

UNCLASSIFIED

**Department of Defense FY 2003 Budget Estimates
February 2002**



**RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE
Volume 4b - Other Defense Agencies and
DIRECTOR, OPERATIONAL TEST AND EVALUATION**

UNCLASSIFIED

Defense Threat Reduction Agency
FY 2003 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 0400D Research, Development, Test & Eval, Defwide

Date: 21 FEB 2002

Line No	Program Element Number	Item	Act	Thousands of Dollars			S E C
				FY 2001	FY 2002	FY 2003	
---	-----	----	---	-----	-----	-----	-
21	0602715BR	Nuclear Sustainment & Counterproliferation Technologies	2	310,416	296,356		U
22	0602716BR	WMD Defeat Technology	2			146,143	U
23	0602717BR	Strategic Defense Technologies	2			131,199	U
	Applied Research			310,416	296,356	277,342	
30	0603160BR	Counterproliferation Advanced Development Technologies	3	76,624	89,687	77,389	U
39	0603711BR	Arms Control Technology	3	67,380	62,909	37,646	U
	Advanced Technology Development			144,004	152,596	115,035	
102	0605110BR	Critical Technology Support	6	3,901	3,213	1,862	U
	RDT&E Management Support			3,901	3,213	1,862	
	Total Defense Threat Reduction Agency			458,321	452,165	394,239	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2					R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR			

COST (In Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete
Total 0602715BR Cost	310.7	296.4	0	0	0	0	0	Realigned
Project BB Small Business Innovative Research	3.0	3.7	0	0	0	0	0	Realigned
Project BC Force Protection & Technology Applications*	14.6	6.2	0	0	0	0	0	Realigned
Project BD Weapons Effects Technologies**	59.8	90.6	0	0	0	0	0	Realigned
Project BE Testing Technologies & Integration	9.4	10.7	0	0	0	0	0	Realigned
Project BF CP Operational Warfighter Support***	35.6	64.4	0	0	0	0	0	Realigned
Project BG Nuclear Operations	140.7	46.3	0	0	0	0	0	Realigned
Project BH System Survivability****	47.6	74.4	0	0	0	0	0	Realigned

*FY 2001 DERF Supplemental provided \$5.5M related to this project. Funding is not reflected in this table.

**FY 2001 DERF Supplemental provided \$5.2M related to this project. Funding is not reflected in this table.

***FY 2001 DERF Supplemental provided \$23.15M related to this project. Funding is not reflected in this table.

****FY 2001 DERF Supplemental provided \$65K related to this project. Funding is not reflected in this table.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

A. Mission Description and Budget Item Justification

The mission of the Defense Threat Reduction Agency (DTRA) is to safeguard America and its friends from weapons of mass destruction (WMD) by reducing the present threat and preparing for the future threat. This mission directly reflects the National Military Strategy, supports the provisions of Joint Vision 2010 and is specifically directed by the JCS in the Joint Strategic Capabilities Plan (Nuclear Annex). To achieve this mission, DTRA has identified principal objectives along with strategies and tasks to ensure the objectives are met. Three of these objectives are to deter the use of WMD, reduce the present threat and prepare for the future threat. A focused, strong threat reduction technology base is critical to achieving these objectives. DTRA has taken the steps to develop this technology base.

This budget submission provides the essential technologies to deter the use of WMD and prepare for the WMD threat. These technologies can be grouped into two areas, Counterproliferation (CP) technologies and Nuclear Sustainment technologies and projects.

CP technologies to include antiterrorism will help DTRA prepare for the WMD threat and support civil and military response to WMD use. Nuclear sustainment technologies and projects support the viability and credibility of the nuclear force as well as development of survivability technology for Theater Missile Defense and National Missile Defense in a nuclear environment.

CP Technologies:

The DTRA is the DoD focal point for programs and activities to reduce the threats posed by WMD proliferants. New, forward-thinking activities have been identified and prioritized to support the DTRA mission and the DoD CP strategy for responding to the full spectrum of crises and preparing now for an uncertain future. The CP programs support national guidance, the DTRA strategic vision, and Service and CINC operational customers. This program element provides the innovative technologies and concepts underpinning all CP programs.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

A. Mission Description and Budget Item Justification (cont'd)

- Examination of existing U.S./Allied capabilities to hold hardened, deeply buried targets at risk; evaluation of capabilities against known or projected potential targets; and evaluation of new technologies for possible application against known shortfalls.
- Targeting and Intelligence Community (IC) support to warfighters that provides functional vulnerability assessments of hostile foreign systems.
- Development of WMD analysis and simulation tools for the warfighter including target planning and assessment; hazardous materials transport and collateral effects prediction; consequence assessment; and anti-terrorism/force protection.
- Development and application of state-of-the-art nuclear weapons effects models to support nuclear weapon stewardship and system hardness design.
- Development, improvements and test engineering for the unique DoD test and simulation facilities (to include infrastructure) and enabling technologies that are used to evaluate the impact of hostile environments from conventional, nuclear, and other special weapons on military or civilian systems or targets.
- Mission vulnerability assessments of strategic U.S./Allied systems leading to strategies for improved survivability. Provides input to assessment training programs, structural engineering designs and practices, communications and information operations, and security and WMD protective measures to support sound mission survivability, vulnerability mitigation, and collective protection principles. Five dedicated teams accomplish up to 30 assessments per year.

Nuclear Sustainment:

The nuclear sustainment program, driven by the specific taskings of the National Strategy, National Military Strategy and the Joint Strategic Capabilities Plan, has two projects, i.e., Nuclear Operations and System Survivability.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

A. Mission Description and Budget Item Justification (cont'd)

- Nuclear Operations develops and supports the National Nuclear Mission Management Plan; Nuclear and WMD Emergency Response Capability; an enhanced WMD consequence management (CM) capability to include a CM Advisory Team (CMAT); nuclear and WMD training expertise for DoD; surety risk and hazard analyses; nuclear planning systems; nuclear deterrent option analyses; technical support for Nuclear Weapons Council (NWC) and nuclear C4I requirements; and WMD threat mitigation analyses.
- The System Survivability Project develops simulator technology (nuclear, blast, thermal, radio frequency (RF) propagation, and optical/infrared (IR) background effects), electronics technology (radiation-hardened microelectronics, balanced electromagnetic hardening technology, radio frequency threat reduction), assessment and protection technology, and provides technology to support the Congressionally mandated Nuclear Test Personnel Review. These development areas directly support the development of survivable and reliable systems for the warfighter.

Together, the Counterproliferation Technologies and Nuclear Sustainment projects comprise a critical component of the ability of the Department to meet the technology and sustainment challenges posed by the emerging international environment and the National Military Strategy. The coverage of the projects ranges from counter-terrorism through conventional conflict through countering WMD threats to the maintenance of the national strategic nuclear deterrent.

In addition, the Advanced Systems and Concepts Office (ASCO) develops and maintains an evolving analytical vision of necessary and sufficient capabilities to protect the United States and allied forces and citizens from nuclear, biological, and chemical (NBC) attack; and identify gaps in these capabilities and initiate programs to fill them.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

B. Program Change Summary

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2001 President's Budget Request(Feb 2000)	230.9	237.8	244.7
FY 2002 Amended President's Budget Request(June 2001)	214.9	295.1	240.1
FY 2003 President's Budget Request (Feb 2002)	310.7	296.4	0*
*Moved to new program elements			

Change Summary Explanation: Changes in FY 2001 from the FY 2001 President's Budget Request (Feb 2000) and FY 2002 Amended President's Budget Request (June 2001) are direct results of Congressional emphasis in the areas of Nuclear Weapons Effects, Discrete Particle Methods, Thermionics technology, and funding for Counterproliferation Studies at the Monterey Center. These Congressional adds are offset by Congressionally directed funding realignments to nuclear sustainment and counterproliferation technology program efforts. Changes in FY 2002 from the FY 2001 President's Budget Request (Feb 2000) and the FY 2002 Amended President's Budget Request (June 2001) reflect funding received for efforts associated with a classified program (\$98M). FY 2001 and FY 2002 reflect the transfer of \$5M in each year to the Navy in support of BROACH. The FY 2002 column also reflects the Department of Defense direction to increase funding of Zebra-Chip in the amount of \$10M (FY 2001 \$500K) and increase the level of funding in support of DTRA's Terrorist Device Detection and Defeat efforts at an additional \$5M from the FY 2001 funding level. In addition, FY 2002 reflects an addition of \$60M -- the result of the new administration's effort to reemphasize the need for continued R&D and DoD's evaluation of how best to use additional R&D funding. These funds will be used to accelerate and expand our capabilities to defeat hard targets and develop capabilities to utilize new thermobaric and energetic material technology. These funds will also be used to develop advanced technology for providing radiation hardened electronics to ensure the reliable operation of our military forces and systems in WMD environments. DoD has unique needs for radiation hardened microelectronics that are met by

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

~~leveraging commercial microelectronic products. These efforts to improve our capabilities to defeat hard targets, develop understanding and tools to take advantage of new materials and to improve survivability of active defense systems will significantly improve our capabilities. Changes in FY 2003 from the FY 2001 President's Budget Request (Feb 2000) and the~~

B. Program Change Summary (cont'd)

FY 2002 Amended President's Budget Request (June 2001) are a result of a \$1.8M Congressional add for Discrete Particle Methods, \$2.8M add for Thermobaric Warhead Development, and \$1.5M add for Radiation Hardened Microelectronics as well as Congressional reductions amounting to \$4.9M. In FY 2003, this program element is being split into two new program elements: WMD Defeat Technologies and Strategic Defense Technologies.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BB - Small Business Innovative Research (SBIR) - This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of DoD supported research and development results. These efforts are responsive to PL 106-554.

FY 2001 Accomplishments

Small Business Innovative Research (\$3,042K)

Supported the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.
Executed Agency-approved SBIRs.

FY 2002 Plans

Small Business Innovative Research (\$3,716K)

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.
Execute Agency-approved SBIRs.

FY 2003 Plans

Funding and activities realigned to Project BB in PE 0602716BR and 0602717BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BC - Force Protection and Technology Applications - This project supports Assessment and Mitigation Technologies, which conducts mission vulnerability assessments of strategic U.S./Allied systems to facilitate the development of investment strategies for improved survivability, to include nuclear command and control. This program also ensures that assessment training programs, engineering designs, and new construction embody sound force protection, vulnerability mitigation, and collective protection principles. DTRA technologies and expertise are applied to enhance U.S. capabilities across the spectrum of the counterproliferation and force protection missions. These may include development of sensor technologies for initially identifying the consequences of weapons of mass destruction (WMD) through countering or protection against this threat. Some of the program's products and services include the Balanced Survivability Assessments (BSA), the Smart Building program's strategic facility construction design and cost estimates, vulnerability out-briefs and written reports, overall vulnerability trend data, National and NATO conferences for Underground Facility Managers, and multi-disciplined technical engineering expertise support and the Congressionally mandated Thermionics program (FY01 only).

FY 2001 Accomplishments

Balanced Survivability Assessments (\$6,541K)

Conducted in conjunction with O&M funding, twenty-three balanced survivability assessments on DoD facilities as tasked by CINCs, the Joint Staff, and OSD Command, Control, Communications (C3I).

Continued integrated vulnerability assessment of defense and critical national infrastructure facilities.

Smart Building Program (\$5,787K)

Completed the Smart Building (SB) retrofits for enhanced WMD protection to include: Chemical, Biological and Radiological (CBR) filtration, overpressurization, back-up power supply, air locks and decontamination stations.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BC - Force Protection and Technology Applications (cont'd)

Completed the final phase of the software and equipment for the two consequence assessment centers - Unclassified for Olympic Coordination Center, and Classified for Joint Operations Center.

Collaborated and conducted external and internal tracer gas tests.

Provided technical support to the Command Post and Field Training Exercises.

Initialized Operational Capability of integrated SB system.

Completed an operational counter-WMD cell within Joint Operations Center (JOC) for on-site and reach-back technical support, and provide training as appropriate.

Completed assessment of the counter WMD integrity of the as-built JOC.

Thermionics Program (\$2,300K)

Continued thermionics research and development

Continued microminiature thermionics converter development

FY 2002 Plans

Balanced Survivability Assessments (\$1,835K)

Conduct balanced survivability and integrated vulnerability assessments on DoD facilities as tasked by CINCs, the Joint Staff, and OSD/ C3I.

Continue integrated vulnerability assessment of defense and critical national infrastructure facilities.

Smart Building Program (\$4,349K)

Finalize Operational Capability of integrated Smart Building (SB) system.

Provide on site technical support for special events.

Begin lessons learned upgrade efforts.

Begin decommissioning of SB system.

FY 2003 Plans

Funding and activities realigned to Project BC in PE 0602717BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BD - Weapon Effects Technologies - This project provides for the development and application of products and services to meet Weapons of Mass Destruction (WMD) and other special weapon effects challenges. This is accomplished using state-of-the-art science and engineering capabilities, including advanced first principles analysis, engineering modeling, simulation and networking technologies, and precision laboratory scale and field testing capabilities (supported by Project BE-Testing Technologies and Integration). The project integrates and applies these advanced capabilities to support decision making in the face of rapidly evolving WMD threats in both military and civilian sectors. Products being developed include WMD target planning and assessment tools, WMD hazardous materials transport and collateral effects prediction tools, tools and technologies used to mitigate the effects of WMD on facilities and people, and consequence assessment/management tools to evaluate and respond to WMD events. Additionally, this project develops the enabling technologies used to produce anti-terrorist/force protection tools. This project also develops technologies to support force protection assessments and forensic analysis of terrorist events as well as advanced blast mitigation/retrofit techniques. Such tools developed on this project are used to enable other projects including Project BC-Force Protection and Technology Applications, and Project BF-CP Operational Warfighter Support. Also, they are made available to civilian, anti-terrorism and disaster response support organizations.

This project also maintains the capability to address nuclear weapon effects problems. This involves development and application of state-of-the-art nuclear weapon effects models to DoD for survivability, operability, and employment planning applications. In addition, the project maintains a national archive of nuclear phenomenology, involving perishable nuclear test data and expert interpretation, weapon effects models that encode our knowledge base, and a modern computer-based architecture for retention and access to such archives. These capabilities are used in direct support of the warfighter and are used to enable other projects including Project BG-Nuclear Operations and Project BH-System Survivability.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

In direct support of these products and services to the warfighter, this project also provides and maintains a world-class High Performance Computing (HPC) architecture with

Project BD - Weapon Effects Technologies (cont'd)

high band-width communications required for direct support to the warfighter. This service enables the application of state-of-the-art first principles models to WMD problems and supports the development of improved models and migration to advanced computing architectures.

In addition, this project includes funds for which the Department of Defense has provided direction to DTRA, to initiate a new subproject known as Z-Chip (also referred to as the Study of Conceptual DoD Health Surveillance and Biodefense System). These funds are to be used to initiate development of the next-generation chip-based micro-sensor array pathogen detection technology and demonstrate the capability to fuse patient point-of-care data using health surveillance software. The system utilizes diagnosis in the early stages of disease when patients present respiratory symptoms to identify the threat agent and to recommend appropriate prophylaxis and treatment.

Also included in this project are civilian salaries required to directly support the development of products and services provided by this project. Additionally, this project contains resources added by Congress for the Monterey Center for Counterproliferation Studies.

As part of the Secretary of Defense's recent Strategic Review, additional funds of \$60M were added to: begin development of the capability to defeat a broad spectrum of biological threat agents, develop nuclear effects and output models and precision lethality tools for warfighter/CINC and service acquisition program office support, and begin efforts to assess nuclear test readiness.

FY 2001 Accomplishments

Targeting Support (\$9,128K)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Released Munitions Effects Assessment (MEA) 4.0 windows based weaponeering planning tool (MEA 3.1) is a validated tool for the Joint Munitions Effects Manual (JMEM) for attacking tunnel facilities.

Project BD - Weapon Effects Technologies (cont'd)

Released IMEA 4.1 that includes the following capabilities: an interface to HPAC 4.0, the Guided-Weapon Trajectory Software (GWTS), and multiple hit/multiple crater algorithm (Common Layer Cratering Library).
 Performed verification & validation testing to submit an accreditation support package to the Joint Technical Coordinating Group for Munitions Effects (JTTCG/ME) to obtain accreditation.
 Completed precision tests for validating Lethality/Vulnerability (L/V) models that are used in the Integrated Munitions Effects Assessment (IMEA).
 Completed tests on Former German Democratic Republic Command, Control, Communications, and Intelligence (C3I) equipment and develop functional defeat model.
 Conducted precision tests on reinforced concrete and masonry walls and steel deck slabs, and integrate engineering level models into MEA.
 Developed multiple shot wall damage algorithms for MEA 5.0.
 Integrated the initial set of weaponeering tools into the Integrated Target Planning Tool Set (ITPTS 1.0). Assured compatibility with the Defense Intelligence Agency (DIA) ATHENA database and the JCS/J2T Joint Targeting Toolbox.
 Upgraded structural response and ground-shock propagation methodologies for Ground-Shock Vulnerability Number (GVN) Improvement.

Phenomenology and Advanced Computing (\$20,164K)

Completed non-ideal airblast phenomenology update in direct response to request of U.S. Army, by initial distribution of PC airblast code.
 Completed development of the EMP (Electromagnetic Pulse) targeting models for Strategic Command (STRATCOM).

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Partially completed development of the STRATCOM C4 Assessment Toolset (STRATCAT) and transferred the version of the tool to STRATCOM.

Began the phase-out of the Graybeard nuclear test data review and archival on airblast, cratering & ejecta, dust & fallout, electronics interaction, and biological effects.

Project BD - Weapon Effects Technologies (cont'd)

Provided scientific and technical information services and products as the DOD-wide repository for test photos, films, data, test records, and other information products.

Continued review and archiving of perishable nuclear environmental radiation, thermo-mechanical, and electromagnetic test data.

Continued computational support by providing annual support for the Scientific Computing Communications Network and maintain High Performance Computing (HPC) equipment for the DTRA Telegraph Road Data Center, such as increased memory and additional Central Processing Units (CPUs) to extend the life of existing systems and enable them to accommodate additional workload from decommissioning of older vector machines.

Provided classified access capabilities for the DTRA Telegraph Road Data Center.

Continued support of National Missile Defense/Theater Missile Defense with detailed nuclear phenomenology and analysis to aid in the development of models of system operation in nuclear environments.

Completed detailed first principle upgrade of EMP tools to include Source Region EMP (SREMP) Tool sets.

Completed detailed benchmark calculations of delivery system impact on nuclear weapon output spectrum.

Initiated upgrade of high/low altitude nuclear environment to assess nuclear effects on military system design.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Provided initial upgrade for ground shock prediction methodologies utilized by DIA and STRATCOM for the Ground Shock Vulnerability System used in Strategic Integrated Operational Plan (SIOP) planning.
Published and distributed Nuclear Weapon Effects textbooks.

Project BD - Weapon Effects Technologies (cont'd)

Hazard Prediction and Assessment Capability (HPAC)/Consequence Assessment Tool Set (CATS) (\$11,126K)

Delivered HPAC 4.0 to STRATCOM, JFCOM, and other CINCs. Incorporate nuclear weapons accident module, NBC messaging capability, missile intercept module, smoke and obscurants module, and initial urban transport capability.
Completed development of high-resolution probabilistic weather capability necessary for target planning of WMD facilities to support the warfighter.
Delivered CATS 4.6 to JTF-Civil Support, JFCOM and other CINCs and civil support first-responders, such as National Guard WMD Civil Support Teams and state emergency operations centers.
Extended casualty estimation to chemical and biological warfare agents, matching current nuclear effects casualty estimation.
Completed initial development of industrial hazardous material source term modeling for HPAC.
Evaluated urban modeling capability at 2001 Presidential Inauguration using the HPAC and new urban sub-models in concert with Joint Forces Command (JFCOM).
Provided counter-terrorism planning and urban transport and dispersion modeling capability for joint DoD/DoE support in preparation for Salt Lake City Winter Olympics.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Completed verification and validation efforts between existing DOE and DTRA transport and dispersion codes.

Provided collateral effects, consequence assessment analyses, and reachback technical support for all HPAC and CATS applications to Joint Staff (J2-Targeting), JFCOM (JTF-Civil Support), CENTCOM and EUCOM, in response to exercises and contingency operations.

Advanced Systems and Concepts Office (ASCO) (\$6,567K)

Researched nuclear, chemical, and biological weapon threats and responses.

Surveyed prospects for nuclear proliferation as well as its implications for deterrence and other tools of coercive threat management.

Project BD - Weapon Effects Technologies (cont'd)

Assessed the utility of preventive threat reduction, that collection on non-coercive tools ranging from reciprocated unilateral action to orchestrated international agreements.

Assessed the feasibility of a DoD Health Surveillance and Biodefense System (Z-Chip); studied advanced chemical and biological operations in contaminated environments; evaluated efforts to enhance attribution in bio-weapon attacks (bio-forensics); supported National Academy of Sciences study of bio-detector technology; assessed the relative lethality of missile-delivered nuclear, chemical, and biological munitions, WMD-related training scenarios, and approaches to food supply assurance.

Infrastructure (\$8,787K)

Provided for payment of civilian salaries.

Monterey Center for Counterproliferation Studies (\$4,000K)

Congressionally added funding

FY 2002 Plans

Targeting Support (\$17,777K)

Develop initial Battle Damage Assessment (BDA) program and begin BDA tool software requirement specifications (SRS) and software program specification (SPS).

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Complete development of MEA 5.0 and ITPTS 2.0 to support the final CP2 ACTD demonstration DIPOLE ZODIAC and the tunnel defeat demonstration.
 Perform high-fidelity analyses and precision tests to produce blast mitigation and retrofit criteria for use in joint Blast Effects Estimation Model.
 Complete development of a high fidelity, physics-based computer code for DoD High Performance Computing Program capable of generating reliable data for lethality/vulnerability model development for WMD counterforce applications.
 Begin development of the capability to defeat a broad spectrum of biological threats (dry/wet spores, viruses, toxins). Establish relationships between weapons concepts, their effects and biological threat agent vulnerabilities.

Project BD - Weapon Effects Technologies (cont'd)

Refine baseline two-dimensional Discrete Particle Model that was developed in FY01 into a full three-dimensional model capable of addressing problems associated with extreme (blast/shock) loading of reinforced concrete structures.

Phenomenology and Advanced Computing (\$28,713K)

Provide online (password protected) scientific and technical information services and products as the DoD-wide repository for test weapon effects photos, films, data, test records, and other information products.
 Complete archiving of perishable nuclear environmental radiation, thermomechanical, and electromagnetic test data.
 Provide support for Scientific Computing Communications Network and High Performance Computing (HPC) equipment, an enabler of weapon effects research and prediction.
 Improve simulation of high altitude regime nuclear burst effects important for National Missile Defense (NMD) to provide improved prediction of debris location and energy deposition, critical parameter for NMD operability.
 Continue educational seminars on the use of nuclear prediction tools for application to Ballistic Missile Defense Office (BMDO) and communications systems.
 Begin integration of nuclear weapon disturbed environments into space weather program.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Complete hostile environment (nuclear interceptor output) definition for reentry body upgrade program.

Begin to develop and apply modern ground shock phenomenology prediction tools and validation databases for Deeply Buried Targets.

Generate nuclear weapons output from threat weapons (Red Book) using high-performance computers.

Provide support to STRATCOM in the field of nuclear phenomenology and associated tools to include upgrade to the Integrated Nuclear Computational Aids, development of an Electromagnetic Pulse (EMP) Vulnerability Number Engagement Tool, and responding to questions on space and EMP environments.

Provide high-altitude nuclear effect (HANE) data for the National Missile Defense Program

Project BD - Weapon Effects Technologies (cont'd)

Assess reducing underground test readiness from three years to three months, resolve safety issues and demonstrate resolve.

Hazard Prediction and Assessment Capability (HPAC)/Consequence Assessment Tool Set (CATS) (\$15,650K)

Deliver HPAC 4.0.1 to JFCOM, STRATCOM, EUCOM and other CINCs and service organizations.

Incorporate industrial hazardous material source with human effects, airborne chemical reaction and deflagration effects and integrated urban transport.

Deliver HPAC-CATS (Nuclear) prototype for testing to STRATCOM.

Deliver CATS-JACE web-based consequence assessment software to JFCOM and other primary and support CINCs in buildings due to infiltration and in-the-building releases.

Develop initial high-resolution weather forecasting model to incorporate mesoscale methodologies from the Navy, Air Force, Colorado State University, and DTRA.

Continue development of urban transport and dispersion modeling capability through collaboration with United Kingdom and scaled testing.

Provide counter-terrorism support and urban transport and dispersion modeling capability for joint DoD/DOE support during designated special events.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Advanced Systems and Concepts Office (ASCO) (\$8,036K)

Commission and perform a wide array of study efforts to address areas of force protection and operations; homeland defense and countering terrorist attacks; strategic issues; and other unconventional threats and vulnerabilities.

Complete studies on a chemical weapon next generation agent assessment; assess casualties for a multilayer biological defense; conduct game theory applications to offense-defense strategies; continue studies of advanced chemical and biological threats and operations in contaminated environments; and further develop the conceptual plan for an integrated national bio-forensics capability.

Accomplish broad spectrum WMD intelligence collection gaps and needs assessment.

Zebra-Chip (\$10,000K)

Validate bio surveillance software/network point-of-care capability.

Project BD - Weapon Effects Technologies (cont'd)

Demonstrate PCR-based initial operational capability for point-of-care pathogen detection.

Develop and demonstrate DNA-based multi-agent biological detection chip.

Develop and demonstrate anti-body-based multi-agent biological detection chip.

Infrastructure (\$10,465K)

Provide for payment of civilian salaries.

FY 2003 Plans

Funding and activities realigned to Project BD in PE 0602716BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BE - Testing Technologies and Integration - This project provides a unique national test-bed capability for Weapons of Mass Destruction (WMD) facility characterization, weapon-target interaction, and WMD facility defeat for various types of test/demonstration functions to respond to operational needs. The project develops, provides and maintains test-beds used by the DoD, the Services, the CINCs and other federal agencies to evaluate the implications of WMD, conventional, and other special weapon use against U.S. military or civilian systems and targets. This project leverages fifty years of testing expertise to investigate weapons effects and target response across the spectrum of hostile environments that could be created by proliferant nations or terrorist organizations with access to advanced conventional weapons or WMD (nuclear, biological and chemical). Specific programs supported by this project include: (1) Hard Target Defeat (HTD); (2) Anti-terrorism (AT); (3) CP Counterforce Advanced Concept Technology Demonstration (ACTD); and (4) Special Operations Forces (SOF). This project maintains testing infrastructure to support warfighters, other government agencies, and friendly foreign countries testing requirements on a cost reimbursable basis. This project also develops strategy and planning for a WMD test-bed infrastructure focusing on nuclear, biological, and chemical facilities, and the hard and deeply buried facilities in which activities are often located. The project provides support for full and sub-scale tests that focus on weapon-target interaction with fixed soft and hardened facilities to include aboveground facilities, cut-and-cover facilities and deep underground tunnels. Specific activities include testbed design and construction, instrumentation and data collection, test coordination and execution, and post-test analysis and documentation. This project directly supports Projects BC, BD, and BF, and, in PE 0603160BR, Project BJ and BK.

FY 2001 Accomplishments

Test-Bed Operation and Support (\$6,968K)

Supported broad customer base including friendly foreign nations in the conduct of weapon-target interaction and WMD defeat tests.

Provided an inventory of unique targets, infrastructure support, and expertise for conduct of major integrated test programs, including instrumentation maintenance,

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BE - Testing Technologies and Integration (cont'd)

gauge installation, data recording, source diagnostics, environmental support, safety support, experiment installation, experiment fielding, and test fielding. Specific WMD (nuclear, biological and chemical) programs supported by this project included HTD and CP ACTD.

The number of tests supported this year were 11 for CP2 ACTD, 8 supporting antiterrorism, 5 supporting tunnel defeat and 10 supporting general R&D Service requirements and general knowledge base enhancement. Approximately 10 tests were major ACTD Demonstrations.

Field Support (\$991K)

Continued to provide infrastructure support for maintenance of government vehicles, transportation of equipment, communications, utilities for facilities, rental of facilities, supplies, custodial service, and procurement of equipment in support of test execution.

Nevada Test Site (NTS) Environmental Remediation (\$842K)

Continued systematic environmental assessment and remediation on the tunnel complexes at NTS for which DTRA is responsible.

Developed Corrective Action Plan for N-tunnel muck pile and Corrective Decision Document for T-tunnel muck pile.

Simulator Technology (\$600K)

Maintained Large Blast Thermal Simulator (LB/TS) in a caretaker status, which included one systems test to assure the operational status of the device.

Developed a design package for modification of the nitrogen driver tube section to be replaced with compressed air.

FY 2002 Plans

Test-Bed Operation and Support (\$8,665K)

Continue to provide unique national test-bed capabilities for weapon-target interaction and WMD programs. Expect to support 5 major CP2 ACTD demonstrations, 15 Hard Target

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Defeat demonstrations, 6 antiterrorism information tests and 10 general phenomenology tests.

Project BE - Testing Technologies and Integration (cont'd)

Provide an inventory of unique targets, infrastructure support, and expertise for conduct of major integrated test programs, including instrumentation maintenance, gauge installation, data recording, source diagnosis, environmental support, safety support, experiment installation, experiment fielding, and test fielding.

Field Support (\$1,461K)

Continue to provide infrastructure support for maintenance of government vehicles, transportation of equipment, communication, utilities for facilities, rental of facilities, supplies, custodial service, and procurement of equipment in support of test execution.

Simulator Technology (\$590K)

The original Large Blast and Thermal Simulator(LB/TS) will receive the following upgrade: Driver tube section and end caps are being modified to be used with common compressed air rather than the nitrogen driving gases used in the past. This should allow a more inexpensive test with the same fidelity.

Continuation of LB/TS in caretaker status.

FY 2003 Plans

Funding and activities realigned to Project BE in PE 0602716BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

~~**Project BF - CP Operational Warfighter Support**~~ - This project will provide targeting and Intelligence Community (IC) support, exercise CP technologies and products with the users, develop DoD compliant simulations that exploit CP models for target planning and collateral effects prediction, and demonstrate CP capabilities in operationally realistic environments. The technical approach is to integrate technologies developed in other CP projects, to conduct a full spectrum of tests to verify capability enhancement, to expose customers to these capabilities in exercises, wargames and demonstrations, to integrate CP technologies into customer operations, and to support use of these capabilities during contingency operations. This project focuses on four thrusts that support outside customer requirements. The four thrusts are a Hard Target Defeat (HTD) program, a Weapons of Mass Destruction (WMD) Assessment and Analysis Center (WMDAAC), Nuclear Infrastructure Threat Reduction (NITR), and Commanders-in-Chief (CINC) Planning Support. The CP Operational Warfighter Support project provides the bridge between the CP technology base and operational community needs. The overall project goal is to support the Joint Chiefs of Staff (JCS), the warfighting CINCs and Services/agencies engaged in countering WMD threats and to protect the U.S. and its allies against military or terrorist use of WMD.

Hard Target Defeat Program. The United States and its allies face a growing threat related to critical military targets hidden within and shielded by hardened, deeply buried tunnel complexes. These complexes may house biological/chemical/nuclear weapons production or storage facilities; command, control, and communications facilities; and theater ballistic missiles and their transporter-erector-launchers (TELs). An objective of this project is to examine the existing U.S. and Allied capabilities to hold hardened, deeply buried tunnel targets at risk, thereby defining a current performance baseline. Any deficiencies will be identified and the ability of planned systems to address these deficiencies will be assessed. Finally, new technologies needed to mitigate remaining shortfalls will be evaluated as candidates for new hard target defeat acquisitions. Activities respond to warfighting requirements derived from the Hard and Deeply Buried Target Defeat Capstone Requirements Document, and to the RDT&E priorities of the Office of the

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BF - CP Operational Warfighter Support (cont'd)

Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD(AT&L)). Funds added as a result of the Secretary of Defense strategic review for FY02 are being used to develop technologies identified in the Hard and Deeply Buried Target Defeat Science & Technology Plan.

Targeting and IC Support, part of Hard Target Defeat, provides functional vulnerability assessments of hostile foreign systems in support of warfighter and IC requirements. It assists the CINCs and IC in target planning against hard and deeply buried facilities. The assessments leverage databases, methodologies, and technical expertise developed during Balanced Survivability Assessments (PE 0602715BR, Project BC). Details of specific individual assessments are classified.

This project focuses weapon/target interaction and target planning tool technology base efforts completed in Project BD on tunnel applications. The program depends on test planning and execution support from Project BE. Products from this project are transitioned to PE 0603160BR, Project BK for Command, Control, Communications, and Intelligence (C3I) facility demonstration and the Thermobaric Weapon (TW) demonstration. Efforts in this program provide part of the technology base needed for counterproliferation activities conducted in other DoD programs.

WMD Assessment and Analysis Center. The WMDAAC provides the warfighter with the capabilities and understanding for countering the use and effect of Weapons of Mass Destruction (WMD) through the advancement of simulation technology, assessment of operational impact, and the development of collaborative capabilities. Specifically, the WMDAAC: 1) develops advanced simulations from first-principles physics models produced in other projects in this program element (extensively Project BD). WMDAAC personnel provide an interface between DTRA model developers and the weapons effects simulation community to

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

ensure maximum utility of DTRA models in distributed interactive simulations through compliance with High Level Architecture (HLA) standards and protocols.2) The WMDAAC uses

Project BF - CP Operational Warfighter Support (cont'd)

these advanced simulations to assist the warfighter in quantifiably assessing operational theater plans and post-attack warfighting effectiveness and to develop alternatives to mitigate the effects of WMD. 3) The WMDAAC develops and adapts capabilities to project information through advanced visualization techniques and to facilitate collaboration at widely dispersed locations. Commercial and government developed technologies are selected and proven in a research environment, and then transitioned to the DTRA Operations Center and/or other warfighter customers. 4) The WMDAAC provides warfighters and first responders with ready access to mature computer models, WMD databases and expert field assistance and training. The end result is to provide more realistic models and simulations of the effects of WMD for use in training, analysis, experimentation, and acquisition. Models and simulations will support the fielding of joint and service M&S system developments (e.g., Joint Simulation System (JSIMS), Joint Modeling and Simulation System (JMASS), Joint Warfare System (JWARS)).

Nuclear Infrastructure Threat Reduction (NITR) Program. The NITR program is designed to provide the National Command Authority (NCA) and combatant commands a coordinated capability to deny critical nuclear weapon production, processing, fabrication and storage capability of an adversary, minimize collateral effects, and support consequence management of nuclear accidents/incidents within the combatant commander's area of operations (AOR). NITR technologies include pre-attack planning, target response and collateral effects prediction; a variety of radiometric and nuclear sensors for facility damage and collateral effects assessment; and strategies to ensure structural damage to targeted components and mitigate damage to surrounding components. Additionally, this program will enhance our ability to predict the consequences of terrorist action against accidents in nuclear facilities. The program depends on test planning and execution support from Project BE.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

CINC Planning Support. This activity develops modeling and simulation tools and applies them to support warfighters in development of war plans. It produces

Project BF - CP Operational Warfighter Support (cont'd)

theater and campaign level simulation. These tools are used in a program called War Planning Support (WPS) to assess/analyze war plans or to evaluate the benefits of new technology on improved warfighter efficiency and effectiveness. Two tools currently being developed are the Integrated Theater Engagement Model (ITEM) and the Synthetic Exercise Environment (SEE).

FY 2001 Accomplishments

Hard Target Defeat Demonstrations (\$10,330K)

- Conducted functional defeat demonstrations using current inventory weapons on the full-scale simulated missile operations tunnel facility #1 at the Nevada Test Site (NTS). Determined reconstitution time for functional defeat attacks on missile operations facilities (tunnel facility #1).
- Completed construction of the NTS tunnel facility #2 to be used for functional defeat demonstrations of tunnel facilities housing C3I functions.
- Started installation of equipment necessary for functional defeat demonstrations on the C3I tunnel facility #2 at NTS.

Hard Target Defeat Technology (\$14,526K)

- Continued development and validation of remote site geologic characterization technology.
- Conducted geologic material properties tests for the NTS tunnel facility #2.
- Continued functional characterization and modeling of C3I and WMD tunnel facilities.
- Identified mission critical equipment and vulnerabilities for C3I tunnel facilities.
- Continued penetration testing for rock and damaged concrete focusing on multiple attacks on the same aimpoint.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Continued advanced weapon/payload testing to identify and quantify defeat mechanisms and evaluate effectiveness for C3I and WMD tunnel facilities.

Continued development of improved/new weapon and target interaction models addressed in Project BD under munitions effects assessments to include in-tunnel equipment response, and reconstitution for C3I and WMD tunnel facilities.

Project BF - CP Operational Warfighter Support (cont'd)

Continued support for other DoD and military service hard target defeat-related activities.

Continued placement and integration of targeting models into automated weaponeering tools.

Continued evaluation of signatures for hard target defeat applications.

Continued targeting and IC support by conducting assessments of hostile facilities based on JCS and CINC priorities. Details are classified.

WMD Assessment and Analysis Center (\$8,573K)

Transformed high fidelity, physics-based models and databases into a flexible and extensible framework for providing credible virtual targets including associated weapon effects, target responses, and induced environments. Integrated the resulting system into the Wisconsin Air National Guard Training Range at Volk Field to provide realistic, repeatable, non-destructive training for air-to-ground attack crews.

Implemented DoD High Level Architecture (HLA) requirements for the Operational Multi-scale Environment model with Grid Adaptivity (OMEGA) and Hazard Prediction and Assessment Capability (HPAC) 4.0 enabling the use of these models in DTRA and other government simulations to include Joint Warfare Systems (JWARS), Joint Simulation Systems (JSIMS), Joint Semi-automated Forces (JSAF), etc.

Completed a Weapons Effects Federation Object Model for integration of blast and penetrating weapon codes in nuclear, biological, chemical, and radiological environments.

Continued to support research and development of WMD simulation activities within critical programs such as JWARS and JSIMS by developing tools that will analyze

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

effects of WMD weapons from a single-weapon, detailed view to a theater-wide, aggregate view.

Continued technical and advanced simulation support to CINC-sponsored exercises worldwide and consequence analysis support for National Special Security Events, exercises, and wargames.

Project BF - CP Operational Warfighter Support (cont'd)

Continued research into high-speed data connectivity for operational and research and development customers including the use of Defense Information Systems Network-Leading Edge Services (DISN-LES) and CINC21 ACTD advanced communication connectivity for warfighting CINCs with multiple remote users and deployed teams.

NITR Collateral Effects (\$1,538K)

- Developed target planning tool architecture design, software development documentation plan and verification and validation plan.
- Developed and integrate generic enrichment and reprocessing facility model with fault tree and vulnerability modeling into prototype targeting tool.
- Developed integration plan for prototype tool into Munitions Effects Assessment tool.
- Developed weapon storage facility model to include vulnerability and collateral effects characteristics.
- Developed nuclear component fragility modeling and testing plan.
- Transferred nuclear aspects of collateral effects to Project BD.

NITR Systems Assessment/Weapons (\$575K)

- Identified and assess weapon system elements that enhance the capability to attack and defeat NITR related targets in virtually any weather with minimum collateral effects.
- Identified and assess nuclear, radiometric and other sensors and sensor fusion strategies that facilitate pre-strike planning, attack, and post-strike damage and collateral effects assessment of NITR related targets.
- Documented results and conclude systems assessments.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

FY 2002 Plans

Hard Target Defeat Demonstrations (\$13,360K)

Complete installation of equipment necessary for functional defeat demonstrations on the C3I tunnel facility #2 at NTS.
 Conduct simulated C3I operations at the NTS tunnel facility #2 to support signature/sensor evaluations.

Project BF - CP Operational Warfighter Support (cont'd)

Initiate functional defeat demonstrations using advanced weapon concepts on the C3I tunnel facility #2 at NTS.
 Construct tunnel portal test facilities at White Sands Missile Range (WSMR) to evaluate operational tactics and standoff weapon systems prohibited at NTS.

Hard Target Defeat Technology (\$37,359K)

Continue development and validation of remote site geologic characterization technology.
 Develop functional characterization models of C3I and WMD tunnel facilities.
 Identify mission critical equipment and vulnerabilities for WMD tunnel facilities.
 Continue penetration testing for rock and damaged concrete focusing on multiple attacks on the same aimpoint.
 Continue advanced weapon/payload testing to identify/quantify defeat mechanisms and evaluate effectiveness for C3I and WMD tunnel facilities.
 Conduct development and lethality testing of a classified weapons concept for C3I tunnel facilities.
 Develop improved weapon/target interaction models to include the response of critical C3I and WMD equipment to advanced payload environments.
 Continue support for other DoD and military service hard target defeat-related activities.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

~~Develop structural and functional battle damage assessment for C3I and WMD tunnel facilities, for incorporation into the Munitions Effects Assessment (MEA) tunnel module.~~

Continue evaluation of signatures for hard target defeat applications.

Initiate development of a functional defeat capability to assure critical component and network centric kills for targets invulnerable to physical defeat.

Assess ground shock and tunnel blast lethality issues to determine minimum collateral effects application of nuclear weapons against hard targets.

Initiate development of an advanced payload for improved lethality to address hard and deeply buried target problem.

Project BF - CP Operational Warfighter Support (cont'd)

Initiate development of high-payoff novel explosive concepts using advanced energetic materials to enable defeat of targets currently invulnerable to weapons solutions.

Accelerate development of a thermobaric payload optimized for hard and deeply buried targets and WMD agent kill applications.

Continue targeting and intelligence community support by conducting assessments of hostile facilities based on JCS and CINC priorities. Details are classified.

WMD Assessment and Analysis Center (\$8,987K)

Demonstrate a Weapon Effects Federation Object Model (WE FOM) incorporating physics-based models and databases of targets, weapons, and post-strike effects. Continue WMD modeling interface definition for JSIMS, JWARS, and JMASS. Support the USJFCOM Millennium Challenge exercises.

Complete integration of urban dispersion model into web-enabled Weapons Analysis Lethality Tool Set. Begin follow-on Joint Weapons Effects Analysis Tool Set.

Begin Airbase Effects Assessment for Chemical and Biological Weapons.

Demonstrate utility of weapon effects simulations for DTRA weapon effects testing for both planning and post-test analysis.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Demonstrate utility of HLA federations in WMD effects simulation for Millennium Challenge '02.

Demonstrate utility of Global Broadcast System, a DoD one-way broadband transmission system, for WMD consequence management support during Millennium Challenge '02.

Continue joint efforts to develop high-fidelity physics-based models and databases of targets, weapons, and post-strike effects that support real/near-real time viewing of dynamic weapons effects in a simulated environment to include the effects of WMD, conventional weapon effects, and 3D visualization of target.

Continue research and development of collaborative tools to ensure effectiveness and compatibility with the customer by developing and demonstrating to warfighters and first responders portable automated access capabilities to DTRA products using advanced CINC21 ACTD communication technologies and knowledge management.

Project BF - CP Operational Warfighter Support (cont'd)

Continue exercise participation (CINC 21 ACTD, Fleet Battle Management Experiments, US Forces Korea Ulchi Focus Lens), training, and development of WMD information resources.

CINC Planning Support (\$4,721K)

Produce Synthetic Exercise Environment (SEE) database and cartographic products for AIMING FIST 2002 exercise.

Identify SEE upgrade tasks through SHAPE Users Group.

Implement SEE Atlantis digital terrain mapping enhancements.

Conduct SEE follow-on feasibility study.

Identify upgrade tasks for Integrated Theater Engagement Model (ITEM) to meet customer requirements.

