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<b>Exhibit R-2, RDT&amp;E Budget Item Justification: PB 2011 Office of Secretary Of Defense</b>										<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604400D8Z: <i>Unmanned Aircraft System</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>
Total Program Element	0.000	60.792	49.292	0.000	49.292	28.849	30.974	24.620	21.314	Continuing	Continuing
P440: <i>Unmanned Aircraft System</i>	0.000	35.039	30.960	0.000	30.960	28.849	30.974	24.620	21.314	Continuing	Continuing
P442: <i>UAS Common Ground Station</i>	0.000	25.753	18.332	0.000	18.332	0.000	0.000	0.000	0.000	Continuing	Continuing

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

The Department of Defense (DOD) Unmanned Aircraft Systems (UAS) Common Development is a joint effort to develop and demonstrate common standards, architectures, and technologies that address UAS-specific issues across all Military Services. The intent is to increase interoperability and effectiveness by promoting cooperative development of solutions that are applicable across major classes of UAS. This effort will initially focus on addressing DOD UAS integration into the National Airspace System (NAS) and demonstration of a common, interoperable ground station architecture and associated interface standards.

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

	<u><b>FY 2009</b></u>	<u><b>FY 2010</b></u>	<u><b>FY 2011 Base</b></u>	<u><b>FY 2011 OCO</b></u>	<u><b>FY 2011 Total</b></u>
Previous President's Budget	0.000	60.792	0.000	0.000	0.000
Current President's Budget	0.000	60.792	49.292	0.000	49.292
Total Adjustments	0.000	0.000	49.292	0.000	49.292
• 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	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Program Adjustments	0.000	0.000	49.292	0.000	49.292

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Office of Secretary Of Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604400D8Z: <i>Unmanned Aircraft System</i>	<b>PROJECT</b> P440: <i>Unmanned Aircraft System</i>
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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
P440: <i>Unmanned Aircraft System</i>	0.000	35.039	30.960	0.000	30.960	28.849	30.974	24.620	21.314	Continuing	Continuing
Quantity of RDT&E Articles											

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

In FY12 the Department plans to transition from the U-2 to the Global Hawk (GH), but today's restrictions on airspace access preclude this. GH and the Broad Area Maritime Surveillance (BAMS) UAS, also a GH aircraft, need an autonomous, sense-and-avoid (SAA) as an alternate means of compliance to Title 14 Code of Federal Regulations, Part 91.113, requirement to See-and-Avoid other aircraft. Predator and Sky Warrior have similar requirements for SAA capability; their SAA technology development will leverage the GH/BAMS technology. Development of a Ground Based Sense-and-Avoid (GBSAA) system using existing technology can provide a near-term solution for improved airspace access, both for terminal operations (e.g., Beale AFB, GH transit to/from controlled airspace) and for operations/training within the GBSAA system's coverage area (e.g., Sky Warrior at El Mirage, Shadow operations at Cherry Point).

Funding accelerates the development of a common onboard, autonomous SAA capability for GH and BAMS (one upon which a similar SAA system for Predator and Sky Warrior can be based), provides a GBSAA capability to meet DoD training and operational objectives at locations where airspace restrictions currently limit training and operations, and establishes dedicated funding to develop standards, modeling and simulation tools, and technology to enable DoD UAS to routinely access the national and international airspace systems.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Unmanned Aircraft System Initiatives  Starting in FY2010 the Department's sense-and-avoid (SAA) developmental efforts are consolidated within this defense-wide program element from individual Service accounts.  <i>FY 2009 Accomplishments:</i> N/A	0.000	35.039	30.960	0.000	30.960

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**E. Performance Metrics**

N/A

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<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>	
P442: <i>UAS Common Ground Station</i>	0.000	25.753	18.332	0.000	18.332	0.000	0.000	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles												
<b>A. Mission Description and Budget Item Justification</b>												
The UAS Common Ground Station Demonstration project is intended to develop and demonstrate an interoperable, standards-based, open ground station architecture for MQ-1 (Predator/Sky Warrior), MQ-5 (Hunter), MQ-8 (Fire Scout), and MQ-9 (Reaper) UAS. The intent is to improve joint- and coalition-interoperability and to promote competition through the implementation of open standards and open architectures.												
<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>		
UAS Common Ground Station Demonstration						0.000	25.753	18.332	0.000	18.332		
Develop and demonstrate an interoperable, standards-based, open ground station architecture for MQ-1 (Predator/Sky Warrior), MQ-5 (Hunter), MQ-8 (Fire Scout), and MQ-9 (Reaper) UAS.												
<i>FY 2009 Accomplishments:</i> N/A												
<i>FY 2010 Plans:</i> Develop and demonstrate an interoperable, standards-based, open ground station architecture for MQ-1 (Predator/Sky Warrior), MQ-5 (Hunter), MQ-8 (Fire Scout), and MQ-9 (Reaper) UAS.												
<i>FY 2011 Base Plans:</i> Develop and demonstrate an interoperable, standards-based, open ground station architecture for MQ-1 (Predator/Sky Warrior), MQ-5 (Hunter), MQ-8 (Fire Scout), and MQ-9 (Reaper) UAS.												

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<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>
Accomplishments/Planned Programs Subtotals		0.000	25.753	18.332	0.000	18.332
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>D. Acquisition Strategy</b> N/A						
<b>E. Performance Metrics</b> n/a						

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