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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	279.164	317.268	251.318	0.000	251.318	238.447	200.106	173.336	191.751	Continuing	Continuing
675144: Global Hawk	237.064	245.367	221.591	0.000	221.591	219.574	186.635	154.295	156.940	Continuing	Continuing
67RTIP: MP-RTIP	42.100	71.901	27.227	0.000	27.227	11.373	11.771	12.141	12.511	0.000	0.000
676001: WBCOMM	0.000	0.000	2.500	0.000	2.500	7.500	1.700	6.900	22.300	0.000	0.000

**Note**

In FY 2009, Project Number 5131, Airframe efforts transferred to PE0305220F, Global Hawk Development/Fielding, Project Number RTIP, MP-RTIP, in order to continue development as a separate program since the originating MP-RTIP program was cancelled.

**A. Mission Description and Budget Item Justification**

The Global Hawk System provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

This funding procures the highly capable Global Hawk System, which is comprised of aircraft, payloads, ground segment, and support segment. The aircraft is an autonomous, high altitude, long endurance, remotely piloted aircraft (RPA). The RQ-4A is an imagery-intelligence (IMINT) RPA designed to employ 2000 pounds of payload. The RQ-4A has one configuration known as the Block 10. The Block 10 employs an IMINT system comprised of a synthetic aperture radar (SAR) sensor and an electro-optical (EO) / infrared (IR) sensor. These three sensors are called the integrated sensor suite (ISS). The RQ-4B RPA is designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. The Block 20 will employ upgraded SAR and EO/IR sensors known as the Enhanced ISS (EISS) in an IMINT only configuration. The Block 30 will employ the same EISS sensors as the Block 20 and will also integrate a wide spectrum signals intelligence (SIGINT) sensor called the Airborne Signals Intelligence Program (ASIP) sensor used simultaneously to create a multi-INT platform. The Block 40 will only integrate the multi-platform radar technology insertion program (MP-RTIP) radar sensor. The user will ultimately determine the optimal mix of quantities and payloads for each aircraft configuration based on operational requirements. The ground station (GS) includes the mission control element (MCE) and the launch and recovery element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the Global Hawk System.

The Global Hawk program went through a Title 10, Section 2433 review in 2006, due to a unit cost breach (informally known as Nunn-McCurdy breach). The Department certified the program to Congress on June 5th, 2006. As a result of the review, the Department directed a program restructure to slow development and