Complete War Planning Support (WPS) to SHAPE.

Continue phased WPS to MARFOR/CPF (USPACOM), CNE (USEUCOM), and USCENTCOM.

Respond to anticipated WPS requirements for USFK/CFC.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

~~Continue WPS to the Commanding General 32nd AAMDC with completion of newly integrated Theater Missile Operations Campaign Plan Methodology for USFK/CFC, and transitioning applications to USCENTCOM Area of Responsibility (AOR) requirements.~~

FY 2003 Plans

Funding and activities realigned to Project BF in PE 0602716BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BG - Nuclear Operations - These programs directly reflect the National Military Strategy, support the provisions of Joint Vision 2010, and are directed by the JCS in the Joint Strategic Capabilities Plan (JSCP) Nuclear Annex. This project has been reorganized into three activities: 1) Nuclear Programs, 2) CINC/Forces/Security Support and 3) a new activity--WMD (Nuclear) Protection and Response. Responsive to the oversight of the Nuclear Weapons Council, they provide critical support to the CINCs, Services, JCS and OSD. This project continues the realignment begun by DTRA at its inception so as to deal with the emerging 21st Century strategic landscape, and is divided into the three areas as described above:

Nuclear Programs.

Nuclear Weapons Surety: As tasked by the DoD Nuclear Weapon System Safety Program, the surety programs will provide CINCs, Services, and JCS with technical analysis, studies, research, and experimental data to identify and quantify risks of plutonium dispersal and Loss of Assured Safety (LOAS) due to accidents, fires or natural causes during normal, peacetime operations of the nations nuclear weapon systems. Additionally, studies to quantify the probability of success of targeted terrorist attacks on DoD facilities, leveraging these risk assessment advances.

Nuclear Mission Management Plan (NMMP): As tasked by Deputy Secretary of Defense and Director, Defense Research and Engineering (DDR&E), and in support of national requirements to maintain a strategic nuclear deterrent, conduct assessments and develop long-range plans, the continued development of the DoD Nuclear Mission Management Plan is designed to provide a comprehensive, integrated DoD roadmap for the sustainment and viability of U.S. nuclear forces, personnel, and infrastructure.

Stockpile Sustainment: Continue to act as DDR&E's Executive Agent for Annual Certification and Dual Revalidation and support related stewardship and sustainment activities.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BG - Nuclear Operations (cont'd)

Stockpile Operations Support: In support of national requirements to maintain a viable nuclear deterrent, this program provides automated tools to maintain, report, track and highlight trends affecting the nuclear weapon stockpile. It will provide crucial business process and information support to ensure continued sustainability and viability of the nuclear stockpile.

CINC/Forces/Security Support. As tasked by the JSCP and DoD Directives, these programs will provide CINCs, Services, JCS and DoD with focused analyses in support of nuclear planning and operations and WMD threat mitigation as they pertain to the combat survivability of the forces. Additionally, they provide the DoD nuclear physical security applied research and force-on-force (FoF) testing programs to help insure the security of our nuclear forces. Provides technical support and curriculum development and enhancement for the Defense Nuclear Weapons School (DNWS), to include other WMD support, and other DoD nuclear training activities.

WMD (Nuclear) Protection and Response. As a new activity and in direct support to the National Military Strategy, these programs will promote initiatives to detect the surreptitious introduction and use of weapons of mass destruction against the U.S. and its allies thereby protecting our citizens and critical infrastructures. Potential adversaries, whether nations, terrorist groups or criminal organizations, will be tempted to use asymmetric means of war such as weapons of mass destruction to counter U.S. conventional weapon superiority. Promoting such initiatives enhances deterrence and proactively supports the agency's mission of WMD threat reduction.

FY 2001 Accomplishments
Classified Program (\$97,860K)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BG - Nuclear Operations (cont'd)

Nuclear Programs (\$13,688K)

Nuclear Weapon Surety Thrusts:

- Continued the B-2 Weapon Safety System Assessment (WSSA).
- Completed the WSSA for dual capable fighter aircraft in Europe.
- Completed the C-17 Aircraft Transportation Safety Study.
- Continued Storage Vault Blast Effects Testing and Analysis.
- Conducted modeling and testing to respond to weapon and weapon system safety requirements and criteria.
- Completed the development and continued the validation of the Storage Facility (Lightning) Tester.
- Continued the development and population of a weapon safety database of completed assessments, studies, and test programs.
- Began Phase II Small Business Innovative Research (SBIR)- Automated Vulnerability Evaluation for Risks of Terrorism (AVERT) and Isis Fire Modeling Program.

Stockpile Sustainment Program Thrusts:

- Conducted annual certifications, at Presidential direction, of the continued safety and reliability of the U.S. nuclear stockpile in the absence of underground testing.
- Began harmonization of NMMP and DOE's stockpile stewardship.
- Provided personnel, as tasked by Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs (ATSD(NCB)), for participation on the joint DoD-DOE Dual Revalidation teams, to conduct a multi-year, in-depth evaluation of the continued safety and reliability of specified weapons in the nuclear stockpile.
- Continued evaluation of the W80 in support of the Air Force.
- Prepared an annual performance report, as directed by Presidential Decision Directive #15(PDD), on the DoD stockpile sustainment accomplishments and future plans.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Provided technical support to the Nuclear Weapons Council (NWC).
Published FY 2002 Edition of the NMMP.

Project BG - Nuclear Operations (cont'd)

Stockpile Operations Thrusts:

Developed and initiated beta testing on Defense Integration and Management of Nuclear Data Services (DIAMONDS) capability package 1 which included developing and implementing the initial Unsatisfactory Reporting System, limited Joint Nuclear Weapon Publications access to on-line publications, and development of Maintenance Bay module. In addition, completed the initial integration of the Special Weapons Information Management System data into DIAMONDS. Successfully linked Air Force Product Support Center, Defense Threat Reduction Agency, and Sandia (DOE), with secure communications to support DIAMONDS data transmission and access to stockpile information, tools, and data.

CINC/Forces/Security Support (9,799K)

Completed Phase 2 assessment of outyear nuclear command and control requirements for NATO/SHAPE/Allied Command Europe.
Maintained USEUCOM/SHAPE European Theater Nuclear Support Program to provide in-theater nuclear and WMD support to EUCOM and NATO.
Initiated a program to fully integrate the planning processes and target data sets of STRATCOM, regional CINC plans and NATO nuclear planning capability.
Provided a quality forum for the development of assessments of the impact of technology on the capability of the nuclear forces and plans to sustain the U.S. nuclear deterrent policy and strategy.
Completed the WMD operational analysis for CENTCOM/USFK/TRANSCOM dealing with chemical threats to U.S./Allied military operations.
Jointly with the Counterproliferation (CP) Support and Operations Directorate, initiated a War Plans Support Program for the CINCs. Objective is to provide operational analyses dealing with theater planning WMD issues supporting the

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

development of CINC CONOPS, CONPLANS and OPLANS. USFK and CENTCOM are focus for FY 2001 program.

Project BG - Nuclear Operations (cont'd)

Completed award of Strategic Deterrence Program to support full range of nuclear and WMD Consequence Management Issues; nuclear policy support and the assessment of the full range of nuclear/WMD issues for DoD components.
Initiated NATO Nuclear Command and Control (C2), Quadrennial Defense Review Analytical Support program.
Conducted Force-on-Force exercise program focused on U.S. forces in USEUCOM/USAFE using the Mighty Guardian series.
Expand the support of the AFSPACECOM/STRATCOM security analyses of ICBM forces.
Initiate planning to support U.S. Navy potential Mighty Guardian Exercise.
Continued to directly support the curriculum development for the Defense Nuclear Weapons School.
Continued to serve as the DoD Executive Agent for nuclear weapons training and education.
Continued to expand and enhance expertise outreach training program across DoD.

WMD (Nuclear) Protection and Response (\$19,366K)

Provided ability to accurately and quickly identify source of production of special nuclear material used in weapons or improvised devices.
Facilitated rapid and reliable identification of the source of shielded nuclear material (SNM) involved in a nuclear/radiological event/incident.
Developed portable, mobile, and rapidly deployable radiation detection and measurement system, a portion of which will be comprised of remote sensors linked to central receiving/processing station via radio frequency (RF) signals.
Provided CINC Technical Support Groups (TSG) ability to employ the system based on intelligence cueing.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Developed and field passive and active SNM detection systems where capable of detection in cases where SNM is shielded; current detectors technologies do not perform well when SNM is shielded for gamma and/or neutron emissions.

Project BG - Nuclear Operations (cont'd)

Conducted applied research and development in order to enhance the capabilities of DoD to consistently defeat Improvised Nuclear Device (IND)/Radiological Dispersal Device (RDD) through the use of developed technologies, tools, and techniques. Began development of tools and capability for rapid attribution of the source of a nuclear event.

FY 2002 Plans:

Nuclear Programs (\$20,346K)

Nuclear Weapon Surety Thrusts:

- Conduct modeling and testing to respond to weapon and weapon system safety requirements and criteria.
- Continue the development and population of a weapon surety database and interface to utilize and archive completed assessments, studies, tools and test programs.
- Analyze and quantify Nuclear Detonation Safety Exceptions (NDSEs).
- Complete the B-2 Weapon System Safety Assessment.
- Complete validation and certification approval of the Storage Facility Tester.
- Complete Storage Vault Blast Effects Testing and Analysis.
- Continue Phase II SBIR - AVERT model and Isis model.
- Begin developing desktop tool based on Storage Vault Blast Effects Testing and Analysis.
- Begin Lightning Effects Testing and Analyses (Air Terminal Testing).
- Begin development of electrical system Penetration Tester.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Continue to support abnormal environment scenario development and analysis for nuclear weapons systems (includes other NDSE analyses).

Stockpile Sustainment Program thrusts:

Conduct annual certifications, at Presidential direction, of the continued safety and reliability of the U.S. nuclear stockpile in the absence of underground testing.

Project BG - Nuclear Operations (cont'd)

Provide personnel, as tasked by Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs (ATSD(NCB)), for participation on the joint DoD-DOE Dual Revalidation teams, to conduct a multi-year, in-depth evaluation of the continued safety and reliability of specified weapons in the nuclear stockpile.

Continue evaluation of enduring stockpile weapons in support of the Air Force and Navy.

Prepare an annual performance report, as directed by PDD on the DoD stockpile sustainment accomplishments and future plans.

Continue technical support to the NWC.

Begin developing third edition of the NMMP.

Begin developing and presenting tailored nuclear weapons expertise and sustainment modules through Outreach 21 efforts to the War Colleges and warfighting units.

Stockpile Operations thrusts:

Develop and implement DIAMONDS capability package 2 which includes additional enhancements to Maintenance Bay and Unsatisfactory Reporting System modules as well as field additional integrated modules based upon user priorities and feedback while continuing to enhance fielded modules. In addition, identify additional functionality and opportunity to integrate weapon tracking systems and stockpile management functions. Link partial CONUS nuclear storage sites and additional organizations with secure communications to support DIAMONDS data

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

transmission and access to stockpile information, tools, and data communications to support DIAMONDS data transmission and access to stockpile tools and data.

CINC/Forces/Security Support (\$8,506K)

Maintain USEUCOM/SHAPE European Theater Nuclear Support Program to provide in-theater nuclear and WMD support to EUCOM and NATO.

Jointly with the CP Directorate, continue the War Plans Support Program for the CINCs. Objective is to provide operational analyses dealing with theater WMD planning issues supporting the development of CINC CONOPS, CONPLANS and OPLANS.

Project BG - Nuclear Operations (cont'd)

- Continue support to STRATCOM and regional CINCs with specific nuclear and WMD threat analyses in support of SIOP preparation, development of integrated effects models, direct planning support to regional CINCs, and specified applications for the Deterrence Framework analytic structure.
- Continue to execute the Strategic Deterrence Program to support full range of nuclear and WMD Consequence Management Issues, provide nuclear policy support and the assessment of the full range of nuclear/WMD issues for DoD components.
- Complete targeting program to fully integrate the planning processes and target data set of STRATCOM, regional CINC plans and NATO nuclear planning capability.
- Conduct Force-on-Force exercise program focused on U.S. forces in USEUCOM/USAFE using the Mighty Guardian series.
- Complete support of the AFSPACECOM/STRATCOM security analyses of ICBM forces.
- Plan to support U.S. Navy potential Mighty Guardian Exercise.
- Initiate new program to examine and evaluate the future impacts of technology on political/military/economical trends-focused on WMD/Consequence Management (CM)/Nuclear proliferation.
- Complete NATO Nuclear C2, Quadrennial Defense Review Analytical Support program.
- Continue to directly support the curriculum development for the Defense Nuclear Weapons School.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Continue to serve as the DoD Executive Agent for nuclear weapons training and education.

Begin development of a comprehensive WMD Training program.

Continue to expand and enhance expertise outreach training program across DoD.

WMD (Nuclear) Protection and Response (\$17,417K)

Develop portable, mobile, and rapidly deployable radiation detection and tracking system, a portion of which will be comprised of remote sensors linked to central receiving/processing station via RF signals. Continue effort and begin integration of detection arrays with communication and analytical software. Expand upon mobile prototype, and continue software development toward future deployment of

Project BG - Nuclear Operations (cont'd)

three attended or unattended variants, including mobile, maritime, and stationary or portal.

Provide CINC Technical Support Groups (TSG) ability to employ the system based on intelligence cueing. Continue effort and expand to varied geographic and operational environments to evaluate operability.

Develop and field passive and active SNM detection systems capable of detection in cases where SNM is shielded; current detector technologies do not perform well when SNM is shielded for gamma and/or neutron emissions. Continue effort by funding scientific review panel and technical support to review studies and proposals to determine promising track for detailed research.

Produce through development and adaptive engineering detection equipment capable of rapid and standoff detection of radioactive materials across a broad spectrum of operational environments including uncertain and hostile. Develop equipment that without significant degradation is waterproof, shockproof, and resistant to extreme conditions and sustained employment. Develop lighter weight and smaller detector systems for more diverse field employment.

Integrate through new concept design or adaptive engineering multiple detection sensor systems to facilitate standoff operator detection of radioactive material

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

and passive or active trigger, alarm, destruct, or detection devices targeting the operator.

Establish administrative support structure to support technical reporting and document production of R&D development efforts. Reporting program must have broad enough scope to permit publication at classified and unclassified levels, and permit literature review and exploration of existing technologies to eliminate duplicating or redundant efforts, and exploit dual or multiple-use technologies. Conduct operational analysis of commercial, vendor, "off-the-shelf", laboratory-produced concept design, or theoretical radiation detection devices in order to determine relative efficiencies, capabilities, and technologies to further enhance

Project BG - Nuclear Operations (cont'd)

the ability to develop, procure, and employ reliable and current technologies for radioactive material detection.

Enhance tools and capability for rapid attribution of the source of a nuclear event.

FY 2003 Plans

Funding and activities realigned to Project BG in PE 0602717BR and Project BG in PE 0602716BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BH - System Survivability - These programs directly reflect the National Military Strategy, support the provisions of Joint Vision 2020, and are directed by the JCS in the Joint Strategic Capabilities Plan (Nuclear Annex). Current and future warfighters and weapon systems, including the associated Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), missile defense and support systems/equipment, must be able to survive and operate effectively through a spectrum of hostile environments. Planned efforts emphasize the development and demonstration of innovative and cost-effective technologies to sustain the functional survivability of U.S. and Allied Forces and systems when confronted with threats from advanced conventional weapons, special weapons and limited nuclear attack. This project constitutes the DoD's resident science and technology expertise in nuclear and related survivability matters. It develops and demonstrates affordable strategies and hardening technologies for U.S. systems; transfers the technical products to acquisition program offices; conducts component, subsystem, system and end-to-end performance tests and assessments as requested by the Services and CINCs; and provides support to the Office of the Secretary of Defense on technical and policy matters that relate to the acquisition of survivable systems and strategic system sustainment.

Project BH is divided into the five business areas described below: Radiation Hardened Microelectronics, Simulator Technology, Operability Assessments, Balanced Electromagnetic Hardening, and Human Risk and Technology.

FY 2002 reflects an addition of \$17M, which resulted from the Secretary of Defense strategic review that stressed the importance of developing technological solutions to critical defense problems including ensuring the availability of radiation hardened microcircuits for survivable military systems, enabling the survivability of critical nuclear command and control networks and support for the development of an affordably survivable national missile defense.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Project BH - System Survivability (cont'd)

Radiation Hardened Microelectronics. Responds to DoD space and missile system requirements for hardened microelectronics and photonics technology to support mission needs. The non-availability of this technology would adversely impact system survivability, performance, weight and cost. The program involves the development and demonstration of technology to support the fabrication of radiation-hardened microelectronics and photonics for DoD missions through private sector and government organizations. This is achieved through the development and demonstration of enabling technologies to ensure the continued availability of special materials and radiation-hardened microelectronics and photonic devices.

Simulator Technology. This program is being revised to respond to the Defense Science Board Task Force on Nuclear Effects Simulation that recommended that DTRA pursue developing some of the capability lost with the moratorium on underground testing. Since the underground testing (UGT) moratorium, simulators have provided the only remaining experimental test bed for the development and validation of radiation-hardened DoD systems. The intensity and fidelity of these simulators do not match that of the UGT testbed, but, through this program, the agency develops, provides and maintains unique DoD radiation test facilities and enabling technologies that are used by the Defense Agencies, the Services and other federal departments (such as DOE) to evaluate the impact of hostile environments on military systems that support missions in the air, on land, at sea, or in space. The program also develops technologies to improve the intensity, fidelity, reliability, reproducibility, and cost effectiveness of existing and future simulators (including radiation sources, power flow and conditioning components, energy storage, diagnostics, instrumentation, other test support equipment, debris shields, and numerical models and computer codes for radiation sources and pulsed power components and test beds); develops concepts, plans, and risk reduction strategies for affordable next-generation

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

radiation simulators with substantially improved intensity and fidelity; support improvements to the two existing test centers, one at Maxwell Physics International (MPI) in San Leandro, California, and one at the Arnold Engineering

Project BH - System Survivability (cont'd)

Development Center (AEDC) in Tullahoma, Tennessee; and installs and characterizes upgrades to the new Decade x-ray simulator and to existing radiation simulators at MPI.

Assessments and Protection Technology. Directly responds to warfighter and acquisition program survivability needs by providing solutions, including development of affordable technologies and methodologies for system-level and family-of-system-level assessments, systems hardening, and testing of the effects of nuclear weapons. Includes development and demonstration of cost-effective system design and test qualification techniques to produce hardware that can be tested without the need for underground nuclear tests. Provides testable system design protocols and modeling and simulation (M&S) tools for system designers and users of nuclear effects simulators.

Balanced Electromagnetic Hardening. Provides the necessary science and technology to ensure protection and survival of military battlefield and civilian infrastructure electronic systems against multiple electromagnetic (EM) environments, including nuclear electromagnetic pulse (EMP), high power microwaves (HPM), as well as WMD threats. Designs and develops innovative, low-cost, balanced EM protection and test technologies for weapon systems; C3; and supporting infrastructure systems to the CINCs, Services and other DoD agencies. Includes development of high-power electromagnetic source technology for warfighting applications and hardening technologies for emerging radio frequency (RF) threats.

Human Risk and Technology. Applies lessons learned from the Nuclear Test Personnel Review Program (O&M-funded) to allow warfighters and peacekeepers to quantify/mitigate the risk

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

in post-Cold-War settings (i.e., limited nuclear exchanges, terrorist actions, radiological dispersal weapons, and other radiation risk scenarios) by developing field measurement and dosimetry systems to support military radiological guidelines for the protection of human resources. This provides direct support to warfighters by predicting and quantifying the operational impact of nuclear, biological and chemical (NBC) and conventional battlefield

Project BH - System Survivability (cont'd)

soldier effectiveness on NBC battlefields; providing performance and cost analysis to support the Defense Acquisition Board; and joint efforts with system program offices to apply the Agency's expertise and technologies to specific Service applications.

FY 2001 Accomplishments

Radiation Hardened Microelectronics (\$19,902K)

- Demonstrated prototype radiation hardened memory circuits capable of storing one million bits of information and retaining the information in the absence of power. Completed the qualification, for space applications, of radiation hardened memory circuits capable of storing four million bits of information.
- Demonstrated technology to support the development of a radiation hardened processor circuit capable of providing at least 100 million instructions-per-second operation.
- Demonstrated advanced technology to support the development of radiation hardened circuits capable of processing both analog and digital information.
- Demonstrated a radiation hardened 24 million (4 million gates) transistor circuit array to support satellite and missile onboard data processing needs.
- Tested and evaluated combined electrical and optical technology for wideband data processing applications.
- Demonstrated Single-Event-Transient (SET) mitigation methods for very deep submicron microelectronics.

Simulator Technology (\$14,173K)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Operated and improved DTRA's radiation simulators to support nuclear weapons effects testing requirements.

Continued user data acquisition system (UDAS) upgrade, integration and certification at the Decade Radiation Test Facility.

Replaced obsolete instrumentation at the Decade Radiation Test Facility.

Completed hardware modifications to the Decade Quad for the cold x-ray mode at AEDC.

Demonstrated high-fidelity (>5 keV) cold x-ray source for advanced radiation simulators using a high-energy test facility ("Z") at Sandia National Laboratories.

Project BH - System Survivability (cont'd)

Demonstrated a large-area (>700cm²) debris shield system for application to cold x-ray testing on the Decade Quad.

Initiated the deployment of a monolithic plasma-opening switch on the Decade Quad.

Continued the development of technology to dramatically improve the capability of non-nuclear x-ray test facilities.

Continued the development of improved-efficiency, long-implosion, cold x-ray sources in support of Decade and future x-ray simulators.

Began development of radiation magnetohydrodynamic modeling and simulation tool for use in cold x-ray source development.

Continued development of pulsed power components for faster simulators.

Assessments and Protection Technology (\$6,667K)

Continued to modify the Electronic Battle Book (EBB) database to include multiple link assessment due to nuclear weapons detonation for USSPACECOM exercises and assessments.

Completed Military Strategic and Tactical Relay (MILSTAR) transition operability assessment.

Developed nuclear environment software modules for integration with Hardware-in-the-Loop (HWIL) facilities.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Conducted testing of Early Warning Radars (EWRs) in support of National Missile Defense (NMD) program upgrades. Developed radar disturbance mitigation techniques for NMD ground-based radar (GBR) and Upgraded EWRs (UEWRs).
 Provided infrared (IR) scene testing of National Missile Defense/Theater Missile Defense (NMD/TMD) sensors.
 Supported IR and communications testing of Space-Based Infrared Satellite (SBIRS).
 Continued communication/radar atmospheric effects participation in operational/warfighting exercises.
 Completed development of an advanced IR scene generator.
 Continued development of the Wideband Channel Simulator.
 Continued development of flexible network assessment tool for analyzing various nuclear weapons effects on system performance.

Project BH - System Survivability (cont'd)

Completed the development of thermal structure response (TSR) test methodology for application to weapon systems operating in nuclear environments.
 Began development of a Commercial-Off-The-Shelf (COTS) operability and survivability protocol for designing and testing systems containing COTS parts.
 Improved and refined testable hardware toolkit delivered to program offices and government contractors in FY00.

Balanced Electromagnetic Hardening (\$6,106K)

Developed a unified EM environmental effects protection design tool.
 Conducted integrated EMP and High Power Microwave (HPM) test methods study.
 Conducted case study on EM effects on civilian infrastructures supporting key DoD missions.
 Performed High Altitude EMP (HEMP) test of the National Military Command Center.
 Continued Mission Degradation Analysis (MIDAS) case study on civilian infrastructure computers against RF threats.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Completed loan arrangement with service partner on high power microwave source modification.

Lead a joint working group of Navy and Air Force representatives to investigate the phenomenology of HPM effects on electronic circuits and how they can be better protected.

Completed EM Infrastructure 2010 (EM INFRA 2010, Case Study 1) and delivered an RF model to determine the RF fields within a structure/building.

Human Risk and Technology (\$783K)

Continued development and evaluation of radiation protection standards and risk measures applicable to personnel/equipment for U.S. Armed Forces, NATO and The Technical Cooperation Program (TTCP) review.

Implemented "lessons learned" from the Nuclear Test Personnel Review, the Radiation Experiments Command Center, field exercises and experiments to personnel dosimetry, spectrometry operational dose recording and military standardized procedures.

Project BH - System Survivability (cont'd)

Adapted/developed operational radiological measurement and spectrographic systems to unmanned aerial vehicle (UAV) platforms.

Evaluated a conceptual biological dosimetry capability during a field exercise.

Investigated new methods/agents for decontaminating mission-essential equipment that is radiologically contaminated above military guidelines.

Facilitated the adaptation and integration of human response and behavioral representations into the appropriate agency and outside agency programs.

FY 2002 Plans

Radiation Hardened Microelectronics (\$39,801K)

Demonstrate prototype radiation hardened 4M-Gate Array.

Demonstrate prototype embedded non-volatile memory.

Demonstrate 16M multi-chip module static random access memory.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Develop and demonstrate the initial technology base to support the demonstration of radiation hardened very deep submicron microelectronics integrated circuits as part of the USD(AT&L) accelerated radiation hardened Microelectronics Technology Roadmap. Demonstrate radiation hardened 0.25-micron complementary metal oxide semiconductor/silicon-on-insulator technology for low-power microelectronics. Demonstrate functional, integrated electronic design automation for deep submicron technologies.

Initiate the process development of a radiation-hardened cryogenic readout circuit.

Simulator Technology (\$17,238K)

Support customer test requirements at DTRA test facilities.

Demonstrate a hot bremsstrahlung radiation source on Decade Quad with the monolithic plasma-opening switch.

Continue development of cold x-ray sources for Decade and other simulators, leading to factor-of-two improvement in yield.

Begin to develop diagnostics for user test support and for source development.

Continue radiation magnetohydrodynamic modeling and simulation.

Project BH - System Survivability (cont'd)

Assessments and Protection Technology (\$8,501K)

Continue to modify the Electronic Battle Book (EBB) database to include multiple link assessment due to nuclear weapons detonation for USSPACECOM exercises and assessments.

Continue NMD requirements development support for version C1 of the NMD initial capability.

Continue Navy Theater Wide (NTW) requirements development support.

Complete development of flexible network assessment tool for analyzing various nuclear weapons effects on system performance.

Initiate USSPACECOM operability assessment of tactical warning/attack assessment (TW/AA) system considering impacts of future NMD system integration.

Complete development of the Wideband Channel Simulator.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Support NMD hardware-in-the-loop (HWIL) testing.
 Start development of a Visible Display Simulator to support Spaced Based Infra-Red Systems (SBIRS) Low testing and other future customers.
 Support NMD In-Flight Information Control System (IFICS) testing.
 Develop nuclear environment software modules for integration with HWIL facilities.
 Conduct testing of EWRs in support of NMD program upgrades. Develop radar disturbance mitigation techniques for NMD GBR and EWRs.
 Provide IR scene testing of NMD/TMD (Theater Missile Defense) sensors.
 Support IR and communications testing of Space-Based Infrared Satellite (SBIRS).
 Continue communication/radar atmospheric effects participation in operational/warfighting exercises through operational assessments.
 Complete development of subsystem controller microcircuitry for fast circumvention and recovery (C&R) after radiation exposure.
 Deliver Testable Hardware Toolkit Version 2.0
 Begin development of a thermostructural response (TSR) toolkit.
 Apply subsystem controller microcircuitry for fast circumvention and recovery after radiation exposure to Global Positioning System recovery.

Project BH - System Survivability (cont'd)

Continue development of a COTS operability and survivability protocol for designing and testing systems containing COTS parts.

Balanced Electromagnetic Hardening (\$7,834K)

Develop MIDAS interim software prototype for extracting and applying infrastructure data from/to existing infrastructure databases.
 Develop RF Circuit Protection Phenomenology theory to predict the effect of transformed, coupled signals to circuits as well as develop theoretical approaches to harden circuit components.
 Complete HEMP assessment and verification test of National Military Command Center.
 Develop integrated EM protection measures/technologies for battlefield systems.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

Perform HEMP assessment and test for Cheyenne Mountain Complex (CMC) and USSTRATCOM Center Command.
Update MILITARY-HANDBOOK-423, HEMP Protection for Fixed and Transportable Ground Base C4I Facilities.
Integrate the substrate protection technology in to existing COTS/Non Developmental Items (NDI) and MILSPEC equipment and prove its effectiveness in protecting sensitive receivers from powerful RF attacks.
Investigate the use of upper microwave or millimeter wave regimes for upset/interference with electronics.

Human Risk and Technology (\$1,029K)

Continue development and evaluation of radiation protection standards and risk measures applicable to personnel/equipment for US Armed Forces, NATO and The Technical Cooperation Program (TTCP) review.
Deliver initial UAV-based radiological measurement package.
Deliver a standardization agreement for operational dosimetry recording to the Technical Cooperation Program to ensure dosimetry standards are consistent among participating countries.
Conduct a radiological decontamination exercise.

Project BH - System Survivability (cont'd)

Facilitate the adaptation and integration of human response and behavioral representations into appropriate agency and outside agency programs.

FY 2003 Plans

Funding and activities realigned to Project BH in PE 0602717BR.

C. Other Program Funding Summary: N/A

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Nuclear Sustainment & Counterproliferation Technologies; 0602715BR

D. Execution (Entities receiving 10% or more of total funding available in the PE/FNC.):

Labs/Centers-N/A
Universities-N/A
FFRDCs-N/A
Contractors-N/A
Other-N/A

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2			R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR					
COST (In Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete
Total 0602716BR Cost	0	0	146.1	141.9	181.5	204.9	207.5	Continuing
Project BB Small Business Innovative Research	0	0	1.9	1.9	1.8	1.9	2.0	Continuing
Project BD Weapons Effects Technologies	0	0	71.5	75.2	79.7	85.2	87.5	Continuing
Project BE Testing Technologies & Integration	0	0	11.5	12.2	12.4	12.7	12.9	Continuing
Project BF CP Operational Warfighter Support	0	0	45.6	37.4	87.6	105.1	105.1	Continuing
Project BG Nuclear Operations	0	0	15.6	15.2	0	0	0	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

A. Mission Description and Budget Item Justification

The mission of the Defense Threat Reduction Agency (DTRA) is to safeguard America and its friends from weapons of mass destruction (WMD) by reducing the present threat and preparing for the future threat. This mission directly reflects the National Military Strategy, supports the provisions of Joint Vision 2010 and is specifically directed by the JCS in the Joint Strategic Capabilities Plan (Nuclear Annex). To achieve this mission, DTRA has identified principal objectives along with strategies and tasks to ensure the objectives are met. Three of these objectives are to deter the use of WMD, reduce the present threat and prepare for the future threat. A focused, strong threat reduction technology base is critical to achieving these objectives. DTRA has taken the steps to develop this technology base.

This budget submission provides the essential technologies to deter the use of WMD and prepare for the WMD threat. It includes manpower authorizations, special equipment, necessary facilities, test bed operations, and all other associated costs in support of the development of the technology base needed to support the defeat of current and future WMD. Initiatives supported include, but are not limited to, such activities as follow:

- Counterproliferation programs providing capabilities to warfighters through the development of:
 - o consequence assessment technologies and tools,
 - o WMD operational support technologies, and
 - o targeting support capabilities.
- Technology input to support the development of WMD training courses responsive to emerging threats and technological challenges.

CP technologies to include antiterrorism will help DTRA prepare for the WMD threat and support civil and military response to WMD use.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

A. Mission Description and Budget Item Justification (cont'd)

The DTRA is the DoD focal point for programs and activities to reduce the threats posed by WMD proliferants. New, forward-thinking activities have been identified and prioritized to support the DTRA mission and the DoD CP strategy for responding to the full spectrum of crises and preparing now for an uncertain future. The CP programs support national guidance, the DTRA strategic vision, and Service and CINC operational customers. This program element provides the innovative technologies and concepts underpinning all CP programs.

- Examination of existing U.S./Allied capabilities to hold hardened, deeply buried targets at risk; evaluation of capabilities against known or projected potential targets; and evaluation of new technologies for possible application against known shortfalls.
- Targeting and Intelligence Community (IC) support to warfighters that provides functional vulnerability assessments of hostile foreign systems.
- Development of WMD analysis and simulation tools for the warfighter including target planning and assessment; hazardous materials transport and collateral effects prediction; consequence assessment; and anti-terrorism/force protection.
- Development and application of state-of-the-art nuclear weapons effects models to support nuclear weapon stewardship and system hardness design.
- Development, improvements and test engineering for the unique DoD test and simulation facilities (to include infrastructure) and enabling technologies that are used to evaluate the impact of hostile environments from conventional, nuclear, and other special weapons on military or civilian systems or targets.

Counterproliferation Technologies projects comprise a critical component of the ability of the Department to meet the technology challenges posed by the emerging international environment and the National Military Strategy. The coverage of the projects ranges from counter-terrorism through conventional conflict through countering WMD threats.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

A. Mission Description and Budget Item Justification (cont'd)

In addition, the Advanced Systems and Concepts Office (ASCO) develops and maintains an evolving analytical vision of necessary and sufficient capabilities to protect the United States and allied forces and citizens from nuclear, biological, and chemical (NBC) attack; and identify gaps in these capabilities and initiate programs to fill them.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

B. Program Change Summary

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2001 President's Budget Request (Feb 2000)	0	0	0
FY 2002 Amended President's Budget Request (June 2001)	0	0	0
FY 2003 President's Budget Request (Feb 2002)	0	0	146.1

Change Summary Explanation: In order to better define and capture its 6.2 resources, DTRA has created two new program elements: WMD Defeat Technology (0602716BR) and Strategic Defense Technologies (0602717BR). Effective with FY 2003, specific resources associated with Projects BB, BD, BE, BF, and BG will be split from the existing PE 0602715BR and realigned to PE 0602716BR, WMD Defeat Technology.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BB - Small Business Innovative Research (SBIR) - This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of DoD supported research and development results. These efforts are responsive to PL 106-554.

FY 2001 Accomplishments

Funding and activities performed in Project BB are in PE 0602715BR.

FY 2002 Plans

Funding and activities performed in Project BB are in PE 0602715BR.

FY 2003 Plans

Small Business Innovative Research (\$1,908K)

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.

Execute Agency-approved SBIRs.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BD - Weapon Effects Technologies - This project provides for the development and application of products and services to meet Weapons of Mass Destruction (WMD) and other special weapon effects challenges. This is accomplished using state-of-the-art science and engineering capabilities, including advanced first principles analysis, engineering modeling, simulation and networking technologies, and precision laboratory scale and field testing capabilities (supported by Project BE-Testing Technologies and Integration). The project integrates and applies these advanced capabilities to support decision making in the face of rapidly evolving WMD threats in both military and civilian sectors. Products being developed include WMD target planning and assessment tools, WMD hazardous materials transport and collateral effects prediction tools, tools and technologies used to mitigate the effects of WMD on facilities and people, and consequence assessment/management tools to evaluate and respond to WMD events. Additionally, this project develops the enabling technologies used to produce anti-terrorist/force protection tools. This project also develops technologies to support force protection assessments and forensic analysis of terrorist events as well as advanced blast mitigation/retrofit techniques. Such tools developed on this project are used to enable other projects including Project BC-Force Protection and Technology Applications, and Project BF-CP Operational Warfighter Support. Also, they are made available to civilian, anti-terrorism and disaster response support organizations.

This project provides and maintains the technology base, cornerstone to all components of weapons of mass destruction. It builds on expertise developed originally for nuclear weapon detonation(s) phenomenology [subsurface through exo-atmospheric], the evolution of the resulting disturbed environment, and the effects of that environment on systems. The expertise has expanded to all weapons of mass destruction. This is accomplished by providing weapons effects technology and information to US and Allied government planners, operators, doctrine authors, and decision makers. It also develops and maintains the technical capability to predict the impact of the effects of weapons of mass destruction on communications, radar and optical sensor systems and to support DoD components in the analysis and prediction of the response of systems that must operate in nuclear and

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BD - Weapon Effects Technologies (cont'd)

naturally disturbed environments. DTRA is the sole remaining center of excellence in the area of nuclear weapon burst phenomenology and the resulting interaction with military and civilian systems. Starting with weapon output calculations from the DOE laboratories, DTRA develops the tools for predicting the subsequent evolution of the blast and shock interactions for low altitude, surface and sub-surface nuclear explosions; EMP; prompt, delayed, and trapped radiation; plasma and radioactive debris history. These efforts rely on ready access to high performance computing (HPC) resources to enable the efficient solution of the resultant large-scale numerical simulations. An integral component of this project is the provision of access to state-of-the-art HPC machines, high-speed connectivity, and superior technical support to DTRA researchers nationwide.

DTRA shares with the special weapons related defense community a stewardship responsibility to maintain the Nation's core nuclear competencies and to successfully pass on this knowledge base and critical skills to the next generation of defense oriented scientists, engineers and weapon system developers. The Knowledge Application project is the tight integration of three efforts - Defense Threat Reduction Information Analysis Center (DTRIAC), Data Archival and Retrieval Enhancement (DARE), and Graybeard - dedicated to the collection and preservation of the data and knowledge derived during 50 years of nuclear weapons effects testing and studies; and a fourth effort, the Knowledge Applications component, that capitalizes on the expertise derived from these three programs to support current Agency technical programs. Without nuclear testing, research relies more on simulations and high fidelity calculations requiring correlation with this "legacy" data for validation.

Also included in this project are civilian salaries required to directly support the development of products and services provided by this project.

2001 Accomplishments

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Funding and activities performed in Project BD are in PE 0602715BR.

Project BD - Weapon Effects Technologies (cont'd)

FY 2002 Plans

Funding and activities performed in Project BD are in PE 0602715BR.

FY 2003 Plans

Targeting Support (\$16,954K)

- Validate the system-level Lethality/Vulnerability models for fixed WMD targets using test data from a large-scale test.
- Deliver version 2.0 of the Integrated Target Planning Tool Set (ITPTS v2.0) to the warfighter. Expand version 1.0 to include a full spectrum of targets and weapons.
- Demonstrate interoperability of intelligence, weaponeering, and collateral effects tools using ITPTS v2.0 during a mini-exercise in support of the CP2 ACTD.
- Develop a combustion model and advanced energetics material effects model for use in the agent defeat analysis module of the Integrated Munitions Effects Assessment (IMEA) software tool.
- Complete IMEA v.5.0 capability with a nuclear module and additional capabilities in the buildings, bunkers, and tunnels modules.
- Develop novel concepts for thermobaric weapon fills for use in the Thermobaric ACTD.
- Develop payload performance prediction models for baseline payloads against targets containing dry biological agents.
- Develop an engineering and semi-empirical model for IMEA that accounts for traditional damage modes, to include cratering and breach, as well as flexural damage for buried bunkers.
- Transfer the technology contained within the Design and Analysis of Hardened Structures to Conventional Weapons Effects (DAHS CWE) manual to the Security Engineering Manual to automate the access of the technology.

High Performance Computing, Precision Nuclear Effects, and Knowledge Application (\$17,952K)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Complete a major upgrade to EMP/SREMP effects analysis methods and target assessment and planning tools used by warfighters.

Project BD - Weapon Effects Technologies (cont'd)

Distribute updated/documented nuclear phenomenology and system effects modeling software.

Complete review of atmospheric nuclear effects knowledge base; identify shortfalls in context of anticipated requirements for system hardening and effects mitigation.

Obtain warfighters' operational approval of EMP/SREMP effects tools.

Obtain NWE experts' review/approval of atmospheric nuclear effects knowledge base.

Demonstrate a family of systems simulation capability. Incorporate suite of system-level tools into visualization suite.

Continue revision of high altitude and underground burst nuclear weapon codes and their incorporation into to large, scalable parallel computers.

Maintain capability to provide the DTRA research community with ready access to world-class HPC resources.

Complete culling and converting magnetic/electronic storage media to newer format.

Integrate DTRIAC and DARE programs.

Continue to enhance DARE usability and functionality through adaptation and integration of current web technologies.

Relocate DARE Operational Center from DC area to Albuquerque.

Complete electronic guides to the data and knowledge for all five Graybeard Domains.

Disseminate Knowledge Applications research findings and lessons learned (e.g., from the FY 2002 PILE DRIVER and HARD HAT UGT review, GVN improvements, Safeguard C - Test Readiness).

Hazard Prediction and Assessment Capability (HPAC)/Consequence Assessment Tool Set (CATS) (\$16,757K)

Deliver HPAC 4.1 to JFCOM, EUCOM and other CINCs and service organizations. This version expands and validates industrial facility models for combustion and burning,

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

validated urban transport, building infiltration, and casualty tables based on dynamic population movement.

Deliver HPAC-CATS (Nuclear) operational version to STRATCOM.

Project BD - Weapon Effects Technologies (cont'd)

Leverage existing GIS-based infrastructure, consolidate collateral assessment tools (HPAC/CATS), and demonstrate client-server architecture for a forward deployable collateral assessment system in which the server performs most processing.

Initiate integration of hazard prediction tools into OSD Joint Effects Module Block 1. Develop Littoral-region mesoscale weather forecasting model and demonstrate integrated capability.

Complete initial validation of urban dispersion modeling capability and continue collaboration with United Kingdom and full-scale testing.

Advanced Systems and Concepts Office (ASCO) (\$8,180K)

Stimulate, identify, and execute high-impact studies that encourage new thinking, address technology gaps, and improve the operational capabilities of DoD, DTRA, and other Government Agencies.

Commission and perform a wide array of study efforts to address areas of force protection and operations; homeland defense and countering terrorist attacks; strategic issues; and other unconventional threats and vulnerabilities.

Finalize the conceptual plan for an integrated national bio-forensics capability.

Accomplish broad spectrum WMD intelligence collection gaps and needs assessment.

Infrastructure (\$11,650K)

Provided for payment of civilian salaries.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BE - Testing Technologies and Integration - This project provides a unique national test-bed capability for Weapons of Mass Destruction (WMD) facility characterization, weapon-target interaction, and WMD facility defeat for various types of test/demonstration functions to respond to operational needs. The project develops, provides and maintains test-beds used by the DoD, the Services, the CINCs and other federal agencies to evaluate the implications of WMD, conventional, and other special weapon use against U.S. military or civilian systems and targets. This project leverages fifty years of testing expertise to investigate weapons effects and target response across the spectrum of hostile environments that could be created by proliferant nations or terrorist organizations with access to advanced conventional weapons or WMD (nuclear, biological and chemical). Specific programs supported by this project include: (1) Hard Target Defeat (HTD); (2) Anti-terrorism (AT); (3) CP Counterforce Advanced Concept Technology Demonstration (ACTD); and (4) Special Operations Forces (SOF). This project maintains testing infrastructure to support warfighters, other government agencies, and friendly foreign countries testing requirements on a cost reimbursable basis. This project also develops strategy and planning for a WMD test-bed infrastructure focusing on nuclear, biological, and chemical facilities, and the hard and deeply buried facilities in which these activities are often located. The project provides support for full and sub-scale tests that focus on weapon-target interaction with fixed soft and hardened facilities to include aboveground facilities, cut-and-cover facilities and deep underground tunnels. Specific activities include testbed design and construction, instrumentation and data collection, test coordination and execution, and post-test analysis and documentation. This project directly supports Project BC in PE 0602717BR, and Projects BD, and BF in PE 0602716BR and, in PE 0603160BR, Project BJ and BK.

FY 2001 Accomplishments

Funding and activities performed in Project BE are in PE 0602715BR.

