

Exhibit R-2, RDT&E Budget Item Justification				Date: May 2009				
Appropriation/Budget Activity RDT&E, Defense-Wide/08				R-1 Item Nomenclature Global Command and Control System (GCCS)/PE 0303150K				
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total Program Element	50.504	35.917	26.511					
Global Command and Control System-Joint (GCCS-J)/CC01	41.634	27.915	15.947					
*Overseas Contingency Operations (OCO)-GCCS-J Integrated Imagery and Intelligence (I3)/CC01			2.750					
Collaborative Force Analysis, Sustainment, and Transportation System (CFAST)/CC02	8.870	8.002	7.814					

**A. Mission Description and Budget Item Justification:** The Global Command and Control System-Joint (GCCS-J) is the Department of Defense joint Command and Control (C2) system of record for achieving full spectrum dominance. GCCS-J is the principal foundation for dominant battlespace awareness, providing an integrated, near real-time picture of the battlespace necessary to conduct joint and multinational operations. It enhances information superiority and supports the operational concepts of full-dimensional protection and precision engagement. GCCS-J provides a robust and seamless C2 capability to the Commander-in-Chief, Secretary of Defense, National Military Command Center, Combatant Commanders, Joint Force Commanders, and Service Component Commanders. Employing the Defense Information Systems Network, GCCS-J offers vital connectivity to the systems the joint warfighter uses to plan, execute, and manage military operations. GCCS-J is a major Information Technology investment and is designated an Acquisition Category IAM Major Automated Information System (MAIS) program. GCCS-J is being implemented in an evolutionary manner through distinct blocks, using spiral development. Each block is self-contained, targets a specific set of validated, prioritized user requirements, and delivers multiple releases of GCCS-J functional capabilities. GCCS-J employs a predominantly open system client/server architecture, which is evolving to a web-based architecture that allows a diverse group of commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) software packages to operate at any GCCS-J location. Web based architecture is a key transition step as the system is readied for the migration of capabilities to the Service Oriented Architecture (SOA) framework. GCCS-J integrates C2 mission applications/capabilities, database, web technology, and office automation tools. It fuses select C2 capabilities into a comprehensive, interoperable system by exchanging imagery, intelligence, status of forces, and planning information. GCCS-J Block V version releases will continue to address high priority requirements, and implement enhancements to fielded capabilities in support of the following mission areas: Intelligence; Situational Awareness; Readiness; and Force Planning, Employment, Protection, and Deployment. The program will continue to develop and refine enhancements to the core planning and assessment tools required by combatant commanders and their subordinate joint task force commanders. In support of DoD transformation

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efforts in the area of Strategic and Operational Command and Control, the GCCS-J program provides capability products that are critical to military, intelligence, and other National Security Systems. The requested RDT&E funding is critical as GCCS-J infrastructure and functional capabilities will continue to be maintained until they are available in the Net Enabled Command Capability (NECC) Program.

Overseas Contingency Operations - GCCS-J Integrated Imagery and Intelligence (I3)\* provide for software modifications to the Global Command and Control System - Joint (GCCS-J) I3/COP baseline in direct support of USCENTCOM War funding requirements. These software modifications require extensive coding and testing in order to effect their implementation. Specifically: (a) Improve Visualization client interface for both Analyst Workshop (AWS) and AWS Web (\$1.500 million); (b) Process and display additional Unmanned Aerial Video (UAV) formats (\$0.500 million); and (c) Provide access and display of additional Open Source Intelligence data (\$0.750 million).

Adaptive Planning (AP) is the DoD's methodology for constructing timely and agile war plans that achieve national security objectives. The Collaborative Force Analysis, Sustainment, and Transportation System (CFAST) is a suite of software tools that provides AP capabilities to include: campaign planning, forecast predictions, information management and rapid execution. As an operational prototype, CFAST will continue to evolve as required to support the Joint Planning and Execution Community (JPEC) and is aimed to reduce the deliberate planning timeline from two years to six months. CFAST facilitates the dynamic preparation of campaign plans for rapid expeditionary environments to meet DoD planning doctrine requirements of ongoing operations such as the Global Overseas Contingency Operations (OCO) and future contingencies. The U.S. Pacific Command (USPACOM), U.S. European Command (USEUCOM), Joint Staff and other Combatant Commands currently utilize CFAST. OSD and Joint Staff use CFAST to model how DoD will respond to current and future conflicts using a variety of forces from all Services as part of their Operational Analysis missions.

CFAST has been identified for migration into the NECC Program. In preparation for the transition, CFAST must evolve to the SOA while continuing to provide functional enhancements to meet Joint Staff validated and prioritized requirements. These enhancements include user-intuitive capabilities for rapidly determining transportation requirements, performing course of action analyses, and projecting delivery profiles of troops and equipment by air, land, and sea. The improved system will be tailored for use by the Combatant Commanders, Component Services, Regional Commanders, Joint Task Forces (JTFs), and the Service staffs as a planning, forecasting, analysis, and execution tool for both deliberate and crisis action planning. The goal end-state is for rapidly produced, near-execution ready campaign plans that provide multiple courses of action. CFAST will provide "living plans" in a net-centric, collaborative, virtual environment, updated

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routinely to reflect changes in guidance/strategic environment with automated triggers, linked to real time authoritative sources, that alert planners to key assumptions or planning parameters.

