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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0305165F: <i>NAVSTAR GPS (Space)</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	50.527	34.471	17.893	-	17.893	14.950	-	-	-	Continuing	Continuing
673030: <i>NAVSTAR GPS (Space & Control)</i>	50.527	34.471	17.893	-	17.893	14.950	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments for GPS Block II satellites. It includes, but is not limited to: training simulators, Integrated Logistics Support (ILS) products, ground control segment development, sustaining engineering, space and ground segments upgrades, and R&D efforts to support GPS Block II system deployment including efforts to provide anti-jam capability through increased Military(M)-Code signal power. The Operational Control Segment (OCS) delivers control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites.

Funding will provide continued development upgrades for ground segment to include, but not limited to upgrades for the existing GPS Selective Availability Anti-Spoof Module (SAASM) capability and SAASM changes. AEP software changes needed to fly IIF 6-12 and Launch, Anomaly and Disposal operations (LADO) changes.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

Totals include funding for PRCP Program Number 166, Navstar GPS.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	51.197	34.471	17.953	-	17.953
Current President's Budget	50.527	34.471	17.893	-	17.893
Total Adjustments	-0.670	-	-0.060	-	-0.060
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.217	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.453	-			
• Other Adjustments	-	-	-0.060	-	-0.060

Change Summary Explanation

No significant program changes.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305165F: NAVSTAR GPS (Space)				PROJECT 673030: NAVSTAR GPS (Space & Control)			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
673030: NAVSTAR GPS (Space & Control)	50.527	34.471	17.893	-	17.893	14.950	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments for GPS Block II satellites. It includes, but is not limited to: training simulators, Integrated Logistics Support (ILS) products, ground control segment development, sustaining engineering, space and ground segments upgrades, and R&D efforts to support GPS Block II system deployment including efforts to provide anti-jam capability through increased Military(M)-Code signal power. The Operational Control Segment (OCS) delivers control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites.

Funding will provide continued development upgrades for ground segment to include, but not limited to upgrades for the existing GPS Selective Availability Anti-Spoof Module (SAASM) capability and SAASM changes. AEP software changes needed to fly IIF 6-12 and Launch, Anomaly and Disposal operations (LADO) changes.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

Totals include funding for PRCP Program Number 166, Navstar GPS.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: OCS	50.527	34.471	17.893	-	17.893
Description: Development of GPS Block II Operational Control System (OCS).					
FY 2010 Accomplishments: Develop and deliver Selective Availability Anti-Spoofing Module (SAASM) capability for Block IIR/IIR-M/IIF satellites; System Engineering & Integration (SE&I) and Program Support.					
FY 2011 Plans: Operational Control Segment Ops Acceptance and Turnover; provide ground segment upgrades. System Engineering & Integration (SE&I) and Program Support.					
FY 2012 Base Plans:					

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B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue with ground segment upgrades, System Engineering & Integration (SE&I) and Program Support.											
FY 2012 OCO Plans:											
Accomplishments/Planned Programs Subtotals							50.527	34.471	17.893	-	17.893
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MPAF PE 0305165F: GPS Space & Control	124.194	64.609	67.689	0.000	67.689	61.574	80.966	10.522	0.000	Continuing	Continuing
• OPAF PE 0305165F: GPS Space & Control	7.569	7.736	7.579	0.000	7.579	7.741	0.394	0.400	0.408	Continuing	Continuing
D. Acquisition Strategy GPS OCS upgrade was competitively awarded to a single contractor (Lockheed Martin) in July 1995. Block IIF satellite and IIF ground systems development contract was competitively awarded to a single contractor (Boeing) in April 1996. The Single Prime Initiative (SPI) consolidated these efforts and was added to the Boeing IIF contract (with Lockheed Martin as a subcontractor) on 1 Oct 1999. GPS Modernization efforts for the Block IIR were awarded sole source to Lockheed Martin under a new contract in August 2000. Modernization efforts for Block IIF were added to the existing contract with Boeing in 2002 as Engineering Change Proposals (ECPs).											
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305165F: NAVSTAR GPS (Space)				PROJECT 673030: NAVSTAR GPS (Space & Control)					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OCS Development & IIF Modernization	C/Various	Boeing:Seal Beach, CA	1,451.329	18.484	Nov 2010	11.404	Nov 2011	-		11.404	Continuing	Continuing	1,944.179
IIF Development	C/Various	Boeing:Seal Beach, CA	76.272	-		-		-		-	0.000	76.272	77.600
Control Segment Support	MIPR	Various:Various,	29.808	9.841	Nov 2010	-		-		-	Continuing	Continuing	TBD
Completed GPS Development Efforts	Various	Various:Various,	165.983	-		-		-		-	0.000	165.983	0.000
Subtotal			1,723.392	28.325		11.404		-		11.404			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/Support	C/CPAF	Various:Various,	71.177	2.580	Nov 2010	0.230	Nov 2011	-		0.230	Continuing	Continuing	TBD
FFRDC	Various	Aerospace:El Segundo, CA	1.630	1.140	Nov 2010	1.200	Nov 2011	-		1.200	0.000	3.970	0.000
Completed GPS Support Efforts	Various	Various:Various	-	-		-		-		-	0.000	0.000	0.000
Subtotal			72.807	3.720		1.430		-		1.430			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Completed GPS T&E Efforts	Various	Various:Various,	4.588	-		-		-		-	0.000	4.588	0.000
Subtotal			4.588	-		-		-		-	0.000	4.588	0.000

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>				PROJECT 673030: <i>NAVSTAR GPS (Space & Control)</i>					

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support	C/CPAF	Aerospace:El Segundo, CA	62.922	2.426	Nov 2010	5.059	Nov 2011	-		5.059	Continuing	Continuing	TBD
Subtotal			62.922	2.426		5.059		-		5.059			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,863.709	34.471		17.893		-		17.893			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>	PROJECT 673030: <i>NAVSTAR GPS (Space & Control)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Launch, Anomaly & Disposal Operations (LADO) Release 2 Complete	2	2010	2	2010
SAASM Capability Complete	1	2011	1	2011
Certification for SAASM Multi-Service Operational Test & Evaluation (MOT&E)	4	2011	4	2011
Critical Ops Modifications	4	2011	1	2012

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