

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	18.999	15.645	15.547	0.000	15.547	15.858	16.006	16.073	16.991	Continuing	Continuing
C74: DEVEL SIMULATION TECH	3.613	3.728	3.548	0.000	3.548	3.643	3.620	3.072	4.022	Continuing	Continuing
C77: Army Geospatial Data Master Plan	2.324	0.341	0.477	0.000	0.477	0.485	0.493	0.507	0.509	Continuing	Continuing
C78: One Semi-Automated Forces (OneSAF)	11.383	11.576	11.522	0.000	11.522	11.730	11.893	12.494	12.460	Continuing	Continuing
C81: Joint Training Integration & Evaluation Center	1.679	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>The program element "Distributive Interactive Simulations - Engineering Development" applies to the Army's Advanced Simulation Program, which enables operational readiness and the development of concepts and systems for the Future Force through the application of new simulation technology and techniques. The development and application of simulation technology will provide the means to link electronically a range of various simulation tools in a manner that is transparent to the user. The amalgam of simulations and tools is linked together to enable execution of an event; to verify the scenarios, tactics/techniques and procedures; to train testers on new hardware/software; and to conduct trial test runs before costly live field tests. The tools developed are available for reuse by developers and users of simulations throughout the Army. Project C74 provides the resources necessary to perform the formally chartered mission of the Army's Simulation-to-C4I* Interoperability Overarching Integrated Product Team (SIMCI OIPT). (*C4I = Command, Control, Communications, Computers and Intelligence.) Project C77, Army Geospatial Data Master Plan, focuses on activities that start with data acquisition from multiple sources and culminate in (1) accurate, robust and timely geospatial data and data management and (2) integration and conversion tools that support multiple battle command, training and mission-rehearsal applications. Project C78 develops the One Semi-Automated Forces (OneSAF) program, which will combine and improve the functionality and behaviors of several current semi-automated forces to provide a single SAF for Army use in simulations. The FY11 line of Project C74 continues management of the SIMCI OIPT's Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. The FY11 line of Project C77 develops geospatial data standards and integrates geospatial data into Army Battle Command (BC) systems. The FY11 line of Project C78 continues development of the software for OneSAF Pre-Planned Product Improvements (P3Is).</p>											

UNCLASSIFIED

R-1 Line Item #101

Page 1 of 26

1242 of 1922

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev			
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	17.717	15.727	15.819	0.000	15.819
Current President's Budget	18.999	15.645	15.547	0.000	15.547
Total Adjustments	1.282	-0.082	-0.272	0.000	-0.272
• Congressional General Reductions		-0.082			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	1.720	0.000			
• SBIR/STTR Transfer	-0.438	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.272	0.000	-0.272
Change Summary Explanation					
Change Summary Explanation: None Required.					