**B. Program Change Summary:**

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY 2009 President's Budget	46.795	36.374	27.633
FY 2010 President's Budget	50.504	35.917	26.511
Total Adjustments	3.709	-0.457	-1.122

Change Summary Explanation: The FY 2008 adjustments reflect a below threshold reprogramming action Development and Strategic Planning and Integration and Test of the GCCS-J program.

In FY 2009, there were reductions due to Section 8026 FFRDCs -\$0.359 million and -\$0.098 million due to Section 8101 Economic Assumptions, as cited in the FY 2009 Appropriations Conference Report.

In FY 2010, there was an increase of \$2.750 million in support of the OCO for the GCCS-J Integrated Imagery and Intelligence (I3); a -\$1.372 million reduction due to revised fiscal guidance and revised inflation rates; and additional -\$2.500 million reduction due to internal realignment of funding to support the transition from GCCS-J to NECC.

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\* The FY 2010 Overseas Contingency Operations (OCO) request of \$2.750 is included in the FY 2010 annual base funding request for the GCCS-J program.

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<b>Exhibit R-2a, RDT&amp;E Project Justification</b>			Date: May 2009					
Appropriation/Budget Activity RDT&E, Defense-Wide/07			Project Name and Number Global Command and Control System - Joint/CC01					
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Global Command and Control System - Joint/CC01	41.634	27.915	18.697					

**A. Mission Description & Budget Item Justification:** The Global Command and Control System-Joint (GCCS-J) is the Department of Defense joint Command and Control (C2) system of record for achieving full spectrum dominance. GCCS-J is the principal foundation for dominant battlespace awareness, providing an integrated, near real-time picture of the battlespace necessary to conduct joint and multinational operations. It enhances information superiority and supports the operational concepts of full-dimensional protection and precision engagement. GCCS-J provides a robust and seamless C2 capability to the Commander-in-Chief, Secretary of Defense, National Military Command Center, Combatant Commanders, Joint Force Commanders, and Service Component Commanders. Employing the Defense Information Systems Network, GCCS-J offers vital connectivity to the systems the joint warfighter uses to plan, execute, and manage military operations. GCCS-J is a major Information Technology investment and is designated an Acquisition Category IAM Major Automated Information System (MAIS) program. GCCS-J is being implemented in an evolutionary manner through distinct blocks, using spiral development. Each block is self-contained, targets a specific set of Joint Staff validated, prioritized user requirements, and delivers multiple releases of GCCS-J functional capabilities. GCCS-J employs a predominantly open system client/server architecture, which is evolving to a web-based architecture that allows a diverse group of commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) software packages to operate at any GCCS-J location. GCCS-J integrates C2 mission applications/capabilities, database, web technology, and office automation tools. It fuses select C2 capabilities into a comprehensive, interoperable system by exchanging imagery, intelligence, status of forces, and planning information. GCCS-J Block V version releases will continue to address high priority requirements, and implement enhancements to fielded capabilities in support of the following mission areas: Intelligence; Situational Awareness; Readiness; and Force Planning, Employment, Protection, and Deployment. The program will continue to develop and refine enhancements to the core planning and assessment tools required by combatant commanders and their subordinate joint task force commanders. Because the GCCS-J program provides capability products that are critical to the direct fulfillment of military, intelligence, and other National Security Systems, the management of the GCCS-J program is an inherently governmental function. The requested RDT&E funding is critical to support DoD Transformation efforts in the area of Strategic and Operational Command and Control.

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Appropriation/Budget Activity RDT&E, Defense-Wide/07			Project Name and Number Global Command and Control System - Joint/CC01					
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Global Command and Control System - Joint/CC01	41.634	27.915	18.697					

**B. Accomplishments/Planned Program:**

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Subtotal Cost	34.878	21.712	12.432

**Development and Strategic Planning:** GCCS-J is currently executing Block V (FY 2004 through August 2009). GCCS-J Block V will incorporate new and enhanced capabilities to the v4.0 baseline. By partnering with Global Information Grid (GIG) enterprise services initiatives, GCCS-J will evolve the initial web-based architecture and maximize the use of emerging net-centric/web services. Block V releases of GCCS-J will deliver a secure, collaborative, web-enabled, and tailorable C2 architecture that provides decision superiority and vertical/horizontal interoperability. Major Block V capabilities include:

