

UNCLASSIFIED

PE NUMBER: 0603421F
 PE TITLE: GLOBAL POSITIONING SYSTEM

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2005
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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 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	39.913	87.364	236.635	485.892	772.513	903.394	831.076	Continuing	TBD
4993 GPS BLOCK III	0.000	39.913	87.364	236.635	485.892	772.513	903.394	831.076	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Navstar Global Positioning System (GPS) is a space-based radio positioning, navigation, and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS Block III Space and Control Segments. This includes, but is not limited to, advanced concept development, systems engineering and analysis, satellite systems development, the study of augmentation systems, control segment development, user equipment interfaces, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources.

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.

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

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	0.000	40.568	180.023	291.035
(U) Current PBR/President's Budget	0.000	39.913	87.364	236.635
(U) Total Adjustments	0.000	-0.655		
(U) Congressional Program Reductions		-0.655		

- Congressional Rescissions
- Congressional Increases
- Reprogrammings
- SBIR/STTR Transfer

(U) Significant Program Changes:

The GPS III program has been restructured from an FY12 first launch (launch for capability profile), to no later than an FY13 first launch (launch for schedule profile), and provide the opportunity to evaluate incremental satisfaction of GPS III requirements. This approach could deliver a subset of mission-critical improvements before FY13 to incrementally satisfy near-term warfighter requirements. This approach is intended to be compliant with FY05 authorization language that directs the evaluation of various architectures that take advantage of smaller, lighter weight, and potentially less expensive GPS satellites. Plan to award contract(s) for Phase A System Design Review (SDR) in FY07.

Exhibit R-2a, RDT&E Project Justification	DATE February 2005
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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 BLOCK III
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Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4993 GPS BLOCK III	0.000	39.913	87.364	236.635	485.892	772.513	903.394	831.076	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**
 Navstar Global Positioning System (GPS) is a space-based radio positioning, navigation, and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS Block III Space and Control Segments. This includes, but is not limited to, advanced concept development, systems engineering and analysis, satellite systems development, the study of augmentation systems, control segment development, user equipment interfaces, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources.

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.

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

(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue Program Support for GPS III/Modernization	0.000	3.473	4.200	4.664
(U) Continue GPS III/Modernization Development	0.000	36.440	83.164	231.971
(U) Total Cost	0.000	39.913	87.364	236.635

(U) <u>C. Other Program Funding Summary (\$ in Millions)</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</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>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) PE 0305165F Navstar GPS (Space & Ground), R-191	142.198	147.037	188.301	131.624	106.993	78.502	58.638	38.044	Continuing	TBD
(U) Other APPN Operations and Maintenance										
(U) (PE 0305165F, BA 1 - Operating Forces, SAG 13D) Missile Procurement (PE	50.161	62.340	70.129	81.821	85.643	86.607	91.435	101.338	Continuing	TBD
(U) 0305165F, BA 5-Space and Other Support, P-22, 23)	252.318	327.583	318.086	301.489	264.989	147.317	167.080	531.467	Continuing	TBD
(U) Other Procurement (PE	12.495	7.774	13.637	12.275	5.650	6.232	11.005	69.017	Continuing	TBD

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

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SYSTEM**

PROJECT NUMBER AND TITLE

4993 GPS BLOCK III**(U) C. Other Program Funding Summary (\$ in Millions)**

0305165F, BP 83-Electronics
and Telecommunications
Equipment, WSC 836790,
P-70 and WSC 836730; BP
86 - Spares & Repair Parts
WSC 86190A, P-62)

(U) D. Acquisition Strategy

On 15 Sep 03, the USecAF signed an Acquisition Decision Memorandum directing the GPS JPO to re-initiate Phase A activities (concept exploration/risk reduction) for GPS III. Two Phase A contracts were awarded in Jan 04 to Lockheed-Martin and Boeing, with direction to mature the GPS III program through Systems Requirements Review (SRR), culminating in a Key Decision Point-B (KDP-B) by 3QFY05. In Dec 04, the National Security Space Acquisition Policy was updated, which now requires the completion of a System Design Review (SDR) prior to KDP-B. To comply with this policy, the program will now conduct RFP release, source selection and contract award prior to KDP-B in order to minimize budget and schedule impacts. The winning contractor will then conduct SDR in 2QFY07, and KDP-B in 3QFY07. Concept exploration/risk reduction activities will evaluate the potential for incremental delivery of GPS III capabilities, which could potentially be fielded sooner than FY13.