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification: PB 2011 Air Force</b>		<b>DATE:</b> February 2010
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<p>cap the low rate initial production (LRIP) at 5 per year to reduce risk. LRIP will remain at 5 per year or less until successful completion of the initial operational test and evaluation (IOT&amp;E).</p> <p>When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to enhance joint, allied, and coalition interoperability.</p> <p>The MP-RTIP was established to develop a family of modular, scalable next generation sensors for multiple platforms to support network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability.</p> <p>Future MP-RTIP studies/development insertion-- includes concept exploration, program definition/risk reduction, sensor technology insertion/development. Funds continued support improvement and implementation of C2ISR capabilities enabling the joint air and missile defense architecture joint decisive operations and the AEF Task Force CONOPS. Conducts limited risk reduction activities on Battle Management Command and Control (BMC2) Mission Execution and BMC2 Kill Chain, and MP-RTIP Wide Area Surveillance (WAS) Radar Hardware Verification.</p> <p>MP-RTIP will also support NATO Alliance Ground Surveillance (AGS) conceptual design and early development activities under the Global Hawk PE.</p> <p>Starting in FY 2011, studies are planned to develop integration and installation requirements in order to integrate a Wideband SATCOM terminal on Global Hawk.</p> <p>This program is budget activity 7, Operational Systems Development, because it utilizes Air Force R&amp;D to develop a highly capable operational system.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
3600: Research, Development, Test & Evaluation, Air Force		PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING			
BA 7: Operational Systems Development					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	310.664	325.732	0.000	0.000	0.000
Current President's Budget	279.164	317.268	251.318	0.000	251.318
Total Adjustments	-31.500	-8.464	251.318	0.000	251.318
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-31.500	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	-8.464	251.318	0.000	251.318
Change Summary Explanation					
FY09: \$31.5M was reprogrammed to support Battlefield Airborne Communications Node (BACN) in FY09.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>				<b>PROJECT</b> 675144: <i>Global Hawk</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
675144: <i>Global Hawk</i>	237.064	245.367	221.591	0.000	221.591	219.574	186.635	154.295	156.940	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b> <p>The Global Hawk System provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.</p> <p>This funding procures the highly capable Global Hawk System, which is comprised of aircraft, payloads, ground segment, and support segment. The aircraft is an autonomous, high altitude, long endurance, remotely piloted aircraft (RPA). The RQ-4A is an imagery-intelligence (IMINT) RPA designed to employ 2000 pounds of payload. The RQ-4A has one configuration known as the Block 10. The Block 10 employs an IMINT system comprised of a synthetic aperture radar (SAR) sensor and an electro-optical (EO) / infrared (IR) sensor. These three sensors are called the integrated sensor suite (ISS). The RQ-4B RPA is designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. The Block 20 will employ upgraded SAR and EO/IR sensors known as the enhanced ISS (EISS) in an IMINT only configuration. The Block 30 will employ the same EISS sensors as the Block 20 and will also integrate a wide spectrum signals intelligence (SIGINT) sensor called the Airborne Signals Intelligence Program (ASIP) sensor used simultaneously to create a multi-INT platform. The Block 40 will only integrate the multi-platform radar technology insertion program (MP-RTIP) radar sensor. The user will ultimately determine the optimal mix of quantities and payloads for each aircraft configuration based on operational requirements. The ground station (GS) includes the mission control element (MCE) and the launch and recovery element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the Global Hawk System.</p> <p>The Global Hawk program went through a Title 10, Section 2433 review in 2006, due to a unit cost breach (informally known as Nunn-McCurdy breach). The Department certified the program to Congress on June 5th, 2006. As a result of the review, the Department directed a program restructure to slow development and cap the low rate initial production (LRIP) at 5 per year to reduce risk. LRIP will remain at 5 per year or less until successful completion of the initial operational test and evaluation (IOT&amp;E).</p> <p>This program is budget activity 7, Operational Systems Development, because it utilizes Air Force R&amp;D to develop a highly capable operational system.</p>											

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When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to enhance joint, allied, and coalition interoperability. Activities will also include studies and analysis to support both current program planning and execution and future program planning.					
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Global Hawk Development and Demonstration (SDD)  FY 2009 Accomplishments: In FY 2009: Continued Aircraft/Comm system modernization. Development and integration of sensors, payload integration, test and training capability, Auto-takeoff and Landing, encrypted data link and technical data. Continue Navy BAMS synergies.  FY 2010 Plans: In FY 2010: Continue Aircraft/Comm system modernization. Development and integration of sensors, payload integration, test and training capability, Auto-takeoff and Landing, data compression, encrypted data link and technical data. Continue Navy BAMS synergies.  FY 2011 Base Plans: In FY 2011: Continue Aircraft/Comm system modernization. Development and integration of sensors, payload integration, test and training capability, Auto-takeoff and Landing, data compression, encrypted data link and technical data. Continue Navy Broad Area Maritime System (BAMS) synergies.  FY 2011 OCO Plans: In FY 2011 OCO: N/A	160.477	177.920	139.659	0.000	139.659
MAJOR THRUST: Ground Segment	25.786	27.502	36.487	0.000	36.487

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Continued upgrade of current ground station. Planning for ground station re-architecture.						
FY 2010 Plans: In FY 2010: Continued upgrade of current ground station. Planning for ground station re-architecture.						
FY 2011 Base Plans: In FY 2011: Continued upgrade of current ground station. Planning for ground station re-architecture.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: Support Segment		25.677	27.398	37.986	0.000	37.986
FY 2009 Accomplishments: In FY 2009: Logistics Support						
FY 2010 Plans: In FY 2010: Logistics Support						
FY 2011 Base Plans: In FY 2011: Logistics Support						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: Other Government Costs		16.624	12.547	7.459	0.000	7.459