**FY 2008:** In FY 2008 GCCS-J focused on the development and testing of GCCS-J 4.2 Spiral Releases (Global 4.2, SORTS 4.2, JOPES 4.2) addressing operational requirements and net-centric architecture implementation. Included core infrastructure upgrades to operating system, database, and security capabilities, completing the implementation of unified account management via PKI and single sign on. New functionality included web based access to Force Planning and Force Readiness data, ability to aggregate readiness data, implementation of dynamic and deployment Force Modules, web enablement of the JOPES Rapid Query Tool (RQT), common operational picture track management capability increase (100K Tracks), Cross Domain Services (CDS), time critical targeting, the ability to process and display Combat Survivor Evader Locator (CSEL) events, and target coordinate production from ISR sensor images. Architectural enhancements included the migration of Adaptive Course of Action (ACOA) from a local to an enterprise level capability and eliminating the need for local replication of readiness data. GCCS-J also completed testing and fielding activities for JOPES 4.1, the last release in the v4.1 baseline.

**FY 2009:** GCCS-J is in the final development, testing and fielding for the final Block V releases (Global, JOPES, and SORTS). GCCS-J is currently targeting completion of Block V on or around August 2009, at which point the program will

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Appropriation/Budget Activity RDT&E, Defense-Wide/07			Project Name and Number Global Command and Control System - Joint/CC01					
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Global Command and Control System - Joint/CC01	41.634	27.915	18.697					

enter into full sustainment. The Block V threshold schedule date was March 2009; however, due to operational imperatives and the need for critical warfighter requirements, the PMO is in the process of extending the Block V Acquisition Program Baseline (APB) to August 2009. The PMO has encountered a number of issues that resulted in this fact of life change, not uncommon in software development programs. These include technical challenges with the use of COTS products and integration issues with the use of multiple developers providing various product lines, plus the impact of the loss of experienced contractor and government personnel in anticipation of movement to sustainment and ramp-up of the Net-Enabled Command Capabilities (NECC) program. GCCS-J is currently targeting providing minimal sustainment of the baselines and associated hardware and software (FY 2009 - FY 2010) until functional capabilities transition to the NECC program.

Starting at the end of FY 2009 through FY 2010, GCCS-J will also address a limited number of deferred GCCS-J GRiD requirements through a small number of Pre-Planned Product Improvement (P3I) releases. The focus of the P3I effort will be to provide Commanders and their battle staffs automated collateral level access to intelligence in support of operational functions, phases, and tools to visualize and use intelligence within the Common Operational Picture (COP). This effort will specifically provide intelligence on hostile/threat ground forces and a robust set of ground warfare analysis and Joint Intelligence Preparation of the Battlespace (JIPB) tools and products accessible from and displayable within the COP. It will also provide the ability to display the detection of a threat intrusion to the data or network disseminating the COP as well as provide the ability to accept, parse, and compose standard reports (e.g., SITREPS, OPREPS, etc) from the COP. These requirements will be prioritized by the operational sponsor (JFCOM) and developed in accordance with NECC to allow functional transfer once NECC is available.

FY 2010: GCCS-J will continue to use its RDT&E to develop minimal capability enhancements for release via P3I releases. GCCS-J will also continue the design and testing of technical changes/software patches to the operational system to address high-priority GSPRs and Information Assurance Vulnerabilities (Alerts, Bulletins, and Technical Advisories). Beginning in FY 2010, GCCS-J RDT&E funding will begin to ramp down as the program begins transitioning functionality to the Net-Enabled Command Capabilities (NECC) program. The PMO will also transition from using RDT&E on certain activities to O&M. This transition to sustainment for the GCCS-J program continues through FY 2015.

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<b>Exhibit R-2a, RDT&amp;E Project Justification</b>			Date: May 2009					
Appropriation/Budget Activity RDT&E, Defense-Wide/07			Project Name and Number Global Command and Control System - Joint/CC01					
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Global Command and Control System - Joint/CC01	41.634	27.915	18.697					

Subtotal Cost	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
	6.756	6.203	3.515

**Integration and Test (I&T):** GCCS-J's incremental, spiral I&T approach permits an earlier start of integration testing since all new segments will not be available at the beginning of integration testing. This risk reduction strategy allows testing in smaller, more manageable increments, while still enforcing a level of Block V testing commensurate to the operational and technical complexity of each release. In accordance with DOT&E guidelines, and determined through an initial risk assessment conducted by the GCCS-J Program Management Office (PMO), Block V spiral releases will be relatively low risk, with minimal potential to (1) impact other system applications and (2) disrupt the basic system's ability to support the mission.

Subtotal Cost	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
	0.000	0.000	2.750

**Overseas Contingency Operations (OCO) - GCCS-J Integrated Imagery and Intelligence (I3):** Provide for software modifications to the Global Command and Control System - Joint (GCCS-J) I3/COP baseline in direct support of USCENTCOM War funding requirements. These software modifications require extensive coding and testing in order to effect their implementation. Specifically: (a) Improve Visualization client interface for both Analyst Workshop (AWS) and AWS Web (\$1.500 million); (b) Process and display additional Unmanned Aerial Video (UAV) formats (\$0.500 million); and (c) Provide access and display of additional Open Source Intelligence data (\$0.750 million).