UNCLASSIFIED

R-1 Line Item #101

Page 2 of 26

1243 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C74: <i>DEVEL SIMULATION TECH</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C74: <i>DEVEL SIMULATION TECH</i>	3.613	3.728	3.548	0.000	3.548	3.643	3.620	3.072	4.022	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification Project C74 funds the HQDA-chartered mission of the Simulation-to-C4I* Interoperability (SIMCI) Overarching Integrated Product Team (OIPT). (*C4I = Command, Control, Computers and Intelligence.) The SIMCI OIPT mission is to provide recommendations to Army senior leadership regarding Army policy, organization and processes for improvement of interoperability of Battle Command (BC) and Modeling & Simulation (M&S) systems. BC system capabilities encompass not only command and control functions, but also "decision and planning support capabilities that cover all functions including deployment, mission rehearsal, sustainment, Intelligence, Surveillance, Reconnaissance, etc., en route as well as from fixed locations." [Training and Doctrine Command (TRADOC) Pamphlet 525-66] The SIMCI OIPT, led by PEO-STRI and PEO-C3T, uses collaborative processes among its approximately 30 Army organizations (including HQDA staff, combat developers and materiel developers) to identify key interoperability shortfalls and the required materiel solutions. The functions of the SIMCI OIPT are: (1) Technical Investment--sponsor/support initiatives that seek solutions to interoperability issues surrounding BC and M&S systems; e.g. targeted, technical investments for development projects; implementation of BC and M&S interoperability architectures, standards, and interface products; (2) Research--promote cooperative research and coordination among existing and emerging BC and M&S programs; (3) Advisor to Army Leadership--recommend and influence BC and M&S interoperability programs, policies, resourcing and procedures; (4) Facilitator--facilitate the integration of Army interoperability initiatives with Service and Joint, Interagency, International and Multinational (JIIM) programs;(5) Change Agent--serve as a catalyst for change to achieve interoperable system of systems; and (6) Outreach--conduct & participate in interoperability outreach activities such as conferences and publications.SIMCI investments consist primarily of cost sharing opportunities, leveraging partial solutions to acquisition programs to enhance the interoperability of multiple systems in the Joint operational environment. Key programs that will benefit from the cross-domain vision and practices of SIMCI include Army Battle Command Systems (ABCS), System of Systems Common Operating Environment (SOSCOE), Force XXI Battle Command Brigade and Below (FBCB2), Joint Capabilities Release (JCR), Joint Land Component Constructive Training Capability (JLCCTC), Live/Virtual/Constructive Integrating Architecture (LVC-IA), Software Blocking (SWB), Data Product Development Environment (DPDE), Joint Forces Command's Joint National Training Capability (JNTC), and Global Command and Control System- Family of Systems (GCCS-FOS). SIMCI investment will accelerate the implementation, within BC and M&S systems, of a common Joint Consultation, Command and Control Information Exchange Data Model (JC3IEDM) that is used by other Services and coalition nations, thus enhancing the inherent ability of Army systems to interoperate seamlessly in a JIM environment. The SIMCI-sponsored Army C4I and Simulation Initialization System (ACSIS) capability will be expanded to the DPDE to address key training and operational data initialization gaps. This will enable timely, flexible, and common data updates to BC and M&S systems, thus reducing data latency and inter-system ambiguity. SIMCI's direct involvement with PEO Integration will increase the visibility of that program's needs and capabilities, providing the various OIPTs with opportunities to leverage their systems' fundamental capabilities to meet the needs of PEO Integration, and vice versa. SIMCI investments will cement those relationships through co-development of common-use products.FY11 funding continues management of the SIMCI OIPT'S Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Objectives are: identify and articulate to HQDA senior leadership specific standards that require Army-wide implementation;											

UNCLASSIFIED

R-1 Line Item #101

Page 3 of 26

1244 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev	PROJECT C74: DEVEL SIMULATION TECH		
co-develop data standards, architecture standards, implementation specifications and joint initialization / scenario-generation products; co-develop common JC3IEDM integration/translation capability for BC/M&S applications; co-develop BC/M&S products to support PEO Integration; continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint acquisition programs.					
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09-FY11: Management of the SIMCI OIPT's Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Objectives are: identify and articulate to HQDA Senior Leadership specific standards that require Army-wide implementation; co-develop data standards, architecture standards, implementation specifications and joint initialization / scenario-generation products; co-develop common JC3IEDM integration/translation capability for BC/M&S applications; co-develop BC/M&S products to meet the Future Force; and continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint acquisition programs. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	3.613	3.624	3.548	0.000	3.548
Program #2 FY10: Small Business Innovative Research/Small Business Technology Transfer Programs	0.000	0.104	0.000	0.000	0.000

UNCLASSIFIED

R-1 Line Item #101

Page 4 of 26

1245 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C74: <i>DEVEL SIMULATION TECH</i>			
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	3.613	3.728	3.548	0.000	3.548
<u>C. Other Program Funding Summary (\$ in Millions)</u>					
N/A					
<u>D. Acquisition Strategy</u>					
SIMCI OIPT resources are allocated to multiple organizations and contracts to execute approved functions and projects that advance the efforts of SIMCI and components-based architecture alignment.					
<u>E. Performance Metrics</u>					
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.					

