

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2005

## BUDGET ACTIVITY

### 5 - System Development and Demonstration

## PE NUMBER AND TITLE

0604□□0A - COMBINED ARMS TACTICAL TRAINER (CATT)

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	3817	18316	37471	40134	44796	32476	21777	25503	Continuing	Continuing
571 CLOSE CBT TACT TRAINER	3817	5361	6247	3160	2831	2907	0	0	0	29084
577 SOLDIER - COMBINED ARMS TACTICAL TRAINER	0	0	0	2557	2559	575	585	477	0	6753
582 SYNTHETIC ENVIR CORE	0	9792	21200	22664	26419	27466	19665	23500	Continuing	Continuing
585 AVIATION COMBINED ARMS TACTICAL TRAINER	0	3163	10024	11753	12987	1528	1527	1526	Continuing	42508

**A. Mission Description and Budget Item Justification:** The Combined Arms Tactical Trainer (CATT) is a family of combined arms simulation systems designed to support the Army's simulation-based Combined Arms Training Strategy. The initial CATT system is the Close Combat Tactical Trainer (CCTT), which provides the underlying baseline (architecture, terrain databases, After Action Review [AAR], Semi-Automated Forces [SAF], and models/algorithms) for future CATT expansions, pre-planned product improvements and system enhancements. Synthetic Environment (SE) Core provides for the expansion of the Synthetic Environment baseline to include enhanced interoperability and the products and infrastructure to support Mission Rehearsal for operations currently required by the Global War on Terror (GWOT). The first synthetic environment to be expanded is the Aviation Combined Arms Tactical Trainer (AVCATT) for both Active and Reserve components. CATT enables units, from crew to the battalion task force level, to conduct a wide variety of combat tasks on a realistic, interactive synthetic battlefield. CATT's combination of manned simulators and staff officer workstations enables units to train as a combined arms team in a cost effective manner. CATT reinforces the successes and corrects the shortcomings of the Simulator Network (SIMNET) and Aviation Network (AIRNET) Demonstration Programs executed by the Defense Advanced Research Projects Agency (DARPA). Soldier CATT is a dismount-centric collective virtual training system designed to train dismounted soldiers, leaders and units (platoon through battalion). Soldier-CATT provides light infantry, Stryker Brigade Combat Team (SBCT), Ranger, SOF and Land Warrior equipped Brigade Combat Team (BCT) commanders a highly tolerable, deployable, collective combined arms training and mission rehearsal system with an AAR capability. It provides the soldier/leader a virtual link into the Live, Virtual, and Constructive training environment and provides the core architecture that will enable dismounted infantry for Future Combat System (FCS) equipped Unit of Action units. By practicing skills in CATT, units are able to make more effective use of scarce resources and costly live fire and maneuver exercises as well as train tasks deemed too hazardous to conduct in the field. Fielded in both fixed site and mobile/transportable versions, CATT enables both Active and Reserve component units to prepare for real world contingency missions. By being able to process a wide array of terrain databases and modify the behavior of the computer generated opposing forces, CATT offers a virtually unlimited array of training options to support the Army's many regional contingency missions. The combination of tough field and live fire training and realistic simulation training in CATT is the catalyst to prepare soldiers and their leaders for the uncertainties they will face in an unpredictable world, especially in support of GWOT operations.

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The FY06/07 funding for CCTT will provide the U.S. Army with weapons concurrency upgrades and begin Generic Reconfigurable Manned Modules. These improvements allow CCTT the opportunity to enhance capabilities as a tactical trainer and maintain concurrency to communication system with the structural changes the current battle force is experiencing. FY07 funds for Soldier CATT will provide the U.S. Army with a proof of concept with key components (Virtual Warrior, Master Control/After Action Review Console and Semi-Automated Forces Interface) for a Virtual Collective Combined Arms Virtual Training System supporting dismounted/mounted leader and Soldier training tasks at the squad level. FY06/07 funds for SE Core will provide the U.S. Army with a Standardized and Dynamic Terrain Database generation process, Objective OneSAF Integration and Common Virtual Components (CVCs). FY06/07 funds nonsystem weapons concurrency upgrades and initiates Engineering Change Proposals (ECPs) for refinements to the AVCATT system. These efforts will improve readiness by providing more realistic collective training in support of GWOT and the flexibility to support Army modularity.