**C. Other Program Funding Summary:**

	<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>	To Complete	Total Cost
O&M, DW*	80.915	88.570	66.670						Cont'g	Cont'g
Procurement, DW*	10.244	10.941	8.553						Cont'g	Cont'g

\*Includes ramp-up for CFAST

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Cost (\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Global Command and Control System - Joint/CC01	41.634	27.915	18.697					

**D. Acquisition Strategy:** GCCS-J development, integration, and migration efforts are primarily supported through Cost Reimbursable Task Orders (TO) issued under competitively awarded contracts. Use of performance-based contract awards is maximized while use of Time and Material (T&M) contracts is minimized to those providing programmatic support vs. software development, integration, or testing. The GCCS-J Acquisition Strategy is structured to retain contractors capable of satisfying cost, schedule, and performance objectives. PMO contract awards incorporate provisions requiring contractors to establish and manage specific earned value data. The PMO's strategy mitigates risk by requiring monthly Contract Performance Reviews (CPR) and utilizes Award Fee contracts where appropriate to incentivize performance.

**E. Performance Metrics:**

**Capabilities Provided:** In August 2005 Joint Staff published the GCCS-J Block V Requirements Identification Document (RID) as the requirements baseline for Block V. Each Block V version release addresses outstanding high priority requirements, while continuing to implement enhancements to fielded capabilities. These enhancements may take the form of modifications to existing GCCS-J mission applications, new candidate solutions provided by executive agents, technical refresh actions to minimize COTS end-of-life issues, and/or interfacing with additional high value data sources.

**Cost & Schedule Management:** The GCCS-J program does employ a tailored subset of earned value concepts that fit within ANSI/EIA Standard 748. Contractors are required to plan, budget, and schedule resources in time-phased "planned value" increments constituting a cost and schedule measurement baseline. This approach encourages contractors to use effective internal cost and schedule management control systems. The PMO evaluates performance by conducting thorough Post-award Contract Reviews (PCRs) and monthly Contract Performance Reviews (CPRs). The GCCS-J Program Manager (PM) also conducts weekly critical path reviews of the GCCS-J release schedules to ensure tasks are on track and to mitigate risk across the entire program.

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Exhibit R-3 RDT&E Project Cost Analysis										Date: May 2009				
Appropriation/Budget Activity RDT&E, Defense-Wide/07			Program Element PE 0303150K							Project Name and Number Global Command and Control System-Joint/CC01				
<u>Cost Category</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total PY Cost (\$000)</u>	<u>FY08 Cost (\$000)</u>	<u>FY08 Award Date</u>	<u>FY09 Cost (\$000)</u>	<u>FY09 Award Date</u>	<u>FY10 Cost (\$000)</u>	<u>FY10 Award Date</u>	<u>FY11 Cost (\$000)</u>	<u>FY11 Award Date</u>	<u>Cost to Complete (\$000)</u>	<u>Total Cost (\$000)</u>	<u>Target Value of Contract</u>
Product Development	CPAF	NGMS Reston, VA	51.500	4.755	03/07	4.752	03/09	3.334	03/10			Cont 'g	Cont 'g	64.339
Product Development	CPAF	NGMS Reston, VA	32.402	10.180	04/08	5.584	04/08	3.780	04/10			Cont 'g	Cont 'g	51.946
Product Development	CPAF	AB Floyd Alexandria, VA	12.477	N/A	N/A	N/A	N/A	N/A	N/A			N/A	12.477	12.477
Produce Development	CPAF	Femme Comp Inc., Chantilly, VA	3.424	2.843	09/08	0.929	09/09	0.611	09/10			Cont 'g	Cont 'g	7.807
Product Development	CPFF	SAIC Falls Church, VA	5.876	N/A	N/A	N/A	N/A	N/A	N/A			N/A	5.876	5.876
Product Development	CPFF	SAIC Falls Church, VA	5.291	2.066	04/08	1.338	04/09	0.881	04/10			Cont 'g	Cont 'g	9.576
Product Development	FFP	Dynamic Systems Los Angeles, CA	2.394	0.425	02/08	0.350	02/09	0.230	02/10			Cont 'g	Cont 'g	3.399
Product Development	CPFF	Pragmatics McLean, VA	19.965	4.987	05/08	1.486	05/09	0.978	05/10			Cont 'g	Cont 'g	27.416
Product Development	MIPR	Booz Allen Hamilton McLean, VA	3.394	N/A	N/A	N/A	N/A	N/A	N/A			N/A	3.394	3.394
Product Development	MIPR	JDISS Suitland, MD	6.039	N/A	N/A	N/A	N/A	N/A	N/A			N/A	6.039	6.039
Product Development	FFP	NGMS Reston, VA	4.790	N/A	N/A	N/A	N/A	N/A	N/A			N/A	4.790	4.790

