

UNCLASSIFIED

PE NUMBER: 0603421F

PE TITLE: GLOBAL POSITIONING SYSTEM

Exhibit R-2, RDT&E Budget Item Justification

DATE

May 2009

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603421F GLOBAL POSITIONING SYSTEM

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

DATE

May 2009

BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
04 Advanced Component Development and Prototypes (ACD&P)					0603421F GLOBAL POSITIONING SYSTEM			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.

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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>Actual</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>FY 2012</u> <u>Estimate</u>	<u>FY 2013</u> <u>Estimate</u>	<u>FY 2014</u> <u>Estimate</u>	<u>FY 2015</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</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
BUDGET ACTIVITY			PE NUMBER AND TITLE		PROJECT NUMBER AND TITLE
04 Advanced Component Development and Prototypes (ACD&P)			0603421F GLOBAL POSITIONING SYSTEM		4993 GPS III
(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 transfered 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

DATE

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BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

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0603421F GLOBAL POSITIONING
SYSTEM

PROJECT NUMBER AND TITLE

4993 GPS III

(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2008</u> <u>Cost</u>	<u>FY 2008</u> <u>Cost</u>	<u>FY 2008</u> <u>Award</u> <u>Date</u>	<u>FY 2009</u> <u>Cost</u>	<u>FY 2009</u> <u>Award</u> <u>Date</u>	<u>FY 2010</u> <u>Cost</u>	<u>FY 2010</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target Value</u> <u>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) Total Cost			527.135	446.197		0.000		0.000		0.000	973.332	48.491

R-1 Line Item No. 36

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Exhibit R-3 (PE 0603421F)

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

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PE NUMBER AND TITLE

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4993 GPS III

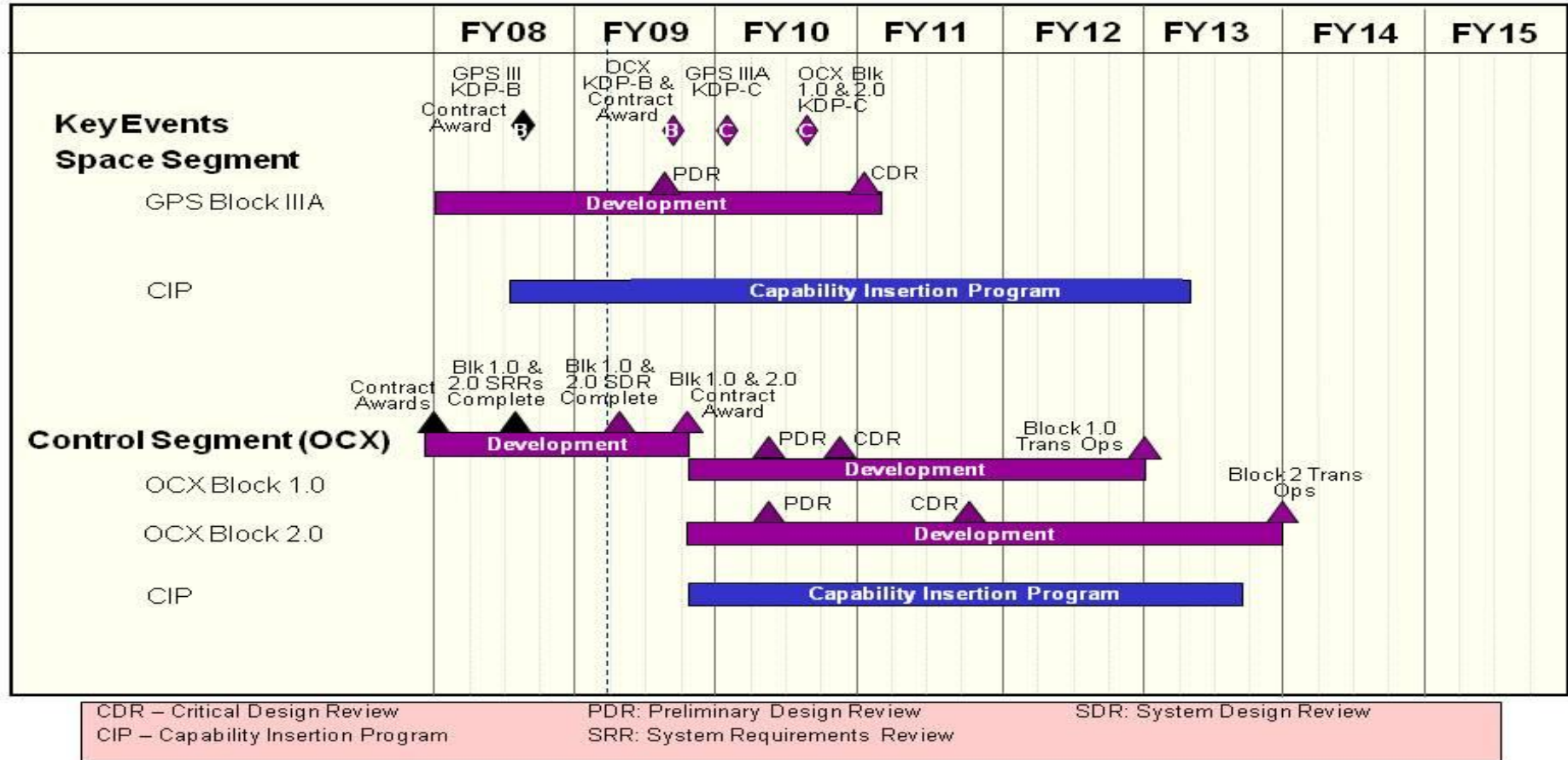


Exhibit R-4a, RDT&E Schedule Detail

DATE

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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 ProfileFY 2008FY 2009FY 2010

(U) OCX Award 2 Contracts

1Q

(U) Block IIIA KDP-B

3Q

(U) OCX SRRs

3Q

(U) Block IIIA Contract Award

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	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	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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