

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY		PE NUMBER AND TITLE								
4 - Advanced Component Development and Prototypes		0603801A - Aviation - Adv Dev								
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	5384	9536	6481	7503	8738	8674	8044	9537	Continuing	Continuing
B32 ADV MAINT CONCEPTS/EQ	4422	9536	6481	7503	8738	8674	8044	9537	Continuing	Continuing
B45 AIRCREW INTEGRATED SYS-AD	962									7135

A. Mission Description and Budget Item Justification: This PE provides advanced development aviation support of tactical programs associated with air mobility, advanced maintenance concepts and equipment, and Aircrew Integrated Systems (ACIS). This program demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets developed enhance the functionality of current and future aircraft by improving the efficiency of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, enhance aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment.

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<u>B. Program Change Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	7146	6542	6218	6757
Current BES/President's Budget (FY 2008/2009)	5384	9536	6481	7503
Total Adjustments	-1762	2994	263	746
Congressional Program Reductions	-72	-36		
Congressional Rescissions	-31			
Congressional Increases	1000	3100		
Reprogrammings				
SBIR/STTR Transfer		-269		
Adjustments to Budget Years	-2659	199	263	746

FY 07: \$3.1 million increase for Aviation Ground Power Unit II;

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COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
B32 ADV MAINT CONCEPTS/EQ	4422	9536	6481	7503	8738	8674	8044	9537	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets developed enhance the functionality of current and future aircraft by improving the efficiency of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, enhance aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment. This program provides for development of rapid battle repair procedures, tools development to speed the return of aircraft to a full mission status and development of new equipment for aerial recovery of damaged aircraft. Included in this program are projects such as: diagnostics/prognostic monitoring systems, Battle Damage Assessment and Repair (BDAR) procedures and tools, support to modernized aircraft, Aviation Turbine Engine Diagnostics System (ATEDS), Flexible Engine Diagnostic System (FEDS), Unit Maintenance Aerial Recovery Kit (UMARK), Standard Towing System (SATS), Shop Equipment Contact Maintenance (SECM), Aviation -Sets, Kits, Outfits and Tools (A-SKOT) redesign, Aviation Vibration Analyzer II (AVA II) and development of the modular Aviation Ground Power Unit (AGPU), Generic Aircraft Nitrogen Generator (GANG), Aviation Intermediate Maintenance (AVIM) Shop Set used for performing intermediate and limited depot-level maintenance, and development support for tools needed to provide maintenance support to modernized/future force aircraft.

<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Aviation Turbine Engine Diagnostic System (ATEDS)	1065			
Battle Damage Assessment and Repair System (BDAR)		100	200	
Standard Aircraft Towing System (SATS)	110	310	813	
Generic Aircraft Nitrogen Generator (GANG)		100		
Flexible Engine Diagnostic System (FEDS) T-701 Engine		118		
FEDS Next Generation				533
Shop Equipment Contact Maintenance (SECM) Modernization	879	1346	1111	1377
Aviation Ground Power Unit (AGPU) II	1321	3100	800	1863
Unit Maintenance Aerial Recovery Kit (UMARK)		1200	1220	1092
Aviation - Sets, Kits, Outfits and Tools (A-SKOT)		1417	1475	1637
Aviation Vibration Analyzer II (AVA-II)	130			
Aviation Intermediate Maintenance (AVIM) Shop Set		538		
Management Support Services	107	332	190	218
Technical Engineering Services	700	581	542	633

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RDT&E Project Test Support	110	125	130	150				
Small Business Innovative Research (SBIR)/Small Business Technology Transfer Programs (STTR)		269						
Total	4422	9536	6481	7503				

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Aircraft Procurement, Army(APA) SSN AZ3100	61349	59552	80221	104693	87152	65504	68745	96280	Continuing	Continuing

Comment:

C. Acquisition Strategy This project is an aggregate of advanced maintenance concepts-related projects. While the detailed acquisition strategy varies from project to project, the general strategy for each individual project is to complete the development effort through Government test (developmental and operational). Program documentation for milestone decision is prepared, as appropriate, concurrently with the development effort.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT		
4 - Advanced Component Development and Prototypes			0603801A - Aviation - Adv Dev									B32		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ATEDS - Multi Engine/Integration	Various	PIF, Redstone Arsenal, AL/Boeing/GE, Sikorsky/GE, Honeywell; PIF, Redstone Arsenal, AL	4582	1065	2-3Q								5647	5647
BDAR System	MIPR	PIF, Redstone Arsenal, AL				100	3Q	200	2Q				300	300
SATS	MIPR	Navy, Lakehurst, NJ	784	110	2Q	310	2Q	813	2Q				2017	2017
GANG	MIPR	AATD, Ft. Eustis, VA				100	2Q						100	100
FEDS T-701 Engine	MIPR	Navy, Lakehurst, NJ				118	2Q						118	118
FEDS Next Generation	MIPR	Navy, Lakehurst, NJ								533	2Q	Cont.	Cont.	Cont.
SECM	MIPR	PIF, Redstone Arsenal, AL	800	879	3Q	1346	2Q	1111	2Q	1377	2Q		5513	5513
AGPU II	Various	AM General, Detroit, MI/Solectra, Boston, MA, (Applied Geo Tech (AGT)/AAI Corp, Choctaw, MS	5803	1321	2Q	3100	2Q	800	2Q	1863	2Q	Cont.	Cont.	Cont.
UMARK	MIPR	ATTC, Ft. Rucker, AL / AEC, APG, MD / ATEC, Alexandria, VA				1200	3Q	1220	2Q	1092			3512	3512
A-SKOT	MIPR	PIF, Redstone Arsenal, AL / TACOM, Warren, MI				1417	2Q	1475	2Q	1637	2Q	Cont.	Cont.	Cont.
AVA-II	C/FP/Level of Effort	AMRDEC, Redstone Arsenal, AL	1333	130	4Q								1463	1463
AVIM Shop Set	MIPR	PIF, Redstone Arsenal, AL				538	2Q						538	538
Subtotal:			13302	3505		8229		5619		6502		Cont.	Cont.	Cont.

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February 2007

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603801A - Aviation - Adv Dev	PROJECT B32
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II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services	MIPR	AATD, Ft. Eustis, VA	4307	700	1-3Q	581	1-3Q	542	1-3Q	633	1-3Q	Cont.	Cont.	Cont.
Subtotal:			4307	700		581		542		633		Cont.	Cont.	Cont.

Remarks: None

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
RDT&E Project Test Support	MIPR	ATEC, Alexandria, VA	100	110	1-3Q	125	1-3Q	130	1-3Q	150	1-3Q	Cont.	Cont.	Cont.
Subtotal:			100	110		125		130		150		Cont.	Cont.	Cont.

Remarks: None

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Management Support Services	C/FP/ Level of Effort and InHouse	AGSE, Redstone Arsenal, AL & Science Applications Intl Corp, San Diego, CA	1890	107	1-4Q	332	1-4Q	190	1-4Q	218	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						269							269	
Subtotal:			1890	107		601		190		218		Cont.	Cont.	Cont.

Remarks: None

Project Total Cost:	19599	4422		9536		6481		7503		Cont.	Cont.	Cont.
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Schedule Profile (R4 Exhibit)

February 2007

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Aviation Turbine Engine Diagnostic System	ATEDS																														
Battle Damage Assessment & Repair					BDAR																											
Flexible Engine Diagnostic System Next Generation													FEDS Next Generation																			
Standard Aircraft Towing System	SATS																															
Shop Equipment Contact Maintenance					SECM																											
Aviation Ground Power Unit II									AGPU II																							
Aviation - Sets, Kits, Outfits and Tools																	A-SKOT															
Misc Projects (FEDS T-701 Engine, UMARK, AVA II, AVIM Shop Set, etc)																	MISC PROJECTS															

Schedule Detail (R4a Exhibit)

February 2007

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4 - Advanced Component Development and Prototypes		0603801A - Aviation - Adv Dev						B32	
<u>Schedule Detail</u>	<u>FY 2006</u>	<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>	
Aviation Turbine Engine Diagnostic System	1Q - 4Q	1Q - 3Q							
Battle Damage Assessment & Repair		3Q - 4Q	1Q - 4Q	1Q - 2Q					
Flexible Engine Diagnostic System Next Generation				2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Standard Aircraft Towing System	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q					
Shop Equipment Contact Maintenance	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
Aviation Ground Power Unit II	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Aviation - Sets, Kits, Outfits and Tools		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Misc Projects (FEDS T-701 Engine,UMARK, AVA II, AVIM Shop Set, etc)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	