FY 2002 Plans

Funding and activities performed in Project BE are in PE 0602715BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BE - Testing Technologies and Integration (cont'd)

FY 2003 Plans

Test-Bed Operation and Support (\$8,665K)

Continue to provide unique national test-bed capabilities for weapon-target interaction and WMD programs. TDT expects to support approximately 80 tests this year. Provide an inventory of unique targets, infrastructure support, and expertise for conduct of major integrated test programs, including instrumentation maintenance, gauge installation, data recording, source diagnosis, environmental support, safety support, experiment installation, experiment fielding, and test fielding.

Field Support (\$2,266K)

Continue to provide infrastructure support for maintenance of government vehicles, transportation of equipment, communication, utilities for facilities, rental of facilities, supplies, custodial service, and procurement of equipment in support of test execution.

Simulator Technology (\$625K)

Continue to maintain the Large Blast and Thermal Simulator in caretaker status. Tests can be accomplished with short notice.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BF - CP Operational Warfighter Support - This project will provide targeting and Intelligence Community (IC) support, exercise CP technologies and products with the users, develop DoD compliant simulations that exploit CP models for target planning and collateral effects prediction, and demonstrate CP capabilities in operationally realistic environments. The technical approach is to integrate technologies developed in other CP projects, to conduct a full spectrum of tests to verify capability enhancement, to expose customers to these capabilities in exercises, wargames and demonstrations, to integrate CP technologies into customer operations, and to support use of these capabilities during contingency operations. This project focuses on three thrusts that support outside customer requirements. The three thrusts are: 1) Hard Target Defeat (HTD) program, 2) Weapons of Mass Destruction (WMD) Assessment and Analysis Center (WMDAAC), and 3) Commanders-in-Chief (CINC) Planning Support. The CP Operational Warfighter Support project provides the bridge between the CP technology base and operational community needs. The overall project goal is to support the Joint Chiefs of Staff (JCS), the warfighting CINCs and Services/agencies engaged in countering WMD threats and to protect the U.S. and its allies against military or terrorist use of WMD.

Hard Target Defeat Program. The United States and its allies face a growing threat related to critical military targets hidden within and shielded by hardened, deeply buried tunnel complexes. These complexes may house biological/chemical/nuclear weapons production or storage facilities; command, control, and communications facilities; and theater ballistic missiles and their transporter-erector-launchers (TELs). An objective of this project is to examine the existing U.S. and Allied capabilities to hold hardened, deeply buried tunnel targets at risk, thereby defining a current performance baseline. Any deficiencies will be identified and the ability of planned systems to address these deficiencies will be assessed. Finally, new technologies needed to mitigate remaining shortfalls will be evaluated as candidates for new hard target defeat acquisitions. Activities respond to warfighting requirements derived from the Hard and Deeply Buried Target Defeat capstone requirements document, and to RDT&E priorities by the Office of the

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BF - CP Operational Warfighter Support (cont'd)

Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD(AT&L)). Funds added as a result of the Secretary of Defense strategic review for FY 2002 are being used to develop technologies identified in the Hard and Deeply Buried Target Defeat S&T Master Plan.

Targeting and IC Support, part of Hard Target Defeat, provides functional vulnerability assessments of hostile foreign systems in support of warfighter and IC requirements. It assists the CINCs and IC in target planning against hard and deeply buried facilities. The assessments leverage databases, methodologies, and technical expertise developed during Balanced Survivability Assessments (PE 0602717BR, Project BC). Details of specific individual assessments are classified.

This project focuses weapon/target interaction and target planning tool technology base efforts completed in Project BD on tunnel applications. The program depends on test planning and execution support from Project BE. Products from this project are transitioned to PE 0603160BR, Project BK for Command, Control, Communications, and Intelligence (C3I) facility demonstration and the Thermobaric Weapon (TW) demonstration. Efforts in this program provide part of the technology base needed for counterproliferation activities conducted in other DoD programs.

WMD Assessment and Analysis Center. The WMDAAC provides the warfighter with the capabilities and understanding for countering the use and effect of Weapons of Mass Destruction (WMD) through the advancement of simulation technology, assessment of operational impact, and the development of collaborative capabilities. Specifically, the WMDAAC: 1) Develops advanced simulations from first-principles physics models produced in other TD projects (extensively Project BD). WMDAAC personnel provide an interface between DTRA model developers and the weapons effects simulation community to ensure maximum

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

utility of DTRA models in distributed interactive simulations through compliance with High Level Architecture (HLA) standards and protocols. 2) The WMDAAC uses these advanced

Project BF - CP Operational Warfighter Support (cont'd)

simulations to assist the warfighter in quantifiably assessing operational theater plans and post-attack warfighting effectiveness and to develop alternatives to mitigate the effects of WMD. 3) The WMDAAC develops and adapts capabilities to project information through advanced visualization techniques and to facilitate collaboration at widely dispersed locations. Commercial and government developed technologies are selected and proven in a research environment, and then transitioned to the DTRA Operations Center and/or other warfighter customers. 4) The WMDAAC provides warfighters and first responders with ready access to mature computer models, WMD databases and expert field assistance and training. The end result is to provide more realistic models and simulations of the effects of WMD for use in training, analysis, experimentation, and acquisition. Models and simulations will support the fielding of joint and service M&S system developments (e.g., Joint Simulation System (JSIMS), Joint Modeling and Simulation System (JMASS), Joint Warfare System (JWARS)).

CINC Planning Support. This activity develops modeling and simulation tools and applies them to support warfighters in development of war plans. It produces theater and campaign level simulation. These tools are used in a program called War Planning Support (WPS) to assess/analyze war plans or to evaluate the benefits of new technology on improved warfighter efficiency and effectiveness. Two tools currently being developed are the Integrated Theater Engagement Model (ITEM) and the Synthetic Exercise Environment (SEE).

FY 2001 Accomplishments

Funding and activities performed in Project BF are in PE 0602715BR.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

FY 2002 Plans

Funding and activities performed in Project BF are in PE 0602715BR.

Project BF - CP Operational Warfighter Support (cont'd)

FY 2003 Plans

Hard Target Defeat Demonstrations (\$10,956K)

Conduct functional defeat operational demonstrations on the C3I tunnel complex to be constructed at the Nevada test Site.

Determine reconstitution time for functional defeat attacks on the C3I tunnel facility. Complete construction of tunnel portals and begin planning for operational tunnel defeat demonstrations using standoff and advanced weapons at the White Sands Missile Range.

Conduct demonstrations and evaluations of sensor technologies to improve battle damage assessment (BDA) of functional attacks on tunnel facilities.

Hard Target Defeat Technology (\$16,186K)

Continue development of find/characterize/assess technologies to improve the national capability to functionally defeat tunnel facilities.

Continue development and validation of remote site geologic characterization technology.

Continue development of reverse engineering methodology to characterize tunnel facilities.

Continue development of system fragility and response models for C3I equipment.

Identify mission critical equipment and vulnerabilities for WMD production tunnel facilities.

Develop tunnel aimpoint optimization models to increase the effectiveness of the planning tools developed for warfighter planners.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Continue assessments of hostile facilities based on JCS and CINC priorities. Details are classified.

Continue development of defeat technologies to model and predict penetration of multiple weapons, tunnel damage, and advanced weapon performance.

Continue development of high-payoff novel explosive concepts using advanced energetic materials to enable defeat of targets currently invulnerable to weapons solutions.

Develop improved weapon/target interaction models of tunnels and liners to nuclear groundshock environments and implement them in Munitions Effects Assessment (MEA) planning tool.

Project BF - CP Operational Warfighter Support (cont'd)

Demonstrate a prototype of the Underground Targeting and Analysis System (UTAS) that develops three-dimensional models of underground targets.

Continue targeting and IC support by conducting assessments of hostile facilities based on JCS and CINC priorities. Details are classified.

WMD Assessment and Analysis Center (\$11,045K)

Begin definition of entity-to-aggregate level weapon-target effects models. Incorporate knowledge management techniques using genetic algorithms in the weapon effects models and simulations. Enable inclusion of individual weapon system (e.g., PAC-3, F-22) effects into theater-level models.

Integrate Nuclear Weapon Effects into the Joint Weapon Effects Analysis Tool Set in order to support real/near-real time viewing of dynamic weapons effects in a simulated environment. Include the effects of WMD, conventional weapon effects, and 3D visualization of target.

Complete Airbase Effects Assessment looking at the implications of WMD on airbase operations and the resultant theater impact.

Complete Handheld Wireless Collaboration Study, investigating collaboration and data transfer using wireless devices to support WMD consequence assessment and management.

Begin implementation of the study recommendations.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Demonstrate tools and solicit warfighter requirements at the Interservice/Industry, Test, Simulation, and Education Conference and at the World-Wide Chemical Conference. Continue research and development of collaborative tools to ensure effectiveness and compatibility with the customer by developing and demonstrating to warfighters and first responders portable automated access capabilities to DTRA products using advanced CINC21 ACTD communication technologies and knowledge management. Continue exercise participation (CINC 21 ACTD, Fleet Battle Experiments, US Forces Korea Ulchi Focus Lens) to demonstrate newly developed advanced simulations, and WMD information resources and tools.

Project BF - CP Operational Warfighter Support (cont'd)

CINC Planning Support (\$7,412K)

Consolidate ACE Versions 1-4 into Synthetic Exercise Environment (SEE) database. Provide exercise support for Central Harmony and ABLE ALLY (USSTRATCOM & SHAPE) using SEE. Implement a web-enabled version of SEE and the supporting web-site data repository. Complete all War Planning Support (WPS) projects for MARFOR/CPF (USPACOM), CNE (USEUCOM), USCENTCOM, and 32nd AAMDC (USPACOM/USCENTCOM). Complete approved WPS support requirements for USFK/CFC.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BG - Nuclear Operations - This program directly reflects the National Military Strategy, supports the provisions of Joint Vision 2010, and is directed by the JCS in the Joint Strategic Capabilities Plan (JSCP) Nuclear Annex. This project encompasses a new activity--WMD (Nuclear) Protection and Response. Responsive to the oversight of the Nuclear Weapons Council, they provide critical support to the CINCs, Services, JCS and OSD. This project continues the realignment begun by DTRA at its inception so as to deal with the emerging 21st Century strategic landscape.

WMD (Nuclear) Protection and Response. As a new activity and in direct support to the National Military Strategy, these programs will promote initiatives to detect the surreptitious introduction and use of weapons of mass destruction against the U.S. and its allies thereby protecting our citizens and critical infrastructures. Potential adversaries, whether nations, terrorist groups or criminal organizations, will be tempted to use asymmetric means of war such as weapons of mass destruction to counter U.S. conventional weapon superiority. Promoting such initiatives enhances deterrence and proactively supports the agency's mission of WMD threat reduction.

FY 2001 Accomplishments

Funding and activities performed in Project BG are in PE 0602715BR.

FY 2002 Plans

Funding and activities performed in Project BG are in PE 0602715BR.

FY 2003 Plans

WMD (Nuclear) Protection and Response (\$15,587K)

Develop portable, mobile, and rapidly deployable radiation detection and tracking system, a portion of which will be comprised of remote sensors linked to central receiving/processing station via RF signals. Continue effort and begin integration of detection arrays with communication and analytical software. Expand upon mobile prototype, and continue software development toward future deployment of

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BG - Nuclear Operations (cont'd)

three attended or unattended variants, including mobile, maritime, and stationary or portal.

Provide CINC Technical Support Groups (TSG) ability to employ the system based on intelligence cueing. Continue effort and expand to varied geographic and operational environments to evaluate operability.

Develop and field passive and active Special Nuclear Material (SNM) detection systems capable of detection in cases where SNM is shielded; current detector technologies do not perform well when SNM is shielded for gamma and/or neutron emissions. Continue effort by funding scientific review panel and technical support to review studies and proposals to determine promising track for detailed research.

Produce through development and adaptive engineering detection equipment capable of rapid and standoff detection of radioactive materials across a broad spectrum of operational environments including uncertain and hostile. Develop equipment that without significant degradation is waterproof, shockproof, and resistant to extreme conditions and sustained employment. Develop lighter weight and smaller detector systems for more diverse field employment.

Integrate through new concept design or adaptive engineering multiple detection sensor systems to facilitate standoff operator detection of radioactive material and passive or active trigger, alarm, destruct, or detection devices targeting the operator.

Establish administrative support structure to support technical reporting and document production of R&D development efforts. Reporting program must have broad enough scope to permit publication at classified and unclassified levels, and permit literature review and exploration of existing technologies to eliminate duplicating or redundant efforts, and exploit dual or multiple-use technologies.

Conduct operational analysis of commercial, vendor, "off-the-shelf", laboratory-produced concept design, or theoretical radiation detection devices in order to determine relative efficiencies, capabilities, and technologies to further enhance the ability to develop, procure, and employ reliable and current technologies for

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE WMD Defeat Technology; 0602716BR

Project BG - Nuclear Operations (cont'd)

radioactive material detection. Enhance tools and capability for rapid attribution of the source of a nuclear event.

C. Other Program Funding Summary: N/A

D. Execution (Entities receiving 10% or more of total funding available in the PE/FNC.):

N/A

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE February 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2			R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR						
COST (In Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	
Total 0602717BR Cost	0	0	131.2	125.4	124.0	97.6	99.1	Continuing	
Project BB Small Business Innovative Research	0	0	1.3	1.3	1.3	1.3	1.3	Continuing	
Project BC Force Protection & Technology Applications	0	0	4.0	2.0	2.2	1.8	1.8	Continuing	
Project BG Nuclear Operations	0	0	30.5	29.4	25.8	27.3	28.1	Continuing	
Project BH System Survivability	0	0	95.4	92.7	94.7	67.2	67.9	Continuing	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

A. Mission Description and Budget Item Justification

The mission of the Defense Threat Reduction Agency (DTRA) is to safeguard America and its friends from weapons of mass destruction (WMD) by reducing the present threat and preparing for the future threat. This mission directly reflects the National Military Strategy, supports the provisions of Joint Vision 2010 and is specifically directed by the JCS in the Joint Strategic Capabilities Plan (Nuclear Annex). To achieve this mission, DTRA has identified principal objectives along with strategies and tasks to ensure the objectives are met. Three of these objectives are deter the use of WMD, reduce the present threat and prepare for the future threat. A focused, strong threat reduction technology base is critical to achieving these objectives. DTRA has taken the steps to develop this technology base.

This budget submission provides the essential technologies to deter the use of nuclear weapons and prepare for the projected nuclear threat. It includes funding for assessments and development of strategies, concepts and Strategic Nuclear and WMD deterrence options. In addition, it provides funding for development and testing of special equipment, necessary facilities, and other associated costs necessary to support the development of the technology base needed to support the national deterrent policy and military strategy. Initiatives supported include, but are not limited to, the following development efforts:

- Programs focused on assessing, enhancing and maintaining the survivability and operability of nuclear deterrent forces.
- Operational support programs focused on such activities as balanced survivability assessments, operational assessments, nuclear physical security technology development, and assessments of various OPTEMPO concerns obtained from Chemical, Biological, Radiological, and Nuclear Environments (CBRNE).
- Support to OSD, JCS and CINCs in war planning, force structure options and technology impacts, logistics, WMD mitigation operations and stockpile programs.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

A. Mission Description and Budget Item Justification (cont'd)

- Develop and validate advanced technology to provide enhanced WMD Training supporting Joint Mission Essential Tasks (JMETS) for forces and coordination of DoD WMD training requirements.
- Nuclear technology programs focused on:
 - Simulation and testable design protocols
 - Effects Infrastructure and survivability assessments
 - Radiation hardened microelectronics technology
 - High Performance Computing
 - Precision nuclear effects
 - Nuclear technology knowledge promulgation
 - Develop and validate technology programs designed to provide terrorist device defeat across the CBRNE spectrum.

Nuclear sustainment technologies and projects support the viability and credibility of the nuclear force as well as development of nuclear environment survivability for Theater Missile Defense and National Missile Defense.

The nuclear sustainment program, driven by the specific taskings of the National Strategy, National Military Strategy and the Joint Strategic Capabilities Plan, has two projects, i.e., Nuclear Operations and System Survivability.

- Nuclear Operations develops and supports the National Nuclear Mission Management Plan; nuclear and WMD training expertise for DoD; surety risk and hazard analyses; nuclear planning systems; nuclear deterrent option analyses; technical support for Nuclear Weapons Council (NWC) and nuclear C4I requirements; and WMD threat mitigation analyses.
- The System Survivability Project develops simulator technology (nuclear, blast, thermal, radio frequency (RF) propagation, and optical/infrared (IR) background effects), electronics technology (radiation-hardened microelectronics, balanced

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

A. Mission Description and Budget Item Justification (cont'd)

electromagnetic hardening technology, radio frequency threat reduction), assessment and protection technology, and provides technology to support the Congressionally mandated Nuclear Test Personnel Review. These development areas directly support the development of survivable and reliable systems for the warfighter.

Nuclear Sustainment projects comprise a critical component of the ability of the Department to meet the technology and sustainment challenges posed by the emerging international environment and the National Military Strategy. The coverage of the projects ranges through countering WMD threats to the maintenance of the national strategic nuclear deterrent.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

B. Program Change Summary

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2001 President's Budget Request(Feb 2000)	0	0	0
FY 2002 Amended President's Budget Request(June 2001)	0	0	0
FY 2003 President's Budget Request (Feb 2002)	0	0	131.2

Change Summary Explanation: In order to better define and capture its 6.2 resources, DTRA has created two new program elements: WMD Defeat Technology (0602716BR) and Strategic Defense Technologies (0602717BR). Effective with FY 2003, specific resources associated with Projects BB, BC, BG, and BH will be split from the existing PE 0602715BR and realigned into PE 0602717BR, Strategic Defense Technologies.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Project BB - Small Business Innovative Research (SBIR) - This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of DoD supported research and development results. These efforts are responsive to PL 106-554.

FY 2001 Accomplishments

Funding and activities performed in Project BB are in PE 0602715BR.

FY 2002 Plans

Funding and activities performed in Project BB are in PE 0602715BR.

FY 2003 Plans

Small Business Innovative Research (\$1,269K)

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.

Execute Agency-approved SBIRs.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Project BC - Force Protection and Technology Applications - This project supports Assessment and Mitigation Technologies, which conducts mission vulnerability assessments of strategic U.S./Allied systems to facilitate the development of investment strategies for improved survivability, to include nuclear command and control. This program also ensures that assessment training programs, engineering designs, and new construction embody sound force protection, vulnerability mitigation, and collective protection principles. DTRA technologies and expertise are applied to enhance U.S. capabilities across the spectrum of the counterproliferation and force protection missions. These may include development of sensor technologies for initially identifying the consequences of weapons of mass destruction (WMD) through countering or protection against this threat. Some of the program's products and services include the Balanced Survivability Assessments (BSA), the Smart Building program's strategic facility construction design and cost estimates, vulnerability out-briefs and written reports, overall vulnerability trend data, National and NATO conferences for Underground Facility Managers, and multi-disciplined technical engineering expertise support.

FY 2001 Accomplishments

Funding and activities performed in Project BC are in PE 0602715BR.

FY 2002 Plans

Funding and activities performed in Project BC are in PE 0602715BR.

FY 2003 Plans

Balanced Survivability Assessments (\$2,041K)

Conduct balanced survivability and integrated vulnerability assessments on DoD facilities as tasked by CINCs, the Joint Staff, and OSD/ C3I.

Continue integrated vulnerability assessment of defense and critical national infrastructure facilities.

Smart Building Program (\$1,950K)

Complete decommissioning for the Smart Building.

Prepare final reports and present results at various venues.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Project BG - Nuclear Operations - These programs directly reflect the National Military Strategy, support the provisions of Joint Vision 2010, and are directed by the JCS in the Joint Strategic Capabilities Plan (JSCP) Nuclear Annex. This project for this Program Element encompasses two activities: 1) Nuclear Programs and 2) CINC/Forces/Security Support. Responsive to the oversight of the Nuclear Weapons Council, they provide critical support to the CINCs, Services, JCS and OSD. This project continues the realignment begun by DTRA at its inception so as to deal with the emerging 21st Century strategic landscape, and is divided into the two areas as described above:

Nuclear Programs.

Nuclear Weapons Surety: As tasked by the DoD Nuclear Weapon System Safety Program, the surety programs will provide CINCs, Services, and JCS with technical analysis, studies, research, and experimental data to identify and quantify risks of plutonium dispersal and Loss of Assured Safety (LOAS) due to accidents, fires or natural causes during normal, peacetime operations of the nations nuclear weapon systems. Additionally, studies to quantify the probability of success of targeted terrorist attacks on DoD facilities, leveraging these risk assessment advances.

Nuclear Mission Management Plan (NMMP): As tasked by Deputy Secretary of Defense and Director, Defense Research and Engineering (DDR&E), and in support of national requirements to maintain a strategic nuclear deterrent, conduct assessments and develop long-range plans, the continued development of the DoD Nuclear Mission Management Plan is designed to provide a comprehensive, integrated DoD roadmap for the sustainment and viability of U.S. nuclear forces, personnel, and infrastructure.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Project BG - Nuclear Operations (cont'd)

Stockpile Sustainment: Continue to act as DDR&E's Executive Agent for Annual Certification and Dual Revalidation and support related stewardship and sustainment activities.

Stockpile Operations Support: In support of national requirements to maintain a viable nuclear deterrent, this program provides automated tools to maintain, report, track and highlight trends affecting the nuclear weapon stockpile. It will provide crucial business process and information support to ensure continued sustainability and viability of the nuclear stockpile.

CINC/Forces/Security Support. As tasked by the JSCP and DoD Directives, these programs will provide CINCs, Services, JCS and DoD with focused analyses in support of nuclear planning and operations and WMD threat mitigation as they pertain to the combat survivability of the forces. Additionally, they provide the DoD nuclear physical security applied research and force-on-force (FoF) testing programs to help insure the security of our nuclear forces. Provides technical support and curriculum development and enhancement for the Defense Nuclear Weapons School (DNWS), to include other WMD support, and other DoD nuclear training activities.

FY 2001 Accomplishments

Funding and activities performed in Project BG are in PE 0602715BR.

FY 2002 Plans

Funding and activities performed in Project BG are in PE 0602715BR.

FY 2003 Plans

Nuclear Programs (\$19,937K)

Nuclear Weapon Surety Thrusts:

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Continue modeling and testing to respond to weapon and weapon system safety requirements and criteria.

Project BG - Nuclear Operations (cont'd)

Continue the development and population of a weapon surety database and interface to utilize and archive completed assessments, studies, tools and test programs.

Continue to analyze and quantify Nuclear Detonation Safety Exceptions (NDSEs).

Complete Phase II SBIR -AVERT model and Isis model.

Continue development of desktop tool based on Storage Vault Blast Effects Testing and Analysis.

Continue Lightning Effects Testing and Analyses (Air Terminal Testing).

Continue development of electrical system Penetration Tester.

Continue to support abnormal environment scenario development and analysis for nuclear weapons systems (includes other NDSE analyses).

Stockpile Sustainment Program thrusts:

Conduct annual certifications, at Presidential direction, of the continued safety and reliability of the U.S. nuclear stockpile in the absence of underground testing.

Provide personnel, as tasked by Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs (ATSD(NCB)), for participation on the joint DoD-DOE Dual Revalidation teams, to conduct a multi-year, in-depth evaluation of the continued safety and reliability of specified weapons in the nuclear stockpile.

Continue evaluation of enduring stockpile weapons in support of the Air Force and Navy.

Prepare an annual performance report, as directed by PDD on the DoD stockpile sustainment accomplishments and future plans.

Continue technical support to the NWC.

Complete third edition of the NMMP.

Continue developing and presenting tailored nuclear weapons expertise and sustainment modules through Outreach 21 efforts to the War Colleges and warfighting units.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Project BG - Nuclear Operations (cont'd)

Stockpile Operations thrusts:

Develop and implement Defense Integration and Management of Nuclear Data Services(DIAMONDS) capability package 3 which includes additional enhancements to Maintenance Bay and Unsatisfactory Reporting System modules as well as field additional integrated modules based upon user priorities and feedback while continuing to enhance fielded modules.

Complete CONUS nuclear storage site fielding and begin fielding OCONUS locations with secure communications to support DIAMONDS data transmission and access to stockpile information, tools, and data. Field enhanced integrated modules based upon user priorities as well as integrated stockpile functions as necessary.

CINC/Forces/Security Support (\$10,551K)

Maintain USEUCOM/SHAPE European Theater Nuclear Support Program to provide in-theater nuclear and WMD support to EUCOM and NATO.

Jointly with the TD Directorate, continue the War Plans Support Program for the CINCs. Objective is to respond to CINC requests to address counter-WMD challenges within theater war plans; to provide recommended executable solutions based upon detailed, integrated operational analyses with associated technical applications.

Continue support to STRATCOM and regional CINCs with specific nuclear and WMD threat analysis in support of SIOP preparation, development of integrated effects models, direct planning support to regional CINCs, and specified applications for the Deterrence Framework analytic structure.

Continue to execute the Strategic Deterrence Program to support full range of nuclear and WMD Consequence Management Issues, provide nuclear policy support and the assessment of the full range of nuclear/WMD issues for DoD components.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Complete targeting program to fully integrate the planning processes and target data set of STRATCOM, regional CINC plans and NATO nuclear planning capability.
 Conduct Force-on-Force exercise program focused on U.S. forces in USEUCOM/USAFE using the Mighty Guardian series.

Project BG - Nuclear Operations (cont'd)

Complete support of the AFSPACECOM/STRATCOM security analyses of ICBM forces.
 Plan to support U.S. Navy potential Mighty Guardian Exercise.
 Initiate new program to examine and evaluate the future impacts of technology on political/military/economical trends-focused on WMD/Consequence Management (CM)/Nuclear proliferation.
 Complete NATO Nuclear C2, Quadrennial Defense Review Analytical Support program.
 Continue to directly support the curriculum development for the Defense Nuclear Weapons School.
 Continue to serve as the DoD Executive Agent for nuclear weapons training and education.
 Continue to develop a comprehensive WMD Training program.
 Continue to expand and enhance expertise outreach training program across DoD.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Project BH - System Survivability - These programs directly reflect the National Military Strategy, support the provisions of Joint Vision 2020, and are directed by the JCS in the Joint Strategic Capabilities Plan (Nuclear Annex). Current and future warfighters and weapon systems, including the associated Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), missile defense and support systems/equipment, must be able to survive and operate effectively through a spectrum of hostile environments. Planned efforts emphasize the development and demonstration of innovative and cost-effective technologies to sustain the functional survivability of U.S. and Allied Forces and systems when confronted with threats from advanced conventional weapons, special weapons and limited nuclear attack. This project constitutes the DoD's resident science and technology expertise in nuclear and related survivability matters. It develops and demonstrates affordable strategies and hardening technologies for U.S. systems; transfers the technical products to acquisition program offices; conducts component, subsystem, system and end-to-end performance tests and assessments as requested by the Services and CINCs; and provides support to the Office of the Secretary of Defense on technical and policy matters that relate to the acquisition of survivable systems and strategic system sustainment.

Project BH encompasses programs formerly divided into the five business areas: Radiation Hardened Microelectronics, Simulator Technology, Assessments and Protection Technology, Balanced Electromagnetic Hardening, and Human Risk and Technology. These business areas are now divided into three business areas and described below: Radiation Hardened Microelectronics; Simulation Technology and Protocols from the Simulator Technology and part of the Assessments and Protection Technology, and Infrastructure and Survivability Assessments combining the remaining business areas.

Radiation Hardened Microelectronics. Responds to DoD space and missile system requirements for hardened microelectronics and photonics technology to support mission needs. The non-availability of this technology would adversely impact system survivability, performance, weight and cost. The program involves the development and demonstration of technology to support the fabrication of radiation-hardened microelectronics and photonics for DoD

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Project BH - System Survivability (cont'd)

missions through private sector and government organizations. This is achieved through the development and demonstration of enabling technologies to ensure the continued availability of special materials and radiation-hardened microelectronics and photonic devices.

Simulation Technology and Protocols. This program is being revised to respond to the Defense Science Board Task Force on Nuclear Effects Simulation, which recommended that DTRA pursue developing some of the capability lost with the moratorium on underground testing. Since the underground testing (UGT) moratorium, simulators have provided the only remaining experimental test bed for the development and validation of radiation-hardened DoD systems. The intensity and fidelity of these simulators do not match that of the UGT testbed, but, through this program, the agency develops, provides and maintains unique DoD radiation test facilities and enabling technologies that are used by the Defense Agencies, the Services and other federal departments (such as DOE) to evaluate the impact of hostile environments on military systems that support missions in the air, on land, at sea, or in space. The program also develops technologies to improve the intensity, fidelity, reliability, reproducibility, and cost effectiveness of existing and future simulators (including radiation sources, power flow and conditioning components, energy storage, diagnostics, instrumentation, other test support equipment, debris shields, and numerical models and computer codes for radiation sources and pulsed power components and test beds); develops concepts, plans, and risk reduction strategies for affordable next-generation radiation simulators with substantially improved intensity and fidelity; support improvements to the two existing test centers, one at Maxwell Physics International (MPI) in San Leandro, California, and one at the Arnold Engineering Development Center (AEDC) in Tullahoma, Tennessee; installs and characterizes upgrades to the new Decade x-ray simulator and to existing radiation simulators at MPI. The program also provides testable system design protocols and modeling and simulation (M&S) tools for

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

system designers and users of nuclear effects simulators. Includes development and demonstration of cost-effective system design and test qualification techniques to produce hardware that can be tested without the need for underground nuclear tests.

Project BH - System Survivability (cont'd)

Infrastructure and Survivability Assessments. The Infrastructure and Survivability Assessments Project is evolving from an emphasis on strategic assessments for nuclear C2 against prompt radiation to NMD and Theater assessments, balanced protection of battlespace, critical infrastructure and network protection, and portable radiological survey equipment. It directly responds to warfighter and acquisition program survivability needs by providing solutions, including development of affordable technologies and methodologies for system-level and family-of-system-level assessments, systems hardening, and testing of the effects of nuclear weapons. This business area is comprised of three sub-areas, Balanced Electromagnetic Hardening, Operability Assessments and Disturbed Environment Assessment Technology, and Human Survivability.

Balanced Electromagnetic Hardening. Provides the science and technology to ensure protection and survival of military battlefield and civilian infrastructure electronic systems against multiple electromagnetic (EM) environments, including nuclear electromagnetic pulse (EMP), high power microwaves (HPM), as well as WMD threats. Designs and develops innovative, low-cost, balanced EM protection and test technologies for weapon systems; C3; and supporting infrastructure systems to the CINCs, Services and other DoD agencies.

Operability Assessments and Disturbed Environment Assessment Technology. Directly responds to warfighter and acquisition program survivability needs by providing solutions, including development of affordable technologies and methodologies for system-level and family-of-system-level assessments, systems hardening, and testing of the effects of

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

nuclear weapons. Includes end-to-end assessment technologies for nuclear command and control and Tactical Warning/Attack Assessment networks. Develops disturbed environments test sets to simulate scintillation effects on radar and communications system and to simulate the structure optical and infrared backgrounds, which disrupt space-based and missile defense interceptor sensors.

Project BH - System Survivability (cont'd)

Human Survivability. Applies lessons learned from the Nuclear Test Personnel Review Program (O&M-funded) to allow warfighters and peacekeepers to quantify/mitigate the risk in post-Cold-War settings (i.e., limited nuclear exchanges, terrorist actions, radiological dispersal weapons, and other radiation risk scenarios) by developing field measurement and dosimetry systems to support military radiological guidelines for the protection of human resources. This provides direct support to warfighters by predicting and quantifying the operational impact of nuclear battlefield environments on systems and personnel; providing methods for measuring and increasing soldier effectiveness on NBC battlefields; providing performance and cost analysis to support the Defense Acquisition Board; and joint efforts with system program offices to apply the Agency's expertise and technologies to specific Service applications.

FY 2001 Plans

Funding and activities performed in Project BH are in PE 0602715BR.

FY 2002 Plans:

Funding and activities performed in Project BH are in PE 0602715BR.

FY 2003 Plans

Radiation Hardened Microelectronics (\$56,351K)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Demonstrate a prototype 0.25/0.18-micron radiation-hard complementary metal oxide semiconductor (CMOS) fabrication process to support 4M-gate Application Specific Integrated Circuits (ASIC) and 16M Static Random Access Memories.

Demonstrate a prototype radiation-hard, 0.35-micron mixed signal technology for system-on-chip circuit applications with a 4X increase in performance.

Complete initial demonstration of radiation hardened 0.15/0.18-micron technology for Accelerated Program.

Complete testing of prototype Honeywell and BAE 4/8M-gate ASIC.

Complete validation of prototype Boeing Very Deep Submicron digital/analog compiler.

Project BH - System Survivability (cont'd)

Complete qualification of prototype radiation hardened 1Mb Non-volatile Random Access Memory.

Complete demonstration of prototype radiation hardened embedded giant magneto-resistive non-volatile random access memory.

Demonstrate radiation hardened SiGe mixed-signal technology.

Simulation Technology and Protocols (\$24,637K)

Improve cold x-ray yield and debris shielding capability by a 3X increase in the fluence - area metric on Decade.

Demonstrate 400 kilo-Joule (kJ) Ar Plasma Radiating Source (PRS) on the Sandia Z Machine.

Demonstrate 1 Mega-Volt (MV) fast Marx generator.

Include radiation transport in MACH2 code.

Demonstrate Ar/Kr/Xe "Black Body" spectrum on Decade Quad (DQ).

Demonstrate 1000 cm² survivable lithium debris shield.

Demonstrate 40 kJ Ar PRS on DQ.

Demonstrate 50% increase in warm x-ray dose on Decade Enhanced (DE).

Demonstrate 30% increase in hot x-ray dose-rate on DE.

Continue customer test support at Titan Pulsed Sciences Division.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Upgrade and integrate cold x-ray debris shields at the Decade Radiation Test Facility (DRTF).

Begin replacement of obsolete user and machine instrumentation at the DRTF.

Begin development of an Integrated Design Environment (IDE) by applying advanced modeling and simulation techniques to system hardness qualification.

Complete development of subsystem controller microcircuitry for fast circumvention and recovery (C&R) after radiation exposure applied to GPS recovery.

Continue development of a COTS operability and survivability protocol for designing and testing systems containing COTS parts.

Deliver Testable Hardware Toolkit Version 3.0.

Continue development of a thermostructural response (TSR) toolkit.

Initiate space sensor system demonstration.

Project BH - System Survivability (cont'd)

Infrastructure and Survivability Assessments (\$14,463K)

Balanced Electromagnetic Hardening

Develop Mission Degradation Analysis (MIDAS) model integration methodology.

Update MIL-STD-188-125 for Fixed C4I Facilities and MIL-STD-2169 for the High Altitude Electromagnetic (EM) Pulse environment; evaluate 100% of user-suggested improvements and modify documents as required.

Assess digital battlespace architectures for susceptibility to EM upset or damage.

Continue development of a Radio Frequency/High Power Microwave military standard/handbook.

Integrate advanced limiter technology into a sensitive communication receiver in cooperation with the Office of Naval Research.

Operability Assessments and Disturbed Environment Assessment Technology

Begin Upgraded Early Warning Radar (UEWR) Radar Nuclear Effects Clutter Simulator (RNECS) Development.

Complete the Electronic Battle Book (EBB) database to include multiple link assessments due to nuclear weapons detonation for USSPACECOM exercises and assessments.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

Complete USSPACECOM operability assessment of tactical warning/attack assessment (TW/AA) system considering impacts of future National Missile Defense (NMD) system integration.

Support NMD hardware-in-the-loop (HWIL) testing.

Continue development of a Visible Display Simulator to support Spaced Based Infra-Red Systems (SBIRS) Low testing and other future customers.

Support NMD In-Flight Information Control System (IFICS) testing.

Develop nuclear environment software modules for integration with HWIL facilities.

Conduct testing of Early Warning Radars (EWRs) in support of NMD program upgrades.

Develop radar disturbance mitigation techniques for NMD Ground-Based Radar and EWRs.

Provide IR scene testing of NMD/TMD (Theater Missile Defense) sensors.

Support IR and communications testing of Space-Based Infrared Satellite (SBIRS).

Continue communication/radar atmospheric effects participation in operational/ warfighting exercises through operational assessments.

Project BH - System Survivability (cont'd)

Complete NMD requirements development support for version C1 of the NMD initial capability.

Initiate NMD requirements development support for command and control.

Complete Navy Theater-Wide requirements development support.

Initiate USSTRATCOM force employment assessment.

Human Survivability

Commence Electro-Paramagnetic Resonance Mobile Response Dosimetry System.

Commence Rolling Circle Amplifier Biodosimeter Development and Construction.

Deliver Automated Hematology Analyzers to the Air Force Radiation Assessment Team for incorporation into Field Laboratory for Assessment of Radiation Exposure (FLARE).

Continue participation in Human Response Steering Committee, The Technical Cooperation Program, and the Arctic Military Environment Cooperation Program.

C. Other Program Funding Summary: N/A

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	R-1 ITEM NOMENCLATURE Strategic Defense Technologies; 0602717BR

D. Execution (Entities receiving 10% or more of total funding available in the PE/FNC.):

N/A

*FY 2001 DERF Supplemental provided \$15.7M related to this project. Funding is not reflected in this table.

*FY 2001 DERF Supplemental provided \$5.2M related to this project. Funding is not reflected in this table.

A. Mission Description and Budget Item Justification - The proliferation of nuclear, biological, and chemical weapons and their means of delivery (NBC/M) continues to pose a grave threat to national security. The U.S. requires counterproliferation (CP) counterforce capabilities to neutralize this threat. To accomplish this counterforce mission, the U.S. must be able to identify, characterize and defeat NBC/M research, production, storage, operations and support, and command and control facilities while mitigating collateral hazards resulting from release and expulsion of NBC agents. The potential target set includes fixed, aboveground and underground, hardened and unhardened facilities.

Programs funded through this program element develop, demonstrate, and transition CP counterforce technologies to combatant commands and the Services. The programs are

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

structured to exploit ongoing DoD agency, Service laboratory, and Department of Energy laboratory technology programs wherever possible. The program emphasis is on functional kill as well as hard kill and on mitigating collateral effects. The goal is rapid development of enhanced counterforce mission capabilities to include, but not limited to, advanced conventional and non-conventional (non-nuclear) weapons, application of sensor technologies to provide weapons of mass destruction (WMD) combat assessment, and target-attack planning tools to optimize weapon and sensor employment.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

A. Mission Description and Budget Item Justification (cont'd)

Prototype or modified systems integrating these capabilities will then be evaluated in demonstrations, those having military utility transition to a Service for acquisition, and, in some cases, a residual operational capability is provided to combatant commanders. These programs have been grouped into two projects, Special Operation Forces (SOF) Counterproliferation Support (Project BJ) and Counterforce (Project BK).

Starting in FY 2003, the planned milestones will be grouped by program instead of product types to provide a clearer link to the programs included in this program element.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

B. Program Change Summary

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2001 President's Budget Request (February 2000)	77.4	76.9	80.3
FY 2002 Amended President's Budget Request (June 2001)	76.6	89.8	77.5
FY 2003 President's Budget Request (February 2002)	75.1	89.7	77.4

Change Summary Explanation:

The decrease in FY 2001 between the FY 2001 President's Budget Request (Feb 2000) and the FY 2002 Amended President's Budget Request (June 2001) is due to general Congressional reductions. The FY 2002 Amended President's Budget Request (June 2001) reflects an addition of \$15M in FY 2002, which resulted from the Secretary of Defense Strategic Review process. Essentially all funds in this Program Element that were added as a result of the Secretary of Defense Strategic Review in FY 2002 are being used to demonstrate technologies identified in the Hard and Deeply Buried Target Defeat (HDBTD) Science & Technology Master Plan (Report to Congress). FY 2003 reflects that no funding was added to continue programs started in FY 2002.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

Project BB - Small business Innovative Research (SBIR) - This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of DoD supported research and development results. These efforts are responsive to PL 106-554.

FY 2001 Accomplishments

SBIR Total (\$500K)

Supported the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.

FY 2002 Plans

SBIR Total (\$1,712K)

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.

FY 2003 Plans

SBIR Total (\$1,082K)

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

Project BJ - Special Operations Forces (SOF) Counterproliferation Support - In 1995, the SECDEF assigned the core task of countering the proliferation of weapons of mass destruction (WMD) to SOF. This project directly supports SOF contributions to the nation's effort to counter the spread of WMD. Efforts in this project include the defeat of hard and deeply buried targets (HDBT), explosive ordnance disposal (EOD), maritime efforts to prevent the spread of WMD technology, and a SOF sponsored Advanced Concept Technology Demonstration (transferred to Project BK in FY 2003). This project supports requirements that apply to all three of the efforts identified above.

Details of this program have been classified per CJCSM 5225-01 dated 23 Oct 1996.

FY 2001 Accomplishments

SOF Projects (\$17,655K)

Specific details are classified.

FY 2002 Plans

SOF Projects (\$17,585K)

Specific details are classified.

FY 2003 Plans

SOF Projects (\$18,292K)

Specific details are classified.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

Project BK - Counterforce - The purpose of this project is to develop technologies, demonstrate prototype systems in an operationally realistic environment, support operators in the definition of the concept of operations, and provide combatant commanders with enhanced capabilities in response to potential adversaries who have the capability to develop and/or employ nuclear, biological and chemical (NBC) weapons of mass destruction (WMD) in future regional conflicts involving the U.S. or its allies. The U.S. requires the capability to attack and neutralize NBC research, production, storage, operations and support, and command and control facilities while mitigating collateral effects resulting from expulsion and release of NBC agents. The potential target sets include fixed, aboveground and underground, hardened and unhardened, and tunnel facilities. The project is structured to exploit ongoing technology programs wherever possible. The project emphasis is on functional kill as well as hard kill and on mitigating collateral effects through advanced weapon development and greatly enhanced target attack planning to optimize weapon employment. The goal is the development of an enhanced counterforce mission capability to include penetrating weapons, WMD combat assessment, and the supporting planning tools. Prototype or modified systems integrating these technologies will then be evaluated in demonstrations, and, in some cases, a residual operational capability is provided to combatant commanders.

This project emphasizes technology demonstrations to include Advanced Technology Demonstrations (ATD) and Advanced Concept Technology Demonstrations (ACTD). Seven programs are currently planned: the Second Counterproliferation (CP2) Counterforce ACTD, the Agent Denial Demonstration (a proposed ACTD), the Biological Characterization Testbed, a classified program, the Hard Target Defeat (HTD) C3I Demonstration, the Thermobaric Demonstration (a proposed ACTD), and the CP Analysis and Planning System (CAPS). Essentially all funds added in this Project, as a result of the Secretary of Defense Strategic Review in FY 2002, are being used to demonstrate technologies identified in the

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Hard and Deeply Buried Target Defeat (HDBTD) Development - BA3	Counterproliferation Support; 0603160BR Science & Technology Master Plan. These	

programs are described in the following paragraphs:

Project BK - Counterforce (cont'd)

The CP2 ACTD objective is to develop, demonstrate, and deliver enhanced standoff, counterforce capabilities in conjunction with operational concepts to combatant commanders for planning attacks and timely, reliable defeat of WMD related facilities while minimizing collateral hazards. The CP2 ACTD depends on technology base and products in PE 0602715BR and PE 0602716BR, Projects BD for planning tools and test planning and execution support, and Projects BE for the operational demonstrations. The Navy and Air Force are both participating in weapons and WMD combat assessment system development for the ACTD. The CP2 ACTD has been approved by Deputy Under Secretary of Defense for Advanced Systems and Concepts DUSD(AS&C), and the management plan was signed April 21, 1999. USEUCOM is the operational sponsor with USJFCOM and USSTRATCOM participating. The CP2 ACTD started in FY 1999 and will be completed in FY 2003.

