

UNCLASSIFIED

PE NUMBER: 0603421F
 PE TITLE: GLOBAL POSITIONING SYSTEM

Exhibit R-2, RDT&E Budget Item Justification								DATE February 2004	
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)				PE NUMBER AND TITLE 0603421F GLOBAL POSITIONING SYSTEM					
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	46.633	0.000	40.568	180.023	291.035	779.493	794.030	Continuing	TBD
4993 GPS BLOCK III	46.633	0.000	40.568	180.023	291.035	779.493	794.030	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 with the potential of hosting the GPS PNT system on multi-mission service satellites, 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.

GPS Modernization Stewardship funds efforts which are of a national scale, joint civil-military in nature, and benefit two or more agencies. Stewardship funding transfers to PE 0305165F starting in FY04.

This program is Budget Activity 4 - Advanced Component Development and Prototypes because it is a Phase A effort, pre-Key Decision Point (KDP)-B (Risk Reduction and Design Phase Approval).

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	55.580	0.000	40.674
(U) Current PBR/President's Budget	46.633	0.000	40.568
(U) Total Adjustments	-8.947	0.000	
(U) Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-7.132		
SBIR/STTR Transfer	-1.815		

(U) Significant Program Changes:

The GPS III program has been restructured to focus on supporting a FY12 first launch. FY03 funds were used to continue ongoing Phase A (concept definition) through

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FY04 with two contractors. Plan to award a single contract for development in FY06.

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Cost (\$ in Millions)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
4993	GPS BLOCK III	46.633	0.000	40.568	180.023	291.035	779.493	794.030	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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GPS Modernization Stewardship funds efforts which are of a national scale, joint civil-military in nature, and benefit two or more agencies. Stewardship funding transfers to PE 0305165F starting in FY04.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Continue GPS Modernization Stewardship	4.600	0.000	0.000
(U) Continue Program Support for GPS III/Modernization	4.121	0.000	3.533
(U) Continue GPS III/Modernization Development	37.912	0.000	37.035
(U) Total Cost	46.633	0.000	40.568

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

	<u>FY 2003</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>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 & Ground), R-187	284.036	144.790	148.344	117.813	94.558	43.657	39.758	Continuing	TBD
(U) Other APPN									

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

Operations and Maintenance (PE									
(U) 0305165F, BA 1 - Operating Forces, SAG 13D)	41.663	53.205	65.991	67.497	78.468	81.947	82.354	Continuing	TBD
Missile Procurement (PE									
(U) 0305165F, BA 5-Space and Other Support, P-31, 32)	249.794	255.758	330.530	341.482	265.975	132.051	82.367	Continuing	TBD
Other Procurement (PE									
(U) 0305165F, BP 83-Electronics and Telecommunications Equipment, WSC 6790, P-70 and WSC 6730; BP 86 - Spares & Repair Parts WSC 190A, P-111)	19.926	12.495	7.804	13.547	12.051	10.359	22.889	Continuing	TBD

(U) D. Acquisition Strategy

In Nov 00, GPS III awarded one-year contracts to Boeing and Lockheed Martin for \$16M each. Both companies completed the System Architecture and Requirements Definition (SA/RD) studies to survey GPS user needs, develop feasible concepts to address those needs, and provide lifecycle cost estimates associated with achieving various levels of needs satisfaction. Efforts accomplished prior to FY02 are included in PE 0305165F. During FY01, changes were made in the DoD space acquisition process. As a result, the next phase is termed Concept Definition (Phase A, similar to Component Advanced Development) followed by a Key Decision Point B (KDP-B). After a full and open competition for Phase A continuation contracts, two contracts were awarded in January 2004 to Boeing and Lockheed Martin. The GPS JPO plans to release an RFP following KDP-B (3Q FY05) to conduct a Full and Open Competition for a single contract to complete development. The exact scope and strategy for this competitive award will be determined during 3QFY04 reviews with the Undersecretary of the Air Force.

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Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2004		
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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2004</u> <u>Cost</u>	<u>FY</u> <u>2004</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2005</u> <u>Cost</u>	<u>FY</u> <u>2005</u> <u>Award</u> <u>Date</u>	<u>Cost to Complete</u>	<u>Total</u> <u>Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u>												
Concept Defn and Risk Reduction											0.000	
Boeing	FPLOE	Seal Beach, CA	3.234								3.234	
Lockheed Martin	FPLOE	King of Prussia, PA	3.290								3.290	
Spectrum Astro	FPLOE	Gilbert, AZ	3.234								3.234	
Phase A Continuation Contracts											0.000	
Boeing	CPIF	Seal Beach, CA		12.774	Jan-04	0.000		8.042	Oct-04	Continuing	TBD	20.816
Lockheed Martin	CPIF	King of Prussia, PA		12.774	Jan-04	0.000		8.042	Oct-04	Continuing	TBD	20.816
GPS III/Modernization System Engineering & Technical Support	Various	Various	43.347	14.290		0.000		20.951		Continuing	TBD	
Subtotal Product Development			53.105	39.838		0.000		37.035		Continuing	TBD	41.632
Remarks:												
(U) <u>Support</u>												
JPO Support for GPS III / Modernization	Various	Various	7.812	2.295		0.000		3.533		Continuing	TBD	
GPS Modernization Stewardship	Various	Various	4.700	4.500		0.000		0.000		Continuing	TBD	
Subtotal Support			12.512	6.795		0.000		3.533		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	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			65.617	46.633		0.000		40.568		Continuing	TBD	41.632

