

UNCLASSIFIED

PE NUMBER: 0603427F

PE TITLE: GPS Operational Control Segment Backwards Compatibility

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603427F GPS Operational Control Segment Backwards Compatibility
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	304.360	212.962	0.000	0.000	0.000	0.000	0.000
A022 GPS III OCX Block I	0.000	0.000	304.360	212.962	0.000	0.000	0.000	0.000	0.000

(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 the next generation GPS control segment (OCX Block I). This includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) productions, and developmental test resources. The OCX acquisition was established to 1) fly the GPS III satellites, 2) incorporate the GPS Operations Center (GPSOC) functionality into the GPS Control Segment, and 3) enable mission capability upgrades to support warfighter effect based operations.

Funds will support engineering studies and analyses, architectural engineering studies, trade studies, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

Funding in this PE was previously part of the GPS III PE 0603421F. In the FY09 PB, OCX funding is separated out from PE 0603421F into two separate PEs for increased visibility. This PE contains funding for OCX Block I only. Funding for OCX Blocks II, III and IV is contained in PE 0603423F, Global Positioning System III Operational Control Segment.

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 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	0.000	0.000	0.000
(U) Current PBR/President's Budget	0.000	0.000	304.360
(U) Total Adjustments	0.000		
(U) Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
(U) <u>Significant Program Changes:</u>			
OCX Block I funding transferred from PE 0604321F beginning in FY09.			

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 0603427F GPS Operational Control Segment Backwards Compatibility			PROJECT NUMBER AND TITLE A022 GPS III OCX Block I		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A022 GPS III OCX Block I	0.000	0.000	304.360	212.962	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	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 the next generation GPS control segment (OCX Block I). This includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) productions, and developmental test resources. The OCX acquisition was established to 1) fly the GPS III satellites, 2) incorporate the GPS Operations Center (GPSOC) functionality into the GPS Control Segment, and 3) enable mission capability upgrades to support warfighter effect based operations.

Funds will support engineering studies and analyses, architectural engineering studies, trade studies, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

Funding in this PE was previously part of the GPS III PE 0603421F. In the FY09 PB, OCX funding is separated out from PE 0603421F into two separate PEs for increased visibility. This PE contains funding for OCX Block I only. Funding for OCX Blocks II, III and IV is contained in PE 0603423F, Global Positioning System III Operational Control Segment.

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 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) OCX Block I Development	0.000	0.000	275.031
(U) Program Support	0.000	0.000	29.329
(U) Total Cost	0.000	0.000	304.360

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

	<u>FY 2007</u>	<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>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E									
(U) PE 0305165F Navstar GPS (Space) (Project 673030; BA-07; R-179)	160.555	119.089	91.277	56.335	35.414	35.699	36.417	Continuing	TBD
(U) PE 0603421F Global Positioning System (Project 644993; BA-04;	291.556	482.845	0.000	0.000	0.000	0.000	0.000	0.000	774.401

Exhibit R-2a, RDT&E Project Justification	DATE February 2008
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(U) C. Other Program Funding Summary (\$ in Millions)

R-38)										
(U) PE 0603423F, Global Positioning System III Operational Control Segment (Project 64A021; BA-04; R-XX)	0.000	0.000	2.975	236.734	359.524	330.812	310.996	Continuing	TBD	
(U) PE 0305265F GPS III Space Segment (Project 67A019; BA-04; R-XX)	0.000	0.000	420.342	284.973	262.810	299.210	247.075	Continuing	TBD	
(U) Other APPN Operations and Maintenance: PE 030165F, BA 1, SAG 11M, 13D	62.936	77.264	83.326	92.168	98.214	100.103	102.492	Continuing	TBD	
(U) Missile Procurement (PE 0305165F, BA 5 - Space and Other Support, P-22, P-23)	84.576	207.826	110.443	167.801	355.160	66.553	297.178	Continuing	TBD	
(U) Missile Procurement (PE 0305265F, BA 5 - Space and Other Support, P-XX)	0.000	0.000	0.000	0.000	139.484	650.029	482.004	Continuing	TBD	
(U) Other Procurement (PE 0305165F, BP 83 Electronics and Telecommunications Equipment, WSC 836790, P-70, WSC 836730, P-XX, BP 86, Spares and Repair Parts WSC 86190A, P-62)	11.087	11.599	25.111	10.802	18.215	27.624	20.470	Continuing	TBD	

(U) D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to the GPS III next generation control segment (OCX) to rapidly respond to warfighter capability requirements. The Block acquisition approach follows the "Back to Basics" space program acquisition philosophy which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach, consistent with the National Security Space (NSS) 03-01 Acquisition Policy, focuses on mission success and on time delivery. The first block of GPS III ground control segment (OCX) will provide backwards compatibility to GPS Block II capability.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE			
04 Advanced Component Development and Prototypes (ACD&P)				0603427F GPS Operational Control Segment Backwards Compatibility					A022 GPS III OCX Block I			
<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 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 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 OCX Development	CPFF	Carson, CA	0.000	0.000		0.000		121.750	Nov-08	Continuing	TBD	
Phase A OCX Development SE&I (SAIC)	CPFF	Aurora, CO	0.000	0.000		0.000		121.750	Nov-08	Continuing	TBD	
	CPAF	Huntington Beach, CA	0.000	0.000		0.000		10.036	Nov-08	Continuing	TBD	
Modernization/SE & Technical Support	Various	Various	0.000	0.000		0.000		21.495	Nov-08	Continuing	TBD	
Subtotal Product Development			0.000	0.000		0.000		275.031		Continuing	TBD	0.000
Remarks:												
<u>(U) Support</u>												
Wing Support	Various	Various	0.000	0.000		0.000		25.817		Continuing	TBD	
Other Agency Support	Various	Various	0.000	0.000		0.000		3.512		Continuing	TBD	
Subtotal Support			0.000	0.000		0.000		29.329		Continuing	TBD	0.000
Remarks:												
<u>(U) Test & Evaluation</u>												
Subtotal Test & Evaluation			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
Remarks:												
<u>(U) Total Cost</u>			0.000	0.000		0.000		304.360		Continuing	TBD	0.000