The Agent Denial Demonstration is a joint program with the U.S. Air Force. The objective is to demonstrate and transition an enhanced capability to deny the use of biological weapons, with DTRA interest in obtaining collateral effects test data and enhancing target planning tools with this data. The program starts in FY 2003. The final demonstration is planned for FY 2005. This program responds to the 1994 U.S. Air Force Mission Need Statement for Agent Defeat Weapons.

The Biological Characterization Testbed provides a realistic and baselined demonstration capability in support of Combating Terrorism and counterproliferation programs. Starting in FY 2003, the testbed leverages and integrates technologies developed by various customers to demonstrate an enhanced capability. Details of this program have been classified per CJCSM 5225-01 dated 23 Oct 1996.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

The classified program has been transferred from Project BJ in FY 2003 to demonstrate enhanced capabilities for the customer, USSOCOM. Details of this program have been classified per CJCSM 5225-01 dated 23 Oct 1996.

Project BK - Counterforce (cont'd)

The HTD program objective is to develop and demonstrate end-to-end capabilities for the functional defeat of hard targets, particularly tunnels, and assess developing weapon and sensor concepts against such targets. The program does not develop new sensors; it assesses existing or emerging technologies being developed by others. The HTD program develops technologies under PE 0602715BR and PE 0602716BR, Project BF and transitions them to this program for demonstration. The demonstrations require test planning and execution support from PE 0602715BR, Project BE, or from PE 0602716BR starting in FY 2003. The currently planned HTD C3I Demonstration ends in FY 2003. HTD customers are USPACOM, USSTRATCOM, USSOCOM, and the Air Force's Air Combat Command.

The Thermobaric Demonstration will develop a weapon concept that is based on a new class of thermobarics. Thermobarics include a broad range of high-energy density materials that are capable of producing high temperatures ("thermo") and high pressures ("barics") for extended periods of time. This technology develops the potential for producing sustained, distributed damage in hard targets. The weapon could be used against certain type of tunnel targets for a maximum functional kill of the tunnels. Prototype weapons will be tested under operational conditions for their performance, and leave-behinds will be delivered to the customer.

The Counterproliferation Analysis and Planning System (CAPS) program responds to the need for a comprehensive and timely counterproliferation (CP) target planning tool to assist combatant commanders in the conduct of their Concept of Operations Plan (CONPLAN) 0400

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology targeting responsibilities. Products from Development - BAS	Counterproliferation Support; 0603160BR CAPS include end-to-end descriptions of country	

specific Nuclear, Biological, Chemical, and Means of delivery (NBC/M) programs of proliferation concern. The analysis provides combatant commanders highly detailed assessments of a country's NBC/M programs, proliferation pathways, and identifies the critical nodes and key facilities that, if eliminated, would cause the greatest impact to that program. This information will directly support the combatant commanders in the planning and execution of their CP missions. These analyses are conducted in successive

Project BK - Counterforce (cont'd)

levels of detail, identified as Level 1-5 analysis, with Level 1 having the lowest analytical detail and Level 5 the highest. As an output of the analyses, CAPS will provide CP target planners with the critical data elements needed to take effective action against the NBC/M programs of proliferating countries, and will also predict whether there will be environmental consequences (hazards) produced by these actions. There are five major aspects of the CAPS program. (1) The integration of intelligence and NBC/M production process analyses to create highly-detailed models of the proliferation efforts underway in selected countries, identifying the specific function and location of the major production sites, and developing detailed layouts of these sites within each country. (2) Element analyses of each country model to select the critical nodes in the country's proliferation pathway. Critical nodes will include those facilities essential to research, production, weaponization, and storage, which if eliminated, would require extended time to replace and significantly degrade the NBC/M program being analyzed (Level 1-3 analysis). (3) Conduct highly detailed inside-the-building analysis necessary for the employment of precision-guided munitions or special operations forces (Level 4-5 analysis). (4) The execution of consequence analyses to determine and to quantify the level of damage that might occur as a result of potential interdiction/counterforce actions, to include: possible casualties, economic losses, and other environmental issues. (5) The completed CAPS analyses will be provided via secure means to the user community in a logical, user-friendly format

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development - BAS	Counterproliferation Support; 0603160BR The	

incorporating the latest advances in computer software development. The Counterproliferation Mission Support Senior Oversight Group and its Requirements Subcommittee, comprised of OSD, JCS, and CINC J-2/3/5 representatives have identified 45 NBC/M programs in 16 different countries as the requirements basis for CAPS analysis.

The planned programs provide products in five areas: WMD combat assessment, collateral effects prediction, target response, weapons, and operational demonstrations. These product areas are described in the following paragraphs:

Project BK - Counterforce (cont'd)

WMD Combat Assessment. This product area has evolved from the former (completed in FY 1998) Counterproliferation 1 (CP1) ACTD sensor product area to provide WMD combat assessment capabilities. Product area efforts will provide improved warfighting capabilities against the spectrum of WMD-related facilities. These efforts will leverage existing programs to (1) evaluate near-term technologies; (2) define concepts of operation and system architecture for chemical combat assessment; (3) produce data fusion and mission planning modules to meet user requirements on existing platforms; and (4) integrate chemical and biological combat assessment capabilities onto delivery systems, such as unmanned air vehicle (UAV) and expendable mini-UAV platforms. Further, the effort will demonstrate the ability to confirm, identify, and assess the release of biological/chemical agents in support of attacks on NBC facilities and assist in predicting transport patterns by updating pre-strike predictions of the potentially hazardous plume with real-time data.

The combat assessment product area will not develop its own sensors, but will leverage ongoing chemical sensor efforts within the chemical and biological defense community to minimize program risk for applying this technology to counterforce missions. In CP2, a Chemical Combat Assessment System (CCAS) will be demonstrated. The feasibility of a Biological Combat Assessment System (BCAS) is being studied.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development Collateral Effects Prediction.	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR The collateral effects effort provides predictive tools	

for a variety of applications supporting Nuclear, Biological and Chemical (NBC) target attack planning to include NBC expulsion and dispersion resulting from attacks on WMD facilities as well as acts of terrorism and hostile use of WMD. Requirements include high-resolution weather models, weather measurement systems, and population databases. A key element in developing these collateral effects codes is chemical/biological expulsion tests and modeling. Modeling of chemical/biological expulsion sources will be based on theoretical models and empirical data. Codes will be validated from existing data, other predictive models and special collateral effects experiments. The collateral effects tools will provide pre-attack prediction and post-attack assessment.

Project BK - Counterforce (cont'd)

The Hazard Prediction and Assessment Capability (HPAC) is a major product that predicts the release and transport of NBC materials and the subsequent collateral effects. The high-resolution weather prediction capability, another area of emphasis in the product area, will provide timely wind, cloud, and precipitation data necessary for more detailed NBC collateral effects predictions. These tools will also be integrated into the target attack planning tools to assess the consequences of attacks on WMD facilities.

Target Response. This effort will provide a new target attack planning, combat assessment capability and a major upgrade for existing theater-level planning capabilities for defeating or denying NBC facilities and capabilities. This effort builds upon the Integrated Munitions Effects Assessment (IMEA) planning tool developed for CP1 ACTD. IMEA provides a forward deployable, target planning capability for NBC targets. IMEA is an integration of the Munitions Effects Assessment (MEA) tool providing targeting solutions using conventional weapons for a variety of structures and equipment and the HPAC developed under the Collateral Effects Prediction product area. The integrated capability supports the warfighters in the attack planning phase with target response and collateral effects prediction, and in the post-attack phase with combat assessment and re-strike decision support. Upgrades to IMEA for the CP2 ACTD include additional target types (including

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
---	--------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development BA3	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR
--	---

complex facilities), additional weapons as developed in the Weapons area below (including multiple weapon effects), additional platforms, more operator-friendly displays, more WMD material types, weather interfaces and sources, and more detailed weapon input parameters (such as angle of attack). The ultimate CP2 IMEA product will be able to run stand-alone or in a web-based client-server distributed architecture as it migrates into the Integrated Target Planning Tool Set (ITPTS) suite of tools, the second deliverable during CP2. The ITPTS will provide a spectrum of planning and assessment capabilities from deliberate to crisis. ITPTS provides the warfighter a standardized weaponeering framework that greatly increases weaponeering efficiency and fidelity while minimizing warfighter training requirements. It expedites cross service/coalition weaponeering and joint planning. The ITPTS architecture provides the warfighter with cross platform interoperability

Project BK - Counterforce (cont'd)

and a common look and feel, independent of weapon or target. In addition, it provides the warfighter critical decision support services for all target classes including those associated with weapons of mass destruction. ITPTS will also predict weapons performance and associated NBC collateral effects, develop targeting solutions that minimize collateral effects, and provide results through appropriate interfaces for a variety of targets including functionally and structurally complex facilities. ITPTS will provide an enhanced seamless interface to the Intelligence Community (IC) data sources. ITPTS will be the weaponeering segment in the Joint Targeting Toolbox (JTT) and provides the warfighter with targeting information in a JTT's "Electronic Target Folder" (ETF). This effort will execute a full verification and validation program, in accordance with the Joint Technical Coordinating Group for Munitions Effects (JTTCG/ME) Procedures, for all delivered capabilities including extensive verification testing and operational and field testing at all functional levels.

Weapons. This product area will develop, integrate and demonstrate advanced conventional weapons technologies to improve mission effectiveness against NBC facilities while mitigating collateral effects. The focus for CP2 ACTD is to provide combatant

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development - BA3 Commanders with	Counterproliferation Support; 0603160BR	

a demonstrated option to attack NBC facilities in a standoff mode. This effort will improve on existing standoff weapon platforms to provide enhanced penetration and advanced fuzing developed during CP1. Standoff weapons to be enhanced include the Tactical Tomahawk in a penetrator variant and the Conventional Air Launched Cruise Missile (CALCM). An enhanced payloads project explores alternate warhead options to conventional blast/fragmentation with the objective of mitigating collateral effects associated with dispersal of NBC. Hard Target Defeat (HTD) will demonstrate non-conventional (non-nuclear) weapons to functionally defeat tunnels. HTD weapons technology being developed includes advanced energetics (like thermobarics) and non-energetics.

Operational Demonstrations. This product area will improve the operational capability for holding NBC targets at risk with minimum collateral effects. The objective is to integrate available or near-term technologies for WMD combat assessment, weapons,

Project BK - Counterforce (cont'd)

collateral effects prediction, and target planning tools, to evaluate the technologies in an operational context, and to transition improved capabilities rapidly to combatant commands. Specifically, this product area will enhance and accelerate existing programs to provide integrated target planning, collateral effects prediction codes, a Chemical Combat Assessment System (CCAS) and advanced weapons to meet NBC target defeat requirements. This product area will also support demonstration operations to include system operational concept, demonstration planning, scenario development, execution of the demonstration, and post-demonstration analysis. Planning and execution of demonstrations use a time phased approach to screen candidate technologies for maturity, develop prototype systems and demonstrate enhancements in military capability against a combatant command prioritized subset of all potential NBC target types. This approach results in a cycle of prototype development and testing followed by periods of operational demonstration.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development - BA3	Counterproliferation Support; 0603160BR	
Three operational demonstration series	are planned for CP2 ACTD over the period of FY	

2000-2003 to provide the operational sponsor, United States European Command, and participating commands with the opportunity to assess the utility of the selected technologies. The objective of the first demonstration series in CP2 ACTD, called Dipole Yukon (DY), is to demonstrate the capability to plan and execute chemical/biological (C/B) counterforce missions with the Joint Air-to-Surface Standoff Missile (JASSM) through operationally realistic attacks against a simulated biological weapons storage facility. The objective of the second demonstration, called Dipole Zodiac (DZ), is to assess the suitability of the CALCM with a penetrating warhead and a Predator unmanned air vehicle (UAV) based standoff collateral effects assessment system. The objective of the third demonstration series, called Divine Canberra (DC), is to evaluate the end-to-end set of products of the CP2 ACTD including the target planning tool, in its final operational context, the Tactical Tomahawk Penetrator Variant (TTPV), and remote combat assessment using a small expendable mini-UAV with a chemical point detector on-board (and deployed from the Predator UAV demonstrated in DZ) against a hard chemical production and storage facility.

Project BK - Counterforce (cont'd)

Agent Denial demonstration will conduct an operational demonstration of an enhanced payload and enhanced target response and collateral effects tools in FY 2005.

HTD will conduct a functional defeat demonstration on a Command, Control, Communications, and Intelligence (C3I) tunnel facility using improved target planning tools and new weapon concepts. The currently planned demonstration ends in FY 2003.

FY 2001 Accomplishments

WMD Combat Assessment (\$8,369K)

Integrated and tested standoff subsystem.

Continued to configure, fabricate, and test components for chemical point detector.

Conducted simulant and agent tests for sampling, remote and point sensors in explosive chamber.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3 Initiated Divine Invader test series.	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

Integrated point detector/sampler on FINDER mini-UAV.

Collateral Effects Prediction (\$2,620K)

Delivered initial hazard source models for CP2 ACTD standoff weapons.
 Integrated Meteorological Data Server in ITPTS architecture.
 Provided weather model services to HPAC, IMEA and ITPTS.
 Validated weather models and wind field data for priority regional areas.
 Developed HPAC access to ITPTS.
 Delivered HPAC 4.0 to EUCOM, STRATCOM, JFCOM and other CINCs, utilizing a client-server architecture, incorporating wet biological source terms and enhanced chemical/biological warfare agent source terms.

Target Response (\$3,587K)

Delivered IMEA 4.0 software with CALCM and Joint Air-to-Surface Standoff Missile (JASSM) weapons effects data to support Dipole Zodiac and Dipole Yukon 1.

Project BK - Counterforce (cont'd)

Completed the Independent Verification and Validation (IV&V) of MEA 4.0 to the Accreditation Support Package (ASP) to the JTCG/ME for accreditation.
 Delivered CALCM weapon effects/performance models and support operational exercises for Divine Umpire.
 Delivered ITPTS 1.0 that includes four tools (MEA, HPAC, Joint Targeting Toolbox {JTT}), and the USAF Modular Effectiveness and Vulnerability Assessment (MEVA), access to intelligence community data sources and use of a common data structure.
 Started the IV&V of ITPTS 1.0 and submit the Accreditation Support Package (ASP) to the JTCG/ME for accreditation.
 Started the phased integration of the JTCG/ME weaponeering product, Windows version of the Joint Munitions Effects Manual (WinJMEM), into ITPTS.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development - BA3	Counterproliferation Support; 0603160BR Completed Component Vulnerability and Agent Release/Agent Release Model (CVAR/ARM)	

validation tests.

Initiated IMEA C3I facility model validation testing.

CP Analysis and Planning System (\$9,216K)

Completed Level 1-3 CAPS analysis on top 18 combatant commanders' NBC/M country programs.

Began second round of CAPS analytical production. The second CAPS production cycle calls for the completion of: Level 1-3 analysis on the remaining six Counterproliferation (CP) Modeling and Simulation (MS) Senior Oversight Group (SOG) near-term country programs, Level 4 analysis of not less than 40 facilities, and Level 5 analysis of a minimum of 5 facilities. This plan was developed in coordination with the CP MS SOG Principals, the CP MS SOG Requirements Subcommittee and representatives from each of the combatant commands.

Continued CAPSNET terminal installations at major commands, priority supporting commands, and support agencies; installations completed for FY 2001 were JWAC, NIMA, DTRA, and several additional USSOCOM elements.

Project BK - Counterforce (cont'd)

Established a CAPS server on JWICS, providing the Intelligence Community much easier access to Level 1-3 CAPS analysis.

Established a high-speed data communications (JWICS T-1) line and Video Tele-Conference (VTC) capability at LLNL supporting the CAPS program. This provides CAPS with full JWICS connectivity and a direct link to the Intelligence Community (IC) for coordination, access to intelligence information, and much easier coordination via the JWICS VTC.

Weapons (\$18,229K)

Conducted TTPV penetrator systems integration.

Completed TTPV penetrator command and control modifications.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development Continued TTPV penetrator payload system design, missile systems design and engineering, air-vehicle modification design and fabrication.	Counterproliferation Support; 0603160BR	

Continued TTPV penetrator warhead design, fabrication, and test.
 Conducted TTPV penetrator system test and evaluation (3 sled track tests).
 Conducted CALCM critical design review.
 Initiated system trade studies for enhanced payload concepts against chemical/biological targets.
 Continued modeling and simulation of selected enhanced payloads concept.
 Continued design and effectiveness studies for the HTD classified weapon.

Operational Demonstrations (\$14,878K)

Conducted Divine Zorro static TTPV demonstration and analyzed results.
 Conducted Divine Umpire (CALCM Block I baseline) and analyzed results.
 Conducted Dipole Yukon 1 (JASSM) demonstration and analyzed results.

FY 2002 Plans

WMD Combat Assessment (\$9,200K)

Integrate FINDER mini-UAV on Predator and flight test.
 Exercise CCAS Predator standoff system and mini-UAV point detector at Dipole Zodiac.
 Continue Divine Invader test series with integrated CCAS.

Project BK - Counterforce (cont'd)

Train operators on integrated CCAS.
 Conduct feasibility study for a Biological Combat Assessment System (BCAS).

Collateral Effects Prediction (\$4,038K)

Complete chemical source term validation testing.
 Deliver final hazard source models for CP2 ACTD standoff weapons.
 Integrate initial ensemble weather forecasting and source models for CP2 ACTD weapons.
 Provide HPAC modules for ITPTS 2.0 to meet USEUCOM final product requirements.
 Deliver and validate HPAC 4.1 for Dipole Zodiac and Dipole Yukon.

Target Response (\$6,575K)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development - BAS	Counterproliferation Support; 0603160BR	
Validate IMEA 5.0 software to support	Dipole Zodiac and Dipole Yukon 2 (JASSM).	

Deliver TTPV and CALCM weapon effects/performance models.

Deliver ITPTS 2.0 that includes access to additional IC data sources and interface to other targeting tools through the Joint Targeting Toolbox (JTT) and Electronic Target Folder (ETF).

Complete the first phase of the integration of WinJMEM into ITPTS, begin integration of the JTCG/ME Air-to-Surface Weaponing System (JAWS) into ITPTS.

Continue IMEA C3I facility model validation testing.

Perform sub-scale validation tests to support the CP2 full-scale operational tests.

Begin the IV&V of ITPTS 2.0 and submit the Accreditation Support Package (ASP) to the JTCG/ME for accreditation.

Complete the integration of the JTCG/ME weaponing product WinJMEM into ITPTS.

Complete the IV&V of MEA 5.0 support the CALCM and JASSM demonstrations in CP2 ACTD and submit the Accreditation Support Package (ASP) to the JTCG/ME for accreditation.

CP Analysis and Planning System (\$8,870K)

Complete the second round of CAPS analytical production on 1 April 2001: Level 1-3 analysis on the remaining six CP MS SOG near-term country programs, Level 4 analysis of not less than 40 facilities, and Level 5 analysis of a minimum of 5 facilities.

Continued CAPSNET terminal installations at major commands, priority supporting commands, and support agencies; installations in advanced planning for FY 2002 are EUCOM (JAC),

Project BK - Counterforce (cont'd)

USFK (PACOM), DIA, WINPAC (CIA), and SOUTHCOM. Other potential CAPSNET installations for FY 2002 are JFCOM (CMSALANT/JFIC), EUCOM (Stuttgart/Ramstein), and potentially other supporting organizations.

Install JWICS CAPS server at LLNL, providing more up-to-date information than is currently available to CAPS users on JWICS.

Pursue hosting CAPSNET on JWICS using Secure Community of Interest (S/COI) Software. This will provide the full CAPS analysis, Level 1-5, and much easier access to the Intelligence Community and other JWICS users.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Weapons Development (EAS) (\$13,900K)	R-1 ITEM NOMENCLATURE Counterproliferation Support; 0603160BR	

Conduct TTPV critical design review.
 Complete TTPV penetrator warhead design, fabrication, and test.
 Complete TTPV penetrator systems integration.
 Complete TTPV penetrator command and control modifications.
 Complete TTPV penetrator payload system design, missile systems design and engineering, and air-vehicle modification design and fabrication.
 Conduct TTPV penetrator system test and evaluation.
 Conduct TTPV Flight Event Demonstration.
 Complete design and effectiveness studies for the HTD classified weapon concept.

Operational Demonstrations (\$27,807K)

Conduct Dipole Zodiac (1 and 2) CALCM and UAV demonstrations and analyze results.
 Conduct Midway Blue 1, 2 and 3 demonstrations for the Advanced Unitary Penetrator.
 Conduct Dipole Yukon 2 (JASSM) demonstration and analyze results.
 Initiate target refurbishment for Divine Canberra demonstration.
 Initiate C3I demonstration for the HTD classified weapon concept.
 Develop HTD testbed to provide necessary demonstration and validation capability for new hard and deeply buried target defeat technologies.
 Complete management plan for Thermobaric Weapon (TW) demonstration.
 Initiate integration of thermobaric payload material with weapon system and firing system.
 Validate thermobaric weapon functionally through full and sub-scale testing.

Project BK - Counterforce (cont'd)

FY 2003 Plans

CP2 ACTD (\$28,514K)

Complete Divine Invader flight-testing of CCAS.
 Deliver and validate final version of HPAC incorporating CP2 ACTD hazard source models.
 Deliver and validate final version of IMEA incorporating CP2 ACTD weapons effects data.
 Deliver and validate final version of ITPTS incorporating CP2 ACTD requirements.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development - BA3	Counterproliferation Support; 0603160BR	
Complete Deline Canberra (DC) demonstration and analyze results.		

Support USEUCOM's military utility assessment of all CP2 deliverables.

Deliver residual capabilities to CINC sponsor, USEUCOM.

Agent Denial Demonstration (\$1,692K)

Initiate collateral effects and weapon effects modeling of the agent denial weapon.

Biological Characterization Testbed (\$1,795K)

Identify technologies for demonstration.

Develop integrated demonstration plan and schedule.

Specific details are classified.

Classified Program (\$11,092K)

Specific details are classified.

HTD C3I Demonstration (\$5,802K)

Complete C3I demonstration for the HTD classified weapons.

CP Analysis and Planning System (\$9,120K)

Initiate third CAPS production cycle, 01 October 02 - 31 March 03, with specific requirements to be determined by the CP MS SOG Principals, Requirements Subcommittee and representatives of the combatant commands in coordination with the CAPS program managers.

Complete any remaining CAPSNET terminal installations.

C. Other Program Funding Summary: N/A

D. Execution (Entities receiving 10% or more of total funding available in the PE/FNC.):

Labs/Centers-N/A

Universities-N/A

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/Advanced Technology Development - N/A FERDCS - N/A BA3	Counterproliferation Support; 0603160BR	

Contractors-N/A
Other-N/A
Other-N/A

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3				R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR				
COST (In Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete
Total 0603711BR Cost	66.4		37.6	41.7	41.7	41.9	46.5	Continuing
		62.9						
Project BB - Small Business Innovation Research (SBIR)	2.0	0.8	1.1	1.1	1.1	1.1	1.1	Continuing
Project BI - Arms Control Technology*	64.4	62.1	36.5	40.6	40.6	40.8	45.4	Continuing

*FY 2001 DERF Supplemental provided \$17.8M related to this project. Funding is not reflected in this table.

A. **Mission Description and Budget Item Justification** - This program element (PE) provides research, development, test, and evaluation (RDT&E) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging arms control treaties and agreements. Efforts under this PE also support international peacekeeping and nonproliferation objectives. Current and emerging technologies are assessed to provide the basis for research and development investment decisions, evaluate existing programs, and provide the technical input required to make compliance judgments and support U.S. Arms Control policy formulation and negotiating teams. Selected technologies are developed and demonstrated to support confidence building measures and nonproliferation initiatives to ensure that capabilities to monitor, comply with, and implement treaties and agreements are available when required.

Specific products include equipment and procedures for data exchanges, on-site and aerial inspections and monitoring, and off-site analysis required to meet treaty specifications and implement confidence building measures. Where applicable, RDT&E to

meet requirements in one area is applied to fulfill requirements in other areas to maximize return on investment.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

B. <u>Program Change Summary</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2001 President's Budget Request (Feb 2000)	52.9	50.0	49.6
FY 2002 Amended President's Budget (June 2001)	67.4	52.5	53.2
FY 2003 President's Budget Request (Feb 2002)	66.4	62.9	37.6

Change Summary Explanation:

Changes in FY 2001 from the FY 2001 President's Budget Request (Feb 2000) and FY 2002 Amended President's Budget Request (June 2001) are attributable to Congressional adds with Congressional emphasis in the areas of nuclear detection analysis and basic and applied research to support operational nuclear test verification systems. Changes in FY 2002 from the FY 2002 Amended President's Budget (June 2001) and the FY 2003 President's Budget Request (Feb 2002) are due to Congressional adds for Industry Based System Development (+\$4.2M), Center for Monitoring Research (+\$2.8M), and Nuclear Test Monitoring (+\$3.5M), as well as a general congressional reduction in the amount of \$.1M. Changes in FY 2003 from the FY 2002 Amended President's Budget (June 2001) are a result of a Department reduction to the Arms Control Program in the amount of \$10M, as well as DTRA's realignment of \$5.5M to support the DTRA Radiation Hardening Microelectronics program. In addition, \$.1M reduction is attributed to an inflation reduction.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BB - Small Business Innovation Research (SBIR) - This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of DoD supported research and development results. These efforts are responsive to PL 106-554.

FY 2001 Accomplishments

Small Business Innovation Research (\$1,994)

Supported the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research. Executed Agency-approved SBIRs.

FY 2002 Plans

Small Business Innovation Research (\$831K)

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research. Execute Agency-approved SBIRs.

FY 2003 Plans

Small Business Innovation Research (\$1,128K)

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.

Execute Agency-approved SBIRs.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BI - Arms Control Technology - This project provides an integrated and comprehensive approach to meeting the technology requirements associated with achieving national defense nonproliferation and arms control objectives. The major activities consist of the following:

Develop procedures and equipment that will enable the USG to effectively exercise treaty inspection rights, monitor compliance, and accomplish reporting associated with current and projected treaty requirements in the most non-intrusive and cost-effective manner. Objectives include achieving more effective methods of measuring characteristic Treaty-Accountable Item signatures (e.g. for non-deployed missiles and warheads in all life-cycle phases, to include conversion and/or elimination) utilizing technologies based on physical principles such as nuclear radiation detection, acoustics, or chemical identification and providing monitoring/inspection capabilities to reduce the overall cost and increase the flexibility of U.S. inspectors.

Develop technology to provide information collection, processing and dissemination capabilities required for compliance assessments and meet notification and reporting requirements associated with evolving treaties and agreements (e.g., new rules for counting strategic forces).

Develop technology to support revised implementation and compliance requirements resulting from the decisions of the Conventional Armed Forces in Europe (CFE) Joint Consultative Group; the Organization for Security and Cooperation in Europe (OSCE) Forum for Security Cooperation; North Atlantic Treaty Organization (NATO) Verification

Coordinating Committee and the High Level Task Force; the Conference on Disarmament; the Multilateral Working Group on Arms Control and Regional Security; the Wassenaar Arrangement; and the Open Skies Consultative Commission (OSCC).

Perform technology assessments and provide technical input to support development of innovative agreements addressing arms control issues in new topical areas and/or specific geographical regions.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BI - Arms Control Technology (cont'd)-

Develop and validate technologies that ensure on-site sampling and analysis is effective and that DoD equities are protected during the course of all inspections/visits conducted under the convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on their Destruction (CWC), and the protocol under the Biological Weapons Convention (BWC).

Develop technologies to synergistically support international peacekeeping efforts and other nonproliferation initiatives.

Perform technology assessments and provide technical expertise in areas relevant to the production and detection of biological agents to support DoD and U.S. policy makers and negotiators in determining the impact of proposed BWC protocol alternatives methodologies, declaration requirements and transparency measures on DoD equities, and in representing the U.S. during BWC Ad Hoc Group meetings.

Develop the nuclear test monitoring capability necessary to support current and emerging nuclear world-wide non-proliferation requirements as well as operational monitoring improvements for national security objectives.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

**Project BI - Arms Control Technology (cont'd) -
FY 2001 Accomplishments (\$64,393K)**

Assessed potential utility of non-visual ballistic missile verification methods and identified follow-on R&D objectives.

Continued a Space Arms Control Technology Assessment to support DoD analysis and evaluation of potential space arms control measures and the need for verification technology developments.

Identified the technological impact of potential multilateral strategic verification regimes.

Executed a Strategic Arms Reduction Treaty (START) follow-on treaties monitoring regime demonstration at the Pantex Plant for representatives from the Russian Federation.

Conducted a demonstration at a DoD base to evaluate the operational impact of nuclear warhead monitoring at that location.

Initiated a follow-on effort for the cooperative development of strategic arms control technologies with the Russian Federation.

Continued efforts to investigate applications of ultrasonic interferometry technique (originally developed for Chemical Weapons Convention use) to strategic arms control monitoring.

Continued Open Skies Management and Planning System (OSMAPS) life-cycle upgrade assessment.

Assessed various technology options to support the U.S. arms control delegations to NATO, OSCC, the Joint Consultative Group, the Forum for Security Cooperation, the APL, SA/LW, Convention on Conventional Weapons (CCW), Open Skies and regional arms control negotiations.

Assessed Synthetic Aperture Radar (SAR) system performance and provided lifecycle upgrade/replacement recommendations.

Provided RDT&E support for acquisition of upgraded and/or replacement of optical cameras, video camera and Infrared Lens Scanner (IRLS) for the Open Skies Aircraft.

Assessed sensor technology for stand off Anti-Personnel landmine (APL) detection and mapping Completed Latin America Regional Area Technical Assessment.

Provided technical assessments for Open Skies, APL, CCW and SA/LW treaties/negotiations.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

**Project BI - Arms Control Technology (cont'd) -
FY 2001 Accomplishments cont'd**

Completed situational influence modeling support for regional security assessment and workshops.

Defined User and System software requirements for next generation of CWC-related analytical equipment. Assessed new advances in rapid chemical analytical technologies and evaluated potential applications of new sensors to CWC-related sample analysis. Validated mass spectra, IR spectra, Nuclear Magnetic Resonance (NMR) spectra and Gas Chromatograph (GC) retention indices for inclusion in the Organization for the Prohibition of Chemical Weapons (OPCW) central analytical database.

Provided technical support to Office of the Secretary of Defense (Policy) (OSD(P)) in preparation for Review Conferences. Assessed impact of CWC and proposed BWC inspection activities on DoD equities. Evaluated implications and consequences

for DoD of potential changes to the CWC.
 Completed market surveys and assessments on BW detection and related technologies to include immunological and genetic assays, polymerase chain reaction (PCR) analysis, Mass Spectrometer (MS) and genomic sequencing.
 Completed version 3.0 of the Gas Chromatograph/Mass Spectrometer (GC/MS) sample preparation method.
 Continued development of follow-on non-destructive evaluation (NDE) capabilities for standoff chemical munition classification and identification. Exceeded established acoustic goals.
 Completed initial prototype development and initiated field testing of Advanced NDE acoustic CW/BW munitions characterization system.
 Completed initial prototype development of mini-Portable Isotopic Neutron Spectroscopy (PINS) NDE system including technical evaluation of several electrical neutron generators.
 Initiated technical evaluation of conductive polymer, metal oxide and Metal-Insulator-Metal-Ensemble CW sensors.
 Continued development of cost effective computerized, rapidly executing techniques and algorithms to detect, locate, and identify seismic, hydroacoustic, infrasound, and radionuclide signals from operational sensor systems.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BI - Arms Control Technology (cont'd) -
FY 2001 Accomplishments cont'd

Continued the industry-based development of nuclear detection sensors and analysis technology in compliance with Congressional emphasis.
 Completed upgrade, documentation, operational test and evaluation, and mock certification of the primary seismic stations at Lajitas, Texas and Pinedale, Wyoming.
 Completed documentation, operational test and evaluation, and mock certification of the infrasound station at Kona, HI.
 Completed installation, documentation, operational test and evaluation, and mock certification of the infrasound stations at Windless Bight, Antarctica and Pinon

Flat, CA.
 Initiated installation and began preliminary operations at the infrasound station at Newport, WA.
 Began installation of the infrasound station at Fairbanks, AK.
 Continued upgrade of data acquisition and satellite communications systems at auxiliary seismic stations.
 Installed and began testing the first engineering prototype Automated Radioxenon Sampler/Analyzer (ARSA) at the Charlottesville, VA radionuclide station.
 Upgraded three of the Radionuclide Aerosol Sampler/Analyzers (RASA) already on stations.
 Continued development of procedures for sample handling and analysis at the radionuclide laboratory at the Environmental Measurements Laboratory in NY, NY.
 Developed and completed delivery of an upgrade to the Release 3 software for the International Data Center (IDC) in support of Nuclear Event Monitoring.
 Initiated development of the next generation of treaty support information management capabilities under the Arms Control Information and Notification Program, using state-of-the-art technologies and adhering to DoD international standards.
 Completed development of VERITY Treaty Limited Equipment (TLE) Search System and delivered final documentation and source code.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BI - Arms Control Technology (cont'd)
FY 2002 Plans (\$62,078K)

Develop prototype computer based training for CFE Treaty inspection/escort training.
 Provide technical negotiation support for START follow-on treaties or agreements.
 Continue Joint DoD/DOE collaboration on the development of technologies that could be used in any potential warhead accountancy regime.

Initiate prototype development of selected non-visual methods of verifying ballistic missiles.

Continue cooperative development of strategic arms control technologies with the Russian Federation and demonstrate a potential warhead monitoring regime.

Test and evaluate mini-neutron spectroscopy using neutron generator.

Provide technical support (to include quick turn around and longer term analyses) to the U.S. arms control delegations to the NATO, OSCC, the Joint Consultative Group, the Forum for Security Cooperation, and other negotiation and DoD analysis and policy formulation activities.

Continue Open Skies sensor performance evaluations and accomplish RDT&E to support acquisition of Synthetic Aperture Radar (SAR), optical and video cameras, and Infrared Line Scanner (IRLS) equipment for Open Skies aircraft.

Initiate the Middle East Aerial/Aerospace Monitoring Technologies Assessment for use in regional arms control treaty verification regimes.

Conduct assessments of technologies to support current and emerging conventional arms control negotiations.

Initiate Data Preparation Facility (DPF) enhancements to meet Open Skies operational requirements.

Assess requirements for a Data Annotation, Recording and Mapping System (DARMS) trainer to support Open Skies operators.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BI - Arms Control Technology (cont'd) -
FY 2002 Plans (cont'd) -

Initiate development of OSMAPS life-cycle upgrades and conduct required Independent Verification & Validation (IV&V) tests.

Evaluate mass spectrometry technologies for detection of novel chemical agents, bio-

logical molecules and organisms.
 Establish sample preparation and analytical methods for generating standardized mass spectra for biological threat agents.
 Conduct technical assessments of technologies for implementation of alternative BWC protocols.
 Initiate development of sample preparation methods for alternative sample matrices to include vegetation and biomedical materials.
 Initiate chemical characterization and environmental transformation product study on non-traditional agents.
 Initiate development of MAGIChip and Electronic Taste chip technologies for BW sample screening.
 Develop miniaturized & low powered instruments for follow-on technologies for advanced screening and determinative analysis of chemical and biological samples.
 Validate polymerized enzyme foam wipe/swipe screening system for CW agents.
 Continue research and development to improve understanding of source phenomenology and propagation for nuclear events near detection threshold and enhance detection, location, screening, and identification of underground, oceanic, and atmospheric events through a peer-reviewed program of basic research.
 Assess CFE treaty technical needs based on historical performance of inspections to support CFE Review Conference (REVCON).
 Continue development of the next generation of treaty support information management capabilities under the Arms Control Information and Notification Program, using state-of-the-art technologies and adhering to DoD international standards.
 Continue prototype development of selected non-visual methods of verifying ballistic missiles.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BI - Arms Control Technology (cont'd) -
FY 2003 Plans (\$36,518K)

Continue cooperative development of strategic arms control technologies with the

Russian Federation, and conduct a second-generation demonstration at a DoD Base to evaluate the operational impact of nuclear warhead monitoring.

Continue to test and evaluate mini-neutron spectroscopy using neutron generator.

Develop and demonstrate an acoustic Tamper Indicating Device (TID).

Continue development of a Neutron Activation foil tag.

Continue development of a portable handheld, room temperature radiation detection and integrated radiation measurement system.

Provide technical support (to include quick turn around and longer term analyses) to the U.S. arms control delegations to the NATO, OSCE, the Joint Consultative Group, the Forum for Security Cooperation, and other negotiation and DoD analysis and Policy formulation activities.

Continue Open Skies sensor performance evaluations and provide acquisition RDT&E support for SAR, optical and video cameras, and IRLS.

Continue assessment of the Middle East Aerial/Overhead verification and confidence building for use in multiple arms control treaty verification regimes.

Conduct assessments of technologies to support current and emerging conventional arms control negotiations.

Initiate development of computer based training and simulation to support CWC escort operations at US facilities.

Continue development of OSMAPS life-cycle upgrades and conduct required IV&V.

Investigate sample screening, preparation, and determinative analysis techniques for CWC and BWC-related analyses.

Complete advanced development of standoff non-destructive evaluation systems to include demonstration of 10 meter standoff range.

Complete development of real-time polymerase chain reaction(PCR) primers and probes for identification of BWC Annex A bacteria and viruses.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

Project BI - Arms Control Technology (cont'd) -

FY 2003 Plans (cont'd) -

Validate MAGIChip DNA microarray and Electronic Taste Chip immunological sensor for identification of high priority BW agents and toxins.

Expand Long Path Optical Sensor System (LPOSS) CW sample screening instrumentation and test parameters to compounds other than nerve agents.

Expand non-traditional threat agents fate program to include synthesis of analytes.

Conduct research and engage in advanced sensor RDT&E to meet US next-generation requirements for Weapons of Mass Destruction (WMD) monitoring and nuclear event verification.

Continue research and development to improve understanding of source phenomenology and propagation for nuclear events near detection threshold and enhance detection, location, screening, and identification of underground oceanic, and atmospheric events through a peer-reviewed program of basic research.

Continue development of the next generation of treaty support information management capabilities under the Arms Control Information and Notification Program, using state-of-the-art technologies and adhering to DoD international standards.

Continue IV&V tests of information processing systems.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Advanced Technology Development - BA3	R-1 ITEM NOMENCLATURE Arms Control Technology; 0603711BR	

C. Other Program Funding Summary: N/A

D. Execution (Entities receiving 10% or more of total funding available in the PE/FNC.):

Labs/Centers-N/A
Universities-N/A
FFRDCs-N/A
Contractors-N/A
Other-N/A

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE February 2002	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				
RDT&E, Defense-Wide/RDT&E Management Support - BA6				Critical Technology Support; 0605110BR				
COST (In Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete
Total 0605110BR Cost	4.3	3.3	1.9	1.9	2.0	2.0	2.0	Continuing
Project BB - Small Business Innovative Research (SBIR)		.1	.1	.1	.1	.1	.1	Continuing
Project BL - Militarily Critical Technology Program	4.3	3.2	1.8	1.8	1.9	1.9	1.9	Continuing

A. Mission Description and Budget Item Justification: This program element supports the Military Critical Technology Program (MCTP) which entails several facets--the most important is the Military Critical Technologies List (MCTL). The congressionally-mandated MCTL is the fundamental source document for identification of leading edge and current technologies which must be monitored and assessed worldwide for national security and nonproliferation control of weapons of mass destruction and advanced conventional weapons. The main efforts which encompasses the MCTL are: (1) continuous technical support to interdepartmental and international processes which develop multinational control agreements on technologies of concern to DoD; (2) worldwide technology assessments for the MCTL and other critical technologies efforts; (3) identification and determination of technical parameters for proposals for international control of weapons of mass destruction; (4) technical assessments to support treaty compliance inspections and decisions on foreign ownership of US industrial assets; (5) identification of foreign technologies of interest to the DoD and opportunities for international cooperative research and development; and (6) identification of Homeland Security and terrorism applications of militarily critical technologies.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/RDT&E Management Support - BA6		R-1 ITEM NOMENCLATURE Critical Technology Support; 0605110BR

A. Mission Description and Budget Item Justification (cont'd):

Several of the activities performed by the MCTP include: (1) Developing and publishing in both hard copy and electronic form various lists that describe the military and proliferation significance of various technologies; (2) Monitoring and assessing dual-use and military technologies worldwide; (3) Assisting in the development of proposals for negotiation in various multilateral export control regimes; (4) Providing technical support for the review/revision of the U.S. Munitions List under the Defense Trade Security Initiative; and (5) Providing analytical support for various Congressional reports, primarily the annual cumulative assessment of export licenses to various high-risk countries under Section 1402 of the FY 2000 National Defense Authorization Act. These projects include funding for travel by DoD personnel in support of the management and technical objectives.

Automating the patent secrecy review process conducted by DoD and managed by DTRA with the military departments for the U.S. Patent and Trademark Office (PTO) will be accomplished principally through development and implementation of this Patent Application Review System (PARS).

PTO currently scans patents into an in-house system and prints these patents for review. When a patent may pose a national security risk and merits review by DTRA and possibly military field commands, a hard copy is delivered to these sites for review. If a secrecy order is required, it is documented, labeled, and stored accordingly. To provide an efficient and effective review process of these patents, an automated system needs to be developed.

The Technology Security Assessment System (TSAS) is being designed and developed to provide the analytical tools necessary for policy analysts, case analysts, and technical/intelligence analysts within DTRA to glean trends and relationships from a variety of data resources to assist in policy development and in case review processes. This system is intended to be an analytical complement to the case processing system being developed under USXPORTS.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/RDT&E Management Support - BA6	R-1 ITEM NOMENCLATURE Critical Technology Support; 0605110BR	

B. Program Change Summary:

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2001 President's Budget Request (Feb 2000)	3.9	2.2	2.2
FY 2002 Amended President's Budget Request (June 2001)	4.3	3.3	1.9
FY 2003 President's Budget Request (Feb 2002)	4.3	3.3	1.9

Change Summary Explanation:

Changes between FY 2001 and FY 2002 reflect decreased funding due to the completion of application development of the Patent Application Review System. Changes between FY 2002 and FY 2003 reflect decreased funding due to the completion of the application development of the Technology Security Assessment System.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/RDT&E Management Support - BA6		R-1 ITEM NOMENCLATURE Critical Technology Support; 0605110BR

Project BB - Small Business Innovative Research (SBIR): This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of DoD supported research and development results. These efforts are responsive to PL 106-554.

FY 2002 Plans:

Small Business Innovative Research (SBIR)(\$56K):

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research. Execute Agency-approved SBIRs

FY 2003 Plans:

Small Business Innovative Research (SBIR)(\$41K):

Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research. Execute Agency-approved SBIRs.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/RDT&E Management Support - BA6		R-1 ITEM NOMENCLATURE Critical Technology Support; 0605110BR

Project BL - Militarily Critical Technologies Program: This project provides critical data required to support the ongoing update of the Militarily Critical Technologies List (MCTL); technical support for review/revision for the U.S. Munitions List under the Defense Trade Security Initiative; assessment of dual-use and military technology worldwide to support national security actions; proposals for negotiations in various multinational export control regimes; analytical support for various Congressional reports; and, identification of Homeland Security and terrorism applications of militarily critical technologies.

FY 2001 Accomplishments:

Patent Application Review System (PARS)(\$509K):

Developed and designed an automated system to assist in the management control and assessment of the Department of Defense Patent applications for national security.

Military Critical Technology Program (MCTP)(\$1,887K):

Developed and published in hard copy and electronic form updates to the MCTL.

