

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								February 2003		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604633A - AIR TRAFFIC CONTROL				PROJECT 586		
COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
586 AIR TRAFFIC CONTROL	1116	2199	2514	2596	2733	2725	2164	1985	0	19191
<p><u>A. Mission Description and Budget Item Justification:</u> This program element (PE) funds continuous efforts in the development of modernized tactical and fixed base Air Traffic Control (ATC) systems that will significantly enhance aviation safety in both the tactical and strategic ATC domains. Funded in this program element is the development of the Mobile Tower System (MOTS). The MOTS is a tactical mobile tower designed to meet the deployability and communication requirements of the objective force. A Non-Developmental Item (NDI), MOTS will be equipped with modernized and secure avionics to ensure highly reliable and consistent tactical aircraft communications across all frequency bands and ranges to ensure compatibility with all Army, Joint, and Allied aircraft. MOTS will provide modern digital, secure, anti-jam communications, a digital recorder, basic weather information, a precision location capability, and full compatibility with all military and civilian airfields as well as tactical landing zones. The currently fielded systems, AN/TSW-7A and AN/TSQ-70A, are obsolete and require two, two and a half ton vehicles, a 15Kw generator, and a support trailer to fully operate the system. The system is not deployable on any aircraft smaller than a C-5, does not meet communications requirements across the operational spectrum, and is very difficult to maintain because parts are no longer manufactured for the system. An integral part of the MOTS program is the Portable Airfield Lighting System (PALS). This program element includes funds for the trailer mounted PALS and the man-portable PALS. The trailer mounted PALS provides mobile aircraft lighting and all the necessary elements to establish a remote heliport/landing zone including runways up to 5,000 feet in length. Currently, ATC units do not have an airfield lighting capability and only limited tactical lighting capabilities. PALS provides positive visual cues for runway alignment and rate of descent, allows for lower descent altitudes during precision approaches, and provides positive visual directions for Forward Area Rearming/Refueling Point (FARP) operations. The man-portable variant of PALS deploys with the Tactical Terminal Control System (TTCS), provides lighting for tactical landing zones, and provides position lights for six FARP points. PALS provides a significant force protection enhancement to the safety of Army, joint, and allied aircraft operations at all landing sites. The system will significantly enhance aviation safety for all aircraft operations, especially during night and inclement weather operations. Both MOTS and PALS are effective risk management tools. New efforts will include the initial design and development of a Combat Mission Simulator (CMS) to support the TAIS and ATNAVICS Systems. The CMS will significantly improve controller training and support operational currency requirements. These systems support the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).</p>										
<u>Accomplishments/Planned Program</u>						FY 2002	FY 2003	FY 2004	FY 2005	
Program Support						109	117	130	135	
Complete MOTS Competition Testing						85	0	0	0	
MOTS Prototype Development						200	1997	620	0	

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<u>Accomplishments/Planned Program (continued)</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
PALS Proof of Concept Testing	722	0	0	0
Concept Exploration for ATC Simulators/Trainers (ATNAVICS/TAIS/MOTS)	0	85	146	0
PALS Prototype Development	0	0	1215	0
PALS Developmental Testing	0	0	403	0
ATC Simulators/Trainers Prototype Development	0	0	0	1741
TAIS P3I	0	0	0	333
JTRS Integration (MOTS/TAIS/ATNAVICS)	0	0	0	387
Totals	1116	2199	2514	2596

<u>B. Program Change Summary</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Previous President's Budget (FY 2003)	2179	2339	2613	2705
Current Budget (FY 2004/2005 PB)	1116	2199	2514	2596
Total Adjustments	-1063	-140	-99	-109
Congressional program reductions				
Congressional rescissions	-11	-75		
Congressional increases				
Reprogrammings	-1001	-13		
SBIR/STTR Transfer	-51	-52		
Adjustments to Budget Years			-99	-109

FY 2002: \$1 million reprogrammed to support urgent requirement for Apache 2nd Gen FLIR.

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C. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
APA AA0050 - Air Traffic Control	58611	63292	59963	59614	56171	77936	108470	85518	Continue	Continue
<p>D. Acquisition Strategy: Explore new technology initiatives for the development of tactical ATC equipment, ensure complete integration of tactical ATC equipment with the National Airspace System (NAS), and integrate new technology into existing systems.</p>										

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604633A - AIR TRAFFIC CONTROL					PROJECT 586		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MOTS	TBD	TBD	2739	1694	1-2Q	620	1Q	0		0	5053	0
b . PALS	TBD	TBD	2416	0		1215	1Q	0		0	3631	0
c . ATC SIMULATORS/TRAINERS	TBD	TBD	0	0		56	1-2Q	1741	1-2Q	0	1797	0
d . TAIS P3I	TBD	TBD	0	0		0		166	1-2Q	0	166	0
e . JTRS INTEGRATION	TBD	TBD	0	0		0		208	1-2Q	0	208	0
Subtotal:			5155	1694		1891		2115		0	10855	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . ATC SIMULATORS	TBD	TBD	0	85	2Q	90	2Q	0		0	175	0
b . JTRS	TBD	TBD	0	0		0		179	1-2Q	0	179	0
c . TAIS P3I	TBD	TBD	0	0		0		167	1-2Q	0	167	0
Subtotal:			0	85		90		346		0	521	0

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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MOTS	MIPR	AATD, FT EUSTIS, VA	298	303	3Q	0		0		0	601	0
b . PALS TESTING & INTEGRATION	TBD	TBD	722	0		403	2Q	0		0	1125	0
Subtotal:			1020	303		403		0		0	1726	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . ATNAVICS	FP	CSC, INC.	1125	9	1-4Q	8	1-4Q	0		0	1142	0
b . MOTS	CPFF	CAS, INC, Huntsville, AL	233	68	1-4Q	22	1-4Q	0		0	323	0
c . PALS	Various	Various	300	0		71	1-4Q	26	1-4Q	0	397	0
d . TAIS	FP	CAS, INC, Huntsville, AL	12	25	1-4Q	8	1-4Q	21	1-4Q	0	66	0
e . ATC SIMULATORS	TBD	TBD	0	15	1-4Q	21	1-4Q	73	1-4Q	0	109	0

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IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
f . JTRS	TBD	TBD	0	0		0		15	1-4Q	0	15	0
Subtotal:			1670	117		130		135		0	2052	0
Project Total Cost:			7845	2199		2514		2596		0	15154	0

Schedule Profile Detail (R-4a Exhibit)							February 2003	
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<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MOTS Competition Testing	1Q							
MOTS Prototype Development	4Q	1-2Q						
MOTS Developmental Testing/TDP		3-4Q	1-3Q					
PALS Proof of Concept Testing	2-4Q							
Concept Exploration for ATC Simulators/Trainers (ATNAVICS/TAIS/MOTS)		2-3Q	1-2Q					
PALS Prototype Development			1-2Q					
PALS Developmental Testing			3-4Q					
ATC Simulator Prototype Development				1-3Q				
TAIS P3I Developmental Testing				3Q				