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Exhibit R-3 RDT&E Project Cost Analysis										Date: May 2009				
Appropriation/Budget Activity RDT&E, Defense-Wide/07			Program Element PE 0303150K							Project Name and Number Global Command and Control System-Joint/CC01				
<u>Cost Category</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total PY Cost (\$000)</u>	<u>FY08 Cost (\$000)</u>	<u>FY08 Award Date</u>	<u>FY09 Cost (\$000)</u>	<u>FY09 Award Date</u>	<u>FY10 Cost (\$000)</u>	<u>FY10 Award Date</u>	<u>FY11 Cost (\$000)</u>	<u>FY11 Award Date</u>	<u>Cost to Complete (\$000)</u>	<u>Total Cost (\$000)</u>	<u>Target Value of Contract</u>
Product Development	CPAF	NGMS Reston, VA	4.664	6.019	08/08	5.251	08/09	3.401	08/10			Cont 'g	Cont 'g	19.335
Product Development	MIPR	SPAWAR, Charleston, SC	4.092	1.178	N/A	N/A	N/A	N/A	N/A			Cont 'g	Cont 'g	5.270
Product Development	FFRDC	MITRE, McLean, VA	4.840	0.551	03/08	0.590	03/09	0.389	03/10			Cont 'g	Cont 'g	6.370
Product Development	MIPRs	Dept of Energy, Army Research Lab, PD Intelligence Fusion, GSA/FAS, NSMA	3.387	0.699	N/A	1.536	N/A	1.012	N/A			Cont 'g	Cont 'g	6.634
Product Development	CPAF	Tactical 3-D COP (T3DCOP)	3.200	N/A	N/A	N/A	N/A	N/A	N/A			N/A	3.200	3.200
Product Development	FFP	Joint Info Technology Center Initiative	20.400	N/A	N/A	N/A	N/A	N/A	N/A			N/A	20.400	20.400
Product Development	MIPR	DIA	2.804	1.271	03/08	0.606	03/09	0.400	03/10			Cont 'g	Cont 'g	4.681
Test and Evaluation	CPAF	SAIC Falls Church, VA	18.447	2.603	05/08	1.970	05/09	1.363	05/10			Cont 'g	Cont 'g	24.383
Test & Evaluation	MIPR	JITC, Ft Huachuca, AZ	10.482	2.601	10/08	2.511	10/09	1.653	10/10			Cont 'g	Cont 'g	17.247
N/A	MIPR	Slidell	0.436	N/A	N/A	N/A	N/A	N/A	N/A			N/A	0.436	0.436

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Exhibit R-3 RDT&E Project Cost Analysis										Date: May 2009				
Appropriation/Budget Activity RDT&E, Defense-Wide/07			Program Element PE 0303150K					Project Name and Number Global Command and Control System-Joint/CC01						
<u>Cost Category</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total PY Cost (\$000)</u>	<u>FY08 Cost (\$000)</u>	<u>FY08 Award Date</u>	<u>FY09 Cost (\$000)</u>	<u>FY09 Award Date</u>	<u>FY10 Cost (\$000)</u>	<u>FY10 Award Date</u>	<u>FY11 Cost (\$000)</u>	<u>FY11 Award Date</u>	<u>Cost to Complete (\$000)</u>	<u>Total Cost (\$000)</u>	<u>Target Value of Contract</u>
Test & Evaluation	MIPR	SSC, San Diego, CA	5.455	1.456	10/08	1.012	10/09	0.665	10/10			Cont 'g	Cont 'g	8.588
Total			225.759	41.634		27.915		18.697						313.333

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Exhibit R-4, RDT&E Program Schedule Profile														Date: May 2009																		
Appropriation/Budget Activity RDT&E, Defense-Wide, 07								Program Element Number and Name PE 0303150K, Global Command and Control System (GCCS)								Project Number and Name CC01/Global Command and Control System-Joint																
Fiscal Year	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Development and Strategic Planning	△	△	△	△	△	△	△	△	△	△	△	△																				
	Block V				Block V Dev/Sus and P3I Dev				Block V Sus and P3I Dev/Sus																							
Integration and Testing	△	△	△	△	△	△	△	△	△	△	△	△																				
	Block V				Block V Dev/Sus and P3I Dev				Block V Sus and P3I Dev/Sus																							

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<b>Exhibit R-4a, RDT&amp;E Program Schedule Detail</b>		Date: May 2009
Appropriation/Budget Activity RDT&E, Defense-Wide/07	Program Element Number and Name PE 0303150K/Global Command and Control System (GCCS)	Project Number and Name CC01/Global Command and Control System-Joint

<u>Schedule Profile</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>
Development and Strategic Planning	1Q-4Q	1Q-4Q	1Q-4Q					
Integration and Test	1Q-4Q	1Q-4Q	1Q-4Q					
Development and Strategic Planning - P3I	N/A	N/A	3Q-4Q					
Integration and Test - P3I	N/A	N/A	N/A					

During Block V, GCCS-J will enhance the GCCS-J infrastructure and functional capabilities to support the Department's net-centric vision. GCCS-J will migrate to a more sophisticated "n-tier" architecture supporting dynamic infrastructure resources, thin browser-based clients, and net-centric, enterprise services. High priority services for early inclusion are identity management via Public Key Infrastructure (PKI), directory services, portal framework, and publish/subscribe capability. To achieve this GCCS-J will fully implement a new interface capability using XML to provide the flexibility to support independent version changes and improved availability to enterprise data.