Monitored and assessed dual use and military technologies worldwide and develop technology assessments.

Assisted in the development of proposals for negotiations in multilateral export control regimes.

Provided technical support for the review/revision of the U.S. Munitions Lists under the Defense Trade Security Initiative #17.

Provided analytical support for various congressional reports, primarily the annual cumulative assessment of export licenses to various high-risk countries under Section 1402 of the FY 2000 National Defense Authorization Act.

Technology Security Assessment System (TSAS) (\$1,862K):

Provided analytical tools necessary to glean trends and relationships from a variety of data resources to assist in policy development and in case review process.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/RDT&E Management Support - BA6	R-1 ITEM NOMENCLATURE Critical Technology Support; 0605110BR	

Project BL - Militarily Critical Technologies Program (cont'd):

FY 2002 Plans:

Military Critical Technology Program (MCTP) (\$1,857K):

Develop and publish in both hard copy and electronic form updates to the MCTL.

Monitor and assess dual use and military technologies worldwide and develop technology assessments.

Assist in the development of proposals for negotiations in multilateral export control regimes.

Provide technical support for the review/revision of the U.S. Munitions Lists under the Defense Trade Security Initiative #17.

Provide analytical support for various Congressional reports, primarily the annual cumulative assessment of export licenses to various high-risk countries under Section 1402 of the FY 2000 National Defense Authorization Act.

Identify Homeland Security and terrorism applications of militarily critical technologies

Technology Security Assessment System (TSAS) (\$1,300K):

Provide analytical tools necessary to glean trends and relationships from a variety of data resources to assist in policy development and in case review process.

FY 2003 Plans:

Military Critical Technology Program (MCTP) (\$1,821K):

Develop and publish in both hard copy and electronic form updates to the MCTL.

Monitor and assess dual use and military technologies worldwide and develop technology assessments.

Assist in the development of proposals for negotiations in multilateral export control regimes.

Provide technical support for the review/revision of the U.S. Munitions Lists under the Defense Trade Security Initiative #17.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/RDT&E Management Support - BA6	R-1 ITEM NOMENCLATURE Critical Technology Support; 0605110BR	

Project BL - Militarily Critical Technologies Program (cont'd):

FY 2003 Plans: (cont'd)

Provide analytical support for various Congressional reports, primarily the annual cumulative assessment of export licenses to various high-risk countries under Section 1402 of the FY 2000 National Defense Authorization Act.

Identify Homeland Security and terrorism applications of militarily critical technologies

C. Other Program Funding Summary: N/A

D. Execution (Entities receiving 10% or more of total funding available in the PE/FNC.):

Labs/centers-N/A

Universities-N/A

FFRDCs-Institute for Defense Analyses(through Washington Headquarters Service)
\$1,000K

Contractors-Enterprise Engineering Inc. \$342K

Other-N/A

Joint Chiefs of Staff
 FY 2003 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 0400D Research, Development, Test & Eval, Defwide

Date: 21 FEB 2002

Line No	Program Element Number	Item	Act	Thousands of Dollars			S E C
				FY 2001	FY 2002	FY 2003	
---	-----	----	---	-----	-----	-----	-
108	0605126J	Joint Theater Air and Missile Defense Organization	6	21,006	26,678	72,919	U
		RDT&E Management Support		21,006	26,678	72,919	
128	0208052J	Joint Analytical Model Improvement Program	7	11,834	10,613	12,531	U
		Operational Systems Development		11,834	10,613	12,531	
139	0303149J	C4I for the Warrior	7	7,368	10,083	10,190	U
		Operational Systems Development		7,368	10,083	10,190	
163	0902298J	Management Headquarters (OJCS)	7	10,470	12,070	12,887	U
164	0902740J	Joint Simulation System	7	41,708			U
		Operational Systems Development		52,178	12,070	12,887	
Total Joint Chiefs of Staff				92,386	59,444	108,527	

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification								Date: February 2002																													
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide, Joint Staff/BA 6					R-1 ITEM NOMENCLATURE 0605126J Joint Air and Missile Defense Organization (JTAMDO)																																
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																												
Total PE Cost	20.958	26.678	72.919	63.210	55.356	55.197	56.048	Continuing	Continuing																												
<p>A. Mission Description and Budget Item Justification: JTAMDO is the single organization within the Department of Defense chartered to plan, coordinate, and oversee Joint Integrated Missile Defense (IMD) requirements, joint operational concepts, and operational architectures. JTAMDO is also responsible for proposing and evaluating concepts, architectures, capabilities, and technologies. Evaluations determine deficiencies in DoD air and missile defense capabilities and their impact on warfighting CINCs in order to define requirements, architectures, and weapon system performance. The JTAMDO functions are: to serve as the operational community's proponent for requirements in air and missile defense; serve as the joint air and missile defense resource proponent within the resource allocation structures of the Services, and Missile Defense Agency (MDA); lead Air Missile Defense (AMD) mission area analysis; conduct evaluations and demonstrations of joint air defense architectures and concepts; monitor the research, development, acquisition, and demonstration activity associated with the Service's AMD programs; recommend to the JROC and Under Secretary of Defense A&T requirements, technologies, architectures, and concepts that should be evaluated, developed, and fielded; and develop and maintain the AMD Master Plan, which will contain requirements, assessments of current and future capabilities, and an acquisition roadmap for development and fielding of required capabilities. Increased funding from FY 2003 through FY 2007 continues operator in-the-loop activities at the Virtual Warfare Center (VWC), which is DoD's only means to quantify Single Integrated Air Picture (SIAP) and Combat Identification (CID) requirements. This program is in budget activity 6- Joint Attack Operations, because it performs general support of RDT&E activities.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3.592</td> <td style="text-align: center;">3.647</td> <td style="text-align: center;">3.798</td> <td>To fund JTAMDO operations, including office lease, equipment, training, facility maintenance, administrative support, technical support, and travel.</td> </tr> <tr> <td style="text-align: center;">1.856</td> <td style="text-align: center;">1.915</td> <td style="text-align: center;">1.722</td> <td>Objective 1 - To develop and validate JTAMD operational concepts through a rigorous process of analysis, simulation, and demonstration. These valid operational concepts will be provided to doctrinal authorities for implementation.</td> </tr> <tr> <td style="text-align: center;">3.591</td> <td style="text-align: center;">3.615</td> <td style="text-align: center;">3.683</td> <td>Objective 2 -To support the development and approval of TAMD operational requirements. Support analytical foundation and approval of TAMD interoperability requirements by providing analysis and verification of Key Performance Parameters (KPPs) and threshold requirements for JROC approval.</td> </tr> <tr> <td style="text-align: center;">2.775</td> <td style="text-align: center;">2.494</td> <td style="text-align: center;">2.542</td> <td>Objective 3 - Lead the development and approval of JTAMD Operational Architecture through modeling, demonstration, analysis, and assessment of TAMD capabilities and requirements.</td> </tr> <tr> <td style="text-align: center;">2.851</td> <td style="text-align: center;">3.400</td> <td style="text-align: center;">3.685</td> <td>Objective 4 - Operate and administer the JTAMD process to support mission. Provides for the development of, analysis, and demonstration support of concept and requirements development.</td> </tr> <tr> <td style="text-align: center;">1.063</td> <td style="text-align: center;">1.076</td> <td style="text-align: center;">1.101</td> <td>Objective 5 - Support the development of Joint TAMD capabilities and initiatives through analysis and</td> </tr> </tbody> </table>										<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>	3.592	3.647	3.798	To fund JTAMDO operations, including office lease, equipment, training, facility maintenance, administrative support, technical support, and travel.	1.856	1.915	1.722	Objective 1 - To develop and validate JTAMD operational concepts through a rigorous process of analysis, simulation, and demonstration. These valid operational concepts will be provided to doctrinal authorities for implementation.	3.591	3.615	3.683	Objective 2 -To support the development and approval of TAMD operational requirements. Support analytical foundation and approval of TAMD interoperability requirements by providing analysis and verification of Key Performance Parameters (KPPs) and threshold requirements for JROC approval.	2.775	2.494	2.542	Objective 3 - Lead the development and approval of JTAMD Operational Architecture through modeling, demonstration, analysis, and assessment of TAMD capabilities and requirements.	2.851	3.400	3.685	Objective 4 - Operate and administer the JTAMD process to support mission. Provides for the development of, analysis, and demonstration support of concept and requirements development.	1.063	1.076	1.101	Objective 5 - Support the development of Joint TAMD capabilities and initiatives through analysis and
<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>																																		
3.592	3.647	3.798	To fund JTAMDO operations, including office lease, equipment, training, facility maintenance, administrative support, technical support, and travel.																																		
1.856	1.915	1.722	Objective 1 - To develop and validate JTAMD operational concepts through a rigorous process of analysis, simulation, and demonstration. These valid operational concepts will be provided to doctrinal authorities for implementation.																																		
3.591	3.615	3.683	Objective 2 -To support the development and approval of TAMD operational requirements. Support analytical foundation and approval of TAMD interoperability requirements by providing analysis and verification of Key Performance Parameters (KPPs) and threshold requirements for JROC approval.																																		
2.775	2.494	2.542	Objective 3 - Lead the development and approval of JTAMD Operational Architecture through modeling, demonstration, analysis, and assessment of TAMD capabilities and requirements.																																		
2.851	3.400	3.685	Objective 4 - Operate and administer the JTAMD process to support mission. Provides for the development of, analysis, and demonstration support of concept and requirements development.																																		
1.063	1.076	1.101	Objective 5 - Support the development of Joint TAMD capabilities and initiatives through analysis and																																		

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification			Date: February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE		
RDT&E, Defense-Wide, Joint Staff/BA 6	0605126J Joint Air and Missile Defense Organization (JTAMDO)		
.275	.531	.488	assessment of current and emerging TAMD capabilities to provide a capabilities roadmap for the future.
5.000	10.000	10.000	Other - Activities that are broad and transcend all JTAMD activities.
(.045)			Joint Distributed Engineering Plant to improve testing and evaluation rigor resulting in better interoperability.
0	0	5.000	FY 01 congressional non-programmatic rescission
0	0	17.800	Missile Defense (MD)-Develop missile defense (MD) requirements documents, conduct MD studies, represent the Joint Staff in MD-related requirements development in coordination with the MD Agency (MDA).
0	0	23.100	Virtual Warfare Center (VWC)-Enhances the VWC capability by adding representations of several new platforms.
20.958	26.678	72.919	Combat Identification (CID)-Conduct CID force level analysis. Create CID effect engine for analysis of CID CRD requirements.
			Total
B. Program Change Summary:			
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2003 Budget Estimate	21.006	26.865	27.154
FY 2003 Appropriated Value			
Adjustments to Appropriated Value:			
a. Reallocation of non programmatic reductions	(.048)		
b. Congressional Reduction – Management Efficiencies		(.187)	
b. Congressional non programmatic adj/inflation			(.135)
c. SECDEF add MD, VWC and CID			45.900
FY 2003 President’s Budget	20.958	26.678	72.919
Reason for Change: \$5M programmatic increase in FY01 and FY02 to fund Joint Distributed Engineering Plant (JDEP). Reductions reflect program’s share of congressional non-programmatic rescission. FY02-FY03 increase is due to SecDef add for MD, VWC and CID.			
C. Other Program Funding Summary: Not Applicable			
D. Acquisition Strategy: Not required for Budget Activities 1, 2, 3, and 6.			
E. Schedule Profile: Not required for Budget Activities 1, 2, 3, and 6.			

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification								Date: February 2002																													
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE																																
RDT&E, Defense Wide, Joint Staff/BA 7					PE: 0208052J Joint Analytic Model Improvement Program (JAMIP)																																
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																												
Total PE Cost	11.807	10.613	12.531	7.377	5.689	5.803	5.919	TBD	TBD																												
Joint Warfare System (JWARS)	11.807	10.613	12.531	7.377	5.689	5.803	5.919	TBD	TBD																												
<p>A. Mission Description and Budget Item Justification: In May 1995, Deputy Secretary of Defense approved JAMIP to improve analytic support to senior DOD officials. The Joint Staff's J-8 shares the lead with OSD/PA&E. The centerpiece of JAMIP is the development of the Joint Warfare System (JWARS), which will be a state-of-the-art, closed-form, constructive simulation of multi-sided, joint warfare for analysis. The Joint Staff and the Services have agreed upon JWARS as the common model to be used throughout the DOD analytic modeling community. JWARS is an advanced, theater-level campaign analysis tool that will provide improved Command, Control, Communications, Computers, and Intelligence (C4I) Surveillance and Reconnaissance (C4ISR) and balanced joint warfare representations and will be used for evaluation of courses of action, analysis of force sufficiency, force and capability tradeoffs, objective force planning and force structure design, analysis of system alternatives, system tradeoffs, and examination of operational concepts. Users of JWARS will include the combatant commanders, Joint Staff, Services, OSD, and other DOD organizations. Over FYs 2001 and 2002, O&M funding for JWARS has been realigned to RDT&E funding as a result of information technology budgeting policy clarification and to comply with House Appropriations Committee guidance (Report 106-244). RDT&E funds are used for system development, research and design, and for test and evaluation, and are needed to continue development of the top-priority joint warfare model as directed by the Deputy Secretary of Defense and endorsed by the Vice Chairman Joint Chief of Staff. This program is in Budget Activity 7 - Operational Systems Development, because it supports currently employed systems and training activities.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>FY 2001</u></th> <th style="text-align: left;"><u>FY 2002</u></th> <th style="text-align: left;"><u>FY2003</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: right;">\$ 8.817</td> <td style="text-align: right;">\$8.143</td> <td style="text-align: right;">\$ 9.156</td> <td>Software Development</td> </tr> <tr> <td style="text-align: right;">\$ 2.217</td> <td style="text-align: right;">\$1.674</td> <td style="text-align: right;">\$ 2.483</td> <td>Other Support</td> </tr> <tr> <td style="text-align: right;">\$ 0.823</td> <td style="text-align: right;">\$0.897</td> <td style="text-align: right;">\$ 0.892</td> <td>Research/T&E</td> </tr> <tr> <td style="text-align: right;">(.023)</td> <td></td> <td></td> <td>FY 01 Congressional Non-programmatic Rescission</td> </tr> <tr> <td></td> <td style="text-align: right;">(.101)</td> <td></td> <td>FY02 Congressional Reduction - FFRDC</td> </tr> <tr> <td style="text-align: right;">11.807</td> <td style="text-align: right;">10.613</td> <td style="text-align: right;">12.531</td> <td>Total</td> </tr> </tbody> </table>										<u>FY 2001</u>	<u>FY 2002</u>	<u>FY2003</u>	<u>Description</u>	\$ 8.817	\$8.143	\$ 9.156	Software Development	\$ 2.217	\$1.674	\$ 2.483	Other Support	\$ 0.823	\$0.897	\$ 0.892	Research/T&E	(.023)			FY 01 Congressional Non-programmatic Rescission		(.101)		FY02 Congressional Reduction - FFRDC	11.807	10.613	12.531	Total
<u>FY 2001</u>	<u>FY 2002</u>	<u>FY2003</u>	<u>Description</u>																																		
\$ 8.817	\$8.143	\$ 9.156	Software Development																																		
\$ 2.217	\$1.674	\$ 2.483	Other Support																																		
\$ 0.823	\$0.897	\$ 0.892	Research/T&E																																		
(.023)			FY 01 Congressional Non-programmatic Rescission																																		
	(.101)		FY02 Congressional Reduction - FFRDC																																		
11.807	10.613	12.531	Total																																		

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification		Date: February 2002	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE		
RDT&E, Defense Wide, Joint Staff/BA 7	PE: 0208052J Joint Analytic Model Improvement Program (JAMIP)		
B. Program Change Summary:			
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
FY 2003 Budget Estimate	11.834	12.163	8.182
FY 2003 Appropriated Value			
Adjustments to Appropriated Value:			
a. Congressional non programmatic adj/inflation			(.023)
b. Congressional reduction – Management Efficiencies		(.230)	
b. Realignment to O&M		(1.320)	
c. Increase			4.372
FY 2003 President’s Budget	11.807	10.613	12.531
<p>Reductions reflect program’s share of congressional non-programmatic non-purchase inflation. Additions reflect realignment to comply with House Appropriations Committee guidance (Report 106-244) and to maintain JWARS levels of effort. The increase in FY03 is to accelerate the fielding of JWARS and for Scenario Development. The Limited IOC version of JWARS is designed to support the Services, Joint Staff, and OSD in conducting Force Assessment Studies. The IOC version of JWARS is designed to support the CINCs in crisis action and deliberate planning.</p>			
C. Other Program Funding Summary:			
<p>The O&M and Procurement funds listed below in FY2002 and FY2003 are for Joint Data Support (JDS), an organization within OSD(PA&E) whose mission is to provide data support for JWARS development and for Department-level studies and analyses. This includes those studies using other models within the JAMIP Suite.</p>			
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY2003</u>
O&M Defense-Wide	5.131	4.832	5.541
Procurement Defense-Wide	0.614	0.399	0.407
D. Acquisition Strategy: This program supports development of the JWARS model. The R&D effort will terminate as the model is fielded.			
E. Schedule Profile:			
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
<u>Event</u>	(Fiscal Qtr): 1 2 3 4	1 2 3 4	1 2 3 4
Release 1.3	X		
Release 1.4 Beta testing		X	
Release 1.5 Operational Test		X	
Release 1.6			X

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification								Date: February 2002	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE				
RDT&E, Defense-Wide, Joint Staff/BA 7					0303149J C4I for the Warrior				
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE Cost	7.351	10.083	10.190	10.503	10.218	10.405	10.428	TBD	TBD
Network Warfare Simulation (NETWARS)	5.213	5.757	6.271	6.438	6.661	6.794	6.930	TBD	TBD
Joint Warrior Interoperability Demonstrations (JWID)	.201	1.530	1.532	1.553	1.580	1.580	1.595	TBD	TBD
Joint Satellite Communications Architecture Planning and Evaluation (J-SCAPE) Toolset	1.937	2.796	2.387	2.512	1.977	2.031	1.903	TBD	TBD

A. Mission Description and Budget Item Justification

The C4IFTW vision has evolved into the Department's Global Information Grid (GIG) as a means to achieve information superiority. This program provides focus and visibility into resolving joint C4 capacity and interoperability issues and provides a mechanism for achieving information superiority as envisioned by JV 2020. Currently, the overall GIG efforts stress interoperability, identification of transmission capacity, and leveraging of the rapid pace of C4 technology advancements. As the GIG evolves and matures, it will spawn new approaches to providing the joint warfighter with C4 capabilities to achieve information superiority. This program element consists of three Joint Staff programs: 1) Network Warfare Simulation (NETWARS), 2) Joint Warrior Interoperability Demonstrations (JWID), and 3) the Joint Satellite Communications Architecture Planning and Evaluation (J-SCAPE) tool. NETWARS will assess the effects of full operational combat traffic loading on current and future communications systems and networks in a joint task force major theater of war scenario, conduct quick-turn communications planning for small regional conflicts or peacekeeping scenarios, and evaluate new communication systems and technologies. The second program is JWID. JWID is the only CJCS-sponsored demonstration of new and emerging, low-cost, low-risk C4ISR technologies and interoperability solutions, impartially presented to the CINCs and Military Services in an operational environment. Proposals are selected to fulfill identified warfighter deficiencies and are designed to provide the opportunity to experiment with new and emerging capabilities, assess their value, and recommend them for implementation where appropriate. JWID provides a structured process where new C4ISR capabilities are rigorously vetted, evaluated, and assessed by the warfighter. JWID is an integral component of the JV 2020 conceptual template for future joint warfighting. The current focus of the Satellite Communications (SATCOM) operations analysis and integration effort is the development of the Joint Satellite Communications Architecture Planning and Evaluation (J-SCAPE) Tool Set. J-SCAPE is required to provide decision-makers with the means to focus the ongoing modernization of SATCOM assets to transform current systems and choose the best architectural alternative for the 21st century SATCOM infrastructure. The J-SCAPE tool set is also required to support planning and evaluation necessary to maximize all four of the operational concepts of JV 2020-dominant maneuver, precision engagement, focused logistics, and full dimensional protection. Currently, there is no effective,

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification		Date: February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide, Joint Staff/BA 7	0303149J	C4I for the Warrior
<p>concepts of JV 2020-dominant maneuver, precision engagement, focused logistics, and full dimensional protection. Currently, there is no effective, efficient, capability to plan and evaluate the ability of current and future SATCOM architectures to meet the CINCs' requirements. When fully operational, the J-SCAPE tool set will be used by the Joint Staff, CINCs, their components, other joint organizations, satellite systems program offices, and earth terminal program offices. The Services will use this tool set to assess the adequacy of SATCOM systems to support their assigned missions, evaluate operational plans, define SATCOM-related operational requirements, and provide operational input to the acquisition process.</p>		
B. Program Change Summary: No Change		
	<u>FY 2001</u>	<u>FY 2002</u>
FY 2003 Budget Estimate	7.368	9.622
FY 2003 Appropriated Value		10.209
Adjustments to Appropriated Value:		
a. Congressional non programmatic adj/inflation		(.019)
b. Increase		.461
FY 2003 President's Budget	7.351	10.083
<p>Increase in FY02 is due to JWID. Funding has been revised to reflect CJCS direction to ensure critical milestones are met and Golden Nuggets are expeditiously acquired and fielded during the "exploitation year."</p>		
C. Other Program Funding Summary: Exhibit 2a attached.		
D. Acquisition Strategy: Exhibit 2a attached.		
E. Schedule Profile: Exhibit 2a attached.		

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification								Date: February 2002	
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide, Joint Staff/BA 7					R-1 ITEM NOMENCLATURE: 0902298J Management Headquarters – Various				
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE Cost	10.467	12.070	12.887	12.765	11.625	11.881	12.142		
Analysis Support	9.385	10.567	10.683	10.810	9.754	9.950	10.149	TBD	TBD
Joint Staff Information Network (JSIN)	1.082	1.503	1.554	1.605	1.671	1.731	1.793	TBD	TBD
Core Knowledge Management Program (CKMP)	0	0	.350	.350	.200	.200	.200	TBD	TBD
Joint Operational Concept/ Joint Operational Architect (JOC/JOA)	0	0	.300	0	0	0	0	TBD	TBD
<p>A. Mission Description and Budget Item Justification:</p> <p style="margin-left: 40px;">This program element contains three distinct projects: Analysis Support, Joint Staff Information Network (JSIN), Core Knowledge Management Program (CKMP), and Joint Operational Concept/ Joint Operational Architect (JOC/JOA).</p> <p style="margin-left: 40px;">Joint Warfighting Capabilities Assessments (JWCA) are studies conducted by joint assessment teams in the following domains: precision engagement; dominant maneuver; full dimensional protection; focused logistics; information superiority; intelligence, surveillance, and reconnaissance; communications and computer environment; and strategic deterrence. A Joint Staff directorate sponsors each JWCA team, and the teams are composed of warfighting and functional experts from the Joint Staff, combatant commands, Services, Office of the Secretary of Defense, federally funded research and development centers, and others as necessary. JWCA assessments examine key relationships between warfighting capabilities and seek to identify opportunities for improving warfighting effectiveness. Program growth between FY01 and FY02 was required to meet increasing demand for assessments due to CJCS-directed evolution of the Joint Requirements Oversight Council (JROC). This evolution was required to meet congressional expectations of improving joint integration of force capability development efforts, and refocusing the JWCA efforts was a key enabler of this change. The increased funding enabled the JROC to continue to study CINC priority joint warfighting issues as well as initiate efforts to develop operational concepts and operational architectures to establish a framework for DOD transformation. This program is in Budget Activity 7-Operational Systems Development, because it supports currently employed systems and training activities.</p> <p style="margin-left: 40px;">Joint Staff Information Network (JSIN) is the Joint Staff’s primary “weapon system.” It consists of a classified and an unclassified local area network. The classified system operates at the TOP SECRET level and has access to DOD-wide SECRET networks controlled via a comprehensive system of security checks and guards. The unclassified system provides access to the Internet and hosts our connection to the Defense Message System (DMS) currently being implemented as a replacement for the legacy AUTODIN system. Both systems run the standard Microsoft Office suite of programs. Most</p>									

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification		Date: February 2002
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide, Joint Staff/BA 7	R-1 ITEM NOMENCLATURE: 0902298J Management Headquarters – Various	
<p>day-to-day staff work on the staff is conducted on the classified network using a highly customized software program called the Joint Staff Action Processing (JSAP) system. This application was developed by one of our information technology (IT) support contractors (Dyncorp) and codifies our processes for creating, routing, reviewing, approving, and archiving staff packages in electronic form. JSAP has numerous commercial counterparts and is being marketed by Dyncorp to other CINCs and Services. Current direction states any commercially procured software requiring modification must be acquired with RDT&E funds. The OCIO envisions enhancing JSAP to keep the system current with IT initiatives including PKI, collaborative tools, and web-based enhancements.</p> <p>The Joint Staff's core processes and products are knowledge-based. The Core Knowledge Management Program (CKMP) is relevant across the spectrum of the Joint Staff's mission. The Joint Staff's CKMP must be sufficiently robust to enable execution of the Joint Staff's many processes, and sufficiently flexible to retain utility as reengineering improves our processes. The CKMP will enable the staff to collect, analyze, process, and transform information in order to improve staff support to the Chairman of the Joint Chiefs of Staff; to formulate new joint concepts, doctrine, organizational designs and materiel requirements; and to manage the Joint Staff's business processes. It will focus on the automation of a major portion of the Joint Staff's work and increase the availability of information created and used by the staff. The information and knowledge contained in the CKMP must be available in the right format at the right time and place to a wide variety of users across the Joint Community and Department of Defense.</p> <p>The goal of Joint Operational Concept/Joint Operational Architect is to develop an overarching architecture that promotes joint integration for systems lacking interoperability and systems with unclear concepts of employment in a joint environment. The funding will be used to develop a single, unified Joint Operational Concept; construct a Joint Operational Architecture; develop systems architectures and technical architectures; validate concepts and architectures through joint experimentation; and identify architectural shortfalls.</p>		
B. Program Change Summary:		
	<u>FY 2001</u>	<u>FY 2002</u>
FY 2003 Budget Estimate	10.490	11.312
FY 2003 Appropriated Value		12.610
Adjustments to Appropriated Value:		
a. Congressional non-purchase pay inflation		(.023)
b. Realignment from O&M to RDT&E		.758
c. Program Increase (JOC/JOA)		.300
FY 2003 President's Budget	10.467	12.070
		12.887
<p>FY01-02 program increase reflects JSIN realignment of funding as a result of IT budgeting policy clarification and to comply with House Appropriations Committee guidance (Report 106-244). FY02 – 03 CKMP program increase reflects realignment of funding as a result of IT budgeting policy clarification and to comply with House Appropriations Committee guidance (Report 106-244). FY02–03 JSIN program increase reflects realignment of funding from O&M as a result of the Joint Staff decision to retain the Joint Staff Action Processing (JSAP) application. When funding was originally</p>		

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification		Date: February 2002															
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide, Joint Staff/BA 7	R-1 ITEM NOMENCLATURE: 0902298J Management Headquarters – Various																
<p>realigned for JSIN, it was with the intention of replacing JSAP with a modified COTS and upgrading every 4 years. Under the decision to retain JSAP, the current application will be developed and enhanced to provide promising future capabilities like collaboration, knowledge management, and information portals. These realignments do not represent program growth.</p>																	
<p>C. Other Program Funding Summary: JSIN and JWCA information is included in individual project justification.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> </tr> </thead> <tbody> <tr> <td style="padding-left: 40px;">CKMP</td> <td style="padding-left: 40px;">O&M Defense-Wide</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">1.000</td> <td style="text-align: center;">0.550</td> </tr> <tr> <td></td> <td style="padding-left: 40px;">Procure Defense-Wide</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">0.100</td> </tr> </tbody> </table>					<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	CKMP	O&M Defense-Wide	0.000	1.000	0.550		Procure Defense-Wide	0.000	0.000	0.100
		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>													
CKMP	O&M Defense-Wide	0.000	1.000	0.550													
	Procure Defense-Wide	0.000	0.000	0.100													
<p>D. Acquisition Strategy: CKMP information included below, JSIN and analysis support information included in individual project justification. Acquisition Strategy: JS/CIO will evaluate candidates in conjunction with the staff and our support contractor. Identified enhancements will be integrated into JSIN via contract task orders issued to our support contractor. We envision periodic software upgrades driven by contractor upgrades, version releases, and emergency-fix releases to the various COTS applications integrated within JSAP.</p>																	
<p>E. Schedule Profile: CKMP information included below, JSIN and Analysis Support information included in individual project justification. Schedule Profile: CKMP RDT&E funding line is new to this program element starting in FY 03. RDT&E will be spent during various quarters of each fiscal year.</p>																	

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification								Date: February 2002													
RDT&E, Defense-Wide, Joint Staff/BA-7					R-1 ITEM NOMENCLATURE : Joint Simulation System (JSIMS)																
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost												
Total PE Cost	41.614	0	0	0	0	0	0	N/A	N/A												
Quantity of RDT&E Articles	1																				
<p>A. Mission Description and Budget Item Justification; JSIMS is the next generation Modeling and Simulation (M&S) tool to support training for CINCs, their components, JTF staffs, other joint organizations, DOD agencies, and the Services. JSIMS will provide the ability to jointly train, educate, develop doctrine and tactics, formulate and assess operational plans, assess warfighting situations, define operational requirements, provide operational input into the development of new weapon systems, and perform mission planning and mission rehearsal. JSIMS will support all phases of military operations and Military Operations Other Than War (MOOTW). JSIMS will allow warfighters to train as they intend to fight by interfacing into the simulation through their real-world C4I systems. JSIMS is key in supporting the operational concepts of joint experimentation and will improve the interoperability and efficiencies of the Services. JSIMS is specifically supported by the 2000 Secretary of Defense Annual Report to the President and Congress (page 36). This program is in Budget Activity 7–Operational Systems Development, because it supports currently employed systems and training activities. JSIMS transferred to the Department of the Army in FY 2002.</p> <p><u>FY 2001</u></p> <ul style="list-style-type: none"> \$ 1.415 Civilian Pay Compensation and Benefits \$.460 Travel \$.350 Office Space Lease \$.270 Contract Studies \$ 3.491 CAAS Studies/Engineering Technical Support \$27.494 Purchased Software \$ 5.605 Application Software Maintenance & Development \$ 2.621 Other Program Costs <u>\$(0.092)</u> FY01 Congressional non-programmatic Recission \$41.614 Total <p>B. Program Change Summary:</p> <table style="width: 100%; border: none;"> <tr> <td></td> <td style="text-align: center;"><u>FY 2001</u></td> <td style="text-align: center;"><u>FY 2002</u></td> <td style="text-align: center;"><u>FY 2003</u></td> </tr> <tr> <td>FY 2003 Budget Estimate</td> <td style="text-align: center;">41.708</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">0.000</td> </tr> <tr> <td>FY 2003 President's Budget</td> <td style="text-align: center;">41.614</td> <td></td> <td></td> </tr> </table> <p>JSIMS transferred to the Department of the Army in FY 02.</p> <p>C. Other Program Funding Summary : N/A</p> <p>D. Acquisition strategy: Deliver JSIMS as defined in the Operational Requirements Document (ORD). This development effort is in conjunction with the program</p>											<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	FY 2003 Budget Estimate	41.708	0.000	0.000	FY 2003 President's Budget	41.614		
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>																		
FY 2003 Budget Estimate	41.708	0.000	0.000																		
FY 2003 President's Budget	41.614																				

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2, RDT&E Budget Item Justification

Exhibit R-2, RDT&E Budget Item Justification												Date: February 2002			
RDT&E, Defense-Wide, Joint Staff/BA-7								R-1 ITEM NOMENCLATURE : Joint Simulation System (JSIMS)							
D. Acquisition strategy: Deliver JSIMS as defined in the Operational Requirements Document (ORD). This development effort is in conjunction with the program acquisition strategy currently being revised and planned for completion by October 2000 and in accordance with a revised Acquisition Program Baseline (APB) due for completion in March 2001.															
E. Schedule Profile.															
		<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>					
(Fiscal Qtr)		1	2	3	4	1	2	3	4	1	2	3	4		
Federation Integration Event 4			X												
Federation Integration Event 1			X												
Federation Integration Event 2				X											
Federation Integration Event 3					X										

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification								Date: February 2002																																																																					
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER																																																																								
RDT&E, Defense-Wide, Joint Staff/BA 7		0303149J			C4I for the Warrior – NETWARS																																																																								
Cost (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																																																																				
NETWARS	5.213	5.757	6.271	6.438	6.661	6.794	6.930	TBD	TBD																																																																				
RDT&E Articles Qty	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																				
<p>A. Mission Description and Budget Item Justification:</p> <p>The C4I for the Warrior (C4IFTW) vision has evolved into the Department's Global Information Grid (GIG) as a means to achieve information superiority. NETWARS will assess the effects of full operational combat traffic loading on current and future communications systems and networks in a joint task force major theater of war scenario, conduct quick-turn communications planning for small regional conflicts or peacekeeping scenarios, and evaluate new communication systems and technologies. It will be evolved through prototyping, development, and rigorous verification and validation of a toolkit, and its required input information. The objective is to use the simulation to investigate high-priority C4ISR technologies in the context of realistic warfighter scenarios. NETWARS will start with small joint Service scenarios, evolve to include complete joint task force (JTF) scenarios, and, ultimately, to a major theater of war (MTW) with the thousands of communications nodes in a JTF each individually represented in detail. Ultimately, the CINCs will have a tool to assist them in conducting network management scenarios to optimize and ensure full and efficient C4 systems.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.100</td> <td style="text-align: center;">1.470</td> <td style="text-align: center;">1.600</td> <td>Tool Kit Functionality</td> </tr> <tr> <td style="text-align: center;">.700</td> <td style="text-align: center;">.700</td> <td style="text-align: center;">1.200</td> <td>Comm Model Development</td> </tr> <tr> <td style="text-align: center;">.500</td> <td style="text-align: center;">.700</td> <td style="text-align: center;">.700</td> <td>IER Refinement</td> </tr> <tr> <td style="text-align: center;">1.729</td> <td style="text-align: center;">1.787</td> <td style="text-align: center;">1.400</td> <td>Comm Burden Assessment Studies</td> </tr> <tr> <td style="text-align: center;">.200</td> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td>Contract Engineer and Technical Support</td> </tr> <tr> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td>Software Development</td> </tr> <tr> <td style="text-align: center;">.200</td> <td style="text-align: center;">.200</td> <td style="text-align: center;">.500</td> <td>Verification and Validation</td> </tr> <tr> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td>Developmental Studies and Data Expansion</td> </tr> <tr> <td style="text-align: center;">.200</td> <td style="text-align: center;">.200</td> <td style="text-align: center;">.200</td> <td>Program Management</td> </tr> <tr> <td style="text-align: center;">.100</td> <td style="text-align: center;">.100</td> <td style="text-align: center;">.171</td> <td>Configuration Management</td> </tr> <tr> <td style="text-align: center;">.500</td> <td style="text-align: center;">.500</td> <td style="text-align: center;">.400</td> <td>Contractor Engineer Support (FFRDC)</td> </tr> <tr> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td>Standardization</td> </tr> <tr> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td>COTS hardware and software</td> </tr> <tr> <td style="text-align: center;">.000</td> <td style="text-align: center;">.100</td> <td style="text-align: center;">.100</td> <td>Maintenance</td> </tr> <tr> <td style="text-align: center;">(.016)</td> <td></td> <td></td> <td>FY 01 congressional non programmatic rescission</td> </tr> <tr> <td style="text-align: center;">5.230</td> <td style="text-align: center;">5.757</td> <td style="text-align: center;">6.271</td> <td>Total</td> </tr> </tbody> </table> <p>B. Other Program Funding Summary: N/A</p> <p>C. Acquisition Strategy:</p>										<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>	1.100	1.470	1.600	Tool Kit Functionality	.700	.700	1.200	Comm Model Development	.500	.700	.700	IER Refinement	1.729	1.787	1.400	Comm Burden Assessment Studies	.200	.000	.000	Contract Engineer and Technical Support	.000	.000	.000	Software Development	.200	.200	.500	Verification and Validation	.000	.000	.000	Developmental Studies and Data Expansion	.200	.200	.200	Program Management	.100	.100	.171	Configuration Management	.500	.500	.400	Contractor Engineer Support (FFRDC)	.000	.000	.000	Standardization	.000	.000	.000	COTS hardware and software	.000	.100	.100	Maintenance	(.016)			FY 01 congressional non programmatic rescission	5.230	5.757	6.271	Total
<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>																																																																										
1.100	1.470	1.600	Tool Kit Functionality																																																																										
.700	.700	1.200	Comm Model Development																																																																										
.500	.700	.700	IER Refinement																																																																										
1.729	1.787	1.400	Comm Burden Assessment Studies																																																																										
.200	.000	.000	Contract Engineer and Technical Support																																																																										
.000	.000	.000	Software Development																																																																										
.200	.200	.500	Verification and Validation																																																																										
.000	.000	.000	Developmental Studies and Data Expansion																																																																										
.200	.200	.200	Program Management																																																																										
.100	.100	.171	Configuration Management																																																																										
.500	.500	.400	Contractor Engineer Support (FFRDC)																																																																										
.000	.000	.000	Standardization																																																																										
.000	.000	.000	COTS hardware and software																																																																										
.000	.100	.100	Maintenance																																																																										
(.016)			FY 01 congressional non programmatic rescission																																																																										
5.230	5.757	6.271	Total																																																																										

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification		Date: February 2002
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NAME AND NUMBER
RDT&E, Defense-Wide, Joint Staff/BA 7	0303149J	C4I for the Warrior – NETWARS
<p>C. Acquisition Strategy:</p> <p><i>FY 1997:</i> A Mission Needs Statement was developed and signed. Subsequent to initiating model development, an extensive Program Development Plan was developed and approved by the Director, Command, Control, Communications, and Computer (C4) Systems Directorate (J-6). A proof-of-concept effort validated the concept and determined that NETWARS would support the requirements. <i>FY 1998:</i> A Configuration Management Plan, Software Development and Integration Plan, and Systems Architecture Design Plan were developed. Initiated software and communications modules development and integration. NETWARS Toolkit Version 1.1 functional requirements were derived, documented, and formalized. JWARS initial requirements for C4 were evaluated relative to expected analytical outputs from NETWARS. <i>FY 1999:</i> Based on further refinement and analysis of requirements, initiated a transition to lower-risk developmental software and toward building the NETWARS Toolkit Advanced Development, Interim Version. Concurrent communications studies of accepted Joint Task Force (JTF) scenarios will help to refine requirements, the development of data, and the development of models that represent the C4 processors, systems, and networks used in a JTF that will become part of the NETWARS data and model repository. Continued development of NETWARS standards. <i>FY 2000:</i> Interim Version 2.0 provided to CINCs/Services/agency (C/S/A) users, including a training course, in November 1999. Continued development of NETWARS Toolkit Advanced Development, Version 2.0, associated documentation and completion of a Southwest Asia JTF-based communication burden assessment. <i>FY2001:</i> Further expansion of toolkit functionality (Versions 2.2 and 2.5) involved development of needed specific communication system models and information exchange requirements data; a series of developmental studies for Southwest Asia JTF scenarios (of up to 20,000 communication nodes); and gathering requirements from model users. Codified program requirements for subsequent toolkit conversion were captured subsequent to extensive use of NETWARS by the CINCs, Services, and agencies. Continued development of input data in conjunction with communications studies conducted in parallel with model development. <i>FY2002:</i> Emphasis will be on further expansion of toolkit functionality in response to requirements identified by CINCs, Services and agencies; several studies to include a Northeast Asia scenario, the Army's Future Combat System (FCS) and the initial phase of a multi-year logistics communications modeling and simulation effort by DUSD-L; release of several contingency planning tools for use by the CINCs; and the award of a competitively bid contract. Additionally, with the recent award of the Joint Network Management System contract (JNMS), it is logical that the NETWARS program will serve as one of the Government Off The Shelf (GOTS) software options incorporated by JNMS. As such, the potential exists for some associated integration costs as the JNMS technical design matures.</p> <p>D. Schedule Profile and Performance Measures:</p> <p>The first-Phase review was 23 September 1997, when the Phase I proof-of-concept results were presented to the J-6 and Service/agency representatives. The mid-Phase II In-Progress Review (IPR) to the J-6 and the Service/agency representatives was held on 19 December 1997. Block I formally began in March 1997 and involved researching and writing a detailed NETWARS development plan, followed by conducting a proof-of-concept prototype demonstration of a small JTF scenario of 100 to 200 communications nodes. Block II began in mid-September 1997, and was completed in October 1998. In Block II, J6I continued the design and building to complete version 1.1 of the front-end toolset database and completed a study of a small JTF of up to 5000 nodes and a JTF scenario of up to 10,000 nodes. The scenario selected was the Synthetic Theater of War (STOW)/UNITED ENDEAVOR 98-1 scenario, which involved a JTF defense of Kuwait. Block III, Version 2.0, which began in April 1999, involved advanced development, testing, and building of the interim version Version 2.0 front-end toolkit and database for NETWARS, plus completing a Joint Task Force scenario of up to 5000 communications nodes. Reviews of</p>		

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification		Date: February 2002
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NAME AND NUMBER
RDT&E, Defense-Wide, Joint Staff/BA 7	0303149J	C4I for the Warrior – NETWARS
<p>Version 2.0 were held in March 2000, with additional upgrading scheduled for August - November 2000. A refined 5000-node communication burden assessment was completed in December 2000. Joint, CINC, Service, and agency representatives will review that assessment for accuracy and completeness. By integrating input from these users, NETWARS will enhance the abilities of the CINCs, Services, and agencies to meet the goals stated in JV 2010, JV 2020, and the GIG CRD. FY 2001 Accomplishments: Major milestones reached include three software releases (Versions 2.1, 2.2 and 2.5); execution of the software design MOA between J-6 and DISA, publication of coordinating TEMP and ORD drafts, initiation of a Southwest Asia JTF burden analysis study with CENTCOM, and implementation of a spiral acquisition process, to include an evolutionary phased implementation plan (EPIP) and establishment of four integrated process teams (requirements, studies, configuration management and standards).</p>		
(Fiscal Qtr)	<u>FY 2000</u>	<u>FY 2001</u>
	1 2 3 4	1 2 3 4
Contract Award -- Aug 00 to OPNET Technologies		
IOC		X
FOC (FY 2009/4 th Qtr)		