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Mission Support						
FY 2010 Plans: In FY 2010: Mission Support						
FY 2011 Base Plans: In FY 2011: Mission Support						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: Battlefield Airborne Communication Node (BACN)		8.500	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: In FY 2009: BACN Joint Operational Urgent Need Integration and Installation						
FY 2010 Plans: In FY 2010: N/A						
FY 2011 Base Plans: In FY 2011: N/A						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
Accomplishments/Planned Programs Subtotals		237.064	245.367	221.591	0.000	221.591

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0304260F: Airborne SIGINT Enterprise, (RDT&E)	41.803	29.033	15.120	0.000	15.120	6.511	6.709	11.715	11.941	0.000	0.000
• PE 0305220F: Global Hawk, (MILCON)	0.000	31.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
• PE 0305220F (1): Global Hawk, (O&M)	167.528	84.236	178.875	0.000	178.875	304.452	293.376	315.229	319.406	0.000	0.000
• PE 0305220F (2): Global Hawk, (MILPERS)	54.530	81.620	101.635	0.000	101.635	112.079	127.331	135.873	139.816	0.000	0.000
• PE 0305220F (3): Global Hawk, (APAF)	813.701	800.746	859.244	0.000	859.244	929.444	789.967	688.718	596.162	0.000	0.000
• PE 0305220F (4): Global Hawk, (OPAF)	0.297	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
The Global Hawk program uses a modernization strategy to provide the warfighter with a near-term, combat capability with increased, time-phased capability improvements as technology and risk achieve satisfactory levels.											
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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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Air Force</b>											<b>DATE:</b> February 2010																																																																	
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<p><b>Product Development (\$ in Millions)</b></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method &amp; Type</th> <th rowspan="2">Performing Activity &amp; Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>EMD</td> <td>SS/CPAF</td> <td>Northrop Grumman Integrated Systems San Diego, CA</td> <td align="right">1,149.146</td> <td align="right">207.521</td> <td>Feb 2010</td> <td align="right">197.970</td> <td>Feb 2011</td> <td align="right">0.000</td> <td></td> <td align="right">197.970</td> <td>Continuing</td> <td>Continuing</td> <td>Continuing</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td><td align="right">1,149.146</td><td align="right">207.521</td><td></td><td align="right">197.970</td><td></td><td align="right">0.000</td><td></td><td align="right">197.970</td><td></td><td></td><td></td> </tr> </tbody> </table> <p><b>Remarks</b></p>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	EMD	SS/CPAF	Northrop Grumman Integrated Systems San Diego, CA	1,149.146	207.521	Feb 2010	197.970	Feb 2011	0.000		197.970	Continuing	Continuing	Continuing	<b>Subtotal</b>			1,149.146	207.521		197.970		0.000		197.970																	
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<b>Test and Evaluation (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Flight Test & Evaluation	PO	AFFTC Edwards, AFB	55.254	17.949	Jan 2010	10.600	Jan 2011	0.000		10.600	Continuing	Continuing	Continuing
<b>Subtotal</b>			55.254	17.949		10.600		0.000		10.600			
<b>Remarks</b>													
<b>Management Services (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
A&AS	Various/ Various	Various Dayton, OH	41.618	6.526	Nov 2009	3.583	Nov 2010	0.000		3.583	Continuing	Continuing	Continuing
Other Government Organizations	Various/ Various	Various Dayton, OH	11.432	2.456	Jan 2009	1.081	Jan 2009	0.000		1.081	Continuing	Continuing	Continuing
<b>Subtotal</b>			53.050	8.982		4.664		0.000		4.664			
<b>Remarks</b>													
			<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			1,299.556	245.367		221.591		0.000		221.591			

