

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE			
5 - System Development and Demonstration		0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT			
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	30737	26158	33213	Continuing	Continuing
361 INTELLIGENCE SIMULATION SYSTEMS (MIP)	4115	2805	9298	Continuing	Continuing
362 Jnt Land Component Constructive Trng Capability	26622	23353	23915	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element funds the development of constructive and wargame simulations used to realistically train commanders and their battle staffs on today's complex battlefield conditions. Project D361 funds the development of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) that provides Warfighting Commanders at all echelons the ability to train with Intelligence, Surveillance, and Reconnaissance (ISR) products based on realistic ISR assets, people (including the maneuver commander, G-2, G-3, collection manager, analyst/operator) and processes. IEWTPT provides embedded training capability for Future Combat Systems (FCS) ISR systems. IEWTPT will interface/stimulate ISR systems including Tactical Unmanned Aerial Vehicle (TUAV), Joint Surveillance Target Attack Radar System-Common Ground Station (JSTARS-CGS), Tactical Exploitation System/Distributed Tactical Exploitation System (TES/DTES), Guardrail, Counter Intelligence/Human Intelligence Management Systems (CHIMS), Prophet and Distributed Common Ground Station-Army (DCGS-A). IEWTPT is the only Army Simulation System supporting ISR training from the Warfighter to the Military ISR Analyst/System Operator. Project 362, Joint Land Component Constructive Training Capability (JLCCTC), develops the Army's premier wargame simulation for training leaders and Battle Staffs at Brigade, Division, Corps, and echelons above Corps. JLCCTC will provide functionality not currently available (digital, stability, support and information operations), link to unit organizational Command, Control, Communications, Computers and Integration (C4I) equipment, improve exercise generation and after-action reporting. WARSIM will interoperate with One Semi Automated Forces (OneSAF) and other simulations as an integral part of an Army simulation toolkit, so that a warfighter training exercise can represent in simulation all Army echelons and can also be represented in a Joint environment. JLCCTC pulls together current constructive simulation systems and future constructive simulations and uses a comprehensive strategy to ensure interoperability among all of those systems. This strategy will allow JLCCTC to meet current and future user needs. JLCCTC leverages the best pieces of current systems to meet current training needs and evolves to meet the training needs of the future.

FY10 funding continues product improvements with annual spiral releases of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) and continues development of Joint Land Component Constructive Training Capability (JLCCTC).

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May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE		
5 - System Development and Demonstration	0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT		
<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	31645	26244	16996
Current BES/President's Budget (FY 2010)	30737	26158	33213
Total Adjustments	-908	-86	16217
Congressional Program Reductions		-86	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-226		
SBIR/STTR Transfer	-682		
Adjustments to Budget Years			16217

Change Summary Explanation:
 FY 2010: Funding increase of \$8,760 thousand in support of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) program and \$7,457 thousand for the Joint Land Component Constructive Training Capability (JLCCTC) program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT			PROJECT 361	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost	
361 INTELLIGENCE SIMULATION SYSTEMS (MIP)	4115	2805	9298	Continuing	Continuing	

A. Mission Description and Budget Item Justification: Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) provides Warfighting Commanders at all echelons the ability to train with Intelligence, Surveillance, and Reconnaissance products based on realistic assets, people (including the maneuver commander, G-2, G-3, collection manager, analyst/operator) and processes. IEWTPT Technical Control Cell (TCC) and HUMINT Control Cell (HCC) provides the enhancements to simulated battlefields required to stimulate ISR systems in their go to war equipment. IEWTPT interoperates with the Army's constructive simulation training systems and actual operator level field equipment identified as Target Signature Arrays. IEWTPT will interface/stimulate ISR systems including Tactical Unmanned Aerial Vehicle (TUAV), Joint Surveillance Target Attack Radar System-Common Ground Station (JSTARS-CGS), Tactical Exploitation System/Distributed Tactical Exploitation System (TES/DTES), Guardrail, Counter Intelligence/Human Intelligence Management Systems (CHIMS), Prophet and Distributed Common Ground Station-Army (DCGS-A). IEWTPT is the only Army Simulation System supporting ISR training from the Warfighter to the Military ISR Analyst/System Operator.