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification								Date: February 2002																															
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER																																		
RDT&E, Defense Wide, Joint Staff/BA 7		0303149J			C4I for the Warrior - Joint Warrior Interoperability Demonstration (JWID)																																		
Cost (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																														
JWID	.201	1.530	1.532	1.553	1.580	1.580	1.595	TBD	TBD																														
RDT&E Articles Qty	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																														
<p>A. Mission Description and Budget Item Justification:</p> <p>The C4IFTW vision has evolved into the Department's GIG as a means to achieve information superiority. JWID provides focus and visibility into resolving C4 interoperability issues and provides organizing principles, techniques, and procedures for achieving information superiority as envisioned by JV 2020. The GIG stresses interoperability and JWID leverages the rapid pace of C4I technology advancements. Joint Warrior Interoperability Demonstration (JWID) is the only CJCS-sponsored demonstration of new and emerging, low-cost, low-risk C4ISR technologies and interoperability solutions impartially presented to the CINCs and Military Services in an operational environment. Proposals are selected to fulfill identified warfighter deficiencies and are designed to provide the opportunity to experiment with new and emerging capabilities, assess their value, and recommend them for implementation where appropriate. JWID provides a structured process where new C4ISR capabilities are rigorously vetted, evaluated, and assessed by the warfighter. JWID is an integral component of the JV 2020 conceptual template for future joint warfighting. Interoperability and Information Superiority are key goals of the Chairman of the Joint Chiefs of Staff. New and emerging technologies are required to conform with established standards on systems interoperability and must also be integrated into approved architectures that are Defense Information Infrastructure (DII)/Common Operational Environment (COE) Joint Tactical Architecture (JTA)-compliant.</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> <th style="text-align: center;"><u>FY2003</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">.201</td> <td style="text-align: center;">1.530</td> <td style="text-align: center;">1.532</td> <td>Contract Engineering and Technical Support</td> </tr> <tr> <td style="text-align: center;">.201</td> <td style="text-align: center;">1.530</td> <td style="text-align: center;">1.532</td> <td>Total</td> </tr> </tbody> </table> <p>FY 2001 Accomplishments: JWID 01 conducted the "most successful event to date." JWID stood up a worldwide, coalition-wide, area network that maintained a 99.64 percent availability for a 12-nation, 38-worldwide site, multinational task force. JWID conducted complex interoperability trials and operationally assessed 89 demonstrations worldwide. JWID acquired and distributed the two Gold Nugget technologies (Silent Runner™ and PATROL®), selected in JWID 2000, to eight warfighting CINCs with validated concepts of operation and standard operating procedures.</p> <p>B. Other Program Funding Summary</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>To Complete</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>O&M Defense-Wide</td> <td style="text-align: center;">1.488</td> <td style="text-align: center;">.754</td> <td style="text-align: center;">.743</td> <td style="text-align: center;">TBD</td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>Procurement Defense-Wide</td> <td style="text-align: center;">.861</td> <td style="text-align: center;">.260</td> <td style="text-align: center;">.265</td> <td style="text-align: center;">TBD</td> <td style="text-align: center;">TBD</td> </tr> </tbody> </table> <p>C. Acquisition Strategy: N/A</p> <p>D. Schedule Profile. The RDT&E will be spent during various quarters of each Fiscal Year.</p>										<u>FY 2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>Description</u>	.201	1.530	1.532	Contract Engineering and Technical Support	.201	1.530	1.532	Total		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>To Complete</u>	<u>Total Cost</u>	O&M Defense-Wide	1.488	.754	.743	TBD	TBD	Procurement Defense-Wide	.861	.260	.265	TBD	TBD
<u>FY 2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>Description</u>																																				
.201	1.530	1.532	Contract Engineering and Technical Support																																				
.201	1.530	1.532	Total																																				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>To Complete</u>	<u>Total Cost</u>																																		
O&M Defense-Wide	1.488	.754	.743	TBD	TBD																																		
Procurement Defense-Wide	.861	.260	.265	TBD	TBD																																		

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification								Date: February 2002																																					
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER																																								
RDT&E, Defense-Wide, Joint Staff/BA 7		0303149J			C4IFTW (SATCOM Ops Analysis and Integration Tools)																																								
Cost (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																																				
SATCOM Ops Analysis and Integration Tools	1.937	2.796	2.387	2.512	1.977	2.031	1.903	TBD	TBD																																				
RDT&E Articles Qty	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																				
<p>A. Mission Description and Budget Item Justification:</p> <p>The current focus of the Satellite Communications (SATCOM) operations analysis and integration effort is the development of the Joint Satellite Communications Architecture Planning and Evaluation (J-SCAPE) Tool Set. J-SCAPE is required to provide decision-makers with the means to focus the ongoing modernization of SATCOM assets to transform current systems and choose the best architectural alternative for the 21st century SATCOM infrastructure. The J-SCAPE tool set is also required to support the planning and evaluation necessary to maximize all four of the operational concepts of JV 2020-dominant maneuver, precision engagement, focused logistics, and full dimensional protection. Currently, there is no effective, efficient, capability to plan and evaluate the ability of current and future SATCOM architectures to meet the CINCs' requirements. The J-SCAPE tool set mission recognizes the importance of information superiority to each of these operational concepts. Specifically, the J-SCAPE toolset will provide the capability to efficiently and accurately evaluate a set of communication requirements -- captured in the form of a scenario -- against a set of SATCOM resources. It will quantify supportability in terms of connectivity and capacity, emphasizing SATCOM parameters such as link budgets, including fading because of rain and scintillation, bit error rates, satellite processing, and crosslinks. Other measures of effectiveness include link availability, delay, resistance to jamming, and intercept or signals exploitation. When fully operational, the J-SCAPE toolset will be used by the Joint Staff, CINCs, their components, other joint organizations, satellite systems program offices, and earth terminal program offices. The Services will use this tool set to assess the adequacy of SATCOM systems to support their assigned missions, evaluate operational plans, define SATCOM-related operational requirements, and provide operational input to the acquisition process. J-SCAPE is presently in early concept exploration, including documentation of mission need, development and documentation of operational and functional requirements, CONOPS, and program management plan. Specifically, this year's accomplishments include the development of the Research Analysis Report, CONOPS, Functional Requirements Document, Initial - High Level Design, and Initial Software Development Plan.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.917</td> <td style="text-align: center;">1.705</td> <td style="text-align: center;">1.560</td> <td>Software Development</td> </tr> <tr> <td style="text-align: center;">.200</td> <td style="text-align: center;">.300</td> <td style="text-align: center;">.200</td> <td>Program Mgmt</td> </tr> <tr> <td style="text-align: center;">.140</td> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td>COTS HW & SW</td> </tr> <tr> <td style="text-align: center;">.100</td> <td style="text-align: center;">.100</td> <td style="text-align: center;">.100</td> <td>Verification and Validation</td> </tr> <tr> <td style="text-align: center;">.150</td> <td style="text-align: center;">.000</td> <td style="text-align: center;">.000</td> <td>Independent Cost Estimate (FFRDC)</td> </tr> <tr> <td style="text-align: center;">.200</td> <td style="text-align: center;">.361</td> <td style="text-align: center;">.200</td> <td>Contract Engineering & Tech. Support (non-FFRDC)</td> </tr> <tr> <td style="text-align: center;"><u>.230</u></td> <td style="text-align: center;"><u>.330</u></td> <td style="text-align: center;"><u>.327</u></td> <td>Contract Engineering & Tech. Support (FFRDC)</td> </tr> <tr> <td style="text-align: center;">1.937</td> <td style="text-align: center;">2.796</td> <td style="text-align: center;">2.387</td> <td>Total</td> </tr> </tbody> </table> <p>B. Other Program Funding Summary. N/A</p>										<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>	0.917	1.705	1.560	Software Development	.200	.300	.200	Program Mgmt	.140	.000	.000	COTS HW & SW	.100	.100	.100	Verification and Validation	.150	.000	.000	Independent Cost Estimate (FFRDC)	.200	.361	.200	Contract Engineering & Tech. Support (non-FFRDC)	<u>.230</u>	<u>.330</u>	<u>.327</u>	Contract Engineering & Tech. Support (FFRDC)	1.937	2.796	2.387	Total
<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>																																										
0.917	1.705	1.560	Software Development																																										
.200	.300	.200	Program Mgmt																																										
.140	.000	.000	COTS HW & SW																																										
.100	.100	.100	Verification and Validation																																										
.150	.000	.000	Independent Cost Estimate (FFRDC)																																										
.200	.361	.200	Contract Engineering & Tech. Support (non-FFRDC)																																										
<u>.230</u>	<u>.330</u>	<u>.327</u>	Contract Engineering & Tech. Support (FFRDC)																																										
1.937	2.796	2.387	Total																																										

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification		Date: February 2002																																																																	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide, Joint Staff/BA 7	PROGRAM ELEMENT 0303149J	PROJECT NAME AND NUMBER C4IFTW (SATCOM Ops Analysis and Integration Tools)																																																																	
<p>C. Acquisition Strategy: <u>FY 2001</u>: The FY01 increment of funding (RDT&E) was used for the proof-of-concept phase, developing more detailed requirements and inputs for the advanced prototype tool. System requirements specifications: detailed subsystem design document, building of the proof-of-concept tool, testing and documentation, and R-1 (release one) of the tool set. <u>FY 2002</u>: Supports the continued requirements refinement and software engineering of the prototype and actual development of the software tool in compliance with the allocated requirements refined in FY01 and FY02. In addition, because the SATCOM doctrine, requirements, technology, and market are in a continuous state of change, the system-engineering task will continue. This continuing effort will monitor the changing SATCOM environment to ensure that the modeling software will be able to reflect the latest developments. <u>FY2001 Accomplishments</u>: Delivery of Database Design Description, Requirements Traceability Matrix, Functional Requirements Document, Configuration Management Plan, Quality Assurance Plan, and Risk Management Plan. Delivery of J-SCAPE Software v1.02 included UHF Follow-On (UFO), Defense Satellite Communication System (DSCS), and commercial C/Ku and Ka analysis engine software, tool set, and unclassified test data. <u>FY 2003 Plan</u>: Build on the FY02 prototyping efforts by developing and finalizing the design, code, and test, and delivering the analysis engine tool set software for the Global Broadcast Service (GBS), Wide-Band Gapfiller (WGS), and the Advanced Wideband Systems (AWS).</p> <p>D. Schedule Profile: This program was a new start in FY 00.</p> <table style="margin-left: auto; margin-right: auto; border: none;"> <thead> <tr> <th style="text-align: left;">(Fiscal Qtr)</th> <th colspan="4" style="text-align: center;"><u>FY 2001</u></th> <th colspan="4" style="text-align: center;"><u>FY 2002</u></th> <th colspan="4" style="text-align: center;"><u>FY 2003</u></th> </tr> <tr> <th></th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> </tr> </thead> <tbody> <tr> <td>Contract Award* -- Jul 97</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>IOC ** (FY 2004/3rd Qtr)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>FOC (To be determined)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table> <p>* SAIC Inc., under competitively awarded delivery order type support contract awarded July 1997. Aerospace Corporation provides FFRDC support. After program definition, prototyping, risk-reduction phases, and engineering development (just prior to IOC), J-SCAPE will be openly competed based on fully defined requirement and a mature software design.</p> <p>** J-SCAPE acquisition strategy is to follow a proof-of-concept phase with a series of prototypes to help further define the program, continue to capture and refine requirements and implement risk-reduction measures. IOC will be achieved following a final engineering development phase with formalized software design and planning on use of commercial software developmental tools (COTS), as much as feasible. Government Cost Estimates (GCE) are anticipated in FY02 based on documented requirements that are approved at those times.</p>			(Fiscal Qtr)	<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>					1	2	3	4	1	2	3	4	1	2	3	4	Contract Award* -- Jul 97													IOC ** (FY 2004/3 rd Qtr)													FOC (To be determined)												
(Fiscal Qtr)	<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>																																																										
	1	2	3	4	1	2	3	4	1	2	3	4																																																							
Contract Award* -- Jul 97																																																																			
IOC ** (FY 2004/3 rd Qtr)																																																																			
FOC (To be determined)																																																																			

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification								Date: February 2002																																	
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide, Joint Staff/BA 7					R-1 ITEM NOMENCLATURE: 0902298J Management Headquarters – Joint Warfighting Capabilities Assessment (JWCA).																																				
(\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																																
Total PE Cost	9.385	10.567	10.683	10.810	9.754	9.950	10.149	TBD	TBD																																
<p>A. Mission Description and Budget Item Justification:</p> <p>Joint Warfighting Capabilities Assessments (JWCA) are studies conducted by joint assessment teams in precision engagement; dominant maneuver; full dimensional protection; focused logistics; information superiority; intelligence, surveillance, and reconnaissance; communications and computer environment; and strategic deterrence. A Joint Staff directorate sponsors each JWCA team, and its assessments are conducted by teams of warfighting and functional experts from the unified commands, Services, OSD, federally funded research and development centers, and others as necessary. Assessments examine key relationships between warfighting capabilities/interactions and identify opportunities for improving warfighting effectiveness. JWCA program growth between FY 01 and FY 02 is required to meet increasing demand for assessment studies because of CJCS-directed evolution of JROC and JWCA focus to meet congressional expectations of improved joint integration of Service materiel development efforts. This program is in Budget Activity 7-Operational Systems Development, because it supports currently employed systems and training activities.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">7.978</td> <td style="text-align: center;">8.687</td> <td style="text-align: center;">8.814</td> <td>CAAS Contracted Studies</td> </tr> <tr> <td style="text-align: center;">1.452</td> <td style="text-align: center;">1.880</td> <td style="text-align: center;">1.889</td> <td>CAAS Studies Federally Funded Research and Development Centers</td> </tr> <tr> <td style="text-align: center;">(.024)</td> <td></td> <td></td> <td>FY 01 Congressional Non-programmatic Rescission</td> </tr> <tr> <td style="text-align: center;">9.406</td> <td style="text-align: center;">10.567</td> <td style="text-align: center;">10.703</td> <td>Total</td> </tr> </tbody> </table> <p>B. Other Program Funding Summary:</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>To Complete</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>O&M Defense-Wide</td> <td style="text-align: center;">4.026</td> <td style="text-align: center;">6.131</td> <td style="text-align: center;">7.176</td> <td style="text-align: center;">7.020</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p>C. Acquisition Strategy: This program represents a continuing level of effort supporting a wide range of JWCA studies to support the JROC process. The deliverables in each study reflect the analysis required to assist decision makers as they examine the relationships between warfighting capabilities/interactions and identify opportunities for improving warfighting effectiveness.</p> <p>D. Schedule Profile: N/A</p>										<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>	7.978	8.687	8.814	CAAS Contracted Studies	1.452	1.880	1.889	CAAS Studies Federally Funded Research and Development Centers	(.024)			FY 01 Congressional Non-programmatic Rescission	9.406	10.567	10.703	Total		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>To Complete</u>	<u>Total Cost</u>	O&M Defense-Wide	4.026	6.131	7.176	7.020	N/A
<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Description</u>																																						
7.978	8.687	8.814	CAAS Contracted Studies																																						
1.452	1.880	1.889	CAAS Studies Federally Funded Research and Development Centers																																						
(.024)			FY 01 Congressional Non-programmatic Rescission																																						
9.406	10.567	10.703	Total																																						
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>To Complete</u>	<u>Total Cost</u>																																				
O&M Defense-Wide	4.026	6.131	7.176	7.020	N/A																																				

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-2a, RDT&E Project Justification

Exhibit R-2a, RDT&E Project Justification						Date: February 2002											
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER											
RDT&E, Defense Wide, Joint Staff/BA 7			0902298J			Joint Staff Information Network (JSIN)											
Cost (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost								
JSIN	1.082	1.503	1.554	1.605	1.671	1.731	1.793	TBD	TBD								
<p>A. Mission Description and Budget Item Justification: JSIN is The Joint Staff's primary "weapon system." It consists of a classified and an unclassified local area network. The classified system operates at the TOP SECRET level and has access to DOD-wide SECRET networks controlled via a comprehensive system of security checks and guards. The unclassified system provides access to the Internet and hosts our connection to the Defense Message System (DMS), currently being implemented as a replacement for the legacy AUTODIN system. Both systems run the standard Microsoft Office suite of programs. Most day-to-day staff work is conducted on the classified network using the Joint Staff Action Processing (JSAP) application, which consists of several COTS applications integrated to meet the Joint Staff business process. This application was developed by one of our information technology (IT) support contractors (Dyncorp) and codifies our processes for creating, routing, reviewing, approving, and archiving staff packages in electronic form. JSAP has numerous commercial counterparts, and is in fact being marketed by Dyncorp to other CINCs and Services. The OCIO envisions reengineering and enhancing JSAP to keep the system in step with current IT technology initiatives including PKI, collaborative tools, and web-based enhancements. In FY 01, JSIN reduced by \$8K as part of congressional non-programmatic rescission. FY 03-07 JSIN program increase reflects realignment of funding as a result of the change in business practice for the Joint Staff Action Processing (JSAP) application. When funding was originally realigned for JSIN, it was with the intention of replacing JSAP with a modified COTS and upgrading every 4 years. Under the changed business practice, the current JSAP will be developed and enhanced to provide promising future capabilities like collaboration, knowledge management, and information portals. This realignment does not represent program growth.</p> <p>B. Other Program Funding Summary:</p> <table style="margin-left: 100px; border: none;"> <tr> <td></td> <td style="text-align: center;"><u>FY 2001</u></td> <td style="text-align: center;"><u>FY 2002</u></td> <td style="text-align: center;"><u>FY 2003</u></td> </tr> <tr> <td>O&M Defense-Wide</td> <td style="text-align: center;">0.549</td> <td style="text-align: center;">0.711</td> <td style="text-align: center;">0.736</td> </tr> </table> <p>C. Acquisition Strategy: JSAP will continue to be upgraded with required enhancements. JS/CIO will evaluate candidates in conjunction with the staff and our support contractor. Identified enhancements will be integrated into JSIN via contract task orders issued to our support contractor. We envision periodic software upgrades driven by contractor upgrades, version releases, and emergency-fix releases to the various COTS applications integrated within JSAP.</p> <p>D. Schedule Profile: RDT&E funding line is new to this program starting in FY 01. RDT&E will be spent during various quarters of each fiscal year.</p>											<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	O&M Defense-Wide	0.549	0.711	0.736
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>														
O&M Defense-Wide	0.549	0.711	0.736														

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-3, Project Cost Analysis

Exhibit R-3, Project Cost Analysis										Date: February 2002		
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide, Joint Staff/BA 7			PROGRAM ELEMENT: 0208052J Joint Analytic Model Improvement Program (JAMIP)						PROJECT NAME: Joint Warfare System (JWARS)			
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYS Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Management and professional support services	Various	Various	1.517	0.121		0.066		0.000		N/A	TBD	TBD
CAAS engineering and technical services	Various	Various	1.128	9.596		8.605		6.873		N/A	TBD	TBD
FFRDC engineering and technical services	Various	Various	.904	0.838		0.867		0.000		N/A	TBD	TBD
Other services	Various	Various	1.292	1.252		1.075		5.658		N/A	TBD	TBD
Subtotal Product Development			4.841	11.807		10.613		12.531		TBD	TBD	TBD
Remarks: For FYs 2001 and 2002, O&M funding for JWARS has been realigned to RDT&E funding as a result of information technology budgeting policy clarification and to comply with House Appropriations Committee guidance (Report 106-244). The Limited IOC version of JWARS is designed to support the Services, Joint Staff, and OSD in conducting force assessment studies. The IOC version of JWARS is designed to support the CINCs in crisis action and deliberate planning. JWARS fielding has been delayed and is anticipated to occur in FY 2005.												
Total Cost			4.841	11.807		10.613		12.531				
Remarks												

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-3, Project Cost Analysis

Exhibit R-3, Project Cost Analysis										Date: February 2002		
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide, Joint Staff				PROGRAM ELEMENT: 0303149J						PROJECT NAME: C4I for the Warrior -- NETWARS		
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Definition & Proof of Concept		MITRE	.430	0		0	TBD	0	TBD	TBD	TBD	
Software Development	CPFF		3.074				TBD		TBD	TBD	TBD	
Program Management	CPFF		1.766	.200		.200	TBD	.200	TBD	TBD	TBD	
COTS Hardware and Software	CPFF		.395				TBD		TBD	TBD	TBD	
Toolkit Functionality	Fixed Price	OPNET Technologies		1.139	Dec 00	1.470		1.600				
Communication Model Development	CPFF	Various		.700		.700		1.200				
IER Refinement	CPFF	Various		.500		.500		.700				
Subtotal Product Development			5.665	2.539		2.870		3.700		TBD	TBD	
Communications Developmental Studies	CPFF		1.797							TBD	TBD	
Communications Burden Assessment Studies	CPFF	Various		1.746		1.787	TBD	1.400	TBD			
Configuration Mgmt	CPFF		.342	.100		.200	TBD	.172	TBD	TBD	TBD	
Maintenance	CPFF		.177			.200		.100				
P3I	CPFF											
Subtotal Support Cost			2.316	1.846		2.187		1.672				

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-3, Project Cost Analysis

Exhibit R-3, Project Cost Analysis										Date: February 2002		
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide, Joint Staff				PROGRAM ELEMENT: 0303149J						PROJECT NAME: C4I for the Warrior -- NETWARS		
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Verification & Validation	CPFF	Various	.700	.200		.200	TBD	.500	TBD	TBD	TBD	
Subtotal T&E			.700	.200		.200		.500		TBD	TBD	
Contractor (FFRDC) Eng Support	CPFF	Various	.729	.483		.345	TBD	.400	TBD	TBD	TBD	
Contractor Eng and Technical Support	CPFF	Various	.752	.200		.155	TBD	.000	TBD			
Independent Cost Estimate (ICE) (FFRDC)		MITRE	.100			0	TBD	0	TBD	TBD	TBD	
NETWARS Standardization		Various	.250									
Congressional Non-programmatic Rescission				(0.016)								
Subtotal Management			1.831	.667		.500		.400				
Total Cost			10.512	5.213		5.757		6.271				
Remarks Award to SRI, Inc., under sole-source contract; awarded Feb 99. Award to OPNET Technologies under sole source contract, awarded Aug 00. Expect to award competitive contract Dec 02.												

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-3, Project Cost Analysis

Exhibit R-3, Project Cost Analysis										Date: February 2002		
APPROPRIATION/BUDGET ACTIVITY 0400/BA 7				PROGRAM ELEMENT 0303149J						PROJECT NAME AND NUMBER C4IFTW (JWID)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY01 Cost	FY 01 Award Date	FY02 Cost	FY 02 Award Date	FY03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Verification & Validation												
Subtotal T&E												
Contract Engineering and Technical Support		Various	.365	.201		1.530	TBD	1.532	TBD	TBD	TBD	
Subtotal Management			.365	.201		1.530		1.532		TBD	TBD	
Total Cost			.365	.201		1.530		1.532		TBD	TBD	

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-3, Project Cost Analysis

Exhibit R-3, Project Cost Analysis										Date: February 2002		
APPROPRIATION/BUDGET ACTIVITY 0400/BA7				PROGRAM ELEMENT 0303149J						PROJECT NAME AND NUMBER C4IFTW – SATCOM Ops Analysis and Integration Tool		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY01 Cost	FY 01 Award Date	FY02 Cost	FY 02 Award Date	FY03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Definition & Proof of Concept				.917						TBD	TBD	
Software Prototype Development	CPFF	SAIC, Aerospace				1.605	TBD	1.560		TBD	TBD	
Program Management	CPFF	SAIC		.200		.200	TBD	.200		TBD	TBD	
COTS Hardware and Software	CPFF	SAIC		.140		.261	TBD	.0		TBD	TBD	
Subtotal			N/A	1.257	11-09- 00	2.066	TBD	1.760		TBD	TBD	
Verification & Validation		DISA		.100		.200		.100		TBD	TBD	
Subtotal T&E				.100		.200		.100		TBD	TBD	
Independent Cost Estimate (ICE) (FFRDC)	CPFF	Aerospace, AF Cost Analysis Agency		.150		000		000		TBD	TBD	
Contract Engineering and Technical Support	CPFF	SAIC		.200		.200		.200		TBD	TBD	
Contract Eng. & Tech. Support (FFRDC)	CPFF	Aerospace		.230		.330		.327				
Congressional non programmatic rescission												
Subtotal Management				.580		.530		.527		TBD	TBD	
Total Cost				1.937		2.796		2.387		TBD	TBD	
Remarks: All awards to SAIC under competitively awarded task order contract, awarded Jul 97												

JOINT STAFF
FY 2003 Budget Estimates
Exhibit R-3, Project Cost Analysis

Exhibit R-3, Project Cost Analysis									Date: February 2002			
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense Wide, Joint Staff/BA 7				PROGRAM ELEMENT: 0902298J Management Headquarters					PROJECT NAME: JWCA Studies			
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contracted Studies	C/FP/MIPR	TBD	29.211	7.933	Var	8.687	Var	8.814	TBD	Cont	TBD	TBD
Subtotal Support			29.211	7.933		8.687		8.814		Cont	TBD	TBD
Remarks: JWCA studies are not management organizations. The studies support the Joint Staff directorates and CINCs and are executed IAW directives received from the JROC. JWCA studies evaluate warfighting and supporting area assessments vice developing deliverable systems. FY 2002 cost estimates cannot be determined pending prioritization by the JROC.												
FFRDC Studies	Reqn	TBD	8.329	1.452	Var	1.880	Var	1.869	TBD	Cont	TBD	TBD
Subtotal Support			8.329	1.452		1.880		1.869		Cont	TBD	TBD
Remarks: JWCA studies are not management organizations. The studies support the Joint Staff directorates and CINCs and are executed IAW directives received from the JROC. JWCA studies evaluate warfighting and supporting area assessments vice developing deliverable systems. FY 2002 cost estimates cannot be determined pending prioritization by the JROC.												
Total Cost			37.540	9.385		10.567		10.683				

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Defense Message System (DMS)/P.E. 0303129K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Defense Message System/DM01		10.748	11.297	11.803	14.199	14.584	14.706	15.006	Contg	Contg
<p>A. <u>Mission Description & Budget Item Justification:</u> The Defense Message System (DMS) is the Warfighter's Message System. The DMS was established in response to Joint Staff validated messaging requirements which establish the need for writer-to-reader messaging service that is accessible from world-wide Department of Defense (DOD) locations, by tactically deployed users, and other designated Federal Government users, with interfaces to Allied users and Defense contractors. As a value-added service of the Global Information Grid (GIG), the DMS incorporates state-of-the-art messaging, directory, security, and management technologies to provide those capabilities needed to support the GIG objective goals. In FY02, DMS will field Release 3.0 which will focus on essential Intelligence Community requirements and provide automated access controls for compartments, code words and caveats using ACP 120 implementation of the Common Security Protocol (CSP). DMS will also start Release 3.1 in FY03. In FY03, DMS will deliver Release 3.1 which will provide enhancements and robustness to the organizational messaging capabilities provided in Release 3.0. DMS will support closure of the DMS Transition Hubs (DTHs) in FY03. FY2002-07 Defense Planning Guidance directs the Services, in coordination with DISA, to plan for a full and seamless tactical and strategic DMS implementation, to include the intelligence community, the nuclear C3 community, and allied communities. The first operational units of tactical/deployable DMS should be fielded before the end of FY 2001, with implementation sufficient to ensure closure of all DTHs by the end of FY 2003. Reliance on DTHs should be minimized, with a goal of shifting all traffic using the hubs to DMS or other alternatives by the end of FY 2003. The security portion of the DMS RDT&E budget is within PE 0303140K and is explained in a separate budget exhibit that follows. This is not duplication of effort. This program element is under Budget Activity 5 because it involves the development of major upgrades that increase the performance of existing systems.</p>										
Page 1 of 9										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Defense Message System (DMS)/P.E. 0303129K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Defense Message System/DM01		10.748	11.297	11.803	14.199	14.584	14.706	15.006	Contg	Contg
<p><u>FY2001 Accomplishments</u></p> <ul style="list-style-type: none"> o Field and Enhance Release 2.2. The DMS program tested and fielded enhancements (maintenance releases) to Release 2.2. DMS implements and fields system capabilities through a series of coordinated product releases. (1st - 4th Qtr, \$2.000M) o Deliver Release 3.0. Release 3.0 provides classified organizational messaging through Top Secret/Special Compartmented Information (SCI). (1st - 2nd Qtr, \$5.308M) o Test and Enhance Release 3.0. The DMS program performed developmental testing and implemented enhancements to Release 3.0. (2nd - 4th Qtr, \$1.590M) o Expand Medium Grade Service (MGS). DMS expanded the MGS operational base. MGS is a managed set of Commercial Off-The-Shelf (COTS) e-mail products, that utilize the DOD Medium Assurance Public Key Infrastructure (PKI). As a subset of DMS, MGS represents a set of Internet standards agreed to by government and industry. (2nd Qtr, \$1.200M) o Implement Automated Message Handling System (AMHS). The DMS AMHS was implemented and sustained at CINC sites. (1st - 2nd Qtr, \$0.650M) o Total \$10.748M 										
Page 2 of 9										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Defense Message System (DMS)/P.E. 0303129K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Defense Message System/DM01		10.748	11.297	11.803	14.199	14.584	14.706	15.006	Contg	Contg

FY2002 Plan

- o Field Release 3.0. DMS implements and fields system capabilities through a series of coordinated product releases. Release 3.0 provides classified organizational messaging through Top Secret/Special Compartmented Information (SCI). (1st - 2nd Qtr, \$1.557M)
- o Deliver Release 3.0/Maintenance Release 1 (MR1) (previously referred to as Release 3.1). Release 3.0/MR1 will provide additional enhancements and robustness to organizational messaging. (1st - 2nd Qtr, \$5.207M)
- o Release 3.0 Operational Assessment/Test. DMS Release 3.0 will undergo either an Operational Assessment or an Operational Test, in accordance with the approved DMS Revised Capstone Test and Master Plan (TEMP), dtd July 1999. (2nd - 3rd Qtr, \$2.930M)
- o Expand Medium Grade Service (MGS)/Message Service Convergence. DMS will continue to expand the MGS operational base. The convergence of the current DMS High Grade integration of both Commercial and Government supplied hardware and software products and the Medium Grade implementation of Commercial-off-the-Shelf (COTS) will begin. Studies have concluded that this convergence can be accelerated due to the significant technological advances in commercial encryption/security and messaging service capability. (2nd Qtr, \$0.200M)
- o Start next maintenance or "dot" release. Initial development of DMS Release 3.1 will begin. (3rd - 4th Qtr, \$1.403M)
- o Total \$11.297M

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Defense Message System (DMS)/P.E. 0303129K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Defense Message System/DM01		10.748	11.297	11.803	14.199	14.584	14.706	15.006	Contg	Contg

FY2003 Plan

- o Field Release 3.0/MR1 and Support Closure of the DMS Transition Hubs (DTHs). DMS Release 3.0/MR1 will provide additional enhancements to the organizational messaging capabilities provided in Release 3.0. DMS will support closure of the DTHs in FY03. (1st - 2nd Qtr, \$2.612M)
- o Deliver Release 3.1. Release 3.1 will provide additional enhancements and robustness to organizational messaging. (1st - 2nd Qtr, \$4.219M)
- o Release 3.0/MR1 Operational Assessment/Test and Emergency Action Message Testing. DMS Release 3.0/MR1 will undergo either an Operational Assessment or an Operational Test, in accordance with the approved DMS Revised Capstone Test and Master Plan (TEMP). DMS will support testing of the EAM dissemination solution. (2nd - 3rd Qtr, \$3.122M)
- o Expand Medium Grade Service (MGS)/Message Service Convergence. DMS will continue to expand the MGS operational base. (2nd Qtr, \$0.850M)
- o Start Release 3.2 (previously referred to as Release 4.0). Initial development of DMS Release 3.2 will begin. (3rd - 4th Qtr, \$1.000M)
- o Total \$11.803M

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002																																																				
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE																																																								
RDT&E, Defense-Wide/05					Defense Message System (DMS)/P.E. 0303129K																																																								
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost																																																			
Defense Message System/DM01		10.748	11.297	11.803	14.199	14.584	14.706	15.006	Contg	Contg																																																			
<p>B. <u>Program Change Summary:</u></p> <table> <thead> <tr> <th></th> <th><u>FY01</u></th> <th><u>FY02</u></th> <th><u>FY03</u></th> </tr> </thead> <tbody> <tr> <td>Previous Presidents Budget (FY 2002)</td> <td>10.778</td> <td>11.423</td> <td>11.918</td> </tr> <tr> <td>Appropriated Value</td> <td>11.340</td> <td>11.423</td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td>-0.592</td> <td>-0.126</td> <td></td> </tr> <tr> <td>Adjustments to Budget Year Since FY 2002 President's Budget</td> <td></td> <td></td> <td>-0.115</td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY 2003)</td> <td>10.748</td> <td>11.297</td> <td>11.803</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2001 change due to below threshold reprogramming. FY 2002 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation. FY 2003 change due to revised fiscal guidance.</p> <p>C. <u>Other Program Funding Summary:</u></p> <table> <thead> <tr> <th></th> <th><u>FY01</u></th> <th><u>FY02</u></th> <th><u>FY03</u></th> <th><u>FY04</u></th> <th><u>FY05</u></th> <th><u>FY06</u></th> <th><u>FY07</u></th> <th><u>To Complete</u></th> </tr> </thead> <tbody> <tr> <td>Operation & Maintenance,DW</td> <td>10.540</td> <td>8.837</td> <td>8.782</td> <td>6.348</td> <td>6.274</td> <td>6.468</td> <td>6.696</td> <td>Contg</td> </tr> <tr> <td>Procurement,DW</td> <td>16.040</td> <td>18.929</td> <td>19.424</td> <td>19.708</td> <td>20.171</td> <td>20.352</td> <td>20.751</td> <td>Contg</td> </tr> </tbody> </table> <p>D. <u>Acquisition Strategy:</u> DMS Contract, Lockheed Martin Corporation (LMC) provides for the design, development, deployment, implementation and maintenance of DMS. Booz Allen Hamilton (BAH) provides for implementation, tactical deployment, configuration management and logistics support. PRC/SRA provide for the development and integration of Medium Grade Messaging Service (MGS). Getronics provides site implementation support and site technical assistance. Data Systems Analyst (DSA) provides system and software engineering support, to include implementation engineering, tactical integration, service management system integration support, and engineering support for the DMS Top Secret Collateral implementation.</p>												<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	Previous Presidents Budget (FY 2002)	10.778	11.423	11.918	Appropriated Value	11.340	11.423		Adjustments to Appropriated Value	-0.592	-0.126		Adjustments to Budget Year Since FY 2002 President's Budget			-0.115	Current Budget Submit/President's Budget (FY 2003)	10.748	11.297	11.803		<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To Complete</u>	Operation & Maintenance,DW	10.540	8.837	8.782	6.348	6.274	6.468	6.696	Contg	Procurement,DW	16.040	18.929	19.424	19.708	20.171	20.352	20.751	Contg
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>																																																										
Previous Presidents Budget (FY 2002)	10.778	11.423	11.918																																																										
Appropriated Value	11.340	11.423																																																											
Adjustments to Appropriated Value	-0.592	-0.126																																																											
Adjustments to Budget Year Since FY 2002 President's Budget			-0.115																																																										
Current Budget Submit/President's Budget (FY 2003)	10.748	11.297	11.803																																																										
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To Complete</u>																																																					
Operation & Maintenance,DW	10.540	8.837	8.782	6.348	6.274	6.468	6.696	Contg																																																					
Procurement,DW	16.040	18.929	19.424	19.708	20.171	20.352	20.751	Contg																																																					

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Defense Message System (DMS)/P.E. 0303129K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Defense Message System/DM01		10.748	11.297	11.803	14.199	14.584	14.706	15.006	Contg	Contg
<p>E. <u>Schedule Profile:</u></p> <p><u>FY2001:</u></p> <p>1st Qtr:</p> <ul style="list-style-type: none"> o Fielded Release 2.2/Test Release 2.2 Organizational Messaging Enhancements o Delivered Release 3.0 <p>2nd Qtr:</p> <ul style="list-style-type: none"> o Completed TS/Collateral Infrastructure Implementation o Expanded Medium Grade Service (MGS) <p>3rd Qtr:</p> <ul style="list-style-type: none"> o Delivered Release 3.0 Enhancements o Released 2.2 Complete Deployment <p>4th Qtr:</p> <ul style="list-style-type: none"> o Continued Release 3.0 Developmental Testing <p><u>FY2002:</u></p> <p>1st Qtr:</p> <ul style="list-style-type: none"> o Deliver Release 3.0/MR1 <p>2nd Qtr:</p> <ul style="list-style-type: none"> o Begin Development of Allied Gateway Solution o Continue Intel and Deployed Tactical Implementation <p>3rd Qtr:</p> <ul style="list-style-type: none"> o Expand Medium Grade Service (MGS) <p>4th Qtr:</p> <ul style="list-style-type: none"> o Begin development of next maintenance or "dot" release o Release 3.0 Organizational Messaging - Start Fielding 										

Page 6 of 9

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Defense Message System (DMS)/P.E. 0303129K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Defense Message System/DM01		10.748	11.297	11.803	14.199	14.584	14.706	15.006	Contg	Contg
<p><u>FY2003:</u></p> <p>1st Qtr:</p> <ul style="list-style-type: none"> o Complete Release 3.0 Operational Test o Deliver next maintenance or "dot" release o Begin development of next major release o Complete Release 3.0/MR1 Operational Assessment/Test <p>2nd Qtr:</p> <ul style="list-style-type: none"> o Begin fielding 3.0/MR1 o Field Allied Gateway Solution o Continue Intel and Deployed Tactical Implementation <p>3rd Qtr:</p> <ul style="list-style-type: none"> o Expand Medium Grade Service (MGS) <p>4th Qtr:</p> <ul style="list-style-type: none"> o Continue deployment of Release 3.0/MR1 <p><u>FY2004 - FY2007</u></p> <p>1st - 4th Qtr</p> <ul style="list-style-type: none"> o Complete Intel and Deployed Tactical Implementation o Provide Allied Gateway Solution o Continuing commercial convergence of products, including Public Key Infrastructure (PKI), Defense Information Infrastructure (DII)/Directory, Commercial Off-The-Shelf (COTS) Standards (Secure Multipurpose Internet Mail Extension (S/MIME), Medium Grade Service, Lightweight Directory Access Protocol (LDAP)) o Support Closure of the DMS Transition Hubs o Provide new DMS Releases providing commercial enhancements 										

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/05		Defense Message System (DMS)/PE 0303129K				Defense Message System/DM01				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
<u>Product Development</u>										
Systems Engineering and Integration	CPFF, FFP/ Comp	Lockheed Martin Company Manassas, VA	2.209	4.320	5/02	2.621	5/03	Contg	Contg	9.150
Systems Integration	CPFF/ Comp	SAIC, Arlington, VA	0.650	0	N/A	1.050	10/02	Contg	Contg	1.700
	CPFF/ Comp	UNISYS, Arlington, VA	0	0.200	2/02	0	N/A	0	0.200	0.200
System Engineering	CPAF/ SS	Data Systems Analysts Fairfax, VA	1.624	1.614	4/02	1.772	4/03	Contg	Contg	5.010
	FFRDC	MITRE, Arlington, VA	1.470	1.233	10/01	1.127	10/02	Contg	Contg	3.830
	CPFF/ Comp	Booz, Allen & Hamilton, McLean, VA	1.964	0.462	11/01	1.797	11/02	Contg	Contg	4.223
	CPFF/ SS	Getronics, Alexandria, VA	0.324	0	N/A	0	N/A	0	Contg	0.324
	CPFF/ Comp	SETA, McClean, VA	1.258	0	N/A	0	N/A	0	1.258	1.258
Subtotal Product Development			9.499	7.829		8.367				

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 Cost Analysis									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/05		Defense Message System (DMS)/PE 0303129K				Defense Message System/DM01				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
<u>Test and Evaluation</u>										
Developmental Test and Evaluation	MIPR	Joint Interoperability Test Command, Ft Huachuca, AZ	0.795	2.555	10/01	2.822	10/02	Contg	Contg	6.172
	CPAF/SS	Data Systems Analysts Fairfax, VA	0.454	0.375	4/02	0.300	4/03	Contg	Contg	1.129
Tactical Testing	MIPR/ARMY	Executive Agent Tactical Switch Systems	0	0.538	10/01	0.314	10/02	0	0.852	0.852
Subtotal Test and Evaluation			1.249	3.468		3.436				
TOTAL			10.748	11.297		11.803				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg

A. Mission Description & Budget Item Justification:

The Information Systems Security Program, initially created by Defense Management Review Decision (DMRD) 918 dated September 1992, provides for the protection and defensive operation at the tactical, operational, and strategic levels. The Information Assurance Program assures availability, confidentiality, and reliability of mission data as it is processed and traverses DOD's networks. Joint Vision 2020 states that protecting the capability to conduct information operations is one of the most important challenges in the future. DISA has the responsibility to ensure the Global Information Grid (GIG) contains adequate protection against attack and robust dynamic network capabilities are maintained to allow DOD to move toward a common goal: a joint force - persuasive in peace, decisive in war, and preeminent in any form of conflict. Therefore, the role of the Information Assurance (IA) program is to improve the information superiority posture of the DOD. This program provides the DOD-wide security architecture, technical implementation strategy, and current security operations - proactive, routine, and crisis-response. With the exception of some FY 2001 funding for intrusion detection systems and some FY 2003 funding for Public Key Enabling efforts, the RDT&E portion of DISA's ISSP budget focuses predominantly on the security aspects of the Defense Message System (DMS). These funds in PE 0303140K are not duplicative of work being done under PE 0303129K which are shown in a separate R-2 exhibit. In order for DMS to achieve its military functionality, various security improvements were budgeted for and initiated under the Information Systems Security Program. DISA will incorporate the DOD Public Key Infrastructure and state-of-the-art information security products such as Certificate Authority Workstations, High Assurance Guards, and Firewalls. New or improved hardware and software must be prototyped and tested to ensure DMS responds to CINCs' and Services' demands for secure commercial messaging capabilities. Multiple security level technologies, based upon High Assurance Guards, must be incorporated to provide secure interoperability between messaging enclaves of differing security classifications. These DMS security services will continue to be developed, improved, and integrated into the product. In addition to the DMS security work, DISA jointly funded work with NSA to explore patternless intrusion detection in FY01.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg
<p>In FY02, DMS will test and implement Release 3.0 which will focus on essential Intelligence community requirements and provide automated access controls for compartments, code words, and caveats using ACP 120 implementation of the Common Security Protocol (CSP). DMS will also start a Release 3.0 Maintenance Release (MR1) in FY02. In FY03, DMS will deliver the next maintenance or "dot" release which will provide enhancements and robustness to the organizational messaging capabilities provided in Release 3.0. DMS will support closure of the DMS Transition Hubs in FY03. Additionally, in FY03, DISA will be pursuing an effort involving Public Key Infrastructure, which is not related to its other DMS work. In this effort, Public Key Enabling (PKE) initiatives will be investigated that will provide engineering solutions for PK enabling network access control and other network devices using COTS products. The goal is to deliver PK enabled Blackberry and other Personal Digital Assistant (PDA) devices to the operational community.</p> <p>This program element is under Budget Activity 5 because it involves the development of major upgrades that increase the performance of existing systems.</p>										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg

FY2001 Accomplishments:

- o Field and Enhance Release 2.2. The DMS program tested and fielded the ISSP security feature enhancements to Release 2.2. DMS implements and fields system capabilities through a series of coordinated product releases. (1st - 4th Qtr, \$.919M)
- o Deliver Release 3.0. Release 3.0 provides ISSP security features for classified organizational messaging through Top Secret/Sensitive Compartmented Information (SCI). (1st - 2nd Qtr, \$13.519M)
- o Test and Enhance Release 3.0. The DMS program performed developmental testing and implemented ISSP security feature enhancements to Release 3.0. (2nd - 4th Qtr, \$.335M)
- o Expand Medium Grade Service (MGS). DMS expanded the ISSP security features of the MGS operational base. MGS is a managed set of Commercial Off-The-Shelf (COTS) e-mail products, that utilize the DOD Medium Assurance Public Key Infrastructure (PKI). As a subset of the DMS, MGS represents a set of Internet standards agreed to by government and industry. (2nd Qtr, \$2.000M)
- o Start Release 3.0/MR1 (previously referred to as Release 3.1). Initial development of the ISSP security specific features of DMS Release 3.0/MR1 began. This release provides additional enhancements and robustness to organization messaging. (4th Qtr, \$.526)
- o Intrusion Detection Systems. Prototype intrusion detection solution for Pacific Air Force (PACAF)(2nd - 4th Qtr, \$.350M)
- o Total \$17.649M