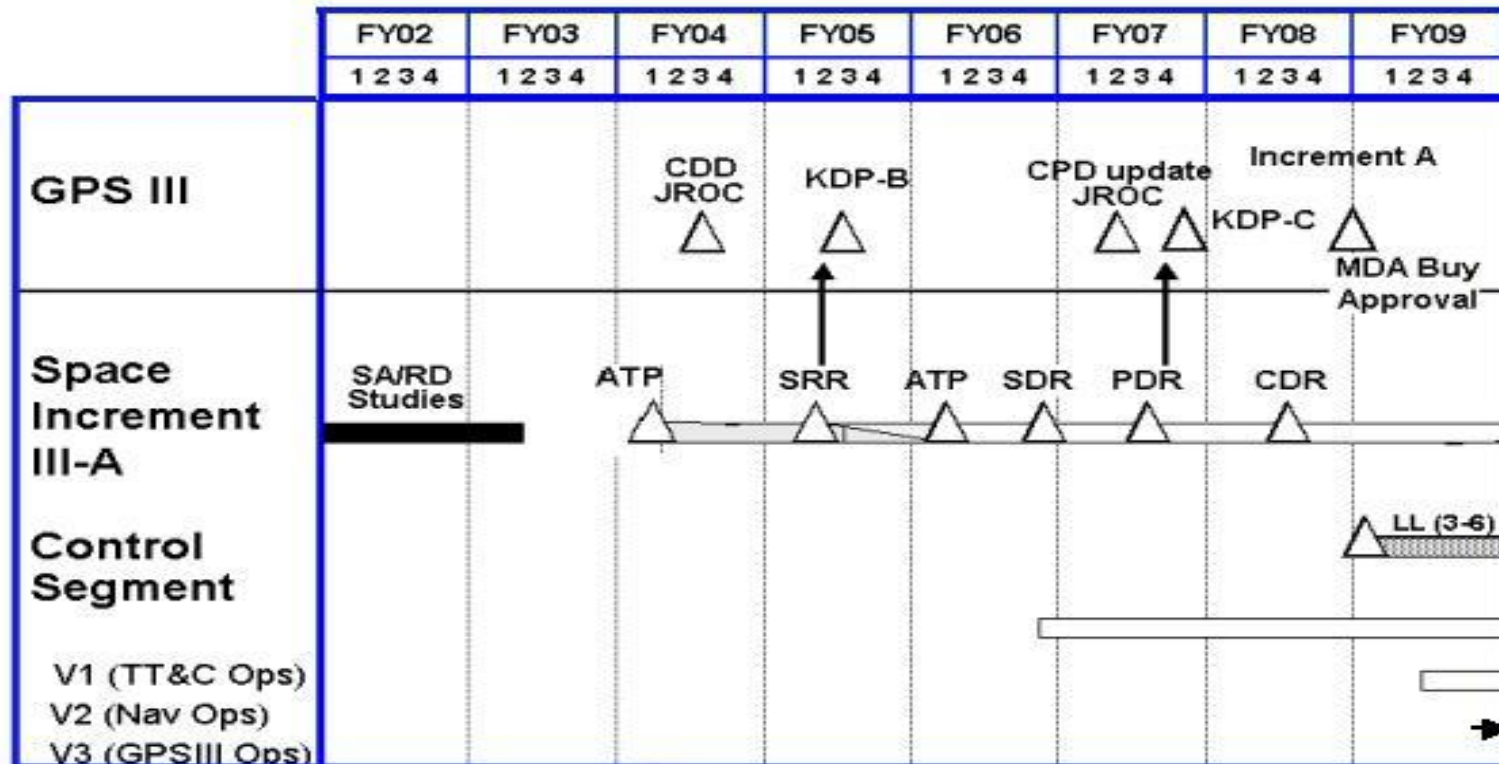
Exhibit R-4, RDT&E Schedule Profile

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CDD – Capabilities Development Document KDP – Key Decision Point JROC – Joint Requirements Oversight Council
 MDA – Milestone Decision Authority ATP – Authority to Proceed SRR – System Requirements Review
 SDR – System Design Review PDR – Preliminary Design Review CDR – Critical Design Review
 LL – Long Lead CPD – Capability Production Document
 TT&C – Tracking, Telemetry and Commanding

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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2004
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	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) <u>Schedule Profile</u>			
(U) Phase A		2Q	
(U) Joint Requirements Oversight Council Capabilities (JROC) Development Document (CDD)		4Q	
(U) System Requirements Review (SRR)			1Q
(U) KDP-B			3Q
(U) Phase B/C development Request for Proposal (RFP) released			3Q