GCCS-J is currently targeting completion of Block V on or around August 2009, at which point the program will enter into full sustainment of the fielded GCCS-J 4.2 Spiral Releases (Global 4.2, SORTS 4.2, and JOPES 4.2). GCCS-J will remain in sustainment (FY 2009 - FY 2010) until functional capabilities transition to the Net-Enabled Command Capabilities (NECC) program. August 2009 through 4<sup>th</sup> quarter FY 2010, GCCS-J will address a limited number of existing and emerging warfighter requirements that will be addressed in Pre-Planned Product Improvement (P3I) releases while awaiting NECC availability. The focus of the P3I effort will be to provide Commanders and their battle staffs automated collateral level access to intelligence in support of operational functions and phases and tools to visualize and use intelligence within the Common Operational Picture (COP), including intelligence on hostile/threat ground forces and a robust set of ground warfare analysis and Joint Intelligence Preparation of the Battlespace (JIPB) tools and products accessible from and displayable within the COP.

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<b>Exhibit R-2a, RDT&amp;E Project Justification</b>				Date: May 2009				
Appropriation/Budget Activity RDT&E, Defense-Wide/07				Project Name and Number Collaborative Force Analysis, Sustainment, and Transportation System (CFAST)/CC02				
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Collaborative Force Analysis, Sustainment, and Transportation System (CFAST)/CC02	8.870	8.002	7.814					

**A. Mission Description and Budget Item Justification:**

Adaptive Planning (AP) is the DoD's methodology for constructing timely and agile war plans that achieve national security objectives. The Collaborative Force Analysis, Sustainment, and Transportation System (CFAST) is a suite of software tools that provides AP capabilities to include: campaign planning, forecast predictions, information management and rapid execution. As an operational prototype, CFAST will continue to evolve as required to support the Joint Planning and Execution Community (JPEC) and is aimed to reduce the deliberate planning timeline from two years to six months. CFAST facilitates the dynamic preparation of campaign plans for rapid expeditionary environments to meet DoD planning doctrine requirements of ongoing operations such as the Overseas Contingency Operations (OCO) and future contingencies. The U.S. Pacific Command (USPACOM), U.S. European Command (USEUCOM), Joint Staff and other Combatant Commands currently utilize CFAST. OSD and Joint Staff use CFAST to model how DoD will respond to current and future conflicts using a variety of forces from all Services as part of their Operational Analysis missions.

CFAST has been identified for migration into the Net Enabled Command Capability (NECC) Program. In preparation for the transition, CFAST must evolve to the Service Oriented Architecture (SOA) while continuing to provide functional enhancements to meet Joint Staff validated and prioritized requirements. These enhancements include user-intuitive capabilities for rapidly determining transportation requirements, performing course of action analyses, and projecting delivery profiles of troops and equipment by air, land, and sea. The improved system will be tailored for use by the Combatant Commanders, Component Services, Regional Commanders, Joint Task Forces (JTFs), and the Service staffs as a planning, forecasting, analysis, and execution tool for both deliberate and crisis action planning. The goal end-state is for rapidly produced, near-execution ready campaign plans that provide multiple courses of action. CFAST will provide "living plans" in a net-centric, collaborative, virtual environment, updated routinely to reflect changes in guidance/strategic environment with automated triggers, linked to real time authoritative sources, that alert planners to key assumptions or planning parameters.

CFAST RDT&E funding continues development of AP capabilities against Joint Staff requirements and to support the synchronization with NECC.

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<b>Exhibit R-2a, RDT&amp;E Project Justification</b>				Date: May 2009				
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**B. Accomplishments/Planned Program:**

Subtotal Cost	<u>FY 2008</u> 8.336	<u>FY 2009</u> 7.520	<u>FY 2010</u> 7.321
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**Development and Strategic Planning:** CFAST continues to produce capabilities via spiral development, allowing for the rapid introduction of more sophisticated planning capabilities to include execution planning/re-planning during crisis and execution. In FY 2006, CFAST received 167 validated and prioritized requirements. In addition, the Secretary of Defense approved the AP Roadmap on 13 December 2005. CFAST will meet this AP guidance, preserving the best characteristics of present day deliberate (contingency) and crisis planning, while establishing common joint processes and systems to support the development and execution of plans. Furthermore, CFAST has been identified as a technical solution to address the NECC Force Projection Mission Capability Package as articulated in the draft NECC Capability Development Document (CDD). Within the FY 2008 to FY 2010 timeframe, CFAST will sustain existing capabilities, continue to development emergent AP capabilities to satisfy the 167 requirements as well as meet the intent of the AP Roadmap and alignment with the NECC CDD. CFAST is funded to provide four operational versions annually.