<b><u>B. Program Change Summary</u></b>	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	23849	33674	40153
Current Budget (FY 2006/2007 PB)	18316	37471	40134
Total Adjustments	-5533	3797	-19
Net of Program/Database Changes			
Congressional Program Reductions	-4740		
Congressional Rescissions	-279		
Congressional Increases		3797	
Reprogrammings			
SBIR/STTR Transfer	-514		
Adjustments to Budget Years			-19

FY05 changes - Congressional Program Reductions (-\$4.740 Million) resulted from Comanche termination. FY06 funding was increased to support the AVCATT program (\$2.594 Million) to support concurrency ECPs, CCTT (\$.676 Million) for obsolescence changes and SE Core (\$.527 Million) for modularity/database generation.

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

## BUDGET ACTIVITY

**5 - System Development and Demonstration**

## PE NUMBER AND TITLE

**0604□□0A - COMBINED ARMS TACTICAL  
TRAINER (CATT)**

## PROJECT

**5□1**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
571 CLOSE CBT TACT TRAINER	3817	5361	6247	3160	2831	2907	0	0	0	29084

**A. Mission Description and Budget Item Justification:** This program provides for System Development and Demonstration (SDD) and Pre-Planned Product Improvements (P3I) for the Close Combat Tactical Trainer (CCTT), which will enhance readiness for both Active and Reserve component forces to support execution of the Global War on Terror (GWOT). The program develops a networked system of interactive computer driven simulators, emulators and semi-automated forces that replicate combat vehicles and weapon systems, combat support systems, combat service support systems, and command and control systems to create a fully integrated real-time collective task training environment. This trainer will allow soldiers to practice, repetitively, tactics, techniques and procedures that, if performed on real equipment, would be too hazardous, time-consuming and expensive. These trainers enhance realism and allow soldiers and units to learn tactical combat lessons on maneuver, command and control, and improved teamwork for increased survivability. The pre-planned product improvements provide CCTT an opportunity to enhance its capabilities as a tactical trainer and maintain concurrency with the structural changes the current battle force is experiencing. These improvements will provide the interoperability with Aviation Combined Arms Tactical Trainer, Force XXI Battle Command Brigade and Below (FBCB2), Army Tactical Command and Control System (ATCCS) and other simulation systems needed to execute training on GWOT.

The FY06/07 funding for CCTT will provide the U.S. Army with weapons concurrency upgrades and begin Generic Reconfigurable Manned Modules. These improvements allow CCTT the opportunity to enhance capabilities as a tactical trainer and maintain concurrency to communication system with the structural changes the current battle force is experiencing.

<u>Accomplishments/Planned Program</u>	FY 2004	FY 2005	FY 2006	FY 2007
FY06-FY07: Develop product improvements for Generic Manned Module, Communication Upgrades for Advanced System Improvement Program (ASIP) Sincgars Radio, Trainer Unique Display, Improved Mortar Ballistic Computer and other prioritized items.	0	0	6030	2939
FY04-FY07: Support government program management, engineering, technical contract, and continue operational evaluation support.	658	781	217	221
FY04-FY05: Complete refinements to digital capabilities, enhanced After Action Review (AAR), enhanced Dismounted Infantry Manned Modules, and nonsystem weapons concurrency upgrades. Begin development efforts for generic reconfigurable Manned modules, and Mobile Theater AAR capability.	3159	4580	0	0

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R2a Exhibit)</b>								<b>February 2005</b>			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□□0A - COMBINED ARMS TACTICAL TRAINER (CATT)</b>				PROJECT <b>5□1</b>		
<u><b>Accomplishments/Planned Program (continued)</b></u>								FY 2004	FY 2005	FY 2006	FY 2007
Totals								3817	5361	6247	3160
<u><b>B. Other Program Funding Summary</b></u>		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA3, Appropriation NA0170 SIMNET/CCTT		58740	61572	63746	16678	32750	33983	33863	6574	Continuing	Continuing
<p><u><b>C. Acquisition Strategy:</b></u>Competitive cost plus award fee contract for System Development and Demonstration (SDD) phase.</p> <p>Competitive procurement against performance specifications as part of basic contract.</p> <p>Engineering Change Proposal's were Sole Source, Cost Plus Fixed Fee.</p> <p>FY05 procurement award was a Firm Fixed Price option executed thru PEO STRI Omnibus Contract (STOC) which was competitively awarded.</p>											

