ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**

COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
586 AIR TRAFFIC CONTROL	11676	14167	7578	Continuing	Continuing

A. Mission Description and Budget Item Justification: 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. 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 Tactical Airspace Integration System (TAIS) Service Oriented Architecture (SOA), Advanced Surveillance, Air Traffic Navigation Integration and Coordination System (ATNAVICS) modernization and Mobile Tower System (MOTS). ATNAVICS provides all weather instrument flight capabilities to include enroute, terminal, radar precision approach and landing services to all Army, Joint, and allied aircraft. The MOTS is a tactical mobile tower designed to meet the deployability and communication requirements of the current to future force. TAIS SOA develops software and required hardware for airspace management web services, integrates a common view, integrates new Battle Command architecture, and provides a bridge to Unified Battle Command (UBC) and Net Enable Command and Control capabilities. TAIS also integrates advanced surveillance interfaces to further facilitate a dynamic airspace management capability.

Funded project improvements to ATC systems, including the TAIS and ATNAVICS, will align these programs with advanced networking and communications goals, and provide compatibility with the Army Aviation aircraft and avionics upgrade programs. In a networked battlefield, joint service systems and radars provide operational data to ATC missions assuming a communications infrastructure and data processing capability is embedded in ATC systems. ATC systems control or maintain information relevant to higher level organizations or other external systems; advanced networks and communications allow such information to be transmitted, to include aircraft positional information, weather data, landing surface conditions, airspace density, airspace control orders, restricted airspace, and flight plan data. As the Department of Defense transitions military aircraft to positional self reporting technologies, Product Manager ATC will demonstrate and test these various technologies prior to integration into the ATC systems. Advanced surveillance relies on aircraft self-reporting technologies which include Automatic Dependent Surveillance Broadcast (ADS-B), Mode 5, and Mode S. Initial testing and integration of these systems are foundational to Advanced Surveillance to increase ATC systems availability to detect, manage, and disseminate aircraft information. ATNAVICS will network its surveillance data to aviation and joint network nodes. TAIS, as a Battlefield Automated System (BAS) of the Army Battle Command System (ABCS), requires the development and testing of web-based services for Airspace Command and Control (AC2) and Air Traffic Services (ATS), and integration of these new web-based services into a Service Oriented Architecture (SOA) supporting Army Battle Command, ATS and Dynamic Airspace Management through advanced surveillance interfaces and situational awareness to the cockpit. TAIS RDTE efforts also include Pre-Planned Product Improvements (P3I). TAIS P3I include, but are not limited to, developing and testing improvements to the air picture. To facilitate increased maintenance and system support, a remote maintenance capability will be developed.

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B. Program Change Summary	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	8899	14214	2717
Current BES/President's Budget (FY 2010)	11676	14167	7578
Total Adjustments	2777	-47	4861
Congressional Program Reductions		-47	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	3004		
SBIR/STTR Transfer	-227		
Adjustments to Budget Years			4861

Change Summary Explanation:
FY08 - Funds reprogrammed ($3004) to support the MOTS Program.
FY10 - Funding increased for TAIS Battle Command Migration.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

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5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

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Accomplishments/Planned Program:	FY 2008	FY 2009	FY 2010
MOTS System Development, Demonstration & Testing	7772	6550	698
TAIS Battle Command Migration	3204	5500	5000
TAIS P3I		800	

ATNAVICS Modernization			1239
Advanced Surveillance			122
Tech and Log support	615	841	408
Program Management Support	85	101	111
Small Business Innovative Research/Small Business Technology Transfer Programs		375	
Total	11676	14167	7578

B. Other Program Funding Summary	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
APA AA0050 - Air Traffic Control	110875	122413	76999	Continuing	Continuing

Comment:

C. 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. TAIS BC Migration contract was awarded in FY08. Development and testing will continue in FY09-12.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MOTS System Development and Demo	C/CPFF	Sierra Nevada Corp, Sparks, Nevada	12852	6704	2Q	1960	2Q				21516	
MOTS Systems Development Support	Various	Various	829	62	1-3Q	66	1-4Q				957	
MOTS Contracted Services	C/T&M	AMCOM	242	334	1Q	390	1Q				966	
TAIS Battle Command Migration	SS/CPFF	General Dynamics C4S, Huntsville, AL		3204	1Q	5500	2Q	5000	2Q	Cont.	Cont.	Cont.
TAIS P3I	SS/CPFF	General Dynamics C4S, Huntsville, AL				800	2Q			Cont.	Cont.	Cont.
ATNAVICS Modernization	SS/CPFF	Raytheon, Marlboro, MA						1239	2Q	Cont.	Cont.	Cont.
Advanced Surveillance	Various	Various						122	2-3Q	Cont.	Cont.	Cont.
Tech and Log Development Support	Inhouse	PM ATC, Redstone	1140	615	1-4Q	841	1-4Q	408	1-4Q	Cont.	Cont.	Cont.
											Cont.	Cont.
Subtotal:			15063	10919		9557		6769		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 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 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MOTS Prototype Testing	MIPR	Various	130	672	3Q	4134	2-3Q	698	2-4Q		5634	

