

**UNCLASSIFIED**

PE NUMBER: 0603601F  
 PE TITLE: Conventional Weapons Technology

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2008</b>
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<b>BUDGET ACTIVITY</b> <b>03 Advanced Technology Development (ATD)</b>	<b>PE NUMBER AND TITLE</b> <b>0603601F Conventional Weapons Technology</b>
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	38.602	18.379	11.813	17.942	18.167	21.910	18.902	Continuing	TBD
670A Conventional Weapons Development	38.602	18.379	11.813	17.942	18.167	21.910	18.902	Continuing	TBD

**(U) A. Mission Description and Budget Item Justification**

This program develops, demonstrates, and integrates ordnance and advanced guidance technologies for air-launched conventional weapons. The program includes development of conventional ordnance technologies including warheads, fuzes, and explosives; and development of advanced guidance technologies including seekers, navigation and control, and guidance. Note: In FY 2008, Congress added \$1.6 million for Moving Target Strike. This program is in the Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	38.530	16.904	13.794
(U) Current PBR/President's Budget	38.602	18.379	11.813
(U) Total Adjustments	0.072	1.475	
(U) Congressional Program Reductions		-0.004	
Congressional Rescissions		-0.121	
Congressional Increases		1.600	
Reprogrammings	0.949		
SBIR/STTR Transfer	-0.877		

**(U) Significant Program Changes:**

Not Applicable.

**C. Performance Metrics**

(U) Under Development.

**Exhibit R-2a, RDT&E Project Justification**

DATE  
**February 2008**

BUDGET ACTIVITY <b>03 Advanced Technology Development (ATD)</b>				PE NUMBER AND TITLE <b>0603601F Conventional Weapons Technology</b>			PROJECT NUMBER AND TITLE <b>670A Conventional Weapons Development</b>		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
670A Conventional Weapons Development	38.602	18.379	11.813	17.942	18.167	21.910	18.902	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

- (U) **A. Mission Description and Budget Item Justification**  
 This program develops, demonstrates, and integrates ordnance and advanced guidance technologies for air-launched conventional weapons. The program includes development of conventional ordnance technologies including warheads, fuzes, and explosives; and development of advanced guidance technologies including seekers, navigation and control, and guidance. Note: In FY 2008, Congress added \$1.6 million for Moving Target Strike. This program is in the Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.
- |   |                |                |                |
|---|----------------|----------------|----------------|
| (U) <b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>   | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> |
| (U) MAJOR THRUST: Develop and demonstrate advanced air-delivered munitions fuze and mass-focusing warhead technologies to improve munition effectiveness, allowing for smaller warheads and munition airframes, thereby improving sortie effectiveness and increasing strike aircraft load-outs. Develop a fuzing capability that will transmit function data from penetrating weapons through various hard target mediums.   | 3.768          | 3.399          | 2.758          |
| (U) In FY 2007: Further designed a hard target influence fuze capable of denying hard and deeply buried facilities access. Completed developing fuzes that can transmit bomb damage information to an aircraft platform.  |                |                |                |
| (U) In FY 2008: Complete initial phase of hard target influence fuze development and testing. Begin developing an active imaging target device that can provide warhead aimpoint selection for mass focused warheads.   |                |                |                |
| (U) In FY 2009: Continue developing an active imaging target device that can provide warhead aimpoint selection for mass focused warheads.  |                |                |                |
| (U) MAJOR THRUST: Develop and demonstrate conventional munition subsystem and platform integration technologies to include innovative air-delivered munition carriage and release equipment, miniature weapon release concepts, and reduced airframe size providing the capability to safely carry, launch, and communicate with the aerospace vehicle and other multiple miniature weapons. These integration technologies will increase weapon load-outs and improve sortie effectiveness for current and future strike aircraft, while reducing munition airlift requirements. | 0.259          | 0.312          | 0.267          |
| (U) In FY 2007: Completed a miniaturized datalink flight demonstration. Enhanced plans and begin design of a low-cost miniature cruise missile. Matured plans and began design of a miniature persistent munition that will provide area dominance with a multiple-shot capability. Note: Datalink flight test conducted in the navigation and control technologies activity in this project.   |                |                |                |