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg

FY2002 Plans:

- o Field Release 3.0. DMS implements and fields system capabilities through a series of coordinated product releases. Release 3.0 provides classified organizational messaging through Top Secret/Sensitive Compartmented Information (SCI). (1st - 2nd Qtr, \$1.950M)
- o Deliver Release 3.0/MR1. Release 3.0/MR1 will provide additional enhancements and robustness to organizational messaging. (1st - 2nd Qtr, \$6.690M)
- o Security, Test, and Evaluation (ST&E) of DMS Releases and Emergency Action Message (EAM) Testing. DMS Releases will undergo security tests of ISSP security features in accordance with the approved DMS Revised Capstone Test and Evaluation Master Plan (TEMP). DMS will support security testing of the EAM dissemination solution. (2nd - 3rd Qtr, \$1.069M)
- o Expand MGS/Message Service Convergence. DMS will continue to expand the MGS operational base. The convergence of the current DMS High Grade integration of both Commercial and Government supplied hardware and software products and the Medium Grade implementation of COTS will begin. Studies have concluded that this convergence can be accelerated due to the significant technological advances in commercial encryption/security and messaging service capability. (2nd Qtr, \$0.300M)
- o Start the next maintenance of "dot" release (previously referred to as Release 3.2). Initial development of the ISSP security specific features of DMS Release 3.1 will begin. (1st - 4th Qtr, \$1.627M)
- o Total \$ 11.636M

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg

FY2003 Plans:

- o Field Release 3.0/MR1 and Support DMS Transition Hub (DTH) Closure. DMS Release 3.0/MR1 will provide additional ISSP security feature enhancements to classified organizational messaging through Top Secret/SCI. DMS will support closure of the DTHs in FY03 (1st - 2nd Qtr, \$1.924M)
- o Deliver the next maintenance or "dot" Release. Release 3.1 will provide additional ISSP security feature enhancements and robustness to organizational messaging. (1st - 2nd Qtr, \$5.111M)
- o Continue ST&E's of DMS Releases. DMS Releases will undergo security tests of ISSP security features in accordance with the approved DMS Revised Capstone TEMP. (2nd - 3rd Qtr, \$0.618M)
- o Expand MGS/Message Service Convergence. DMS will continue to expand the MGS operational base. The convergence of the current DMS High Grade integration of both Commercial and Government supplied hardware and software products and the Medium Grade implementation of Commercial-off-the-Shelf (COTS) will continue. (2nd Qtr, \$2.915M)
- o Start the next major Release (previously referred to as Release 4.0). Initial development of the ISSP security specific features of DMS Release 3.2 will begin. (1st - 4th Qtr, \$2.052M)

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg

FY2003 Plans (cont'd)

- o Provide engineering solutions for PK enabling network access control and network devices using COTS products to achieve seamless secure computing from desktop to laptop to handheld devices, thereby providing continuity and availability of services. (1st Qtr, \$2.5M)
- o Deliver PK enabled Blackberry and other PDA devices to the operational community to provide secure capability to PDAs and thereby extending PKI into the wireless environment. (1st Qtr, \$2.5M)
- o Total \$17.620M

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002																																																				
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Information Systems Security Program (ISSP)/P.E. 0303140K																																																								
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost																																																			
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg																																																			
<p>B. <u>Program Change Summary:</u></p> <table> <thead> <tr> <th></th> <th><u>FY01</u></th> <th><u>FY02</u></th> <th><u>FY03</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 2002)</td> <td>19.780</td> <td>11.767</td> <td>12.757</td> </tr> <tr> <td>Appropriated Value</td> <td>19.610</td> <td>11.767</td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td>-1.961</td> <td>-.131</td> <td></td> </tr> <tr> <td>Adjustments to Budget Year Since FY 2002 President's Budget</td> <td></td> <td></td> <td>+4.863</td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY 2003)</td> <td>17.649</td> <td>11.636</td> <td>17.620</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2001 decrease is due to below threshold reprogramming. FY 2002 change is due to undistributed congressional adjustments to Defense-wide RDT&E appropriation. FY 2003 change is primarily due to initiative involving Public Key Enabling (PKE) effort.</p> <p>C. <u>Other Program Funding Summary:</u></p> <table> <thead> <tr> <th></th> <th><u>FY01</u></th> <th><u>FY02</u></th> <th><u>FY03</u></th> <th><u>FY04</u></th> <th><u>FY05</u></th> <th><u>FY06</u></th> <th><u>FY07</u></th> <th>To Complete</th> </tr> </thead> <tbody> <tr> <td>Operations & Maintenance:</td> <td>112.355</td> <td>145.114</td> <td>163.569</td> <td>166.033</td> <td>173.270</td> <td>176.729</td> <td>182.720</td> <td>Contg</td> </tr> <tr> <td>Procurement:</td> <td>19.658</td> <td>42.911</td> <td>37.543</td> <td>34.377</td> <td>29.963</td> <td>30.133</td> <td>29.999</td> <td>Contg</td> </tr> </tbody> </table> <p>D. <u>Acquisition Strategy:</u> The DMS Contract, Lockheed Martin Corporation (LMC), for the design and development of DMS; Planning Research Corporation (PRC) for the development and integration of Medium Grade Messaging Service (MGS); NSA for the development of security products and the conduct of ST&E (Security Test & Evaluation); and the Joint Interoperability Test Command (JITC) for planning and conducting operational testing.</p>												<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	Previous President's Budget (FY 2002)	19.780	11.767	12.757	Appropriated Value	19.610	11.767		Adjustments to Appropriated Value	-1.961	-.131		Adjustments to Budget Year Since FY 2002 President's Budget			+4.863	Current Budget Submit/President's Budget (FY 2003)	17.649	11.636	17.620		<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	To Complete	Operations & Maintenance:	112.355	145.114	163.569	166.033	173.270	176.729	182.720	Contg	Procurement:	19.658	42.911	37.543	34.377	29.963	30.133	29.999	Contg
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>																																																										
Previous President's Budget (FY 2002)	19.780	11.767	12.757																																																										
Appropriated Value	19.610	11.767																																																											
Adjustments to Appropriated Value	-1.961	-.131																																																											
Adjustments to Budget Year Since FY 2002 President's Budget			+4.863																																																										
Current Budget Submit/President's Budget (FY 2003)	17.649	11.636	17.620																																																										
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	To Complete																																																					
Operations & Maintenance:	112.355	145.114	163.569	166.033	173.270	176.729	182.720	Contg																																																					
Procurement:	19.658	42.911	37.543	34.377	29.963	30.133	29.999	Contg																																																					

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg
<p>E. <u>Schedule Profile</u>: Field various releases of the DMS product with state-of-the-art security components as shown in the following schedule:</p> <p><u>FY2001</u>:</p> <p>1st Qtr:</p> <ul style="list-style-type: none"> o Field Release 2.2/Test Release 2.2 Organizational Messaging Enhancements o Deliver Release 3.0 <p>2nd Qtr:</p> <ul style="list-style-type: none"> o Complete TS/Collateral Infrastructure Implementation o Expand MGS <p>3rd Qtr:</p> <ul style="list-style-type: none"> o Deliver Release 3.0 Enhancements o Release 2.2 Complete Deployment <p>4th Qtr:</p> <ul style="list-style-type: none"> o Begin Release 3.0/MR1 o Continue Release 3.0 Developmental Testing o Patternless Intrusion Detection prototype and technical report <p><u>FY2002</u>:</p> <p>1st Qtr:</p> <ul style="list-style-type: none"> o Field Release 3.0/Complete Release 3.0 Operational Assessment/Test <p>2nd Qtr:</p> <ul style="list-style-type: none"> o Begin Development of Allied Gateway Solution o Continue Intel and Deployed Tactical Implementation <p>3rd Qtr:</p> <ul style="list-style-type: none"> o Expand MGS o Deliver Release 3.0/MR1 										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg

FY2002 Continued4th Qtr:

- o Release 3.0 Organizational Messaging - Complete Deployment
- o Begin Development of next maintenance or "dot" release

FY2003:1st Qtr:

- o Field Release 3.0/MR1 and Complete Release 3.0/MR1 Operational Assessment/Test

2nd Qtr:

- o Field Allied Gateway Solution
- o Continue Intel and Deployed Tactical Implementation

3rd Qtr:

- o Expand MGS
- o Deliver next maintenance or "dot" release
- o Begin Development of next major release

4th Qtr:

- o Complete Deployment of Release 3.0/MR1
- o PKE effort: Engineering solutions for PK enabling network access contract and network devices using COTS products.
- o PKE effort: Deliver PK enabled Blackberry and other PDA devices to operational community.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Information Systems Security Program (ISSP)/P.E. 0303140K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Information Systems Security Program/IA01		17.649	11.636	17.620	12.553	12.586	12.881	13.374	Contg	Contg

FY2004 - FY2007:

1st - 4th Qtr:

- o Complete Intel Implementation
- o Provide Allied Gateway Solution
- o Continuing commercial convergence of products, including Public Key Infrastructure (PKI), Defense Information Infrastructure (DII)/Directory, COTS Standards, Secure Multipurpose Internet Mail Extension (S/MIME), MGS, Lightweight Directory Access Protocol (LDAP)
- o Close DMS Transition Hubs
- o Deliver, test, and field DMS Releases

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/05		Information Systems Security Program (ISSP) PE 0303140K				Information Systems Security Program/IA01				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYS Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
<u>Product Development</u>										
Systems Engineering and Integration	CPFF, FFP/Comp	Lockheed Martin Company, Manassas, VA	11.735	9.593	5/02	9.002	5/03	Contg	Contg	30.330
Systems Engineering	T&M/Comp	ORC, Alexandria, VA	0	0	0	2.500	11/02	2.500	2.500	2.500
Systems Integration	CPFF/Comp	SAIC, Arlington, VA	0.550	0.504	2/02	0	N/A	0	1.054	1.054
	CPFF/Comp	CSC, Arlington, VA	2.000	0	N/A	0	N/A	0	2.000	2.000
	CPFF/Comp	UNISYS, Arlington, VA	1.000	0.300	2/02	3.000	2/03	0	4.300	4.300
	CPFF/Comp	Booz, Allen & Hamilton, McLean, VA	0	0.170	11/01	0	N/A	0	0.170	0.170
	T&M/Comp	SRA, Fairlakes, VA	0	0	0	2.500	11/02	2.500	2.500	2.500
Patternless Intrusion Detection	MIPR	Army, Ft Shafter, HI	0.057	0	N/A	0	N/A	0	0.057	0.057
	MIPR	NSA, Ft Meade, MD	0.082	0	N/A	0	N/A	0	0.082	0.082
	MIPR	DISA PAC, HI	0.041	0	N/A	0	N/A	0	0.041	0.041
	MIPR	Naval Post Graduate School, Monterey, CA	0.170	0	N/A	0	N/A	0	0.170	0.170
Subtotal Product Development			15.635	10.567		17.002				

Exhibit R-3 Cost Analysis		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05	PROGRAM ELEMENT Information Systems Security Program (ISSP) PE 0303140K	PROJECT NAME AND NUMBER Information Systems Security Program/IA01

Cost Category	Contract Method & Type	Performing Activity & Location	Total PYS Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
<u>Test and Evaluation</u>										
Developmental/Operational Test and Evaluation	MIPR	Joint Interoperability Test Command, Ft Huachuca, AZ	1.839	0.891	10/01	0.618	10/02	Contg	Contg	3.348
	CPAF/SS	Data Systems Analysts Fairfax, VA	0	0.178	4/02	0	N/A	0	0.178	0.178
Security Test and Evaluation	MIPR	Joint Interoperability Test Command, Ft Huachuca, AZ	0.175	0	10/01	0	N/A	0	0.175	0.175
Subtotal Test and Evaluation			2.014	1.069		0.618				
TOTAL			17.649	11.636		17.620				

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System/CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>A. Mission Description & Budget Item Justification: The Global Combat Support System is an initiative that provides end-to-end information interoperability across and between combat support functions and command and control functions. Per Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 6723.01, within the GCSS Family of Systems (FOS), DISA is responsible for two main efforts. The first is System Architecture and Engineering for the GCSS FOS and the second is for development, integration, fielding, and operation and maintenance of Global Combat Support System (Commander in Chief/Joint Task Force)(GCSS(CINC/JTF)), which provides Combat Support (CS) information to the joint warfighter. GCSS (CINC/JTF) provides improved situational awareness by integrating CS information into the Command and Control (C2) environment and improves communications between the forward deployed elements and the sustaining bases, ultimately resulting in significant enhancement of combat support to the joint warfighter. GCSS(CINC/JTF) will significantly increase access to information as well as the integration of information across combat support functional areas. GCSS (CINC/JTF) and Global Command and Control System (GCCS) applications are available on the same workstation providing decision makers with command and control information as well as combat support information. Using web-based technology, GCSS(CINC/JTF) provides "any box, any user, one net, one picture" capability.</p> <p>In the 2nd Qtr, FY01, following a security and operational test and evaluation (OT&E), the GCSS program received limited fielding authority to field GCSS(CINC/JTF) v2.0 to Pacific Command (PACOM), Central Command (CENTCOM) and Joint Forces Command (JFCOM). During 4th Qtr FY01, following a successful OT&E, the GCCS Configuration Management Board (CMB) issued a global fielding decision to allow the GCSS (CINC/JTF) v2.0 to be fielded worldwide. In FY02, GCSS(CINC/JTF) v2.0 will be fielded to European Command (EUCOM), U.S. Forces, Korea (USFK) and the National Military Command Center (NMCC). Additional fielding will occur as prioritized by the Joint Staff. FY02 development efforts are focused on delivering enhanced capabilities based on the CINC 129 Combat Support Information Requirements identified by the Commanders in Chief (CINCs); replacing the Joint Operational Planning and Execution System (JOPES) data source with the new JOPES 2000, also known as J2K; completing the integration of the capabilities provided by the Common Operational Picture-Transportation Support Enhanced (COP-TSE); and incorporating the ability to access and display personnel information obtained from the Defense Integrated Military Human Resources System (DIMHRS). The Joint Logistics Advanced Concept Technology Demonstration (JL ACTD) capabilities will also be integrated in FY02.</p>										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>In FY03, GCSS (CINC/JTF) v3.0 will continue to be fielded to sites prioritized by the Joint Staff, integration of the Information Dissemination Management capabilities and JTL ACTD capabilities will begin, and training for users and systems administrators will be updated.</p> <p>Additionally, GCSS(CINC/JTF) has been designated as part of the Rapid Improvement Team (RIT) Pilot by the DOD CIO and USD AT&L. As a RIT Pilot, the program will be testing a streamlined acquisition paradigm to rapidly deliver capabilities to the warfighter. This program element is under Budget Activity 5 because it involves the evolutionary development of major upgrades that increase the performance of existing systems.</p> <p><u>FY 2001 Accomplishments:</u></p> <ul style="list-style-type: none"> o Began integrating the following capabilities provided by the COP-TSE: the ability to access and display information related to site categories in addition to airfields and seaports (e.g. hospitals), the ability to automatically link COP air tracks to missions and expansion of COP air tracks to include those provided by the FAA's Enhanced Traffic Management System (ETMS) (1st- 2nd Qtr; \$2,617K) o Fielded COP-CSE, GCSS Portal and CSDE to Pacific Command (PACOM), Central Command (CENTCOM) and Joint Forces Command (JFCOM). Continued to support exercises/field events like BRIGHT STAR, as prioritized by the JCS. Upgraded GCSS (CINC/JTF) to newer versions of the Defense Information Infrastructure (DII) Common Operating Environment (COE) to remain consistent with the Global Command and Control System (GCCS) clients. Continued to enhance and implement new requirements to the COP-CSE and GCSS Portal (2nd - 3rd Qtr; \$1,855K) 										
Page 2 of 10										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>o Added a Mapping capability to the GCSS Portal, which allows Portal users to view data in a similar fashion to how it is viewed on the COP-CSE. The map-based Portal now allows users to view the actual physical location of combat support resources similar to how COP-CSE users access data. (2nd - 3rd Qtr; \$4,014K)</p> <p>o Added the capability to GCSS (CINC/JTF) to access and display three new types of combat support data (Class III: Petroleum, Oil and Lubricants (POL), Class V: Ammunition and Class IX: Repair Parts) (2nd - 3rd Qtr; \$1,625K)</p> <p>o Began development of enhanced GCSS (CINC/JTF) access to combat support data by providing the capability to determine and display the exact location of repair parts specified by either National Stock Number (NSN) or requisition number. This also includes the ability to find the location of ammunition supplies specified by NSN or DOD Identification Code (DODIC); and the location of package and bulk POL products in the theater of operations (2nd - 3rd Qtr; \$1,626K)</p> <p>o Began development of enhanced GCSS (CINC/JTF) capability by enabling users the ability to identify the POL type and quantity as well as POL-related capabilities such as storage facilities (2nd - 3rd Qtr; \$1,926K)</p> <p>o Began the integration and engineering development required to integrate the new Joint Operations Planning and Execution System (JOPES) 2000 into GCSS (CINC/JTF). JOPES is the data source that supplies the Operational Plans provided to GCSS (CINC/JTF) users. (1st- 3rd Qtr; \$1,925K)</p> <p>o Began incremental development and implementation of the GCSS System Administration and Logging Tool (GSALT), which consolidates account information for GCSS (CINC/JTF) users and provides the mechanisms for securely passing security credentials among the various applications and components of GCSS (CINC/JTF). GSALT development is based on the evolving capabilities of the related security architecture in the DII COE and uses services provided by other key DII infrastructure components such as the DOD Public Key Infrastructure (PKI) program and the Global Information Grid (GIG) Directory Services (1st - 3rd Qtr; \$2,226K)</p> <p>o Developed computer-based and embedded training for GCSS (CINC/JTF) users. Successfully completed an operational test and evaluation, and security test and evaluation of the GCSS (CINC/JTF) v2.0 (2nd - 3rd Qtr; \$1,242K)</p> <p>o Total \$19.056M</p>										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>FY 2002 Plans:</p> <ul style="list-style-type: none"> o Complete integration and testing of the following capabilities provided by the COP-TSE: the ability to access and display information related to site categories in addition to airfields and seaports (e.g. hospitals), the ability to automatically link COP air tracks to missions and expansion of COP air tracks to include those provided by the FAA's Enhanced Traffic Management System (ETMS) (1st- 2nd Qtr; \$1,983K) o Field COP-CSE, GCSS Portal and CSDE to EUCOM, USFK, NMCC and other locations as prioritized by the Joint Staff. Continue to support exercises/field events like BRIGHT STAR and MILLENNIUM CHALLENGE, as prioritized by the JCS. Upgrade GCSS (CINC/JTF) to newer versions of the Defense Information Infrastructure (DII) Common Operating Environment (COE) to remain consistent with the Global Command and Control System (GCCS) clients. Continue to enhance and implement new requirements into GCSS (CINC/JTF). (1st - 3rd Qtr; \$2,466K) o Continue development and integration of Joint Operations Planning and Execution System (JOPES) 2000 with GCSS (CINC/JTF). JOPES is the data source that supplies the Operational Plans to GCSS (CINC/JTF). (1st- 3rd Qtr; \$1,683K) o Add the capability to access and display personnel information obtained from the Defense Integrated Military Human Resources System (DIMHRS) (1st - 2nd Qtr; \$1,010K) o Enhance the capabilities provided by the COP-TSE by introducing the capability to analyze Strategic Airlift and Sealift requirements, resources and shortfalls and to make suggestions for allocating those resources to meet the objectives of Supply Chain Management (3rd-4th Qtr; \$984K) o Integrate the following capabilities provided by the Joint Logistics Advanced Concept Technology Demonstration (JL ACTD): Capabilities Assessment (CA) which provides access to the buildup of a force capability in accordance with an Operational Plan; Force Browser (FB) which provides the ability to answer planning and execution questions by accessing relevant data and displaying it in a meaningful manner; Sustainment Visibility (SV) which allows the user to browse the sustainment pipeline to see the quantity and geographical location of material assets in storage and in transit (2nd - 3rd Qtr; \$1,383K) o Continue work on adding the capability to access and display three new types of combat support data (Class III: Petroleum, Oil and Lubricants (POL), Class V: Ammunition and Class IX: Repair Parts) (4th Qtr; \$1,536K) 										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>o Complete the development of the capability to determine and display the exact location of repair parts specified by either National Stock Number (NSN) or requisition number; the location of ammunition supplies specified by NSN or DOD Identification Code (DODIC); and the location of package and bulk POL products in the theater of operations (4th Qtr; \$1,037K)</p> <p>o Complete the development of the capability to enable the user to identify the POL type and quantity as well as POL-related capabilities such as storage facilities (4th Qtr; \$1,037K)</p> <p>o Modify and enhance the GCSS (CINC/JTF) System Administration and Logging Tool (GSALT) to make use of the evolving capabilities of the related security architecture in the DII COE and make use of services provided by other key DII infrastructure components such as the Global Information Grid (GIG) Directory Services (1st - 3rd Qtr; \$1,983K)</p> <p>o Update computer-based and embedded training for users and system administrators, and test GCSS (CINC/JTF) v3.0 (1st - 3rd Qtr; \$1,199K)</p> <p>o Total \$16.301M</p> <p><u>FY 2003 Plans:</u></p> <p>o Field new versions of GCSS (CINC/JTF) components to locations as prioritized by the Joint Staff, continue migrating to new versions of DII COE, and add new data sources as required to meet CINC priorities (1st- 3rd Qtr; \$3,493K)</p> <p>o Add a Collaborative Logistics Planning capability to enable planners located in different parts of the world to work together on a common plan for providing logistics support to a planned or ongoing operation, and be able to modify data in logistics planning databases (1st- 3rd Qtr; \$1,494K)</p> <p>o Continue evolving the CSDE to a more technically advanced, component-based architecture comprised of Commercial-Off-the-Shelf (COTS) open Applications Program Interface (API) components and services which will allow GCSS (CINC/JTF) to seamlessly connect its data sources and visualization components (2nd - 3rd Qtr; \$2,194K)</p>										
Page 5 of 10										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>o Enhance the GCSS Portal by the integration of Information Dissemination Management (IDM) capabilities that support retrieval of unstructured data, such as text pages, audio, video, imagery (1st - 3rd Qtr; \$2,493K)</p> <p>o Field enhanced Discretionary Access Control (DAC) security services to ensure enforcement of need-to-know and privacy act restrictions within a loosely coupled n-tiered environment while supporting assured, encrypted delivery and transfer of CSDE information. (2nd - 3rd Qtr; \$1,916K)</p> <p>o Provide users with access to authoritative medical data, such as specific medical supplies, blood, available hospital beds, staff specialties, actual and expected medical activities and medical procedures and other resources available at medical facilities. (1st- 3rd Qtr; \$1,447K)</p> <p>o Integrate into GCSS (CINC/JTF) the following capabilities being developed by the Joint Theater Logistics ACTD (JTL ACTD): Ops Log Collaboration which provides the Operator and Logistician with simultaneous access to multiple depictions of Operations/Logistics information; Logistics Plan (Log Plan) Development and Course of Action (COA) Analysis which will use the collaboration capability to establish support relationships, calculate sustainment requirements and evaluate resource sufficiency; and Logistics Watchboard which enables the logistician to rapidly compare planned sustainment estimates from the JTL Log Plan and COA Analysis with consumption data from SITREPs and tactical reporting systems (4th Qtr; \$2,793K)</p> <p>o Update training content for users and system administrators to be consistent with new GCSS (CINC/JTF) capabilities. (Conduct operational and security assessments of new GCSS (CINC/JTF) releases.) (1st Qtr; \$1,409K)</p> <p>o Total \$17.239M</p>										
B. Program Change Summary:					<u>FY01</u>	<u>FY02</u>	<u>FY03</u>			
Previous President's Budget (FY 2002)					20.834	16.483	17.406			
Appropriated Value					22.287	16.483				
Adjustments to Appropriated Value					-3.231	-0.182				
Adjustments to Budget Year Since FY 2002 President's Budget							-0.167			
Current Budget Submit/President's Budget (FY 2003)					19.056	16.301	17.239			

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002																													
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K																																
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost																											
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg																											
<p>Change Summary Explanation:</p> <p>FY01 decrease is due to below threshold reprogramming.</p> <p>FY02 decrease is due to undistributed congressional adjustments to Defense-wide RDT&E appropriation.</p> <p>FY03 adjustment is due to revised fiscal guidance.</p> <p>C. <u>Other Program Funding Summary:</u></p> <table border="0"> <thead> <tr> <th></th> <th><u>FY01</u></th> <th><u>FY02</u></th> <th><u>FY03</u></th> <th><u>FY04</u></th> <th><u>FY05</u></th> <th><u>FY06</u></th> <th><u>FY07</u></th> <th><u>To Complete</u></th> </tr> </thead> <tbody> <tr> <td>Operation and Maintenance, DW</td> <td>8.650</td> <td>12.606</td> <td>11.695</td> <td>11.837</td> <td>12.120</td> <td>13.338</td> <td>13.628</td> <td>Contg</td> </tr> <tr> <td>Procurement, DW</td> <td>5.100</td> <td>1.830</td> <td>2.442</td> <td>2.552</td> <td>2.700</td> <td>2.714</td> <td>2.768</td> <td>Contg</td> </tr> </tbody> </table> <p>D. <u>Acquisition Strategy:</u> All RDT&E work will be contracted out or funded by using MIPRs. Product Development: LOGICON, UNISYS, FGM, ComTek, ENTERWORKS, NRL; Management Services: MITRE, UMD; Test and Evaluation: LOGICON, MITRE, CSC; Support Costs: DECC-D. Current percentage of R&D work to small businesses is 30.22%. Projected at 33% for FY03.</p> <p>E. <u>Schedule Profile:</u></p> <p><u>FY 2001</u></p> <p>1st Qtr</p> <ul style="list-style-type: none"> o Conducted the GCSS (CINC/JTF) v2.0 OT&E in Pacific Command (PACOM) o Conducted the Security Assessment in PACOM <p>2nd Qtr</p> <ul style="list-style-type: none"> o Provided integration engineering support to incorporate Joint Total Asset Visibility (JTAV) system o Conducted the T&E at the Defense Enterprise Computing Center, Montgomery 												<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To Complete</u>	Operation and Maintenance, DW	8.650	12.606	11.695	11.837	12.120	13.338	13.628	Contg	Procurement, DW	5.100	1.830	2.442	2.552	2.700	2.714	2.768	Contg
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To Complete</u>																													
Operation and Maintenance, DW	8.650	12.606	11.695	11.837	12.120	13.338	13.628	Contg																													
Procurement, DW	5.100	1.830	2.442	2.552	2.700	2.714	2.768	Contg																													

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>3rd Qtr</p> <ul style="list-style-type: none"> o Fielded GCSS (CINC/JTF) v2.0 to PACOM and CENTCOM <p>4th Qtr</p> <ul style="list-style-type: none"> o Completed Phase II OT&E at JFCOM o Received GCCS CMB Global fielding decision to field v2.0 worldwide o GCSS (CINC/JTF) v2.0 became operational at JFCOM o Began integration and DII COE compliance testing of GCSS (CINC/JTF) V3.0 <p><u>FY 2002</u></p> <p>1st Qtr</p> <ul style="list-style-type: none"> o Complete Integration and Testing of COP-TSE o Field GCSS (CINC/JTF) v.2.0 to EUCCOM and NMCC; support BRIGHT STAR o Replace JOPES with J2K o Provide access to DIMHRS personnel data o Enhance GSALT <p>2nd Qtr</p> <ul style="list-style-type: none"> o Field v2.0 to USFK o Support MILLENNIUM CHALLENGE o Integrate JL ACTD capabilities <p>3rd Qtr</p> <ul style="list-style-type: none"> o Continue support of MILLENNIUM CHALLENGE o Enhance TCOP capabilities with capability to analyze Strategic Airlift and Sealift o Update training for users and system administrators o Conduct an operational and security assessment of GCSS (CINC/JTF) v.3.0 										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Global Combat Support System (GCSS)/P.E. 0303141K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Combat Support System /CS01		19.056	16.301	17.239	17.542	18.258	18.442	18.873	Contg	Contg
<p>4th Qtr</p> <ul style="list-style-type: none"> o Begin fielding GCSS (CINC/JTF) v.3.0 to locations as prioritized by the Joint Staff o Provide access to information on Ammo, POL and Repair Parts <p><u>FY 2003</u></p> <p>1st Qtr</p> <ul style="list-style-type: none"> o Continue fielding GCSS (CINC/JTF) v3.0 to sites as prioritized by the Joint Staff <p>2nd Qtr</p> <ul style="list-style-type: none"> o Enhance Discretionary Access Control mechanisms <p>3rd Qtr</p> <ul style="list-style-type: none"> o Integrate Information Dissemination Management capabilities o Integrate JTL ACTD capabilities o Provide access to medical data <p>4th Qtr</p> <ul style="list-style-type: none"> o Update training for users and system administrators <p><u>FY 2004-2007</u></p> <ul style="list-style-type: none"> o Implement improved bi-directional data transfer between security domains o Upgrade all systems and applications software to latest technology o Incorporate wireless data entry and distribution mechanisms into GCSS architecture o Complete integration and fielding of collaborative planning tools for JTL ACTD o Integrate and deliver coalition tools from Coalition Theater Logistics (CTL) ACTDs that pass military assessment o Incorporate new data sources as directed by Joint Staff to satisfy evolving CINC requirements 										
Page 9 of 10										

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/05			Global Combat Support System (GCSS) PE 0303141K				Global Combat Support System (Commander in Chief/Joint Task Force)/CS01			
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	C/CPFF	LOGICON/Arlington, VA	4.300	4.000	06/02	4.057	06/03	Contg	Contg	12.357
	MIPR	UNISYS/Falls Church, VA	.915	.850	07/02	.907	07/03	Contg	Contg	2.672
	C/CPFF	FGM/Sterling, VA	4.300	4.056	06/02	4.114	03/03	Contg	Contg	12.470
	C/CPFF	ComTek/Sterling, VA	.200	.369	09/02	.426	10/02	Contg	Contg	.995
	C/CPFF	ENTERWORKS/Sterling, VA	1.500	1.245	04/02	1.303	02/03	Contg	Contg	4.048
	C/CPFF	I-CASE/Gunter AFB, Montgomery, AL	.500	.000	N/A	.000	N/A	0	0	.500
	MIPR	FEDSIM/Bethesa, MD	1.000	.000	N/A	.000	N/A	0	1.000	1.000
	MIPR	NRL, Washington, DC	.250	.150	06/02	.207	10/02	Contg	Contg	.607
	C/CPFF	TBD			.792	03/02	.859	03/03	Contg	Contg
Management Services	FFRDC	MITRE/Vienna, VA	1.075	1.361	10/01	1.418	10/03	Contg	Contg	3.854
	C/CPFF	UMD, Eastern Shore, MD		.181	10/01	.239	10/03	0	.420	.420
Test and Evaluation	C/CPFF	LOGICON/Arlington, VA	.900	1.086	06/02	1.144	03/03	Contg	Contg	3.130
	C/CPFF	SAIC/Falls Church, VA	.400	.000	N/A	.000	N/A	0	.400	.400
	FFRDC	MITRE/Vienna, VA	1.400	1.361	10/01	1.419	10/02	Contg	Contg	4.180
	MIPR	JITC/Ft Huachuca, AZ	.134	.000	N/A	.000	N/A	0	.134	.134
	PR	CSC/Falls Church, VA	.300	.150	06/02	.357	04/03	Contg	Contg	.807
	PR	NRL/Washington, DC	.302	.000	N/A	.000	N/A	0	.302	.302
	PR	MITSS/Langston, OK	.280	.000	N/A	.000	N/A	0	.280	.280
	PR	TBD/HBCU		.300	TBD	.332	TBD	Contg	Contg	.632
Support Costs	MIPR	DECC-D, Montgomery, AL	1.300	.400	12/01	.457	10/02	Contg	Contg	2.157
Total			19.056	16.301		17.239				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>A. <u>Mission Description and Budget Item Justification:</u> In November 1997, the Deputy Secretary of Defense published the Defense Reform Initiative (DRI) which identified the need to promulgate electronic business operations throughout the DOD. To foster the increased application of Electronic Business/Electronic Commerce (EB/EC) across the Department, Defense Reform Initiative Directive (DRID) #43 was issued to establish the overall direction of the DOD Joint Electronic Commerce Program initiative as well as formally establish the Joint Electronic Commerce Program Office (JECPO). Furthermore, the DOD Chief Information Officer (CIO) has developed a cohesive set of guiding principles, goals, objectives, and strategies to promote EB/EC as a complementary business process throughout the functional areas of the Department. The DOD EB/EC strategic guidance and vision can be found in the DOD EB/EC Strategic Plan. It sets forth the summary level direction the Department must take to implement EB/EC in support of its global mission. Since May 1998, JECPO has focused its efforts on EB/EC tools and applications that exhibit joint interoperability and support cross-functional business processes that have been re-engineered to exploit EC technologies. Current programs have been categorized into the work areas of applications and engineering. This program element is under Budget Activity 5 because it involves the development of major upgrades that increase the performance of existing systems.</p>										
Page 1 of 21										

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p><u>FY 2001 Accomplishments:</u></p> <p>Central Contractor Registration (CCR) - The CCR is a web-based system that is the primary repository for vendor data required for conducting business with the DOD. The CCR database currently consists of procurement and financial information as well as trading partner data required to do business electronically with the government. The purposes of the database are to allow the DOD to more efficiently comply with the Debt Collection Improvement Act of 1996; to simplify and streamline procurement by reducing duplicate requirements and processes; and to increase visibility of vendor sources for specific goods and services. Contractors are only required to register in the database one time with annual renewals. (1st Qtr - 4th Qtr; \$3.804M).</p> <p>DOD Business Opportunities (DODBusOpps) - The DOD Business Opportunities Model is a web-based system, which provides a single search mechanism for vendors to review DOD on-line solicitations. Each of the Defense Services/Agencies provides links through their own web-based systems and to DOD Business Opportunities. (1st Qtr - 4th Qtr; \$2.755M).</p> <p>Electronic Document Access (EDA) - EDA is a web-based system that provides on-line storage and retrieval of post award contracts, contract modifications, personal property, freight Government Bills of Lading (GBLs), and vouchers. Documents are stored in a compressed text format. The combined use of this format with Internet technology provides a mechanism to electronically store and retrieve large volumes of information across the existing communication networks. EDA capitalizes on commercial tools that are widely used today. EDA will increase its customer base from DFAS recipients of contracts to include industry and will pioneer the use of Public Key Infrastructure (PKI) for information assurance. Benefits include the reduction of unmatched disbursements, reduced paper consumption, and increased convenience to members of the user community. (1st Qtr - 4th Qtr; \$2.509M).</p>										
Page 2 of 21										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>DOD Electronic Mall (E-Mall) - The DOD E-Mall provides electronic buying capabilities leveraging the work done for commodities by DLA. The DOD E-Mall is a single point of entry system that can search, locate, compare and order material based upon quality, price, and availability. It provides a single point of entry and search capability for all Internet-based DOD electronic catalogs. This enables customers to buy both products and services. The DOD E-Mall is being constructed with a commodities corridor, an information technology corridor, and a services/construction corridor. The Military Services and Defense Agencies are fielding "stores" within these corridors. Users can search across the E-Mall system and order from the following sources: DLA Inventory Control Point managed commodity items and Defense Reutilization and Marketing Office reutilization items, Defense Supply Center Philadelphia's ASCOT electronic catalog for clothing and textile items, DLA's E-CAT electronic catalog of commercial part numbered items, Navy's ITEC Direct electronic catalog of IT hardware and software items, Army Tank and Automotive Command, Inventory Control Point (ICP) long term contracts for photographic and lighting supplies, food services, and other mechanical items. In addition to providing one-stop visibility for ordering from all DOD electronic catalogs, the E-Mall will provide one stop visibility of the status of orders. The E-Mall provides the benefits of reduced logistics response time and improved visibility of both government and commercial sources of supply, as well as facilitating the use of the Government purchase card. (1st Qtr - 4th Qtr; \$2.465M).</p> <p>Wide Area Workflow (WAWF) - WAWF is a web-based system designed to eliminate paper from several of the processes in the contracting and contract pay lifecycle. Initial implementation addresses receipt/acceptance and invoice/payment. Capabilities will be added to address Purchase Request/Funding Document and Contract Closeout processes. The WAWF-Receipt and Acceptance prototype provides capabilities for vendors to submit invoices and receipt/acceptance documents using interactive web-based forms or File Transfer Protocol data directly from their internal accounting systems. Government inspection/acceptance capabilities are provided via the web and all documents are accessible to authorized users in a virtual contract payment folder. During functional proof of concept, WAWF is prototyping several commercial tool sets to assess capabilities for supporting functional and technical requirements.</p>										
Page 3 of 21										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>The WAWF-Contract Closeout segment includes all contracts and associated documents required for contract closeout, thereby providing a multitude of people/organizations the capability to accomplish their part of the closeout via access to all documents in a single location. Benefits include support for expeditious processing of invoices/receipts and reduction of unmatched disbursements since all documentation required for payment is easily accessible. (1st Qtr - 4th Qtr; \$4.303M).</p> <p>Paperless Contracting - Past Performance Automated Information System (PPAIS) enhancements provide the tools for sharing and managing past performance information across DOD, to include enhancements identified by the End to End Process Modeling effort, the evolving EC Architecture, interface improvements with related systems, and user defined changes. This includes a query capability for authorized users into data collection by report card systems, including PPAIS itself, a collection capability for those activities which do not have access to an existing collection system, and a performance tracking system drawing on a variety of data sources. (1st Qtr - 4th Qtr; \$0.475M).</p> <p>DOD Electronic Business Exchange (DEBX) - The DEBX provides routing, archiving, translation, DataMart/DataWarehouse and other value added services to facilitate the paperless exchange between government contract-writing, accounting, disbursing systems, and commercial trading partners. DEBX also supports business domains outside the procurement arena to include defense travel, transportation, court-ordered garnishment of wages, EMALL, WAWF, EDA, BusOps, CCR, and Purchase Card initiatives. (1st Qtr - 4th Qtr; \$2.518M).</p> <p>EC Integration Services - Provides comprehensive electronic commerce systems and security engineering support for the Electronic Commerce systems. This effort provides support for identification, analysis, integration and development of</p>										
Page 4 of 21										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>electronic commerce on-line systems and facilities in a way that maximizes technical integration with the Defense Information Infrastructure (DII) and seeks maximum operational and cost saving efficiencies in DOD electronic commerce. (1st Qtr - 4th Qtr; \$1.331M).</p> <p>System/Program Testing and Analysis - The JECPO Electronic Commerce Infrastructure consists of multiple systems developed for multiple organizations by multiple vendors. These individual systems are integrated into the Electronic Commerce Infrastructure. The Joint Interoperability Test Command (JITC) supports the Electronic Commerce Processing Node, Electronic Document Access, Central Contractor Registration, and Electronic Commerce Interoperability Process by testing the Value Added Network, the DOD/Federal Gateway, and the Trading Partner EC readiness. (1st Qtr - 4th Qtr; \$1.627M).</p> <p>Product Data Markup Language (PDML)- PDML is a vocabulary of the extensible Markup Language (XML) for the purpose of achieving product data interoperability, product data management system integration, and the integration of contractor data repositories with DOD's legacy system - JEDMICS. Also, working with acquisition Integrated Digital Environment (IDE) and logistics oversight groups to conduct technology seminars to encourage the use of Electronic Logistics Interoperability Trading Exchange (ELITE) in legacy weapon system logistic support. (1st Qtr - 4th Qtr; \$0.665M).</p> <p>Electronic Portal Access System (EPASS) - EPASS is to simplify end user access to the various eBusiness applications that are currently available in a stand-alone fashion. Under the EPASS concept, users will execute a single sign-on to an infrastructure that provides a single point of entry, authentication, and authorization function. The goal is to ultimately provide a capability that will save time and reduce cost for other applications and to provide a framework for the future. (1st Qtr - 4th Qtr; \$0.760M).</p>										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>Defense Reform Initiative Directive #48 (DRID #48) - This effort is to replace DOD-unique logistics data standards with American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12 standards as a stepping-stone to move the Department's transactional-based logistics business processes towards the use of international open data interchange standards. This also includes the design and development of a Web-based Supply Discrepancy Report (SDR) process, Electronic Commerce Resource Center (ECRC) development, and the provision of ANSI X12/Defense Logistics Management System (DLMS) training for participants. (1st Qtr - 4th Qtr; \$1.235M).</p> <p>Electronic Commerce/Electronic Data Interchange (EC/EDI) Standards Program - EC/EDI is to facilitate development, maintenance, configuration management, publishing, and distribution of Implementation Conventions (IC's) and Guidelines necessary for DOD Electronic Commerce using Electronic Data Interchange. This effort ensures that all EC/EDI used by DOD and other Federal entities comply with national and international published standards and business practices. (1st Qtr - 4th Qtr; \$0.665M).</p> <p>Architecture Analysis and Recommendations - This effort assists in the evaluation and integration of commercial-off-the-shelf (COTS) tools to replace custom Government-developed EC applications; it defines, evaluates, and assists in incorporating EC security solutions commensurate with defined security objectives; and applies enterprise application integration techniques and tools toward the goal of achieving a fully integrated DOD EB/EC infrastructure. (1st Qtr - 4th Qtr; \$1.640M).</p> <p>Certification and Accreditation - In accordance with the Defense Information Technology Security Certification and Accreditation Process (DITSCAP), each application requires a current System Security Authorization Agreement (SSAA) and Security Test and Evaluation (ST&E). The SSAA describes the application, operational and communication environments, threats, and appropriate security information. Once the SSAA has been agreed upon by key stakeholders the application is tested (i.e., ST&E) to certify the compatibility of the application in its computing environment. (3rd Qtr - 4 Qtr; \$0.400M)</p>										
Page 6 of 21										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>EB Architecture - Electronic Business/Electronic Commerce (EB/EC) Architecture tool documents the elements of a comprehensive functional and technical process architecture to systematically identify and promote opportunities for expansion of EB/EC capabilities across DOD. This goal is to identify and oversee implementation of EB and Electronic Document Interchange integration. It will become the roadmap for moving EB/EC to a fully automated, interactive, and seamless flow of information supporting Joint Vision 2020 and the warfighter. (2nd Qtr - 4th Qtr; \$0.191)</p> <p>Total \$27.343M</p> <p>FY 2002 Plans:</p> <p>Central Contractor Registration - This effort provides continued support to DOD by collecting vendor data (specifically, electronic funds transfer data) in order to comply with the Debt Collection Improvement Act (DCIA), as well as vendor identification and socio-economic data provided to the contracting, reporting and finance functional areas. Mission includes providing value added capabilities for accessing and using the vendor data collected for the users it supports. (1st Qtr -4th Qtr; \$2.946M).</p> <p>DoD Business Opportunities - Efforts are to create synergy and increase visibility among current DoD web sites, maintain flexibility at the local level, support individual DoD Component initiatives, and increase electronic commerce and paperless operations. (2nd Qtr - 4th Qtr; \$0.961M).</p> <p>Electronic Document Access - Offers the DoD the opportunity to store and retrieve contract documents, Government Bills of Lading (GBL), vouchers and other document types electronically. This reduces the need to print, mail, file, and manage paper. (1st Qtr - 4th Qtr; \$5.174M).</p>										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>DOD Electronic Mall - Permits users to establish "one stop" single registration via the Internet, whereby orders can be placed against a wide range of supply vehicles which allows the use of Government Purchase Cards, comparison of prices and deliveries and chooses what best fits the need, selects the source desired, obtains a full range of contract administration/support services, and obtains status of orders placed. (2nd Qtr - 4th Qtr; \$1.053M).</p> <p>Wide Area Workflow - Continues development and maintenance of the WAWF-Receipts and Acceptance. The EC/EDI community has strongly embraced the creation of standardized data type definitions and corresponding tools. Expands WAWF to include all contracts and documents, including a contract closeout check, required for contract closeout thereby providing organizations the ability to accomplish their part of the closeout process using documents in one place. Perform integration activities to ensure EC applications are not developed in a stovepipe fashion. (1st Qtr - 4th Qtr; \$4.031M).</p> <p>Paperless Contracting - Maintains existing DoD data warehouse, retrieval, and collection system. Provides operations, maintenance, and support services. Provides program and configuration management, and implements approved user requested enhancements. Implements and fully deploys mechanism for collection and use of passive data across all components. Fully integrates passive and report card contract data with the procurement shared data warehouse(s). Implements security improvements. (3rd Qtr - 4th Qtr; \$0.296M).</p> <p>DOD Electronic Business Exchange - Provide routing, archiving, translation, DataMarts/DataWarehousing and other value added services to facilitate the paperless exchange between government contract-writing, accounting and distribution systems and commercial trading partners. (1st Qtr - 4th Qtr; \$3.158M).</p> <p>EC Integration Services - Provide comprehensive integrated Electronic Commerce systems engineering support for the DoD Electronic Commerce systems, i.e., support for identification, analysis, integration and development of electronic commerce programs in a way that maximizes technical integration with the DII and seeks the maximum operational and cost saving efficiencies available to DoD electronic commerce. (1st Qtr - 4th Qtr; \$0.820M).</p>										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE						
RDT&E, Defense-Wide/05				Electronic Commerce/ PE 0305840K						
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>System/Program Testing and Analysis - The JECPO Electronic Commerce Infrastructure consists of multiple systems developed for multiple organizations by multiple vendors. These individual systems are integrated into the Electronic Commerce Infrastructure. The Joint Interoperability Test Command (JITC) supports the Electronic Business Exchange (DEBX), Electronic Document Access, Central Contractor Registration, and Electronic Commerce Interoperability Process by testing the Value Added Network, the DOD/Federal Gateway, Trading Partner EC readiness, WAWF, DOD Business Opportunities, DOD EMALL, and the Electronic Portal Access System. (1st Qtr - 4th Qtr; \$2.316M).</p> <p>Product Data Markup Language (PDML) - Establishes a performance baseline for government and industry trading exchange operations in the DOD weapon system acquisition and logistics support environment. Using ELITE and existing Integrated Digital Environment (IDE) as source of requirements, formally describes the data exchange requirements in qualitative and quantitative terms. (2nd Qtr - 4th Qtr; \$0.499M)</p> <p>Electronic Portal Access System (EPASS) - Develops enhancements to the portal that enables users easier access, authentication, and authorization to the suite of DOD applications providing paperless acquisition. Additionally, EPASS automates paper-based and predominately manual-user access processes used by the majority of acquisition systems. (2nd Qtr - 4th Qtr; \$0.841M)</p> <p>DRID #48 - Evaluates existing and new technical business processes, develops and integrates standards, business rules, and implementation conventions and supplements. Researches and identifies the best commercial and international operational methods (uniform policies, procedures, time standards, transactions, and data management) available to meet DOD's Joint Vision (JV) 2010/2020 war-fighting requirements. (2nd Qtr - 4th Qtr; \$0.790M)</p> <p>Electronic Commerce/Electronic Data Interchange (EC/EDI) - Promotes EC/EDI standards that comply with national practices that are to be used by Federal and DOD entities, and seeks consistency between the technical view of the EB/EC Architecture and the Joint Technical Architecture. (2nd Qtr - 4th Qtr; \$0.107M)</p>										
Page 9 of 21										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>Architecture Analysis and Recommendations - Architecture planning, design, and development. Analysis of the DOD CCR database design. Research, design, and develop EPASS security concept and operations. (1st Qtr - 4th Qtr; \$1.612M)</p> <p>Certification and Accreditation - Conduct Security Test and Evaluation (ST&E) review of operating site's personnel, procedures and equipment to determine if and how the site meets the required level of security. (3rd Qtr - 4th Qtr; \$0.474M)</p> <p>EB Architecture - Develops and maintains the EB/EC Architecture reflecting improved, reengineered and integrated business processes, and assists OSD and DOD components in the development of consistent and integrated EB/EC architectures. (1st Qtr - 4th Qtr; \$0.158M)</p> <p>Total \$25.236M</p> <p><u>FY2003 Plans:</u></p> <p>CCR - Improved accuracy of data by including additional validations by authoritative sources (such as EIN with IRS - assuming statutory changes allow it. Expand data element collection to support inter-agency transfers and similar finance requirements. Expand customer base across DoD and Federal users which will further standardize information being used in procurement/finance environments. (1st Qtr - 4th Qtr; \$2.300M)</p> <p>DoDBusOps - In addition to running DoDBusOpps, an additional effort to complete the FedBizOpps integration and to make it a routine, instead of a manual process. (1st Qtr - 4th Qtr; \$1.937M)</p> <p>EDA - Continue development and demonstrate Electronic Document Access (EDA) proof of concept for storing and accessing contract documents including contracts documents via the World Wide Web (WWW). These funds will provide the</p>										
Page 10 of 21										