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Air Force							<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>			<b>PROJECT</b> 675144: <i>Global Hawk</i>			
	<b>Total Prior Years Cost</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Remarks</b> Total Prior Years Cost may include only FY 2009 data.									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

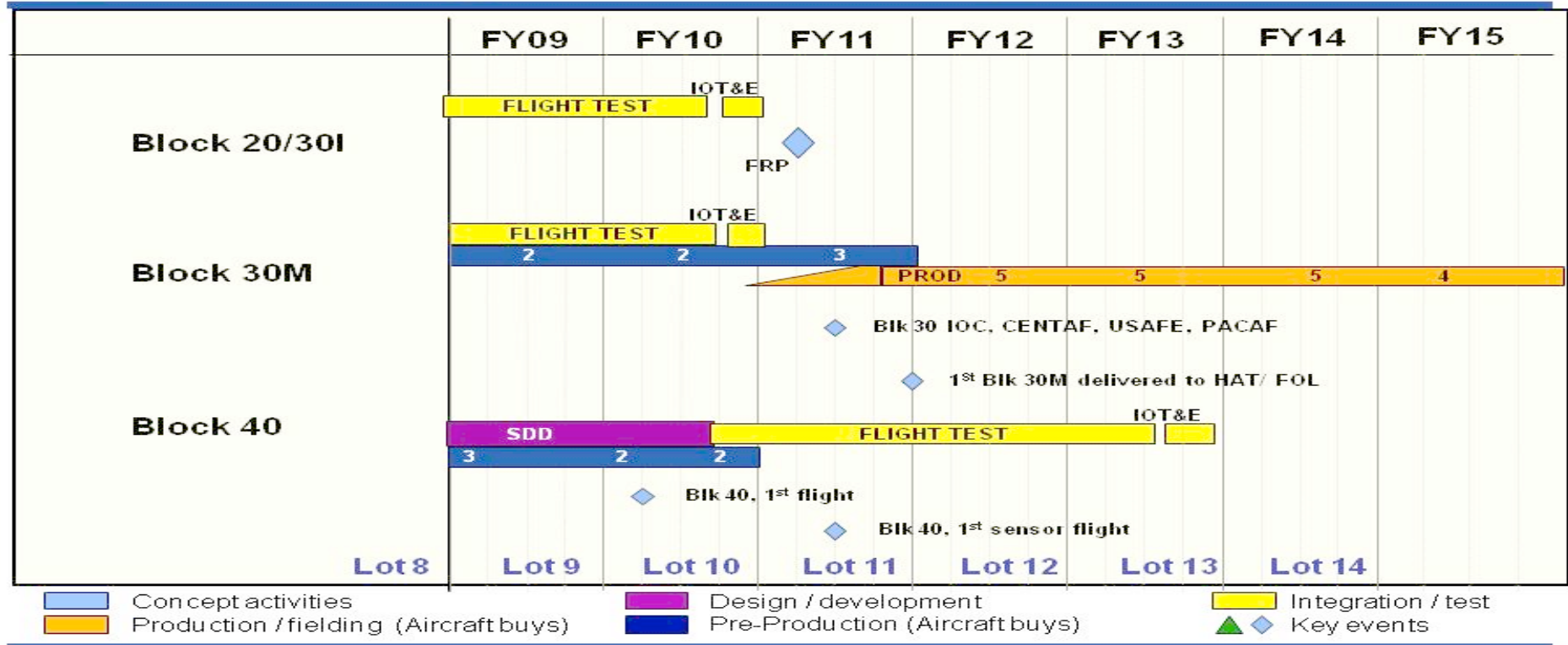
PE 0305220F: GLOBAL HAWK  
DEVELOPMENT/FIELDING