UNCLASSIFIED

R-1 Line Item #101

Page 5 of 26

1246 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev					PROJECT C74: DEVEL SIMULATION TECH				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
JC3IEDM Migration/ Implementation	C/CPFF	Alion Science & Technology Tysons Corner, VA	0.294	0.246		0.285		0.000		0.285	Continuing	Continuing	0	
Implementation of Initialization Products	C/CPFF	Alion Science & technology Tysons Corner, Va	0.569	0.412		0.398		0.000		0.398	Continuing	Continuing	0	
Transition of ACSIS simulation initialization capability	C	NAVSEA Pax River, MD	0.765	0.565		0.542		0.000		0.542	Continuing	Continuing	0	
Expanding Modified Table of Equipment System Architecture (SA) data	C	General Dynamics Orlando, FL	0.563	0.361		0.297		0.000		0.297	Continuing	Continuing	0	
Adding JC3IEDM to the Common C4I adapter/web service	C	PEO STRI Orlando, Fl	0.880	0.520		0.610		0.000		0.610	Continuing	Continuing	0	
Adding JC3IEDM to C2 systems data mediation/ web service	C	Viecore FSD Ft. Monmouth, NJ	0.335	0.492		0.610		0.000		0.610	Continuing	Continuing	0	
JC3IEDM sample application and reference implementation	C	CSC Ft. Monmouth, NJ	0.867	0.560		0.417		0.000		0.417	Continuing	Continuing	0	
Initialization Study Implementation	C	IDA Alexandria, VA	0.210	0.000		0.000		0.000		0.000	Continuing	Continuing	1.394	
Subtotal			4.483	3.156		3.159		0.000		3.159			1.394	
Remarks														

UNCLASSIFIED

R-1 Line Item #101

Page 6 of 26

1247 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev				PROJECT C74: DEVEL SIMULATION TECH					
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SIMCI Program Support	C/CPFF	Alion Science & Technology Location could not be determined.	0.200	0.112		0.121		0.000		0.121	Continuing	Continuing	0
Army Initialization Program	C/CPFF	Alion Science & Tecnology Location could not be determined.	0.183	0.094		0.057		0.000		0.057	Continuing	Continuing	0
Subtotal			0.383	0.206		0.178		0.000		0.178			0.000
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C	Various Location could not be determined.	8.659	0.262		0.211		0.000		0.211	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.104		0.000		0.000		0.000	Continuing	Continuing	0

UNCLASSIFIED

R-1 Line Item #101

Page 7 of 26

1248 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010																																												
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C74: <i>DEVEL SIMULATION TECH</i>																																															
Management Services (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method & Type</th> <th>Performing Activity & Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td align="right">8.659</td> <td align="right">0.366</td> <td></td> <td align="right">0.211</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.211</td> <td></td> <td></td> <td align="right">0.000</td> </tr> </table>																		FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	Subtotal			8.659	0.366		0.211		0.000		0.211			0.000
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																													
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract																																										
Subtotal			8.659	0.366		0.211		0.000		0.211			0.000																																										
Remarks																																																							
<table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="3"></th> <th>Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td align="right" colspan="3">Project Cost Totals</td> <td align="right">13.525</td> <td align="right">3.728</td> <td></td> <td align="right">3.548</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">3.548</td> <td></td> <td></td> <td align="right">1.394</td> </tr> </table>																	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Project Cost Totals			13.525	3.728		3.548		0.000		3.548			1.394														
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																										
Project Cost Totals			13.525	3.728		3.548		0.000		3.548			1.394																																										
Remarks																																																							

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C74: <i>DEVEL SIMULATION TECH</i>

[illegible]

UNCLASSIFIED

R-1 Line Item #101

Page 9 of 26

1250 of 1922

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev		PROJECT C74: DEVEL SIMULATION TECH	
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Coalition Battle Management Language tools and Standards	4	2009	3	2012
Geospatial tool integration in C2 and Simulation	4	2009	3	2011
SDMS SOA Battle Command Demonstration	4	2009	3	2010
JC3IEDM Deep Database Monitoring Tool	4	2009	3	2010
Network Architecture Integration Service (NAIS)	4	2009	3	2011
Army Organizational Server Data Exchange with Army Battle Command Systems (ABCS)	4	2009	3	2012