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BUDGET ACTIVITY <b>03 Advanced Technology Development (ATD)</b>	PE NUMBER AND TITLE <b>0603601F Conventional Weapons Technology</b>	PROJECT NUMBER AND TITLE <b>670A Conventional Weapons Development</b>		
		<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
<b>(U) B. Accomplishments/Planned Program (\$ in Millions)</b>				
(U) In FY 2008: Begin development of a small powered short-range precision-guided submunition capable of attacking multiple moving targets.				
(U) In FY 2009: Begin developing a missile with the capability to defeat a broad range of small and highly agile air targets as well as high value ground targets, such as enemy air defenses.				
(U) MAJOR THRUST: Develop and demonstrate advanced conventional armament warhead technologies, including heavy metal liners, dense metal cases, and insensitive explosives with increased energy release performance attributes. The goal of these efforts is to destroy hardened targets by more effectively penetrating protective surfaces and by enhancing kill mechanisms against softer surface targets.		6.823	6.949	3.269
(U) In FY 2007: Completed insensitive explosive warhead fills that significantly reduce fill volume requirements. Further developed an ordnance package that will significantly improve counter air lethality against cruise missiles and manned aircraft. Developed and tested systems needed for an ordnance package with low collateral damage and minimum far-field lethality. Further developed a multi-mode warhead package designed for precision-guided submunitions. Further developed a weapon system capable of dispensing payloads within a target for counterforce applications.				
(U) In FY 2008: Extend development of an ordnance package with improved counter-air lethality to address cruise missile and urban targets, as well as attacking a subset of ground targets to include enemy air defenses. Continue developing a multi-mode warhead package designed for precision guided submunitions.				
(U) In FY 2009: Demonstrate an ordnance package with improved counter-air lethality to address cruise missile and counter-air targets, as well as attacking a subset of ground targets to include enemy air defenses. Demonstrate a multi-mode warhead package designed for precision guided submunitions.				
(U) MAJOR THRUST: Develop and demonstrate advanced conventional armament seeker technologies for miniature munitions applications. These seeker technologies will autonomously detect, acquire, and guide to targets of interest in adverse weather and battlefield conditions. Also, the seeker technologies will increase the probability of kill and minimize collateral damage, while providing increased weapons load-out and improved sortie effectiveness. In FY 2007, the Miniature Navigator Demonstration (in another thrust in this project) will be completed allowing seekers for two different munition concepts to be initiated.		7.629	6.130	5.519
(U) In FY 2007: Designed, fabricated, and commenced ground and flight testing of a low-cost laser detection and ranging seeker that reduces moving parts compared to earlier generation seekers. Matured plans and began designing a small multiple-mode radar for an air to surface weapon demonstration. Developed ordnance package designed for				

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Exhibit R-2a, RDT&E Project Justification		DATE February 2008		
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603601F Conventional Weapons Technology	PROJECT NUMBER AND TITLE 670A Conventional Weapons Development		
		FY 2007	FY 2008	FY 2009
(U) <b>B. Accomplishments/Planned Program (\$ in Millions)</b>				
low collateral damage and minimum far-field lethality.				
(U) In FY 2008: Continue design and demonstration of low cost laser detection and ranging seeker to increase data rates and reduce moving parts compared to earlier generation laser seeker technologies. Develop a multi-mode radar seeker capable of engaging both moving and stationary targets in adverse weather.				
(U) In FY 2009: Continue design and demonstration of a low cost laser detection ordnance seeker to increase data rates and LADAR moving parts compared to earlier generation LADAR seeker technologies. Flight test a multi-mode radar seeker capable of engaging both moving and stationary targets in adverse weather.				
(U)				
(U) MAJOR THRUST: Develop and demonstrate advanced conventional armament navigation and control technologies to increase armament navigation accuracy, improve stand off range, and enhance weapons control and operation in electronic jamming environments. In FY 2007, the Miniature Navigator Demonstration will be completed allowing seekers for two different munition concepts to be initiated (in another thrust in this project).		1.626	0.000	0.000
(U) In FY 2007: Completed design and fabrication of a weapon datalink and integrated datalink into a guided munition for commencement of flight testing.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Air Force Special Ops Innovative Miniature Infrared Camera.		1.363	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for Air Force Special Ops Innovative Miniature Infrared Camera.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Clandestine Electric Reconnaissance Vehicle (CERV) for Air Force Special Operations Command (AFSOC).		3.116	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for CERV for AFSOC.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Micro-Sized Air-Launched Atmospheric Visibility Sensor.		1.363	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for Micro-Sized Air-Launched Atmospheric Visibility				

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<b>03 Advanced Technology Development (ATD)</b>	<b>0603601F Conventional Weapons Technology</b>	<b>670A Conventional Weapons Development</b>		
<b>(U) B. Accomplishments/Planned Program (\$ in Millions)</b>		<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Sensor.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Falcon Eye Seeker		1.947	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for Falcon Eye Seeker.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Ground Mobile Gateway System.		1.363	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for Ground Mobile Gateway System.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Under Vehicle Mobile Inspection.		3.503	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for Under Vehicle Mobile inspection System.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Next Generation Fixed Wing S-3B Heavy Aerial Firefighting Tanker.		3.116	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for Next Generation Fixed Wing S-3B Heavy Aerial Firefighting Tanker.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Unmanned Air Vehicle (UAV) Sensor Interface and Payloads for Targeting.		1.363	0.000	0.000
(U) In FY 2007: Conducted Congressionally-directed effort for UAV Sensor Interface and Payloads for Targeting.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Weapons Data Link.		1.363	0.000	0.000

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(U) <b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) In FY 2007: Conducted Congressionally-directed effort for Weapons Data Link.			
(U) In FY 2008: Not Applicable.			
(U)			
(U) In FY 2009: Not Applicable.			
(U) CONGRESSIONAL ADD: Moving Target Strike.	0.000	1.589	0.000
(U) In FY 2007: Not Applicable.			
(U) In FY 2008: Conduct Congressionally-direct effort for Moving Target Strike.			
(U) In FY 2009: Not Applicable.			
(U)			
(U) Total Cost	38.602	18.379	11.813

(U) <b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</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) Related Activities:									
(U) PE 0602602F, Conventional									
Munitions.									
(U) This project has been coordinated through the Reliance 21 process to harmonize efforts and eliminate duplication.									
(U) <b><u>D. Acquisition Strategy</u></b>									
Not Applicable.									