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)					PROJECT 501		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . CCTT Pre Planned Product Improvements (P3I)	C/TBS	TBS	3059	4580	2Q	6030	1Q	2939	1Q	5233	21841	Continue
Subtotal:			3059	4580		6030		2939		5233	21841	Continue
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering and Technical Support	MIPRs/T&M	Various activities	32062	0		0		0		0	32062	0
Subtotal:			32062	0		0		0		0	32062	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)					PROJECT 501			
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Project Office Support	MIPR	PEO STRI/NAVAIR, Orlando, FL	14912	781	1-4Q	217	1-4Q	221	1-4Q	500	16631	0	
Subtotal:			14912	781		217		221		500	16631	0	
Project Total Cost:			50033	5361		6247		3160		5733	70534	Continue	

Schedule Profile (R4 Exhibit)																								February 2005								
BUDGET ACTIVITY 5 - System Development and Demonstration												PE NUMBER AND TITLE 0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)												PROJECT 501								
Event Name	FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	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				
P3I																																

## Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□□0A - COMBINED ARMS TACTICAL TRAINER  
(CATT)**

PROJECT

**5□1**

<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
P3I Software/Hardware Insertions Award			1Q	1Q	1Q	1Q		
P3I Software/Hardware Insertions Delivery			4Q	4Q	4Q	4Q		
Mobile Theater After Action Review (AAR) Award	2Q							
Mobile Theater AAR Delivery		2Q						
Enhanced-After Action Review Award	2Q							
Enhanced-After Action Review Delivery	3Q							
Enhanced-Dismounted Infantry Manned Module Award	2Q							
Enhanced-Dismounted Infantry Module Delivery	3Q							
Joint Close Air Support Improvements Award	4Q							
Joint Close Air Support Improvements Delivery		2Q						
Generic Reconfigurable Manned Module Award		2Q						
Generic Reconfigurable Manned Module Delivery			1Q	1Q				



# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604000A - COMBINED ARMS TACTICAL  
TRAINER (CATT)**

PROJECT

**500**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
577 SOLDIER - COMBINED ARMS TACTICAL TRAINER	0	0	0	2557	2559	575	585	477	0	6753

**A. Mission Description and Budget Item Justification:** This project supports Soldier Combined Arms Tactical Trainer (CATT) which is a collective combined arms virtual training system supporting dismounted/mounted leader and soldier training tasks. It will enable more frequent, repetitive, standards-based training to build and sustain readiness at home station. Soldier CATT combines immersive soldier and leader simulators called "Virtual Warrior" with PC-based Reconfigurable Vehicle Simulators, Dismounted Soldier Multifunctional Workstations, and high fidelity convoy trainers to support training of leaders and Soldiers from squad/crew to company with extensions to individual Soldier and battalion echelons. Soldier CATT will enable training on the full-spectrum of operations required by the Global War on Terror (GWOT) in urban and complex terrain environments.

FY07 funds for Soldier CATT will provide the U.S. Army with a proof of concept with key components (Virtual Warrior, Master Control/After Action Review Console and Semi-Automated Forces Interface) for a Virtual Collective Combined Arms Virtual Training System supporting dismounted/mounted leader and Soldier training tasks at the squad level training to support GWOT.