UNCLASSIFIED

R-1 Line Item #101

Page 10 of 26

1251 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C77: <i>Army Geospatial Data Master Plan</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C77: <i>Army Geospatial Data Master Plan</i>	2.324	0.341	0.477	0.000	0.477	0.485	0.493	0.507	0.509	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Project C77 addresses the development and maintenance of the Army Geospatial Data Integrated Master Plan (AGDIMP), approved by the Chief of Staff, Army in April 2005. The AGDIMP provides the framework for generating, analyzing and distributing geospatial data for battle management operations, training, and mission rehearsal. The AGDIMP also provides the procedures for identifying and refining Army geospatial resource requirements. Geospatial data provide Soldiers with the framework and background for displaying the location of friendly and enemy forces and the location of other critical features on the battlefield. Geospatial data -- used in Army command and control systems, course of action analysis, mission rehearsal tools, simulators and simulations -- provide insights on how the physical environment will impact combat operations. This minimizes exposure of Soldiers to hostile environments. The AGDIMP describes the operations for a complete, integrated network-centric enterprise for managing and updating geospatial data required for the Army's Future Force. Although this plan encompasses most of the issues of an enterprise solution for geospatial needs and concerns, it does not contain the full level of detail or complexity required to be considered complete. The AGDIMP includes all activities starting with data acquisition from multiple sources (including raw sensor feeds from national sensors to soldier/platform level) and concluding with accurate, robust, and timely geospatial (terrain-related) data management, integration, and conversion tools that support multiple battle command, training, and mission-rehearsal applications. The AGDIMP does not include the algorithms and functions used by the applications themselves to produce finished battle command or intelligence products. The AGDIMP will become part of a much larger effort to integrate geospatial activities across all Services while documenting the complex framework for a "net ready" geospatial information and services architecture, an environment in which the Army's current and future forces must operate to achieve information dominance within the total battle space. This larger effort is currently being developed in conjunction with the Joint Forces Command and the other Services, including Special Operations Command.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.400	0.200	0.250	0.000	0.250
FY09-11: Funds contribute to development of the Army geospatial data model.					

UNCLASSIFIED

R-1 Line Item #101

Page 11 of 26

1252 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev		PROJECT C77: Army Geospatial Data Master Plan		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 FY09-11: Funds develop geospatial data standards and integrate geospatial data into the Army Battle Command (BC) systems. FY 2009 Accomplishments: FY 2009		0.273	0.141	0.227	0.000	0.227
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #3		1.651	0.000	0.000	0.000	0.000

UNCLASSIFIED

R-1 Line Item #101

Page 12 of 26

1253 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C77: <i>Army Geospatial Data Master Plan</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY09: Standup of Army Geospatial Center. Center provides oversight of Army geospatial activities. This is a one-time expense. Project C77 used as a place to park the funds. Center is not part of normal Project C77 activities. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		2.324	0.341	0.477	0.000	0.477
<u>C. Other Program Funding Summary (\$ in Millions)</u>						
N/A						
<u>D. Acquisition Strategy</u>						
Resources are allocated to multiple organizations and contracts for approval and execution of projects in support of the AGDIMP.						
<u>E. Performance Metrics</u>						
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C78: <i>One Semi-Automated Forces (OneSAF)</i>	11.383	11.576	11.522	0.000	11.522	11.730	11.893	12.494	12.460	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification Project C78 develops and delivers a software system that represents activities of units and forces in simulation. This representation is used to support the concept evaluation, experimentation, materiel acquisition and training communities. The focus of this project is systems engineering and design for development and evolution of the architecture and software tools for a universal system of Army computer-generated forces -- One Semi-Automated Forces (OneSAF). OneSAF is a next-generation higher fidelity brigade-and-below SAF that represents a full range of operations, systems and control processes in support of stand-alone and embedded training and Research, Development and Acquisition (RDA) simulation applications. OneSAF will be fully interoperable with the Army's emerging virtual, live, and division-and-above constructive simulations and will provide next-generation simulation products. OneSAF will replace a variety of simulations currently used within the Army to support analytic and training simulation activities. FY11 will continue the development of the software required to provide OneSAF Pre-Planned Product Improvements (P3Is) as prioritized and approved by the Training and Doctrine Command (TRADOC) Project Office.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09-FY11: Development of functionality to provide architectural services, components, synthetic environment and infrastructure capable of supporting initial model development. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010							4.367	4.043	4.885	0.000	4.885