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
0603427F GPS Operational Control
Segment Backwards Compatibility

PROJECT NUMBER AND TITLE
A022 GPS III OCX Block I

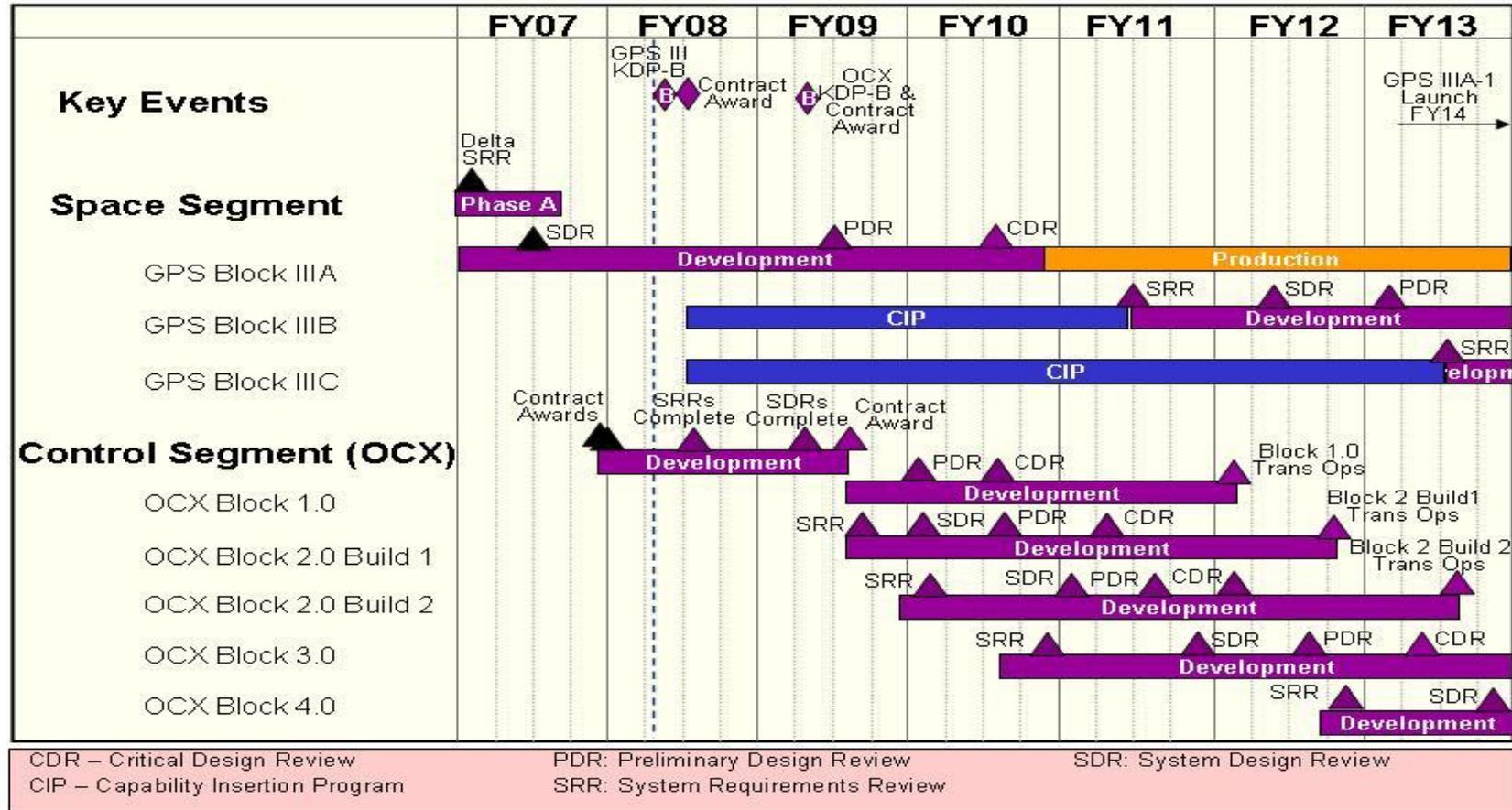


Exhibit R-4a, RDT&E Schedule Detail

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BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603427F GPS Operational Control
Segment Backwards Compatibility

PROJECT NUMBER AND TITLE

A022 GPS III OCX Block I

(U) Schedule Profile

FY 2007

FY 2008

FY 2009

(U) System Design Review

2Q

(U) Key Decision Point (KDP)-B

2Q