OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

Date: February 2006

APPROPRIATION/ BUDGET ACTIVITY	PE NUMBER AND TITLE
RDT&E/ Defense Wide BA# 3	**0603618D8Z - Joint Electronic Advanced Technology**

Cost ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost		0.000	0.000	9.400	9.500	9.600	9.800	10.200
P619	Joint Electronic Advanced Technology	0.000	0.000	9.400	9.500	9.600	9.800	10.200

A. Mission Description and Budget Item Justification: The widespread and growing availability of sophisticated, commercially available electronic sensors, computer modules, navigation and control components coupled with widely proliferated, man-portable explosives, mortars, rockets and small aircraft provide terrorists and foreign military units the novel means to rapidly construct a wide range of weapons capable of disruptive actions against civilian and military forces alike.

In the Global War on Terror (GWOT), the U.S must be ready to counter such weapons on short notice. The asymmetric nature of such devices is already well understood by terrorists. Improvised explosive devices are in widespread use. MANPADS and mortars have been used to attack both air and ground forces, and pose a threat to any region due to their portability. Unmanned aerial vehicles capable of short range operations involving chemical, biological or explosive payloads can be found routinely available through commercial purchase and are easily adaptable to conduct precision attacks for terror purposes using commercial radio control systems. GPS civil navigation and autopilot devices capable of precisely controlling UAVs can be held in the palm of ones hand. Digital processors, analog-to-digital converters and digital optical sensors give terrorists the means to deploy unexpected threats on short notice. Because conventional kinetic defenses against these devices can be impractical in urban settings and because the speed of appearance of such devices can be short, such threats are disruptive and asymmetric in comparison with the typically long and costly development cycles associated with U.S. military defensive systems. Together these asymmetries highlight the need to rapidly evolve alternative Electronic Warfare, Information Operations and Counter Terrorism capabilities suitable for neutralizing such threats.

This program element seeks to identify low-cost, near-term solutions (outside of service programs of record) that can effectively mitigate asymmetric threats by rapidly integrating advanced commercial or military off-the-shelf technology in innovative ways. Laboratory and field testing will be used to evaluate the feasibility and military utility of resultant low cost, near term capabilities. FY 2007 efforts will investigate, integrate, test and demonstrate elements of the following technologies:

1. Ground based Counter ManPads concepts and systems that provide area protection in the vicinity of military airports or other high value locations. A distributed ground based missile warning system will be refined, expanded and evaluated for its ability to increase probability of detection and decrease false alarms from the benchmark performance of aircraft based systems. This missile warning system will be initially integrated with aircraft based countermeasures systems. Several potentially viable ground based countermeasures concepts will be refined and tested to assess developmental risk. Subsequent efforts will assess integration of ground based missile warning/tracking systems, ManPADS countermeasures systems and other rapid means of engagement.
2. Low cost, near term technologies to allow DoD aircraft to fly in medium to high ManPAD threat airspace in support of the Global War on Terror. Emphasis is on aircraft and system approaches not covered by existing programs of record; including innovative fused-sensor missile warning, advanced decoys, and preemptive countermeasure systems.
3. Emerging commercially derived technologies; including rapid prototyping of those required to combat adaptive threats in the GWOT including the following:
   a. Warhead fuse defeat mechanisms
   b. Small Unmanned Aerial Vehicle (UAV) detection and engagement.
   c. Wi-Fi and other wireless network defeat mechanisms
4. Innovative ways to locate terrorist activity in near real time, providing actionable intelligence to the warfighter.

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The objective of this effort is to assess and prototype low cost/near term EW/IO technologies that augment and/or reduce risk when inserted into service programs of record. Opportunities to provide breakthrough technologies and low cost upgrade opportunities are emphasized.

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			
Current BES/President's Budget (FY 2007)	0.000	0.000	9.400
Total Adjustments	0.000	0.000	9.400
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Other			9.400

C. Other Program Funding Summary: Not Applicable.

D. Acquisition Strategy: Not Applicable.

E. Performance Metrics: Not Applicable.

OSD RDT&E PROJECT JUSTIFICATION (R2a Exhibit)

Date: February 2006

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RDT&E/ Defense Wide BA# 3	**0603618D8Z - Joint Electronic Advanced Technology**	**P619**

Cost ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
P619	Joint Electronic Advanced Technology	0.000	0.000	9.400	9.500	9.600	9.800	10.200

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The objective of this effort is to assess and prototype low cost/near term EW/IO technologies that augment and/or reduce risk when inserted into service programs of record. Opportunities

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B. Accomplishments/Planned Program:

Accomplishment/Planned Program Title	FY 2005	FY 2006	FY 2007
Ground Based Counter-ManPADS:	0.000	0.000	2.200
Integrate sensor grid with selected countermeasures concepts.			

Accomplishment/Planned Program Title	FY 2005	FY 2006	FY 2007
Low Cost/Near Term Counter-ManPADS:	0.000	0.000	5.300
Aircraft integration of sensor fusion missile warning Advanced decoy evaluation IR signature data managment			

Accomplishment/Planned Program Title	FY 2005	FY 2006	FY 2007
Electronic Advanced Technology:	0.000	0.000	1.900
Warhead defeat UAV detection and engagement Commercial technology defeat			

C. Other Program Funding Summary: Not Applicable.

D. Acquisition Strategy: Not Applicable.

E. Major Performers Not Applicable.