**PROJECT**

675144: Global Hawk



## Global Hawk Integrated Block Program Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Air Force			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	<b>PROJECT</b> 675144: <i>Global Hawk</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Block 20/30 IOT&E	4	2010	4	2010
Block 30 Initial Operational Capability, PACAF	2	2011	2	2011
Block 30 Initial Operational Capability, USAFE	2	2011	2	2011
Block 30 Initial Operational Capability, CENTAF	2	2011	2	2011
Begin transition to Block 30M at Forward Operating Locations	4	2011	4	2011
First HAT Block 30	4	2011	4	2011
Block 40 First Flight	1	2010	1	2010
Block 40 First Sensor Flight	2	2011	2	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				PROJECT 67RTIP: MP-RTIP			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
67RTIP: MP-RTIP	42.100	71.901	27.227	0.000	27.227	11.373	11.771	12.141	12.511	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note In FY 2009, Project Number 5131, Airframe efforts transferred to PE0305220F, Global Hawk Development/Fielding, Project Number RTIP, MP-RTIP, in order to continue development as a separate program since the originating MP-RTIP program was cancelled.											
A. Mission Description and Budget Item Justification The MP-RTIP sensor is designed to provide next generation capabilities to support network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability.  The funding supports all MP-RTIP design, development, and integration onto the Global Hawk Block 40. Future MP-RTIP studies and development include maritime modes, airborne modes, electronic protection, and other advanced capabilities. The funding also improves and implements C2ISR capabilities enabling Air Expeditionary Force Task Force CONOPS. This effort also provides for funding of limited risk reduction activities on BMC2 Mission Execution and BMC2 Kill Chain. Other activities will include studies and analysis to support both program planning and execution and future program and system life cycle planning.  Global Hawk Block 40 carrying MP-RTIP will also support NATO AGS conceptual design and early development activities.  This program is budget activity 7, Operational Systems Development, because it utilizes Air Force R&D to develop a highly capable operational system.											
B. Accomplishments/Planned Program (\$ in Millions)											
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total						
MAJOR THRUST: MP-RTIP sensor development for integration onto the Global Hawk platform	34.742	60.497	22.975	0.000	22.975						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING		PROJECT 67RTIP: MP-RTIP		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: MP-RTIP design, development, and integration including MP-RTIP studies and development include maritime modes, airborne modes, electronic protection, and other advanced capabilities.						
FY 2010 Plans: In FY 2010: MP-RTIP design, development, and integration including MP-RTIP studies and development include maritime modes, airborne modes, electronic protection, and other advanced capabilities.						
FY 2011 Base Plans: In FY 2011: MP-RTIP design, development, and integration including MP-RTIP studies and development include maritime modes, airborne modes, electronic protection, and other advanced capabilities.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: MP-RTIP sensor development program costs		7.358	11.404	4.252	0.000	4.252
FY 2009 Accomplishments: In FY 2009: Other Government Costs and Support						
FY 2010 Plans: In FY 2010: Other Government Costs and Support						
FY 2011 Base Plans: In FY 2011: Other Government Costs and Support						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force				<b>DATE:</b> February 2010							
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>		<b>PROJECT</b> 67RTIP: <i>MP-RTIP</i>							
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>			
<i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A											
Accomplishments/Planned Programs Subtotals				42.100	71.901	27.227	0.000	27.227			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PE Not Provided (3820): <i>Activity Not Provided</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>D. Acquisition Strategy</b>											
The MP-RTIP program supports the acquisition of the Global Hawk Block 40 weapon system by providing sensor design and development for Global Hawk Block 40 platforms and sensor procurement.											
<b>E. Performance Metrics</b>											
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 2011 Air Force											DATE: February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				<b>PROJECT</b> 67RTIP: MP-RTIP					
<b>Product Development (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
MP-RTIP	SS/CPAF	Northrop Grumman Integrated Systems EI Segundo, CA	31.065	58.397	Nov 2009	21.766	Nov 2010	0.000		21.766	Continuing	Continuing	Continuing
<b>Subtotal</b>			31.065	58.397		21.766		0.000		21.766			
<b>Remarks</b>													
<b>Test and Evaluation (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
N/A	MIPR	Various Edwards, CA	3.677	2.100	Nov 2009	1.209	Nov 2010	0.000		1.209	Continuing	Continuing	Continuing
<b>Subtotal</b>			3.677	2.100		1.209		0.000		1.209			
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Air Force</b>											<b>DATE:</b> February 2010																																																																																															
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>				<b>PROJECT</b> 67RTIP: <i>MP-RTIP</i>																																																																																																		
<p><b>Management Services (\$ in Millions)</b></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method &amp; Type</th> <th rowspan="2">Performing Activity &amp; Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>A&amp;AS</td> <td>TBD/TBD</td> <td>Various Boston, MA</td> <td align="right">6.664</td> <td align="right">10.723</td> <td>Nov 2009</td> <td align="right">3.857</td> <td>Nov 2010</td> <td align="right">0.000</td> <td></td> <td align="right">3.857</td> <td>Continuing</td> <td>Continuing</td> <td>Continuing</td> </tr> <tr> <td>Other Gov't Support</td> <td>Various/ Various</td> <td>Various Boston, MA</td> <td align="right">0.694</td> <td align="right">0.681</td> <td>Nov 2009</td> <td align="right">0.395</td> <td>Nov 2010</td> <td align="right">0.000</td> <td></td> <td align="right">0.395</td> <td align="right">0.000</td> <td align="right">1.770</td> <td align="right">0.000</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td> <td align="right">7.358</td> <td align="right">11.404</td> <td></td> <td align="right">4.252</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">4.252</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><b>Remarks</b></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td align="right"><b>Project Cost Totals</b></td> <td align="right">42.100</td> <td align="right">71.901</td> <td></td> <td align="right">27.227</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">27.227</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><b>Remarks</b> Total Prior Years Cost may include only FY 2009 data.</p>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	A&AS	TBD/TBD	Various Boston, MA	6.664	10.723	Nov 2009	3.857	Nov 2010	0.000		3.857	Continuing	Continuing	Continuing	Other Gov't Support	Various/ Various	Various Boston, MA	0.694	0.681	Nov 2009	0.395	Nov 2010	0.000		0.395	0.000	1.770	0.000	<b>Subtotal</b>			7.358	11.404		4.252		0.000		4.252					Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract							<b>Project Cost Totals</b>	42.100	71.901		27.227		0.000		27.227			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																																																													
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A&AS	TBD/TBD	Various Boston, MA	6.664	10.723	Nov 2009	3.857	Nov 2010	0.000		3.857	Continuing	Continuing	Continuing																																																																																													
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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

