

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2012 Office of Secretary Of Defense **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0606301D8Z: <i>Aviation Safety Technologies</i>
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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	7.699	10.900	6.925	-	6.925	-	-	-	-	Continuing	Continuing
901: <i>Aviation Safety Technologies</i>	7.699	10.900	6.925	-	6.925	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

**Note**

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

This funding supports Secretary Gates direction to achieve a 75% reduction in accidents and supports the Defense Safety Oversight Council's (DSOC) pursuit of aviation safety technologies. The Guidance for the Development of the Force (GDF) directs DoD Components to pursue accident reduction and prevention initiatives that emphasize safety in the workplace and hold leaders accountable for their safety programs. In FY 2008, there were 89 Class A aviation accidents with 61 destroyed aircraft and 32 fatalities. The aviation accidents cost the Department over \$2.9 billion with indirect costs approximately four times that amount.

The DSOC used a data-driven approach to identify and evaluate the most effective hardware and software technologies to be implemented to reduce preventable aviation mishaps. The DSOC task force surveyed existing programs and provided an assessment of the viability and advisability of future resource investments. These investments will fund hardware and software technology to prevent helicopters and fighter aircraft mishaps.

Collision avoidance was recommended for funding in FY 2010. Automatic Collision Avoidance Technologies (ACAT) has been developed by the Air Force to prevent the most prevalent causes of fighter/attack mishap fatalities and destroyed aircraft. An Automatic Ground Collision Avoidance (Auto-GCAS) component of ACAT has matured and is ready for fleet integration. FY 2010-FY2012 money will leverage the successes of ACAT by furthering the development of Auto-ACAS, while retaining scarce technical expertise and flight test resources currently in use. As an unintended side benefit, Auto-ACAS may also hold a key to Unoccupied Aerial Vehicle access to the National Airspace.

The Secretary stated that we can not and should not tolerate the injuries, costs, and capability losses from preventable accidents.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	8.000	10.900	7.100	-	7.100
Current President's Budget	7.699	10.900	6.925	-	6.925
Total Adjustments	-0.301	-	-0.175	-	-0.175
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.301	-			
• Defense Efficiency -Service Support	-	-	-0.046	-	-0.046
Contract					
• Other Efficiencies	-	-	-0.129	-	-0.129

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Title:</b> 901 Aviation Safety Technologies	7.699	10.900	6.925
<b>FY 2010 Accomplishments:</b> FY 2010 Plans: <ul style="list-style-type: none"> <li>• Further develop the Auto-Air Collision Avoidance System (Auto-ACAS), to address the number one cause of fighter Class A mishaps.</li> <li>• Complete a data link study to determine most compatible data link for Auto-ACAS and future operational functionality.</li> <li>• Begin Auto-ACAS algorithm development.</li> </ul>			
<b>FY 2011 Plans:</b> <ul style="list-style-type: none"> <li>• Further develop the Auto-Air Collision Avoidance System (Auto-ACAS), to address the number one cause of fighter Class A mishaps.</li> <li>• Complete a data link study to determine most compatible data link for Auto-ACAS and future operational functionality.</li> <li>• Begin Auto-ACAS algorithm development.</li> </ul>			
<b>FY 2012 Plans:</b> <ul style="list-style-type: none"> <li>• Complete algorithm development and begin simulations.</li> <li>• Complete simulations and ground testing and advance to F-16 flight test.</li> </ul>			
<b>Accomplishments/Planned Programs Subtotals</b>	7.699	10.900	6.925

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

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

- Class A aviation accident rates. Number of Class A aviation accidents, (resulting in damages of \$2m or more; aircraft destroyed; and/or fatality or permanent disability), per 100,000 flying hours.
- Number of destroyed aircraft.
- Number of aviation fatalities.
- 75% reduction goal assessed against a FY 2002 baseline.