<b>Accomplishments/Planned Program</b>	FY 2004	FY 2005	FY 2006	FY 2007
FY07: Initiate development of squad test suite (proof of concept).	0	0	0	2313
FY07: Initiates program office support.	0	0	0	244
Totals	0	0	0	2557

**B. Other Program Funding Summary:** Not applicable for this item.

**C. Acquisition Strategy:** Planned for competitive cost type contract.

ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604□□0A - COMBINED ARMS TACTICAL TRAINER (CATT)					5□□			
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . S-CATT Development	C/CPFF	TBS	0	0		0		2313	2Q	3594	5907	0	
Subtotal:			0	0		0		2313		3594	5907	0	
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Program Support	C-FFP-TM	Morgan Research Corporation, Orlando, FL	0	0		0		100	2Q	250	350	0	
Subtotal:			0	0		0		100		250	350	0	

ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)					PROJECT 500			
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Program Office Support		PEO STRI/NAVAIR, Orlando, FL	0	0		0		144	1-4Q	277	421	0	
Subtotal:			0	0		0		144		277	421	0	
Project Total Cost:			0	0		0		2557		4121	6678	0	

Schedule Profile (R4 Exhibit)	
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February 2005

**BUDGET ACTIVITY**  
**5 - System Development and Demonstration**

PE NUMBER AND TITLE
<b>0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)</b>

# PROJECT 5

Event Name	FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	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) Soldier-CATT Program Approval Development													1 Milestone A/B																			

<b>Schedule Detail (R4a Exhibit)</b>						<b>February 2005</b>		
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)</b>			PROJECT <b>500</b>	
<u><b>Schedule Detail</b></u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
S-CATT development and squad level capability (proof of concept) Award				2Q				
S-CATT development and squad level capability (proof of concept) Delivery					3Q			
Test at multiple squad level					4Q			
Develop a platoon level capability with system upgrades/enhancements.					3Q			

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

## BUDGET ACTIVITY

**5 - System Development and Demonstration**

## PE NUMBER AND TITLE

**0604□□0A - COMBINED ARMS TACTICAL  
TRAINER (CATT)**

## PROJECT

**5□2**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
582 SYNTHETIC ENVIR CORE	0	9792	21200	22664	26419	27466	19665	23500	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** This project supports the Synthetic Environment Core (SE Core) and is the Army's Common Virtual Environment (CVE) to link virtual training simulations into an integrated and interoperable training system with fair fight capability that is sufficient for Mission Rehearsal and Global War on Terror (GWOT) training. This CVE will link to the live and constructive environments for an integrated Live/Virtual/Constructive LVC capability to support Army Transformation and Combined Arms Training Strategy. SE Core is a key element in the Army's Training Transformation Plan to link the Future Combat Systems' (FCS) embedded multi-mode LVC training capability with Current and Stryker Forces and Joint Interagency Intergovernmental Multinational (JIIM) simulations.

Under SE Core, current and future virtual training devices will enable the Army to execute combined arms and joint training, mission planning and rehearsals at home station, en route and deployed locations critical to training for GWOT operations. SE Core consists of a series of interoperable software components that will be integrated into virtual simulations, enabling the Army's CVE and facilitating interoperability in a LVC Training Environment (TE). The components are Objective OneSAF (OOS) integration, standard rapid terrain database (TDB) generation process, master TDB open format, standard visual models, dynamic terrain, atmospheric effects, Chemical, Biological, Radiological, Nuclear and High Explosive (CBRNE) effects, common After Action Review (AAR), a long haul networking capability, Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR) interfaces, training support packages and exercise management tools. The standard TDB generation process uses automated tools, processes and standard source data to create Master Database (MDB). Utilizing a read tool and application program interface, the MDB open format is developed into correlated runtime databases to support the LVC TE and for mission planning/ rehearsal/execution in an operational environment. Once developed, SE Core's Common Virtual Components (CVCs) will reduce redundancy, increase realism and facilitate an integrated LVC TE.

FY06/07 funds for SE Core will provide the U.S. Army with a Standardized and Dynamic Terrain Database generation process, Objective OneSAF integration and CVCs.