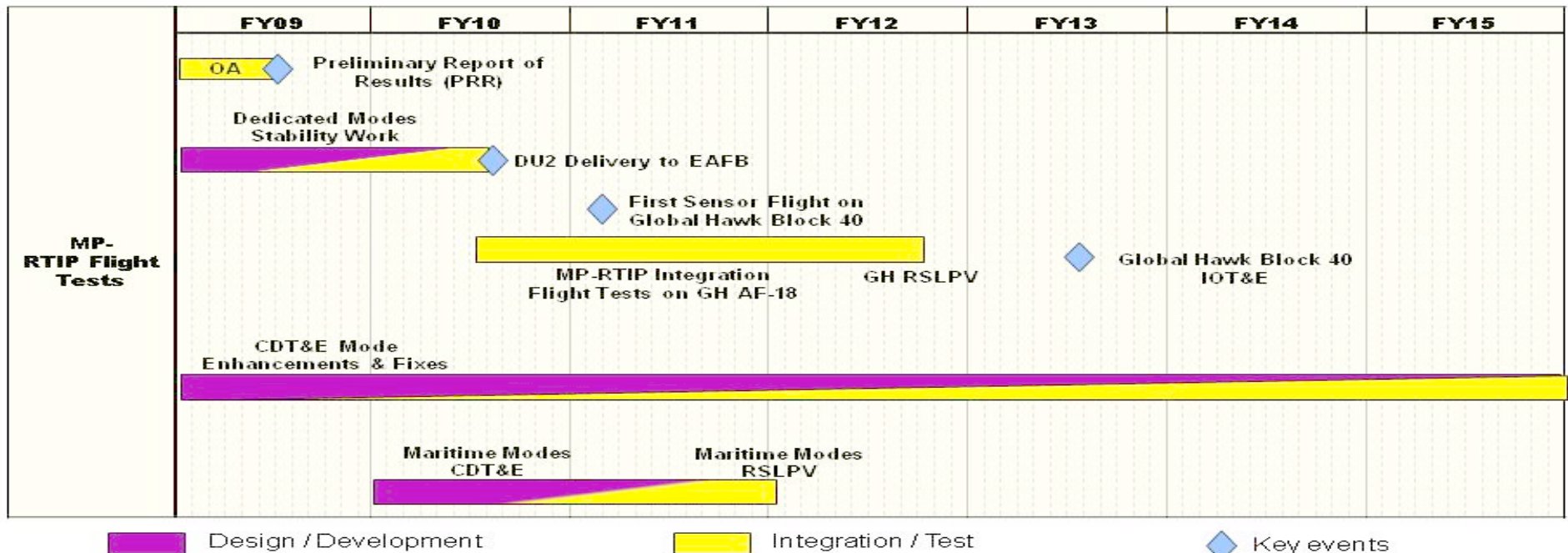
PE 0305220F: GLOBAL HAWK  
DEVELOPMENT/FIELDING