In FY 2008 - FY 2010, RDT&E will finance the following:

**Capability and Force Requirements Manipulation:** improving the Force Builder force generation tool to include Task Organization and Mass/Selective Edits for units within the Time Phased Force And Deployment Data (TPFDD) files. The improvements enable the scheduled movement of forces and supplies into an area of operations. Force Builder allows the planner to build a draft list of forces, group them into force modules and place them into a priority of movement that is honored by scheduling applications. Improvements will include a refined level of detail which provides a higher quality estimate for logistics and transportation needs and reduces the time required to build a plan. The following tools will receive modifications:

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- Force Packager - An application used to quickly build TPFDD requirements including "below the line" Combat Support and Combat Service Support (CS/CSS) capability based on rules of allocation for each Service. Will provide a "one click" process for building large force requirements in support of the published Concept of Operations (CONOPS).

- Plan Builder - Generate decision logs and reports for a specific Operation Plan (OPLAN).

- Plan Viewer - Option to show force flow data across modules by date range.

**Plan Evaluation and Quality Assurance:** providing a feedback loop from models which simulate warfare and transportation needs from initial US entry into theater through mission completion. The feedback allows planners to alter the force composition and size according to the mission needs. The improvements include modifications to the Lift Allocator and the Joint Force Analysis, Sustainment, and Transportation (JFAST) tools, a pair of collaborative tools sponsored by United States Transportation Command (USTRANSCOM) and the other Combatant Commands that rapidly calculates an average daily throughput tonnage by day.

**Logistics Analysis Capabilities:** CFAST will provide improved capabilities which estimate logistics requirements for an operation. This includes all classes of supply daily. Improvements will include Transportation estimate improvements by improving the Sealift estimation algorithm, increasing the level of detail for sustainment planning, and increasing the data for individual ports. The increased detail provides better information and makes the initial estimate more accurate and reduces the planning cycle. Improvements will be made to:

- AmmoGen Tool - Generate ammo sustainment requirements during the building of a plan.

- PerGen Tool - Personnel Generator will allow modifications of scenarios by service for inclusion in dynamic plans/adaptive situations.

- SusGen Tool - Sustainment Generator allows for merging of scenarios by service. Imports scenarios created in standalone Joint Flow and Analysis System for Transportation (JFAST), the robust TRANSCOM used for scheduling movement.

- Execution management tool - A CFAST tool used to absorb and manage USTRANSCOM analysis and scheduling system data. It allows the user to create tools that validate movement requirements, assign requirements to carriers, report movement, and track strategic and theater lift assets and requirement movement through the Defense Transportation System globally.

**Theater log CONOPS management tool** - A CFAST tool that enables logistics planners to develop theater-wide concept of operations. It provides automated planning, and enables planning for theater distribution of supplies and equipment.

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<b>Exhibit R-2a, RDT&amp;E Project Justification</b>				Date: May 2009				
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Include support available, where applicable, from the host nation.

**Log Force adequacy tool** - The Log Force Adequacy tool will enable logistics planners, via automation, to evaluate the force list (Time Phased Force Deployment Data - TPFDD) and develop estimates of supportability/concept of operations for providing adequate and timely support.

**Planning Workflow:** New capability will allow authorized users to track the status of each OPLAN and the approval process for the plan. The planning capability will receive modifications which provide redeployment planning capabilities from theater back to home station. Modifications are required for the following tools:

**Plan Development and Execution Process Workflow Manager** - Provide capability similar to Microsoft Project for management and graphical layout of the campaign and war planning process.

**Planning Application Integration** - Develop a collaborative working environment that provides the capability to absorb, manipulate, model, display and provide updated data containing critical plan elements to/from DLA, the intelligence community, the Standing Joint Force HQ, special operations forces and the Joint medical community.

**Interoperability:** CFAST contains unique software capabilities but relies upon data feeds from external systems. Data requirements and improvements will include Readiness data; fine grain unit information; migration to new data standards; and importing/exporting into new formats.

**Course of Action Development** - Provide an initial capability that allows planners to simulate the scheduled TPFDD flow of forces into the area of operations and the actions required to fulfill the mission. The simulation shall include effects based operations as well as attrition warfare. The course of action will allow feedback into the planning applications in order to refine the forces required for an operation.

**Net Enabled Command Capabilities (NECC)** - In order for CFAST to provide Adaptive Planning capabilities for the NECC program, CFAST must move to the SOA technical specifications in order to reduce cost by providing reuse of code and enterprise level capabilities through FY 2010.