<b>Accomplishments/Planned Program</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>
FY05-FY07: Provides program management, engineering, technical, contract, and test support for development of SE Core.	0	1832	2070	2157
FY05-FY07: Architecture and Integration (integration of OOS into AVCATT and CCTT, development of a Virtual Simulation Architecture (VSA), Atmospheric effects for a Common Virtual Environment, Net Ready Capabilities, Exercise Management Tools, Long Haul Networking Component, Training Support Packages to support Combined Arms Training in AVCATT and CCTT). Integrated capabilities support GWOT training requirements.	0	4313	9616	13706

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)								February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)</b>				PROJECT <b>502</b>			
<b>Accomplishments/Planned Program (continued)</b>								FY 2004	FY 2005	FY 2006	FY 2007
FY05-FY07: Master Database (MDB)& Facilities (Standardized Terrain Database, MDB, Urban Operations Insets and Visual Models for a Common Virtual Environment).								0	3647	9514	6801
Totals								0	9792	21200	22664
<b>B. Other Program Funding Summary</b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost	
OPA3, Appropriation NA0173 Aviation Combined Arms Tactical Trainer	19786	54591	71301	81713	72082	29422	16486	16845	Continuing	Continuing	
OPA3, Appropriation NA0170 Close Combat Tactical Trainer (CCTT)	58740	61572	63746	16678	32750	33983	33863	6574	Continuing	Continuing	
<b>C. Acquisition Strategy:</b> Development and demonstration competitive contracts against performance specifications.											

<b>ARMY RDT&amp;E COST ANALYSIS(R3)</b>									<b>February 2005</b>			
<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>					<b>PE NUMBER AND TITLE</b> <b>0604□□0A - COMBINED ARMS TACTICAL TRAINER</b> <b>(CATT)</b>					<b>PROJECT</b> <b>5□2</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Architecture and Integration	C/CPFF	TBS	0	4313	2Q	9616	1Q	13706	1Q	Continue	27635	21377
b . Master Database (MDB) & Facilities	C/CPFF	TBS	0	3647	2Q	9514	1Q	6801	1Q	Continue	19962	3006
Subtotal:			0	7960		19130		20507		Continue	47597	24383
Remarks: Raytheon Systems Co. has sold this part of their company to L-3Com.												
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering Services & Technical Support	C/FFP/T&M	Morgan Research Corporation, Orlando, FL	0	172	2Q	367	1Q	383	1Q	Continue	Continue	6421
Subtotal:			0	172		367		383		Continue	Continue	6421



ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□□0A - COMBINED ARMS TACTICAL TRAINER (CATT)					PROJECT 5□2			
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
Remarks: Not Applicable													
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Project Office Support	MIPR	PEO STRI/NAVAIR Orlando	0	1660	1-4Q	1703	1-4Q	1774	1-4Q	Continue	Continue	0	
			0	1660		1703		1774		Continue	Continue	0	
Subtotal:													
Project Total Cost:			0	9792		21200		22664		Continue	Continue	30804	

Schedule Profile (R4 Exhibit)																								February 2005																			
BUDGET ACTIVITY 5 - System Development and Demonstration												PE NUMBER AND TITLE 0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)																PROJECT 502															
Event Name												FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
												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
(1) SE CORE Program Approval																1 Milestone A/B																											
Architecture and Integration																																											
Master Database (MDB) & Facilities																																											

Schedule Detail (R4a Exhibit)						February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)				PROJECT 502			
<u>Schedule Detail</u>			FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Architecture and Integration Award				2Q	1Q	1Q	1Q	1Q		
Architecture and Integration Spiral Deliveries					3-4Q	4Q	4Q	4Q		
MDB & Facilities Award				2Q	1Q	1Q	1Q	1Q	1Q	1Q
MDB & Facilities Spiral Deliveries					2-3Q	4Q	4Q	4Q	4Q	4Q

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R2a Exhibit)</b>	<b>February 2005</b>
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BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>	PE NUMBER AND TITLE <b>0604□□0A - COMBINED ARMS TACTICAL TRAINER (CATT)</b>	PROJECT <b>5□5</b>
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COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
585 AVIATION COMBINED ARMS TACTICAL TRAINER	0	3163	10024	11753	12987	1528	1527	1526	Continuing	42508