**PROJECT**

67RTIP: MP-RTIP



# MP-RTIP Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Air Force			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	<b>PROJECT</b> 67RTIP: <i>MP-RTIP</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Operational Assessment	1	2009	2	2009
Preliminary Reports of Results (PRR)	2	2009	2	2009
MP-RTIP Integration on Global Hawk Block 40 Aircraft	3	2010	3	2011
CDT&E Additional Modes	1	2009	4	2011
RTIP First Sensor Flight on Global Hawk	1	2011	2	2011
MP-RTIP Integration Flight Test on GH AF-18	1	2011	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				PROJECT 676001: WBCOMM			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
676001: WBCOMM	0.000	0.000	2.500	0.000	2.500	7.500	1.700	6.900	22.300	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification This funding is to provide for the development and integration of Wideband SATCOM terminals onto the Gobaal Hawk Platform.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Global Hawk Wideband SATCOM Terminals  FY 2009 Accomplishments: In FY 2009: N/A  FY 2010 Plans: In FY 2010: N/A  FY 2011 Base Plans: In FY 2011: To include requirements analysis, design and development and intergration and test  FY 2011 OCO Plans: In FY 2011 OCO: N/A							0.000	0.000	2.500	0.000	2.500
Accomplishments/Planned Programs Subtotals							0.000	0.000	2.500	0.000	2.500

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force								<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>			<b>PROJECT</b> 676001: <i>WBCOMM</i>			

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE Not Provided (4030): <i>Activity Not Provided</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**D. Acquisition Strategy**

The Global Hawk program will use a modernization strategy to develop and integrate Wideband SATCOM Terminals onto the Global Hawk Platform to provide the warfighter required capability.

**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 2011 Air Force											DATE: February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				<b>PROJECT</b> 676001: WBCOMM					
<b>Product Development (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Development and Integrate Wideband SATCOM terminals	TBD/TBD	TBD TBD	0.000	0.000		2.500	Jan 2011	0.000		2.500	0.000	2.500	0.000
<b>Subtotal</b>			0.000	0.000		2.500		0.000		2.500	0.000	2.500	0.000
<b>Remarks</b>													
<b>Support (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
N/A	TBD/TBD	TBD TBD	0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
<b>Subtotal</b>			0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Air Force</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>				<b>PROJECT</b> 676001: <i>WBCOMM</i>					

<b>Test and Evaluation (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
N/A	TBD/TBD	TBD TBD	0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
<b>Subtotal</b>			0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
<b>Remarks</b>													

<b>Management Services (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
N/A	TBD/TBD	TBD TBD	0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
<b>Subtotal</b>			0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
<b>Remarks</b>													

												<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>												0.000	0.000		2.500		0.000		2.500	0.000	2.500	0.000
<b>Remarks</b> Total Prior Years Cost may include only FY 2009 data.																						