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

Subtotal:			130	672		4134		698			5634	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	In-House	PM ATC, Redstone Arsenal, AL	1937	85	1-4Q	101	1-4Q	111	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						375					375	
Subtotal:			1937	85		476		111		Cont.	Cont.	Cont.
Project Total Cost:			**17130**	**11676**		**14167**		**7578**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

PROJECT
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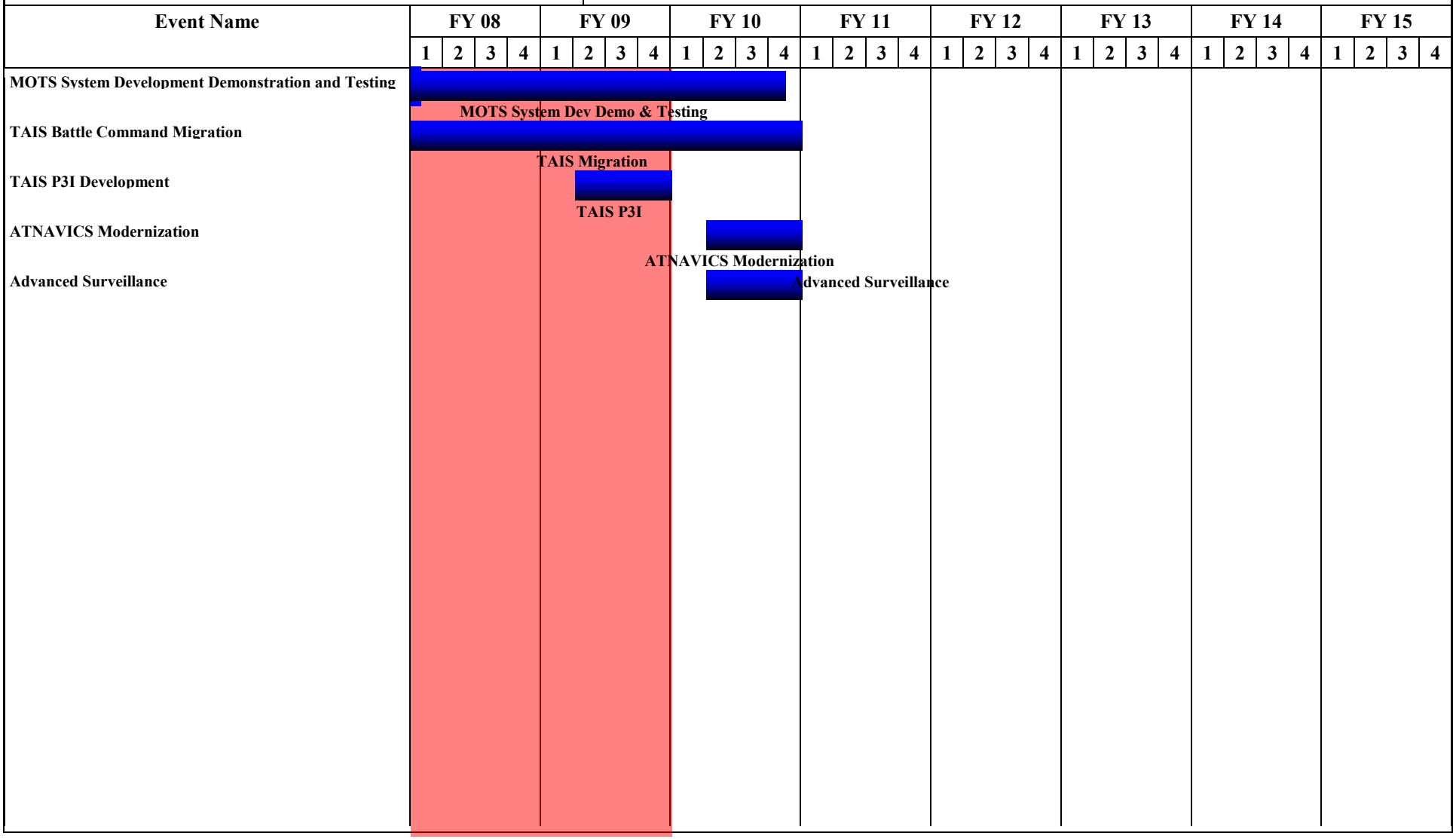

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

Schedule Detail	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
MOTS System Development Demonstration and Testing	1Q - 4Q	1Q - 4Q	1Q - 4Q					
TAIS Battle Command Migration	1Q - 4Q	1Q - 4Q	1Q - 4Q					
TAIS P3I Development		2Q - 4Q						
ATNAVICS Modernization			2Q - 4Q					
Advanced Surveillance			2Q - 4Q					