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Subtotal Cost	<u>FY 2008</u> 0.534	<u>FY 2009</u> 0.482	<u>FY 2010</u> 0.493
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**Integration and Test (I&T):** CFAST employs an incremental spiral I&T methodology in accordance with testing and information assurance regulations, as applicable. This risk reduction strategy allows testing in smaller, more manageable versions, while still enforcing a level of testing commensurate to the operational and technical complexity of each release. This approach permits an earlier start of integration testing as well as on making capability available to users for evaluation during actual planning events. CFAST also finances independent security evaluations of CFAST versions in order to maintain the ATO status. This approach ensures the operational suitability and effectiveness, interoperability, and security of CFAST for warfighter use.

**C. Other Program Funding Summary:**

	<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>	To Complete	Total Cost
Procurement, DW	5.482	1.467	1.462							
O&M, DW	8.152	8.700	8.572							

**D. Acquisition Strategy:**

Joint Requirements Oversight Council (JROC) memorandum (JROCM) 102-04, Subject: Collaborative Force Analysis, Sustainment and Transportation System (CFAST) Future Development, designated U.S. Joint Forces Command (USJFCOM) as the Functional Proponent for CFAST and the Defense Information Systems Agency (DISA) as the Material Solution Provider, effective July 2004. The CFAST Acquisition Strategy is structured to retain contractors capable of satisfying cost,

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Collaborative Force Analysis, Sustainment, and Transportation System (CFAST)/CC02	8.870	8.002	7.814					

schedule, and performance objectives. CFAST utilizes Cost Reimbursable Task Orders (TO) issued under competitively awarded contracts. CFAST maximizes the use of competitively awarded IDIQ contracts and requires contractors to establish and manage specific earned value data. The CFAST strategy mitigates risk by requiring Contract Performance Reviews (CPR) and utilizes Award Fee contracts where appropriate to incentivize performance.

**E. Performance Metrics:**

Cost & Schedule Management - CFAST utilizes earned value management to manage technical cost and schedule requirements. Contractors are required to plan, budget, and schedule resources in time-phased "planned value" increments constituting a cost and schedule measurement baseline. This approach encourages contractors to use effective internal cost and schedule management control systems. Performance is evaluated by conducting contractor performance reviews as well as weekly critical path reviews of the CFAST release schedules to ensure tasks are on track and to mitigate risk across the entire lifecycle.

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Exhibit R-3 RDT&E Program Cost Analysis										Date: May 2009				
Appropriation/Budget Activity RDT&E, Defense-Wide/07			Program Element PE 0303150K				Project Name and Number Collaborative Force Analysis, Sustainment, and Transportation System (CFAST)/CC02							
<u>Cost Category</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total PY Cost (\$000)</u>	<u>FY08 Cost (\$000)</u>	<u>FY08 Award Date</u>	<u>FY09 Cost (\$000)</u>	<u>FY09 Award Date</u>	<u>FY10 Cost (\$000)</u>	<u>FY10 Award Date</u>	<u>FY11 Cost (\$000)</u>	<u>FY11 Award Date</u>	<u>Cost to Complete (\$000)</u>	<u>Total Cost (\$000)</u>	<u>Target Value of Contract</u>
Product Development	MIPR	SPAWAR, San Diego, CA	6.250	8.336	02/08	7.520	02/09	7.321	02/10			Cont'g	Cont'g	29.427
Test and Evaluation	MIPR	SPAWAR, San Diego, CA	0.750	0.534	02/08	0.482	02/09	0.493	02/10			Cont'g	Cont'g	2.259
Total			7.000	8.870		8.002		7.814						31.686

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Exhibit R-4, RDT&E Program Schedule Profile																Date: May 2009																
Appropriation/Budget Activity RDT&E, Defense-Wide, 07								Program Element Number and Name PE 0303150K, Global Command and Control System (GCCS)								Project Number and Name CC02/Collaborative Force Analysis, Sustainment, and Transportation System																
Fiscal Year	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Development and Strategic Planning	△	△	△	△	△	△	△	△	△	△	△	△																				
Integration and Test	△	△	△	△	△	△	△	△	△	△	△	△																				

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<b>Exhibit R-4a, RDT&amp;E Program Schedule Detail</b>		Date: May 2009
Appropriation/Budget Activity RDT&E, Defense-Wide/07	Program Element and Name PE 0303150K/Global Command and Control System (GCCS)	Project Number and Name CC02/Collaborative Force Analysis, Sustainment, and Transportation System

<u>Schedule Profile</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>
Development and Strategic Planning	1Q-4Q	1Q-4Q	1Q-4Q					
Integration and Test	1Q-4Q	1Q-4Q	1Q-4Q					

Within the FY 2008 to FY 2010 timeframe, CFAST will sustain existing capabilities, continue to development emergent AP capabilities to satisfy the 167 requirements as well as meet the intent of the AP Roadmap and alignment with the NECC CDD. CFAST will provide "living plans" in a net-centric, collaborative, virtual environment, updated routinely to reflect changes in guidance/ strategic environment with automated triggers, linked to real time authoritative sources, that alert planners to key assumptions or planning parameters. CFAST is funded to provide four operational versions annually.