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

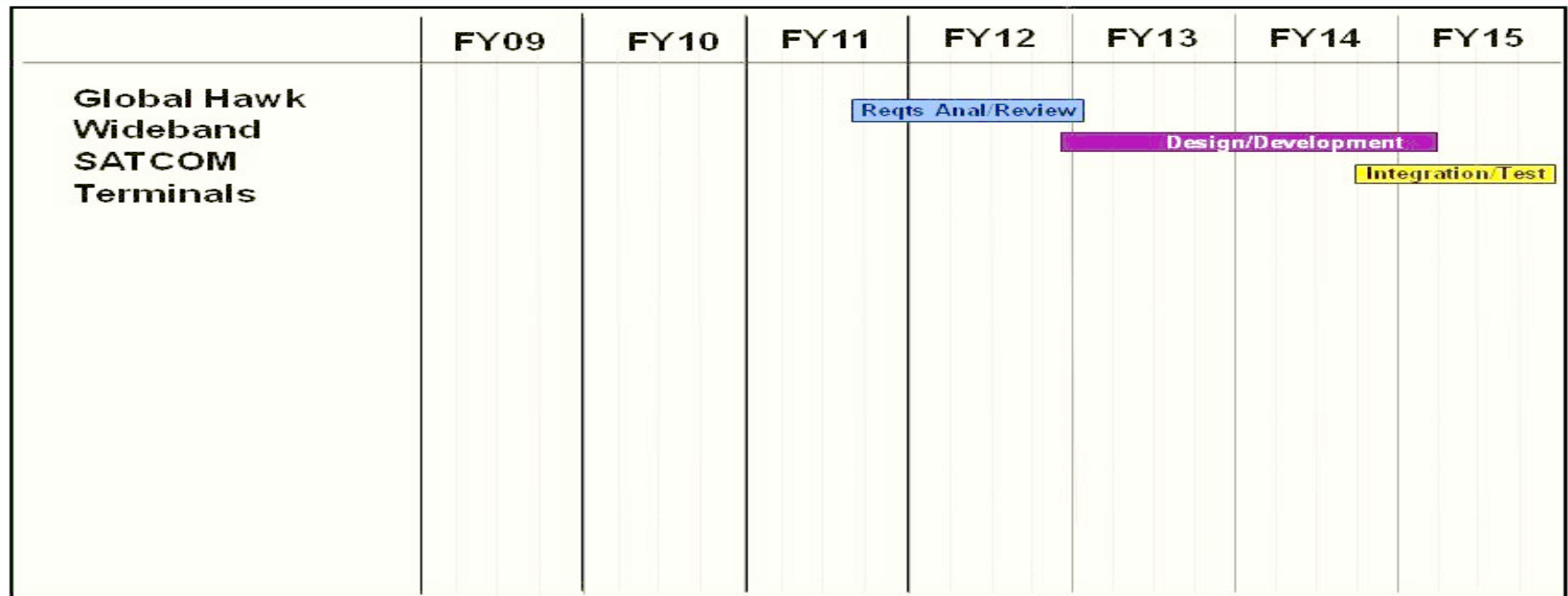
PE 0305220F: GLOBAL HAWK  
DEVELOPMENT/FIELDING

**PROJECT**

676001: WBCOMM



## Global Hawk Wideband Terminal schedule



Concept activities

Design / development

Integration / test

PB 11 R-Docs

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R-1 Line Item #210

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Air Force			<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	<b>PROJECT</b> 676001: <i>WBCOMM</i>		

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Begin Requirements Analysis	3	2011	4	2011

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