UNCLASSIFIED

R-1 Line Item #101

Page 14 of 26

1255 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev	PROJECT C78: One Semi-Automated Forces (OneSAF)				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 FY09-FY11: Development of functionality to represent behaviors, physical models and communication models for OneSAF. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		5.025	5.191	4.967	0.000	4.967
Program #3 FY09-FY11: Verification and validation of newly developed and integrated software. FY 2009 Accomplishments: FY 2009		1.991	2.018	1.670	0.000	1.670

UNCLASSIFIED

R-1 Line Item #101

Page 15 of 26

1256 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev	PROJECT C78: One Semi-Automated Forces (OneSAF)				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4		0.000	0.324	0.000	0.000	0.000
FY10: Small Business Innovative Research/Small Business Technology Transfer						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		11.383	11.576	11.522	0.000	11.522

UNCLASSIFIED

R-1 Line Item #101

Page 16 of 26

1257 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev				PROJECT C78: One Semi-Automated Forces (OneSAF)			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: OMA, 121014000	4.911	4.009	4.205	0.000	4.205	4.532	4.769	5.672	5.642	Continuing	Continuing
D. Acquisition Strategy											
Development of Pre-Planned Product Improvement (P3I) requirements as prioritized and approved by the TRADOC Project Office via multiple task orders on competitively selected contracts.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

R-1 Line Item #101

Page 17 of 26

1258 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev					PROJECT C78: One Semi-Automated Forces (OneSAF)				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Architecture Dev & System Integration	C/CPFF	Science Applications International Corp Orlando, FL	45.960	2.510		0.000		0.000		0.000	Continuing	Continuing	51.628	
Architecture Dev & System Integration - 2	C/CPFF	TBS Location could not be determined.	0.000	0.000		2.102		0.000		2.102	Continuing	Continuing	0	
Integrated Environment Dev	C/CPFF	Advanced Systems Technology Inc., Orlando FL	9.102	1.000		1.100		0.000		1.100	Continuing	Continuing	0	
Environmental Runtime Component	C/CPFF	Science Applications International Corp Orlando, FL	6.990	0.591		0.000		0.000		0.000	Continuing	Continuing	7.981	
Environmental Runtime Component - 2	C/CPFF	TBS Location could not be determined.	0.000	0.000		0.800		0.000		0.800	Continuing	Continuing	0	
OneSAF System Development	C/CPFF	Various Location could not be determined.	9.248	0.200		0.610		0.000		0.610	Continuing	Continuing	0	
Model and Tools Development	C/CPFF	Science Applications International Corp Orlando, FL	21.863	2.800		0.000		0.000		0.000	Continuing	Continuing	27.463	
Model and Tools Development - 2	C/CPFF	TBS Location could not be determined.	0.000	0.000		3.600		0.000		3.600	Continuing	Continuing	0	

UNCLASSIFIED

R-1 Line Item #101

Page 18 of 26

1259 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			93.163	7.101		8.212		0.000		8.212			87.072
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Analysis	C/Various	Multiple Location could not be determined.	4.777	0.500		0.160		0.000		0.160	Continuing	Continuing	0
Domain Analysis	C/Various	Multiple Location could not be determined.	4.387	0.294		0.200		0.000		0.200	Continuing	Continuing	0
Architecture Engr & Tech Spt	C/CPFF	MITRE FFRDC Location could not be determined.	2.696	0.290		0.300		0.000		0.300	Continuing	Continuing	0
Subtotal			11.860	1.084		0.660		0.000		0.660			0.000
Remarks													

UNCLASSIFIED

R-1 Line Item #101

Page 19 of 26

1260 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev					PROJECT C78: One Semi-Automated Forces (OneSAF)				
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
OneSAF integration, evaluation and test	C/CPAF	Multiple Location could not be determined.	4.954	0.980		0.800		0.000		0.800	Continuing	Continuing	0	
OneSAF Verification, Validation & Accreditation	C/Various	Multiple Location could not be determined.	4.975	0.487		0.200		0.000		0.200	Continuing	Continuing	0	
Subtotal			9.929	1.467		1.000		0.000		1.000			0.000	
Remarks														
Management Services (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program management	C/Various	PEO STRI Orlando, FL	10.360	1.600		1.650		0.000		1.650	Continuing	Continuing	0	
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.324		0.000		0.000		0.000	Continuing	Continuing	0	
Subtotal			10.360	1.924		1.650		0.000		1.650			0.000	
Remarks														