**A. Mission Description and Budget Item Justification:** This project supports the Aviation Combined Arms Tactical Trainer (AVCATT) and is an Army aviation training system for both the Active and Reserve Component to provide mission rehearsal and training in support of the Global War on Terrorism (GWOT). AVCATT completed Initial Operational Test & Evaluation (IOT&E) on 1 August 2003 and received Full Rate Production Decision on 19 December 2003. A single suite of equipment consists of two (2) mobile trailers housing six (6) reconfigurable networked simulators that support the AH-64A/D, UH-60A/L, CH-47D, and OH-58D platforms. Supporting roleplayer, semi-automated forces (SAF), and after action review (AAR) workstations are also provided as part of each suite. AVCATT is a fully mobile system, capable of utilizing shore and generator power and is transportable worldwide. AVCATT fully supports Army modularity. The AVCATT system will permit various aviation units to conduct collective task training on a real-time, computerized battlefield in a combined arms scenario. Other required elements that are present on the modern, high intensity battlefield, such as the combat support and combat service support elements are an integral part of the simulation database. AVCATT is designed to provide realistic, high intensity collective and combined arms training to aviation units as well as the full spectrum of operations in support of GWOT. AVCATT supports the Aviation Transformation Plan and the Aviation Combined Arms Training Strategy.

FY2006/2007 funding will initiate Engineering Change Proposals (ECPs) for refinements to the system to include: Classified Operations, Objective OneSAF and Mission Rehearsal capabilities. Funding will also support interoperability with other combined arms simulators, life cycle baseline enhancements to the AVCATT infrastructure and technical obsolescence.

<b>Accomplishments/Planned Program</b>	FY 2004	FY 2005	FY 2006	FY 2007
FY05-FY07: Initiate ECPs for refinements to the system to include: Classified Operations, Objective OneSAF and Mission Rehearsal capabilities. Funding will also support interoperability with other combined arms simulators, life cycle baseline enhancements to the AVCATT infrastructure and technical obsolescence.	0	3013	9868	11591
FY05-FY07: Initiate government program management, engineering, technical, contract, and test support for AVCATT refinements.	0	150	156	162
<b>Totals</b>	0	3163	10024	11753

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R2a Exhibit)</b>	<b>February 2005</b>
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BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>	PE NUMBER AND TITLE <b>0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)</b>	PROJECT <b>505</b>
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<b><u>B. Other Program Funding Summary</u></b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost	
OPA3, Appropriation NA0173 Aviation Combined Arms Tactical Trainer	19786	54591	71301	81713	72082	29422	16486	16845	Continuing	Continuing	

**C. Acquisition Strategy:**System Development and Demonstration (SDD) competitive contract against performance specification.

ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604000A - COMBINED ARMS TACTICAL TRAINER (CATT)					505			
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . AVCATT	C/CPAF/FPI F/FFP	L3 Communications Corporation, Arlington, Texas	0	3013	2Q	9868	1Q	11591	1Q	Continue	Continue	Continue	
Subtotal:			0	3013		9868		11591		Continue	Continue	Continue	
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Subtotal:			0	0		0		0		0	0	0	

ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					060400A - COMBINED ARMS TACTICAL TRAINER (CATT)					505			
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Project Office Support		PEO STRI, Orlando, Florida	0	150	1-4Q	156	1-4Q	162	1-4Q	Continue	Continue	Continue	
Subtotal:			0	150		156		162		Continue	Continue	Continue	
Project Total Cost:			0	3163		10024		11753		Continue	Continue	Continue	

# Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604000A - COMBINED ARMS TACTICAL TRAINER  
(CATT)

PROJECT

505

Event Name	FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	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				
Classified Ops (primarily software changes)																																
Objective OneSAF Integration																																
Mission Rehearsal Capability																																
Required Interoperability with other combined arms simulators																																
Life cycle baseline enhancements to the infrastructure & technical obsol.																																



Schedule Detail (R4a Exhibit)							February 2005	
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604□□0A - COMBINED ARMS TACTICAL TRAINER (CATT)</b>				PROJECT <b>5□5</b>
<b><u>Schedule Detail</u></b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>
Classified Ops (primarily software changes)		2Q	1Q					
Objective OneSAF		2Q	1Q	1Q	1Q			
Mission Rehearsal Capability			1Q	1Q				
Required Interoperability with other combined arms simulators			1Q	1Q	1Q	1Q	1Q	1Q
Life cycle baseline enhancements to the AVCATT infrastructure and technical obsolescence			1Q	1Q	1Q	1Q	1Q	1Q