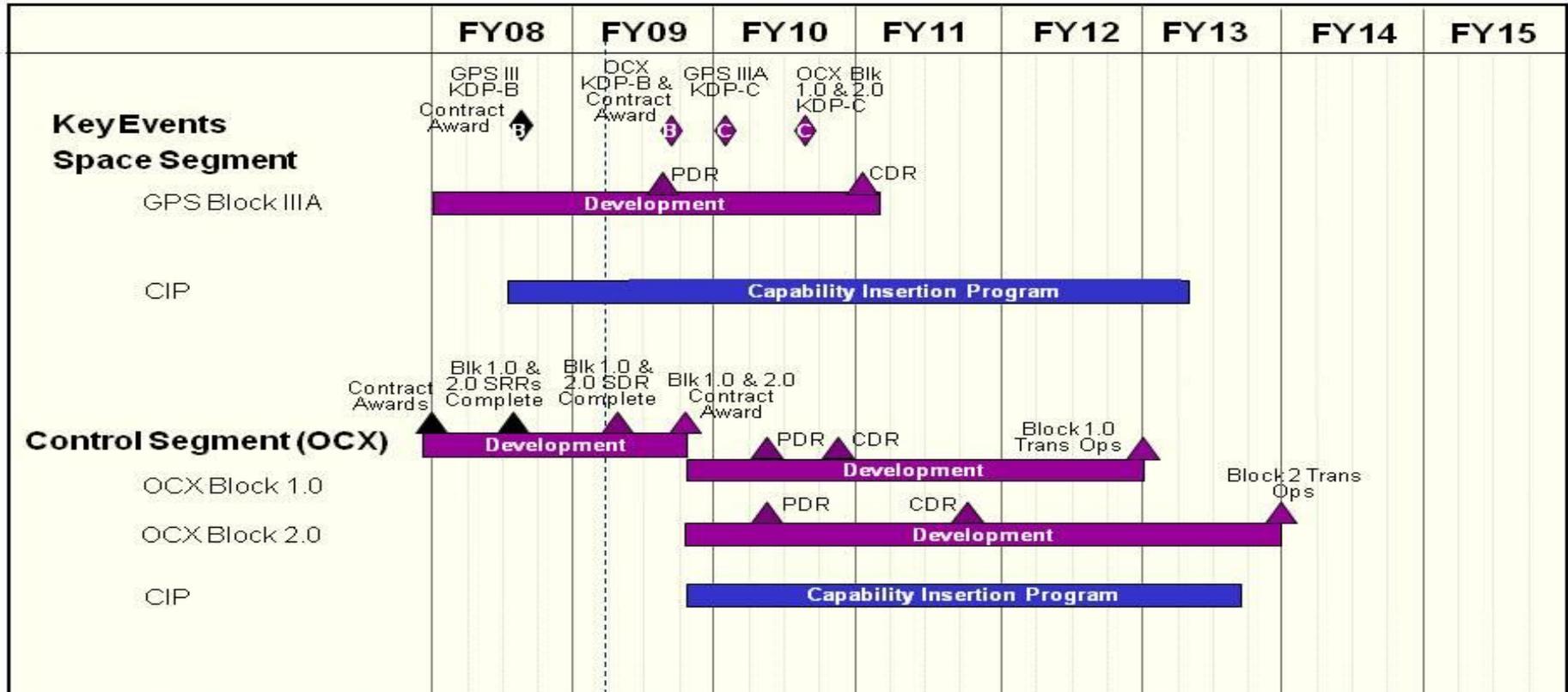
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BUDGET ACTIVITY
04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE
0603421F GLOBAL POSITIONING SYSTEM

PROJECT NUMBER AND TITLE
4993 GPS III



CDR – Critical Design Review
CIP – Capability Insertion Program
PDR: Preliminary Design Review
SRR: System Requirements Review
SDR: System Design Review

Exhibit R-4a, RDT&E Schedule Detail

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BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603421F GLOBAL POSITIONING SYSTEM

PROJECT NUMBER AND TITLE

4993 GPS III

(U) Schedule Profile

- (U) OCX Award 2 Contracts
- (U) Block IIIA KDP-B
- (U) OCX SRRs
- (U) Block IIIA Contract Award

FY 2008

FY 2009

FY 2010

1Q
3Q
3Q
3Q

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TERMINATION OF INVESTMENT-RELATED PROGRAMS
FY 2010 President's Budget
(Dollars in Millions)

PE	BPAC	APPN	FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015	
			COST	QTY														
0603421F	644993	3600	446.197		0.000		0.000		0.000		0.000		0.000					

Effort Title

Global Positioning System (GPS) III

Program Description

GPS III is the next generation GPS satellite. OCX is the next generation ground control segment.

Status to Date

No FY10 funding is requested for this Program Element. Program will continue in other PEs.

Rationale for Termination

Starting in FY09, all funding is distributed among 3 new PEs for increased program visibility. PE 0603421F is discontinued after FY08.

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