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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)				0603421F GLOBAL POSITIONING SYSTEM							4993 GPS BLOCK III				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u>															
Concept Defn and Risk Reduction													0.000		
Boeing	FPLOE	Seal Beach, CA	3.234	0.000		0.000		0.000		0.000		0.000	3.234		
Lockheed Martin	FPLOE	King of Prussia, PA	3.290	0.000		0.000		0.000		0.000		0.000	3.290		
Spectrum Astro	FPLOE	Gilbert, AZ	3.234	0.000		0.000		0.000		0.000		0.000	3.234		
Phase A Continuation Contracts													0.000		
Boeing	CPIF	Seal Beach, CA	12.774	0.000		5.600	Dec-04	0.000		0.000		0.000	18.374	20.816	
Lockheed Martin	CPIF	King of Prussia, PA	12.774	0.000		5.600	Dec-04	0.000		0.000		0.000	18.374	20.816	
Anticipated Phase A(SDR) Contract	CPIF	TBD	57.637	0.000		0.000		38.217	Jun-06	156.079	Nov-06	Continuing	TBD		
GPS III/Modernization System Engineering & Technical Support	Various	Various	0.000	0.000		25.240	Dec-04	44.947		75.892	Nov-06	Continuing	TBD		
Subtotal Product Development			92.943	0.000		36.440		83.164		231.971		Continuing	TBD	41.632	
Remarks:															
(U) <u>Support</u>															
JPO Support for GPS III / Modernization	Various	Various	10.107	0.000		3.473	Nov-04	4.200	Nov-05	4.664	Nov-06	Continuing	TBD		
GPS Modernization Stewardship	Various	Various	9.200	0.000		0.000		0.000		0.000		Continuing	TBD		
Subtotal Support			19.307	0.000		3.473		4.200		4.664		Continuing	TBD	0.000	
Remarks:															
														GPS Modernization Stewardship transferred to PE 0306165F starting in FY04	
(U) <u>Test & Evaluation</u>															
Subtotal Test & Evaluation			0.000	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	0.000	
Remarks:															
(U) Total Cost			112.250	0.000		39.913		87.364		236.635		Continuing	TBD	41.632	

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY
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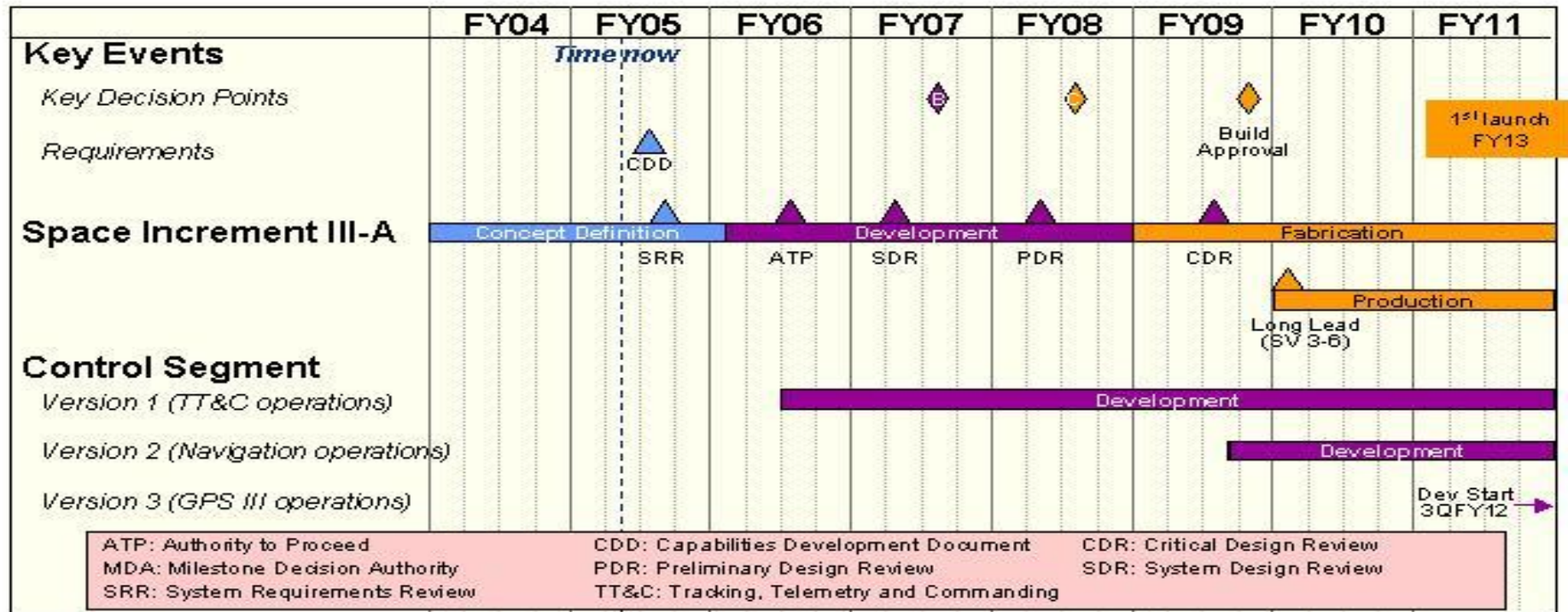


Exhibit R-4a, RDT&E Schedule Detail	DATE February 2005
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(U) <u>Schedule Profile</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Phase A Contract Award	2Q			
(U) Joint Requirements Oversight Council (JROC) Capabilities Development Document (CDD)		3Q		
(U) System Requirements Review (SRR)		3Q		
(U) Acquisition Strategy Panel (ASP)		4Q		
(U) Phase A System Development Review (SDR) Request for Proposal (RFP) Released			1Q	
(U) Phase A (SDR) Contract Award (Jun 06)			3Q	
(U) SDR				2Q
(U) Key Decision Point (KDP)-B				3Q