The FY 2010 funding will continue product improvements with annual spiral releases in the 4th Quarter of each year. Improvements in the Human intelligence (HUMINT) and Signals Intelligence (SIGINT) will coincide with tactical fielded Intelligence, Surveillance and Reconnaissance systems.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08-09: Service Oriented Architecture (SOA) has been completed, however, upgrades are required as new functionality is added. Continue HUMINT and SIGINT capabilities development.	4115	2805	
FY10: Continue product improvement with annual version releases in the 4th Quarter of each year. Improvements in Human Intelligence (HUMINT) and Signals intelligence (SIGINT), initiate Measurement and Signatures Intelligence (MASINT) requirements development and migrate existing Imagery Intelligence (IMINT) capability into Geospatial Intelligence (GEOINT) capability. Activities will coincide with tactical fielded Intelligence, Surveillance and Reconnaissance systems.			9298
Total	4115	2805	9298

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA3, Appropriation NA0102, Training Devices, Nonsystem, Intelligence	869	798	8949	Continuing	Continuing

Comment:

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS
DEVELOPMENT**

PROJECT

361

C. Acquisition Strategy Competitive development based on performance specifications.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT							361		
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
IEWTPT Eng & Manufacturing Dev.	CPIF	Gen Dynamics C4 Systems, Orlando, FL	24520	3027	1-3Q	1456	1-3Q				29003	28833
IEWTPT Eng & Manufacturing Dev.	Multiple	Gen Dynamics C4 Systems, Orlando, FL	737			225	1-4Q	6800	1-4Q	Cont.	Cont.	Cont.
Subtotal:			25257	3027		1681		6800		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
IEWTPT Engineering & Technical Support	Multiple	Various	2171	100	1-4Q	207	1-4Q	506	1-4Q	Cont.	Cont.	Cont.
Subtotal:			2171	100		207		506		Cont.	Cont.	Cont.
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
IEWTPT TEMP Support	Various	Multiple	319								319	319
IEWTPT Operational Test Event Support	Various	Multiple	359	453	1-3Q	281	1-3Q	1089	1-4Q	Cont.	Cont.	Cont.
Test Engineer Support	various	Multiple	1313			270	1-3Q	500	1-4Q	Cont.	Cont.	Cont.
Subtotal:			1991	453		551		1589		Cont.	Cont.	Cont.
IV. Management Services	Contract	Performing Activity &	Total	FY 2008	FY 2008	FY 2009	FY 2009	FY 2010	FY 2010	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT							361		
	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
IEWTPT Program Management	Various	Multiple	1897	535	1-4Q	366	1-4Q	403	1-4Q	Cont.	Cont.	Cont.
Subtotal:			1897	535		366		403		Cont.	Cont.	Cont.
Project Total Cost:			31316	4115		2805		9298		Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
361

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15																													
	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																										
TCC/HCC Development/Integration/Improvements																																																										
(1) Version 3.0 Security Accred., (2) Version 3.0 Release	▲▲ 1 2																																																									
(3) Version 4.0 Security Accred., (4) Version 4.0 Release																													▲▲ 3 4																													
(5) Version 5.0 Security Accred., (6) Version 5.0 Release																													▲▲ 5 6																													

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT	PROJECT 361
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<u>Schedule Detail</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>	<u>FY 2014</u>	<u>FY 2015</u>
TCC/HCC Development/Integration/Improvements	1Q - 4Q							
Version 3.0 Security Accred.	3Q							
Version 3.0 Release	3Q							
Version 4.0 Security Accred.		3Q						
Version 4.0 Release		3Q						
Version 5.0 Security Accred.			3Q					
Version 5.0 Release			3Q					
Version 6.0 Security Accred.				3Q				
Version 6.0 Release				3Q				
Version 7.0 Security Accred.					3Q			
Version 7.0 release					3Q			
Version 8.0 security Accred.						3Q		
Version 8.0 Release						3Q		
Version 9.0 Security Accred.							3Q	
Version 9.0 Release							3Q	
Version 10.0 Security Accred.								3Q
Version 10.0 Release								3Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT			PROJECT 362	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
362 Jnt Land Component Constructive Trng Capability	26622	23353	23915	Continuing	Continuing

