

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604633A - AIR TRAFFIC CONTROL						PROJECT 586		
COST (In Thousands)	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
586 AIR TRAFFIC CONTROL	7877	8899	14214	2717	4844	7102	6610	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element 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. ATC systems are required to achieve or maintain compliance with civil, military, domestic, and international air traffic control and combat identification requirements and mandates. Funding will be utilized to develop, evaluate and integrate candidate systems in each key technology area. 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 current to future force. The 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 in an armored, survivable vehicle.

Funded product improvements include the Air Traffic Control (ATC) Communications and Networking efforts integration and the Tactical Airspace Integration System (TAIS). Voice radios currently integrated into ATC systems will begin migration to accommodate both voice and high bandwidth data throughput. In a networked battlefield, joint service systems and radars can provide data beneficial to ATC missions assuming a communications infrastructure and data processing capability is embedded in ATC systems. As the Federal Aviation Agency (FAA) and Department of Defense (DoD) transition to aircraft self-reporting technologies such as Automatic Dependent Surveillance-Broadcast (ADS-B)/Combat Identification (CID) and Mode 5, PM ATC will equip tactical and fixed base ATC units with ground receivers and networks to process the aircraft positional data. TAIS, as a Battlefield Automated System (BAS) of the Army Battle Command System (ABCS), requires the development and testing of web-based services for both Army Airspace Command and Control (A2C2) and Air Traffic Services (ATS), and integration of these new web-based services into a Battle Command Service Oriented Architecture (SOA) under the provisions of the Army's Battle Command Migration Plan. TAIS RDTE efforts also include Pre-Planned Product Improvements (P3I). TAIS P3I include, but are not limited to, developing and testing Combat Identification (CID) technologies, and autonomous, embedded Blue Force Tracking (BFT) solutions for third dimension BFT situational awareness with minimal latency.

FY 2007 funding total includes no funding received in GWOT supplemental.

FY 2008 funding total includes no funding received in the Bridge Supplemental.

FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of 586.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MOTS System Development, Demonstration & Testing	7498	4829	4052
Communications			850
Networking			724

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TAIS Battle Command Migration		3204	5500
TAIS P3I			2465
Tech and Log support	304	555	530
Program Management Support	75	84	93
Small Business Innovative Research/Small Business Technology Transfer Programs		227	
Total	7877	8899	14214

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<u>B. Program Change Summary</u>	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	4477	8956	14268
Current BES/President's Budget (FY 2009)	7877	8899	14214
Total Adjustments	3400	-57	-54
Congressional Program Reductions		-57	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	3502		
SBIR/STTR Transfer	-102		
Adjustments to Budget Years			-54

FY 2007 - \$3.4M reprogrammed to ATC for Uparmor to MOTS Program.

<u>C. Other Program Funding Summary</u>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
APA AA0050 - Air Traffic Control	103769	97738	123733	79080	85895	85803	88653	Continuing	Continuing

Comment:

D. Acquisition Strategy PM ATC will continue to embrace new technology initiatives for the development of tactical and fixed base ATC equipment and the integration of new technology into existing systems. These systems are required to achieve or maintain compliance with civil, military, domestic and international air traffic control and combat identification requirements and mandates. Funding will be utilized to develop, evaluate, and integrate candidate systems in each key technology area. Technology insertion will be acquired through contract modifications, engineering services tasks, and new/follow-on contracts. MOTS System Development and Demonstration contract was awarded competitively in FY 2006. MOTS development and testing to be completed in FY 2009.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604633A - AIR TRAFFIC CONTROL							586		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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
MOTS System Development and Demo	C/CPFF	Sierra Nevada Corp, Sparks, Nevada	5841	7011	3Q	3658	2Q	2600	1Q		19110	
MOTS Systems Development Support	Various	Various	649	180	1-3Q	366	1-3Q	411	2Q		1606	
MOTS Contracted Services	Various	Various		242	1Q	380	1Q	391	1Q		1013	
TAIS Battle Command Migration	SS/CPFF	General Dynamics C4S, Huntsville, AL				3204	1-2Q	5500	2Q	Cont.	Cont.	Cont.
TAIS P3I	SS/CPFF	General Dynamics C4S, Huntsville, AL						2465	2Q		2465	
Communications	TBD	TBD						850	2-3Q	Cont.	Cont.	Cont.
Networking	TBD	TBD						724	2-3Q	Cont.	Cont.	Cont.
Tech and Log Development Support	Inhouse	PM ATC, Redstone Arsenal, AL	836	304	1-3Q	555	1-3Q	530	1-3Q	Cont.	Cont.	Cont.
Subtotal:			7326	7737		8163		13471		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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
Subtotal:												
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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
MOTS Prototype Testing	MIPR	Various	65	65	2Q	425	3Q	650	2Q		1205	
Subtotal:			65	65		425		650			1205	

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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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
Program Management Support	In-House	PM ATC, Redstone Arsenal, AL	1862	75	1-4Q	84	1-4Q	93	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						227	1Q				227	
Subtotal:			1862	75		311		93		Cont.	Cont.	Cont.
Project Total Cost:			9253	7877		8899		14214		Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

February 2008

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Event Name	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				
MOTS System Development Demonstration and Testing	MOTS System Dev Demo & Testing																															
(1) MOTS Milestone C																																
Communications																	Communications															
Networking																	Networking															
TAIS Battle Command Migration																	TAIS Migration															
TAIS P3I Development																	TAIS P3I															
Maintenance Monitoring																																

Schedule Detail (R4a Exhibit)

February 2008

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0604633A - AIR TRAFFIC CONTROL**

**PROJECT
586**

<u>Schedule Detail</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>
MOTS System Development Demonstration and Testing	1Q - 4Q	1Q - 4Q	1Q - 4Q				
MOTS Milestone C			4Q				
Communications			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Networking			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
TAIS Battle Command Migration		1Q - 4Q					
TAIS P3I Development			2Q - 4Q				
Maintenance Monitoring						2Q - 4Q	1Q - 4Q