UNCLASSIFIED

R-1 Line Item #101

Page 20 of 26

1261 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army									DATE: February 2010								
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>					PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>							
		Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract					
Project Cost Totals		125.312	11.576		11.522		0.000		11.522			87.072					
Remarks																	

UNCLASSIFIED

UNCLASSIFIED

Army

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604760A: Distributive Interactive Simulations (DIS) - Eng Dev	PROJECT C78: One Semi-Automated Forces (OneSAF)		
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
OneSAF Version Release 3.0	1	2009	1	2009
OneSAF Version Release 4.0	1	2010	1	2010
OneSAF Version Release 5.0	1	2011	1	2011

UNCLASSIFIED

R-1 Line Item #101

Page 23 of 26

1264 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C81: <i>Joint Training Integration & Evaluation Center</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C81: <i>Joint Training Integration & Evaluation Center</i>	1.679	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Joint Training Integration and Evaluation Center (JTIEC) supports and actively participates with the Joint Forces Command (JFCOM), Joint Warfighting Center (JWFC), Joint National Training Capability (JNTC), and Joint Management Office (JMO) in combined effort to advance Joint Training. The mission of the JTIEC is aligned with the Joint Advanced Training Technology Lab (JATTL) and the Joint Development Integration Facility (JDIF) missions. The JTIEC was established to promote collaboration in the research, development, integration, interoperability, demonstration, evaluation, and verification & validation training technologies and products. The JTIEC serves as an integration and evaluation environment for training system and tools. It will serve as a common resource for evaluation of training technologies and products to address military and civilian training, education and performance requirements. Working with the JFCOM, JWFC, JNTC, JMO, the Center collaborates on the research, development, demonstration, evaluation and interoperability of training tools, live-virtual-constructive simulations, federations, architectures, databases and performance-measurement systems on projects of relevance to participating organizations, individual services and in support of Joint research & development, training exercises, mission rehearsal and experimentation. The JTIEC provides verification, validation, accreditation and certification capabilities and will be an integrated virtual battle space environment that provides connection to the JNTC as a persistent host site for Joint training exercises and experimentation. In this capacity, the Center will include capabilities such as joint training performance & effectiveness evaluations, site planning and setup, configuration control, and communications planning and setup. The JTIEC will connect to the JATTL and provide a technology integration environment and infrastructure for service research and development efforts while providing a connection to a Joint environment and exercises. Infrastructure upgrades will enable each service to conduct research and development efforts and provide a connection to the joint environment and exercises as part of the Joint Training and Experimentation Network (JTEN).</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							1.679	0.000	0.000	0.000	0.000
FY09: Congressional Add - Joint Training Intregation and Evaluation Center; supports DoD Joint training and provided for system development to meet urgent US Joint Forces Command live virtual and constructive training requirements.											

UNCLASSIFIED

R-1 Line Item #101

Page 24 of 26

1265 of 1922

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C81: <i>Joint Training Integration & Evaluation Center</i>			
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	1.679	0.000	0.000	0.000	0.000
<u>C. Other Program Funding Summary (\$ in Millions)</u>					
N/A					
<u>D. Acquisition Strategy</u>					
N/A					
<u>E. Performance Metrics</u>					
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.					

UNCLASSIFIED

R-1 Line Item #101

Page 25 of 26

1266 of 1922

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C81: <i>Joint Training Integration & Evaluation Center</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Training Intregation and Evaluation Center	C/Various	PEO STRI Orlando	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	1.679
Subtotal			0.000	0.000		0.000		0.000		0.000			1.679
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		0.000		0.000		0.000			1.679
Remarks													

UNCLASSIFIED

R-1 Line Item #101

Page 26 of 26

1267 of 1922