A. Mission Description and Budget Item Justification: This Project funds the development of the Joint Land Component Constructive Training Capability (JLCCTC), the Army's premier wargaming simulations for training leaders and Battle Staffs from Battalion through echelons above Corps. JLCCTC pulls together current constructive simulation systems and future constructive simulations and uses a comprehensive strategy to ensure interoperability among all of those systems. JLCCTC will provide functionality not currently available (digital operations, stability and support operations and information operations), link to organic Battle Commands equipment, and improve exercise generation and after-action reporting.

The FY 2010 funding continues the development of the Army training system, integration and system evaluation. The JLCCTC leverages the best capabilities of current systems to meet current training needs and evolves to meet the training needs of the future force.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08-FY10: Verify and validate JLCCTC software models.	2243	1888	1943
FY08-FY10: Continue integration of JLCCTC components for interoperability.	15623	13395	14356
FY08-FY10: Develop and integrate user interface enhancements for Army training applications.	5392	4677	4753
FY08-FY10: Develop and evaluate system performance and conduct system test events.	3364	2831	2863
Small Business Innovative Research/Small Business Technology Transfer Programs.		562	
Total	26622	23353	23915

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA, NA0103, NSTD Command & Control	26426	17241	21571	Continuing	Continuing

Comment:

C. Acquisition Strategy Competitive development based on performance specifications.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS
DEVELOPMENT**

PROJECT

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ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT							362		
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
WARSIM Development of Army Training System	CPFF	Lockheed Martin Info Systems, Orlando, FL	72642	11091	1-3Q	10500	1-3Q	10651	1-3Q	Cont.	Cont.	Cont.
Integration of JLCCTC	Multiple	Various	26996	7207	1-2Q	5101	1-2Q	5373	1-2Q	Cont.	Cont.	Cont.
Development of logistics model	T&M	Tapestry, San Diego, CA	10692	2500	1-2Q	2300	1-2Q	2264	1-2Q	Cont.	Cont.	Cont.
Subtotal:			110330	20798		17901		18288		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
Engineering & Tech Spt	Multiple	Various	6069	430	1-3Q	430	1-3Q	650	1-3Q	Cont.	Cont.	Cont.
Subtotal:			6069	430		430		650		Cont.	Cont.	Cont.
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
Verification, Validation and Accreditation	Multiple	Various	8334	1050	1-3Q	550	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
System Evaluation and Test	Multiple	Various	11684	682	1-3Q	475	1-3Q	100	1-3Q	Cont.	Cont.	Cont.
Subtotal:			20018	1732		1025		600		Cont.	Cont.	Cont.
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	FY 2010 Cost	FY 2010 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS
 DEVELOPMENT**

PROJECT
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	Type				Date		Date		Date			Contract
Program Management	Multiple	Various	21569	3662	1-4Q	3435	1-4Q	4377	1-4Q	Cont.	Cont.	Cont.
Cost Analysis Support	T&M	Northrup Grumman-TASC, Orlando FL	414								414	493
SBIR/STTR						562					562	
Subtotal:			21983	3662		3997		4377		Cont.	Cont.	Cont.
Project Total Cost:			158400	26622		23353		23915		Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
362

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	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) JLCCTC V5, (2) JLCCTC V5.5, (3) JLCCTC V6, (4) OneSAF integration into JLCCTC	▲ 1				▲ 2				▲ 3				▲ 4																			

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT					PROJECT 362	
<u>Schedule Detail</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>	<u>FY 2014</u>	<u>FY 2015</u>
Milestone C								
JLCCTC V4								
JLCCTC V5	3Q							
JLCCTC V5.5		3Q						
JLCCTC V6			4Q					
OneSAF integration into JLCCTC				4Q				
P3I Development				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q