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg

development of EDA application to authorize users with web-based access to DoD business documents including contracts and contract modifications, personal property and freight GBL, Vouchers, and Materials Acceptance and Accounts Payable Report data. Also these funds will be used to define the contract effort to acquire technical support in the areas of software/system engineering, programming, and analysis. (1st Qtr - 4th Qtr; \$5.000M)

EMALL - The DoD EMALL began migration designed to assist in DISA's support of EDA. This transition will be completed and put into production. The benefits will be lower maintenance costs, improved ability to integrate commercial software packages and capabilities and faster development times for new capabilities. It will also provide a basis for easily interfacing with external vertical exchanges (e.g. EXOSTAR) and other commercial catalog systems. (1st Qtr - 4th Qtr; \$1.993M)

WAWF - Increases ability to handle more types of invoicing needs to support eInvoicing mandate. For example, WAWF will be enhanced to support miscellaneous payment forms, progress payments, and foreign military payments. Increases ability to reach a multitude of vendors and government personnel with enhanced web-based training. By continuing to evolve the web-based training, we no longer need to support instructor led training. Web-based training is anywhere, anytime, and less money. Increase maintainability of the application by moving towards COTS software. Replace GOTS workflow engine with COTS product. Ability to support all DOD vendors. Increases the number of application servers/db servers to support better overall capability. (1st Qtr - 4th Qtr; \$6.853M)

DEBX - The primary objective is to obtain support in the development and fielding of an improved capability to conduct Electronic Data Interchange (EDI) supporting Electronic Business/Electronic Commerce (EB/EC) within the Federal government. This includes necessary technical support to: DISA/JECE (EC/EDI Engineering Management Office); the DoD eBusiness Program Office; DISA/WESTHEM (EC/EDI operators); and the Defense Logistics Agency's (DLA) Defense Automatic Addressing System Center (DAASC).

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>The fundamental objectives of this effort shall enhance the DEBX to include the capabilities of processing the EDI transactions currently being processed by the DLA EDI infrastructure, to connect systems to support the Defense Travel System (DTS), to connect systems to support the Defense Finance and Accounting Service (DFAS), to connect systems to support the US Transportation Command in their effort to implement EDI-based in-transit visibility capability in the Global Transportation Network (GTN), to connect the automated invoice processing system with the ECI, and to connect systems to support other domains as needed. (1st Qtr - 4th Qtr; \$2.427M)</p> <p>EC Integration and Implementation - Provides comprehensive integrated systems engineering support for the DoD Electronic Commerce systems, i.e., support for requirement identification, analysis, integration and development of electronic commerce programs in a way that maximizes technical integration with the DII and achieves the maximum operational and cost saving efficiencies in DOD electronic commerce. This includes the requirements to be used for the assessment of COTS information technology and the support identified in the JECPO Strategic Implementation Plan (SIP), Electronic Workflow support of the functional requirement analysis for the Electronic Workflow prototype to include the engineering MIPR process and the DOD EMALL, and Vendor Tracking Application support of the requirements process with a vendor tracking capability. This capability will track vendors that interface with DoD eBusiness programs. The Implementation objective is to provide comprehensive electronic commerce systems and security engineering support for the Electronic Commerce systems, specifically implementation of the Next Generation Electronic Commerce Infrastructure (ECI). This new ECI will be primarily integration of existing Electronic Commerce systems with new tools such as an EC Technical Library, ePass, JECPO Evaluation and Demonstration Center, and the Interoperability Catalog capability using XML. This effort will provide support for identification, analysis, integration and development of electronic commerce on-line systems and facilities located at DISA and DLA in a way that maximizes technical integration with the DII and achieves the maximum operational and cost saving efficiencies in DOD electronic commerce. This effort includes the engineering and integrating support to combine the DISA and the DLA electronic commerce infrastructures, and the operation and maintenance of the JECPO Evaluation and Demonstration Center (EDC). (1st Qtr - 4th Qtr; \$1.187M)</p>										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>System Testing - The Defense Electronic Business Program Office Paperless Contracting and Common Business Environment consists of multiple systems, developed for multiple DLA/DISA organizations, by multiple vendors. The Joint Interoperability Test Command (JITC) provides development and system testing, test plan writing, functional, performance, stress and operation acceptance testing, and test report writing. Systems supported include: DoD Electronic Business Exchange (DEBX), Electronic Document Access (EDA), Central Contractor Register (CCR), Electronic Commerce Interoperability Process (ECIP), Value Added Networks (VANs), DoD/Federal Gateway (GW), Automated Information Systems (AISs), Trading Partners (TP) EC readiness, Electronic Commerce System Level Tests, Wide Area Work Flow (WAWF), DoD Business Opportunities, DoD E-Mall, and Electronic Portal Access Services System (ePASS). (1st Qtr - 4th Qtr; \$1.333M)</p> <p>EPASS - Planned benefits include develop enhancements to EPASS covering changes to security, additions and improvements to DoD eBusiness infrastructure, and functionality; and accomplish further DoD EPASS implementations and necessary application interfaces. (2nd Qtr - 4th Qtr; \$0.500M)</p> <p>EDI Standards - The objective is to provide comprehensive electronic commerce systems and security engineering support for the Electronic Commerce systems to investigate Commercial-off-the-Shelf (COTS) products for potential use in the Next Generation EC infrastructure. Qualified engineering personnel, with a working knowledge of EC products, conduct the evaluation under the direction of the JECPO EC Engineering Division.</p>										
Page 13 of 21										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p>Current methodology requires the engineering division to survey commercial sources and, subsequently, evaluate appropriately mature technologies. The evaluation process usually involves 3 phases: first, evaluation of products, installation, and documentation right "out of the box"; second, evaluation of the functionality of properly and fully configured products; and third, evaluation of proof of concept or prototyped systems. Vendors usually provide software at no expense to the government under an evaluation license to cover the period of evaluation (30 to 60 Days). (1st Qtr - 4th Qtr; \$0.503M)</p> <p>Certification and Accreditation (C&A) Process - In accordance with the Defense Information Technology Security Certification and Accreditation Process (DITSCAP), each application requires a current System Security Authorization Agreement (SSAA) and Security Test and Evaluation (ST&E). The SSAA describes the application, operational and communication environments, threats, and appropriate security information. Once the SSAA has been agreed upon by key stakeholders, the application is tested (i.e., ST&E) to certify the compatibility of the application in its computing environment. (1st Qtr - 4th Qtr; \$0.090M)</p>										
Page 14 of 21										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002																									
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K																													
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost																								
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg																								
<p>EB Architecture - Assist OSD Principal Staff Assistants (PSA) and the DoD Components in the development of consistent and integrated EB/EC architectures for their functional areas of responsibility. The purpose is to continue the work supporting the DoD eBusiness Program Office EB/EC Architecture initiatives and programs with functional, analytical, program management support, and editorial services to the DoD eBusiness Office Directorate and the EB/EC Architecture Team. This includes: rewriting the EB/EC Architecture IAW revised guidance from ASD(C3I); assisting other services and agencies by providing experience and lessons learned from the previous two years; establishing and maintaining a database and providing training in its use. (1st Qtr - 4th Qtr; \$0.142M)</p> <p>Total \$24.265M</p> <p>B. <u>Program Change Summary</u></p> <table border="0"> <thead> <tr> <th></th> <th><u>FY01</u></th> <th><u>FY02</u></th> <th><u>FY03</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 2002)</td> <td>26.703</td> <td>25.519</td> <td>22.173</td> </tr> <tr> <td>Appropriated Value</td> <td>28.094</td> <td>25.519</td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td>-0.751</td> <td>-0.283</td> <td></td> </tr> <tr> <td>Adjustments to Budget Year since FY 2002 Presidents Budget</td> <td></td> <td></td> <td>2.092</td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY 2003)</td> <td>27.343</td> <td>25.236</td> <td>24.265</td> </tr> </tbody> </table> <p>Change Summary Explanation:</p> <ul style="list-style-type: none"> FY 2001 change is due to below threshold reprogramming. FY 2002 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation. FY 2003 change is due to increased emphasis on the central contractor registration effort. 												<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	Previous President's Budget (FY 2002)	26.703	25.519	22.173	Appropriated Value	28.094	25.519		Adjustments to Appropriated Value	-0.751	-0.283		Adjustments to Budget Year since FY 2002 Presidents Budget			2.092	Current Budget Submit/President's Budget (FY 2003)	27.343	25.236	24.265
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>																															
Previous President's Budget (FY 2002)	26.703	25.519	22.173																															
Appropriated Value	28.094	25.519																																
Adjustments to Appropriated Value	-0.751	-0.283																																
Adjustments to Budget Year since FY 2002 Presidents Budget			2.092																															
Current Budget Submit/President's Budget (FY 2003)	27.343	25.236	24.265																															

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg

C. Other Program Funding Summary:

	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>Cost To Complete</u>
Operation and Maintenance:	15.754	14.857	15.431	15.997	16.564	16.803	17.191	continue
Procurement:	3.674	3.648	3.660	3.658	3.682	3.720	3.804	continue

D. Acquisition Strategy - The mission of JECPO is to accelerate the application of Electronic Business Practices and Associated Information Technologies to improve DoD acquisition processes, support life-cycle sustainment and other departmental business operations. JECPO is developing and maintaining Web-based applications to support the paperless contracting life cycle from requirements generation through contract closeout. These include Central Contractor Registration, Wide Area Workflow, Past Performance Automated Information System, Electronic Document Access, Email, and Business Opportunities. JECPO is developing a DoD EC Architecture. The architecture's operational, systems, and technical views are being vetted throughout the Department through the Architecture Coordination Council in the DoD CIO. JECPO is addressing EC Integration Services by using public key infrastructure to facilitate single sign on capabilities, and by data integration among JECPO applications. The projected Common Business Environment, made up of applications and infrastructure, will leverage the DII Common Operating Environment (COE).

E. Schedule Profile

FY 2001
1st Qtr:

- DII COE compliant software received
- Receive complete software documentation for Central Contractor Registration (CCR) software components
- Receive installation procedures

Page 16 of 21

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<ul style="list-style-type: none"> - Receive WAWF user's manual - Receive software test plan and test cases - Receive DoD Electronic Business Exchange (DEBX) software (DII COE segments) - Receive translator maps and documentation for systems connected to DEBX - Ongoing research of EC/EB education material - Development/maintenance of the CCR website and database - Maintain Bus Opps web capability/applications/user interface - Finalize PDML Repository/Registry approach - Development of business rules, procedures, and implementation connections/supplements <p>2nd Qtr:</p> <ul style="list-style-type: none"> - Continue partnerships with Services and Agencies. - Replace DOD unique proprietary information exchange standards with commercial technologies - Receive development and expansion of BUSOPPS website - Update and promulgate technical review committee commercial EDI implementation responsibilities <p>3rd Qtr:</p> <ul style="list-style-type: none"> - Continue DoD-wide execution of the Corporate Implementation Plan - Migration of corporate level infrastructure and services to ASC X12 - Continue development of policy and procedures for centralized management and control of DoD logistics data - Provide performance measures as required by Government Performance Act of 1996 <p>4th Qtr:</p> <ul style="list-style-type: none"> - Prepare and deliver training on the passive system to DoD contracting activities - Development of EDA applications 										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<ul style="list-style-type: none"> - Provide operational support to the DoD data administration program and Defense Logistics Management Standards Office (DLMSO) operational area - Develop templates and provide conversion support - Receive engineering guidance on the strategic direction in the evolution to the EC architecture - Develop implementation plan and charter for End-to-End process model - Develop performance measures and customer survey instruments - Assist in development of common user support requirements <p>FY 2002 1st - 4th Qtr</p> <ul style="list-style-type: none"> - Continue corporate level configuration management support - Increase CCR functionality - Efforts to support single face initiative to all DOD vendors - Continue improvement of the acquisition automation process - Contractor integration support - Integrating the use of COTS tools <ul style="list-style-type: none"> - Analysis of engineering issues and oversight of their resolution - Coordinating the migration to commercial standards - Development of business rules, procedures, and implementation connections/supplements - Create a new COTS-based component in the EB/EC infrastructure for authentication, authorization, and registration - Continuous updates to metrics - Provide a management tool and roadmap for DOD eBusiness initiatives - Assist in development of new and revised management process business rules 										
Page 18 of 21										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Electronic Commerce/ PE 0305840K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Electronic Commerce/EC01		27.343	25.236	24.265	18.527	15.942	16.106	16.472	Contg	Contg
<p><u>FY 2003 - FY 2007</u> 1st - 4th Qtr</p> <ul style="list-style-type: none"> - Build Bid module that is so generic as to be used or interact with any system - Develop test requirements document to capture functional, operational and performance requirements - Finalize and promulgate a respository/registration approach for PDML - Develop and implement a full scale customer outreach and support marketing plan - Develop flexible automated registration capability for all EPASS linked electronic business applications - Provide a linkage between the DOD EB/EC goals, objectives, and strategies and the various projects benefiting the eBusiness community - Analyze, review, comment, and approve implementation conventions to be adopted by Federal and DOD entities - Provide roadmap for the remaining logistics systems and technical architecture - Development of web-based prototype to include documentation and relational tables and databases 										
Page 19 of 21										

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/05		Electronic Commerce/PE 0305840K				Electronic Commerce/EC01				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
<u>Applications</u>										
Central Contractor Registration	MIPR/PR	INRI/DLIS/PWC	3.804	2.946	10/01	2.300	10/02	Contg	Contg	9.926
DOD Business Opportunities	MIPR/PR	Navy//DISA	2.755	0.961	01/02	1.937	01/03	Contg	Contg	7.622
Product Data Markup Language	PR	KPMG Consulting	0.665	0.499	06/02	0.000	N/A	0	Contg	1.164
EPASS	MIPR	EDS	0.760	0.841	02/02	0.500	02/03	Contg	Contg	2.110
Wide Area Workflow-RA	PR	CACI/SSH	2.400	1.150	02/02	3.794	10/02	Contg	Contg	6.642
Wide Area Workflow-INT	PR	INRI/EDS	1.403	2.486	02/02	2.227	10/02	Contg	Contg	6.000
Wide Area Workflow-Training	MIPR/PR	SAIC/FISC	0.500	0.395	12/01	0.832	10/02	Contg	Contg	1.490
Department of Defense Past Performance Automated Information System	MIPR/PR	Navy/Compaq	0.475	0.296	02/02	0.000	N/A	0	.771	.771
DOD EMALL	MIPR/PR	Raytheon/Dell/Excalibur/Red River	2.465	1.053	05/02	1.993	05/03	Contg	Contg	6.821
Electronic Document Access	MIPR	EDS/DAPS	2.509	5.174	10/01	5.000	10/02	Contg	Contg	12.279
DOD Electronic Business Exchange	PR	INRI	2.518	3.158	10/01	2.427	10/02	Contg	Contg	9.968
DRID #48	PR	LMI/Pinkerton/Amerid	1.235	0.790	03/02	0.000	N/A	0	2.025	2.025

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/05		Electronic Commerce/PE 0305840K				Electronic Commerce/EC01				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYS Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Electronic Commerce/Electronic Data	PR	LMI/PCCI/Amerind	0.665	0.107	01/02	0.503	10/02	Contg	Contg	1.847
EC Integration	PR	Anvicon	1.331	0.820	02/02	1.187	10/02	Contg	Contg	3.809
Architecture Analysis	MIPR	MITRE	1.640	1.612	11/01	0	N/A	0	Contg	3.252
JITC	MIPR	JITC	1.627	2.316	10/01	1.333	10/02	Contg	Contg	6.520
Security Documentation	MIPR	TBD	0.400	0.474	03/02	0.090	03/03	Contg	Contg	1.113
EB Architecture	PR	Pinkerton	<u>0.191</u>	<u>0.158</u>	03/02	<u>0.142</u>	03/03	Contg	Contg	0.536
TOTAL			27.343	25.236		24.265				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/05					Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg

A. Mission Description & Budget Item Justification: The Advanced Information Technology Services Joint Program Office (AITS-JPO), facilitates the transition of the Defense Advanced Research Projects Agency's (DARPA's) and other agencies' substantial information systems technology research into DISA's operational support of the warfighter. The AITS-JPO, among other functions: a) provides advanced technology demonstrations and collaboration capabilities for R&D and Battle Lab communities; b) engineers and reinforces components for leave-behind and transition into the Global Information Grid (GIG), including the Global Command and Control System (GCCS) and Global Combat Support System (GCSS); c) augments transitioning products with improved security, scalability, and GIG and Common Operating Environment (COE) compliance; and d) provides advanced, hardened capabilities (Leading Edge Services) to select operational beta test sites. As a result, this program element is under Budget Activity 5. Leading Edge Services are information transport and value added services not available from the DII and for which customers are willing to assume some of the risk associated with development and initial deployment. These services include information processing, storage, and retrieval; communications (voice, data, video, multimedia); security technology and application in command, control, and intelligence; and combat support for the worldwide DOD communities.

FY 2001 Accomplishments:

- o Initial transition to GCCS of web-based planning tools for CINC and Joint Task Forces using products from the Adaptive Course of Action (ACOA) Advanced Concept Technology Demonstration (ACTD), and other relevant DARPA and Service technology. (2nd Qtr - 4th Qtr; \$2.820 million).

- o Transitioned enhanced Battlespace Awareness tools into the Integrated Intelligence and Imagery (I3) component of GCCS and other C2 systems (2nd Qtr - 4th Qtr; \$1.879 million).

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg
<p>o Demonstrated integrated knowledge-based products for CINC command centers and distributed decision-makers, to support dissemination of relevant, mission-critical information on geospatial, intelligence, and plans information to tactical forces (2nd Qtr - 3rd Qtr; \$0.716 million).</p> <p>o Continued integration of Joint Logistics products and DARPA combat support tools into GCCS for support to Joint Force logisticians. Initiated Joint Logistics Decision Tools pilot services to selected CINCs (2nd Qtr - 4th Qtr; \$0.885 million).</p> <p>o Demonstrated extensive functional integration between the Joint Force operational planning functions of GCCS and advanced combat support functions (2nd Qtr - 4th Qtr; \$1.880 million).</p> <p>o Transitioned an upgraded distributed decision-making toolkit and demonstrated advanced shared applications that increase interaction between C4I systems, combat support systems and modeling and simulation components (2nd Qtr - 4th Qtr; \$1.990 million).</p> <p>o Demonstrated a cost-effective capability to support dynamic bandwidth management within the global networks to support priority dissemination of time critical information and information release to coalition forces (2nd Qtr - 4th Qtr; \$0.934 million).</p> <p>o Provided enhanced applications that take advantage of dynamic bandwidth allocation on limited networks by coupling to an optimized information dissemination and network interface (2nd Qtr - 4th Qtr; \$1.462 million).</p> <p>o Initial transition of products from the DARPA Information Assurance (IA) program and other IA technology into the Global Information Grid infrastructure, including intrusion detection and guards (2nd Qtr - 4th Qtr; \$1.930 million).</p> <p>o Total \$14.496 million</p>										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg

FY 2002 Plans:

- o Complete transition of Joint Force Planning and Execution Tools from the Adaptive Courses of Action ACTD to GCCS and continue development of deployment tools and Force Protection tools for coalition rear area security and Homeland Defense 2nd Qtr - 3rd Qtr; \$3.076 million).
- o Continue development and integration of advanced Battlespace Awareness tools into GCCS (4th Qtr; \$2.247 million).
- o Joint Logistics pilot services and final transition of Joint Logistics ACTD decision support tools to GCCS. Demonstrate initial U.S./coalition logistics tools (2nd Qtr - 3rd Qtr; \$1.467 million).
- o Demonstrate a secure collaboration and shared applications environment coupled with decision tools for force protection and homeland defense (1st Qtr - 3rd Qtr; \$2.708 million).
- o Demonstrate a prototype information management enterprise for the Theater and JTF C4ISR Coordination Centers that provides monitoring and policy management of networks and information management (2nd Qtr - 4th Qtr; \$2.598 million).
- o Demonstrate initial capability for active network intrusion response (2nd Qtr - 4th Qtr; \$2.000 million).
- o Total \$14.096 million

FY 2003 Plans:

- o Field operational prototypes of Advanced Battlespace Awareness at selected Theater Operations Centers (2nd Qtr-3rd Qtr; \$1.866 million).
- o Develop advanced tools for force projection, rapid transportation planning and transport monitoring during crisis action deployments of forces, cargo, and personnel (2nd Qtr - 4th Qtr; \$2.525 million).

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg
<p>o Complete prototyping of logistics decision support tools and begin transition to GCCS and GCSS. Continue development and conduct in-Theater demonstration of coalition logistics tools (4th Qtr; \$2.311 million).</p> <p>o Field a secure mechanism for locating and joining conferences on a peer-to-peer or conference server basis. Provide a capability to monitor and preempt improper use of collaboration bandwidth (2nd Qtr - 4th Qtr; \$1.466 million).</p> <p>o Serve as DoD Collaboration Tool Suite Program Office, providing collaboration technology updates and advanced CONOPs for integrated tools across functional communities and Services (1st Qtr - 4th Qtr; \$3.097 million).</p> <p>o Conduct military utility assessment of active network intrusion defense mechanisms. (4th Qtr; \$1.495 million).</p> <p>o Transition knowledge management, integrated network, IA, and information dissemination management monitoring and visualization tools to the GIG and to the 21st Century CINC command center. Demonstrate assured, priority-based information product delivery through congested information networks (3rd Qtr - 4th Qtr; \$3.395 million).</p> <p>o Conduct coalition advanced technology experiments with the Joint Battle Center, Services and Allies via the Combined Federated Battle Laboratories Network (1st Qtr - 4th Qtr; \$0.497 million).</p> <p>o Demonstrate mission tailored displays of dynamically prepositioned and synchronized real-time combat information to support both operational and tactical decision making across a Joint Force (2nd Qtr - 4th Qtr; \$0.697 million).</p> <p>o Develop advanced decision support tools and predictive assessment capabilities for a Joint Commander during situation development, crisis assessment, development and selection of a course of action, operation planning and execution, force protection, and homeland defense C2 in a collaborative environment (2nd Qtr - 4th Qtr, \$4.145 million).</p> <p>o Deploy Ops/Log synchronized planning/execution tools (4th Qtr; \$2.447 million).</p> <p>o Field a pilot for dynamic, integrated control of Theater and Force integrated tools for optimizing the entire information enterprise, including networks and IA and information management services (2nd Qtr - 4th Qtr; \$1.324 million).</p>										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg

- o Develop tools so that during Information Operations a Theater or Joint Force Commander can characterize, contain and recover from attacks (2nd Qtr - 4th Qtr; \$2.431 million).
- o Prototype mechanisms for deep collaboration: database-to-database, application-to-application (2nd Qtr - 4th Qtr; \$0.697 million).
- o Total \$28.393 million

B. <u>Program Change Summary</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
Previous President's Budget (FY 2002)	12.933	14.254	14.279
Appropriated Value	14.685	14.254	
Adjustments to Appropriated Value	-.189	-.158	
Adjustments to Budget Year Since FY 2002 President's Budget			+14.114
Current Budget Submit/President's Budget (FY 2003)	14.496	14.096	28.393
Change Summary Explanation:			

FY 2001 change due to below threshold reprogramming.
 FY 2002 change due to undistributed congressional adjustments to Defense-Wide RDT&E appropriation.
 FY 2003 adjustment is due to addition of management and technical responsibility for DoD collaboration tools development and technology update, for development of a core Joint Task Force level Joint Command and Control capability, and of management and network responsibility for the Combined Federated Battle Laboratories Network (CFBLNet).

Exhibit R-2, RDT&E Budget Item Justification					DATE: February 2002					
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg
<p>C. <u>Other Program Funding Summary:</u> N/A</p> <p>D. <u>Acquisition Strategy:</u> MITRE, Reston, VA; Houston Associates, Inc., SAIC, Arlington, VA and SSC, Charleston</p> <p>E. <u>Schedule Profile:</u></p> <p><u>FY 2001</u> 1st Qtr</p> <ul style="list-style-type: none"> o Continued integration and transition of IA and network management components of DARPA's, Services' and Agencies' technology programs (AIDE, ANID, CINC 21) into GIG aligned with COE software releases. o Continued to develop joint and coalition interoperability capabilities in accordance with Joint Staff priorities, available technologies, and GIG strategic plans. 										
Page 6 of 10										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg
<p>2nd Qtr</p> <ul style="list-style-type: none"> o Demonstrated GCCS integrated plan execution monitoring capability. o Integrated Intelligence and Imagery (I3) components and product access via Integrated Data Management (IDM) services. o Continued sustained support of leading edge deployed capabilities until they are fully transitioned. o Continued Battle Lab experiments, including Ops/Combat support integration between GCCS, GCSS, and Service systems. <p>3rd Qtr</p> <ul style="list-style-type: none"> o Demonstrated integrated enterprise management for network, and IA components to achieve optimized information infrastructure quality of service management. o Demonstrated automated watch board capabilities for GCCS/GCSS execution monitoring. o Continued Battle Lab experiments, including Ops/Combat support integration between GCCS, GCSS, COE, DISN, and service systems. <p>4th Qtr</p> <ul style="list-style-type: none"> o Collaboration and coalition information assurance transitions. o Demonstrated advanced knowledge-based decision-making and visualization capabilities for integrated GCCS/GCSS. o Initial capability for enhanced Joint Common Operational Picture coordination. o Continued Battle Lab experiments, including Ops/Combat support integration between GCCS, GCSS, and Service systems. o Demonstrated advanced knowledge-based decision-making and visualization capabilities for integrated GCCS/GCSS. 										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg
<p><u>FY 2002</u></p> <p>2nd Qtr</p> <ul style="list-style-type: none"> o Course of action and execution monitoring in GCCS/Joint Operational Planning and Execution System (JOPES). o Joint Logistics decision support tools pilot services and transition GCSS developers. <p>3rd Qtr</p> <ul style="list-style-type: none"> o GCCS secure shared applications and Force Protection tools. o Demonstrate initial integration of theater operations and logistic decision tools. <p>4th Qtr</p> <ul style="list-style-type: none"> o Demonstrate information flow monitoring tools in GIG Control. o Active network intrusion response demonstration. o Demonstrate user Adaptive Battlespace Awareness and Homeland Defense C2 tools. <p>1st - 4th Qtr</p> <ul style="list-style-type: none"> o Continue sustained enhancements of leading edge FY 2001 support of leading edge deployed capabilities until they are fully transitioned. o Continue Battle Lab experiments, including Knowledge Management and NetOps Enterprise Management. <p><u>FY 2003</u></p> <p>2nd Qtr</p> <ul style="list-style-type: none"> o Adaptive Battlespace Awareness pilot at EUCOM CINC and Combined Air Operations Centers sites. o Secure conference bridge tool and advanced collaborative visualization for force protection operations. <p>3rd Qtr</p> <ul style="list-style-type: none"> o Requirements generation and transportation scheduling tools to support rapid strategic and theater lift from within GCCS and other C4ISR systems. 										

Exhibit R-2, RDT&E Budget Item Justification						DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/05					R-1 ITEM NOMENCLATURE Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K					
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Leading Edge Pilot Info Technology/T26		14.496	14.096	28.393	23.861	28.755	24.062	24.430	Contg	Contg
<p>o Operational pilot services for interactive ops/log planning tools, and military utility assessment of U.S./coalition logistics planning and coordination tools.</p> <p>4th Qtr</p> <ul style="list-style-type: none"> o Initial pilot fielding of active network intrusion defense mechanisms. o Initial transition of CINC 21 knowledge management & visualization services. o Prototype of Homeland Defense predictive assessment tools for CINCs and on-scene consequence management teams. o Integrated network, IA, and information dissemination management monitoring and visualization tools at an initial Theater C4ISR Coordination Center. <p>1st-4th Qtrs</p> <ul style="list-style-type: none"> o DoD Collaboration Tool Suite Technology refresh update. o Coalition advanced technology experiments with the Joint Battle Center, Services and Allies via the Combined Federated Battle Laboratories Network. <p><u>FY 2004-2007</u></p> <ul style="list-style-type: none"> o Continue evaluation, hardening and transitioning of DARPA and Agencies' technologies into Joint C4I and Combat Support systems, including GCCS and GCSS. o Continue technological updates of advanced multimedia conferencing and shared knowledge management and applications. o Continue coalition technology experimentation and transition with Services and Allies. o Develop situation assessment, planning, execution & information enterprise management technologies for Joint Force Command and Control. 										

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER					
RDT&E, Defense-Wide/05		Advanced Information Technology Services Joint Program Office (AITS-JPO)/PE 0604764K				Leading Edge Pilot Information Technology/T26					
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
<u>Product Development</u>											
<u>Engineering/technical services</u>											
	CPFF/T&M	HAI, Arlington, VA	2.341	3.376	Jan 02	4.730	Dec 02	Contg	Contg	10.447	
	CPAF	SAIC, Arlington, VA	2.360	2.369	Jan 02	4.770	Dec 02	Contg	Contg	9.499	
	MIPR	SSC, San Diego, CA	1.145							1.145	
	MIPR	SSC, Charleston, SC		0.991	0.913	Jan 02	2.076	Dec 02	Contg	Contg	3.980
	MIPR	BTG	0.715	0.753	Jan 02	1.537	Dec 02	Contg	Contg	3.005	
	CPAF	INRI		1.205	0.800	Jan 02	2.500	Dec 02	Contg	Contg	4.505
All other Contracts			2.619	2.828	Feb 02	7.670	Dec 02	Contg	Contg	N/A	
<u>Systems Engineering</u>											
	CPAF	MITRE, Arlington, VA	<u>3.120</u>	<u>3.057</u>	Nov 01	<u>5.110</u>	Nov 02	Contg	Contg	11.287	
TOTAL			14.496	14.096		28.393					

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06					R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element Cost		44.381	43.738	45.249	46.217	47.511	48.707	50.152	Contg	Contg
001 Defense Technical Information Center		34.549	33.858	34.745	35.530	36.547	37.589	38.775	Contg	Contg
002 Information Analysis Centers		9.832	9.880	10.504	10.687	10.964	11.118	11.377	Contg	Contg

A. Mission Description and Budget Item Justification: The Defense Technical Information Services Program Element provides resources for the Defense Technical Information Center (DTIC) and the DoD Information Analysis Centers (IACs). DTIC's mission and function is to provide for the centralized operation of DoD Services for the acquisition, storage, retrieval, and dissemination of Scientific and Technical Information (STI), including data which is restricted, controlled and/or classified. DTIC also functions as the central activity within the DoD for exploring and applying advanced techniques and technology to DoD STI systems and for developing improvements in service and STI transfer effectiveness. The purpose of the program is to permit timely and effective exchange of information, to improve research, to avoid unnecessary duplication of effort and resources, and to improve decision making. DTIC's concept of operations is to function as the front door to DoD unclassified and unlimited information resources for customers internal and external to DoD; as the door to controlled information resources for internal DoD use; and as a repository and processor for STI and one-stop shopping. The military, universities, managers, scientists, engineers, and contractors look to DTIC to serve as a DoD Information Utility and to provide for leadership in the advancement of information access, sharing and knowledge management. The IACs are contractor-operated research organizations chartered by OSD to collect, analyze, synthesize and disseminate worldwide scientific and technical information in specialized fields to prevent re-inventing research and to promote standardization within these fields. The DTIC IAC Program Management Office provides management and oversight of 13 IACs and funds operations of 12 IACs. DTIC currently serves information from its collection to approximately 5642 registered organizations located in the U.S. and overseas. In addition, DTIC operates 100 websites (e.g. Homepages and associated web pages) for itself and other organizations with an average of 87,000,000 accesses per month in FY 02. The Program Element is under Budget Activity 6, RDT&E Management Support, which provides for the support of operations required for general research and development and not allocable to specific missions.

Page 1 of 10

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<p><u>FY 2001 Accomplishments:</u></p> <p>DTIC: Funded ongoing basic operations including input and preservation of information (media conversion where needed, to ensure interoperability and creation of metadata), delivery of products and services including web support, personnel, maintenance of equipment, postage and support services paid to other government agencies via Inter-service Support Agreements. (1 Qtr - 4 Qtr; \$31.443 Million)</p> <p>Examples of accomplishments include:</p> <ul style="list-style-type: none"> o Provided substantial scientific and technological information in support of the Defense RDT&E effort by leveraging ongoing and completed research findings. Continued to identify and acquire government information collections for dissemination and preservation through the DTIC technical report collection. o Assimilated modernization techniques and equipment to provide state-of-the-art electronic access and dissemination of DTIC products and services. Enhanced the Electronic Document Management System to include the conversion and processing of unclassified technical reports submitted electronically through the web interface. o Updated and monitored secure systems. Enhanced efforts to convert the DTIC archive of technical reports to electronic media to preserve critical information and provide a paperless environment. o Promoted awareness of DTIC through Distance Learning Courses and increased program development activities. o Initiated requirements definition and development of the DTIC Knowledge Portal pilot to support internal DTIC staff requirements to include information, access to support systems, and collaboration. o Initiated testing of the Internet-based credit card processing system. <p>o Managed and executed the Science & Technology (S&T) Business Process Reengineering initiatives for the Deputy Under Secretary of Defense for Science and Technology (DUSD(S&T)). Electronically collected, validated, and disseminated DoD's FY00 In-House Activities Report. Updated the Research and Development Descriptive Summaries (RDDS) database and website with the latest data. Continued enhancements to the DoD S&T InfoWeb, the S&T Collaboration Tool, the BioSystems program, and the Defense Technology Area Plans (DTAP) databases and website. Identified FY01 Best Practices for the DoD Technology Area Review and Assessment (TARA) Program. Continued development of the Virtual Technology Exposition (VTE) program (Phase II). Demonstrated VTE to the S&T community and Industry. (1 Qtr - 4 Qtr; \$2.431 Million)</p>		
Page 2 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<p>o Expanded Defense Virtual Library (DVL) to include complex digital objects (integrated text, sound and moving images). Investigated potential for archiving/preserving complex objects harvested from the web. Made substantial progress in specifying preservation metadata in Extensible Markup Language (XML). Completed phase 1 of entering DVL data into XML-based metadata registry. Completed initial specifications for access protections at individual object level. Completed the development of Phase I of the Handle System to provide persistent identification of DTIC/DoD internet resources of permanent value. (2 Qtr - 4 Qtr; \$.369 Million)</p> <p>o Enhanced the unclassified Web-Enabled Defense RDT&E Online System (WED), by correcting errors and adding essential functionality. Increased reliability of control mechanisms and further integration with other DTIC unclassified systems. Began effort to move WED into the DTIC standard web infrastructure. Began work on functional requirements for an Electronic Registration System. (2 Qtr - 4 Qtr; \$.306 Million)</p> <p>IAC: Provided basic core contract operations for DoD IACs to collect, analyze, synthesize and disseminate worldwide Scientific and Technical Information (STI) in support of DoD's critical technologies and the warfighter. Provided in-depth analysis services and created STI products. Responded to technical inquires; prepared state-of-the-art reports, handbooks, and databooks; performed technology assessments; and supported exchange of information among the respective communities of various disciplines within scope for each of the DTIC sponsored, contractor operated IACs. (1 Qtr - 4 Qtr; \$9.515 Million)</p> <p>Examples of accomplishments include:</p> <ul style="list-style-type: none"> o Provided substantial science and technological information in support of the Defense Technology Objectives and the Joint Warfighter Science and Technology Plan to develop and transition superior technology which enables affordable and decisive military capabilities. o Assimilated modernization techniques and equipment to provide state-of-the-art electronic access and dissemination of IAC products and services. o Updated and monitored secure systems. 		
Page 3 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<p>o Enhanced efforts to totally convert fragile paper media historical archives into electronic media to preserve critical information and provide a totally paperless environment.</p> <p>o Promoted IAC awareness through increased program development activities with particular emphasis on emerging technologies to support acquisitions, CINCs and the warfighter.</p> <p>o Reviewed, revised, implemented and monitored strategic plan and performance measurements to support continual oversight, assessment, and improvement of DoD IACs.</p> <p>o Provided IAC Program access to secure government networks to enable focused critical science and technology support to laboratories, acquisitions, CINCs and the warfighters.</p> <p>o Funded ongoing program management office operations. Continued to identify and manage government information collections abandoned by disestablished organizations to be transferred and incorporated into the IAC program. The IAC program provided a return-on-investment (ROI) in excess of 10:1 documented by the community survey results, which stated that a combined cost avoidance of over \$100M was realized. This cost avoidance was due to the leveraged intellectual properties and the exchange of timely information. (1 Qtr - 4 Qtr; \$.317 Million) \$44.381M Total</p> <p><u>FY 2002 Plans:</u></p> <p>DTIC: Funds ongoing basic operations including input and preservation of information (media conversion where needed, to ensure interoperability and creation of metadata), output of products and services, personnel, maintenance of equipment, postage and support services paid to other government agencies via Inter-service Support Agreements. Implement a baseline Activity Base Costing (ABC) structure which will provide insight into the relationship between Resources and Outputs (Products and Services) by quantifying the work performed (Activities) within DTIC; thereby, facilitating the Most Efficient Organization structure and operational improvements. Integrate internet-based credit card processing system with DTIC's on-line document ordering capability. (1 Qtr - 4 Qtr; \$31.593 Million)</p>		
Page 4 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<p>Examples of planned accomplishments include:</p> <ul style="list-style-type: none"> o Continue to provide substantial scientific and technological information in support of the Defense RDT&E effort by leveraging ongoing and completed research findings. Continue to identify and acquire government information collections for dissemination and preservation through the DTIC technical report collection. o Assimilate modernization techniques and equipment to provide state-of-the-art electronic access and dissemination of DTIC products and services. Enhance the Electronic Document Management System (EDMS) to include additional output formats and products. Analyze multimedia collection to determine requirements for long-term preservation and recommend policy for maintaining long-term access. o Update and monitor secure systems. Enhance efforts to convert the DTIC archive of technical reports to electronic media to preserve critical information and provide a paperless environment. o Promote awareness through Distance Learning Courses. o Expand the DTIC Knowledge Portal Pilot into a production intranet portal. Initiate development of an extranet portal - the Defense Science and Technology (S&T) Knowledge Portal. Integrate DTIC digital products and services including WED, STINET, and IACs into the Defense S&T Knowledge Portal. Integrate DTIC customer service systems into the portal to provide a self service Customer Relationship Management (CRM) capability. Develop a portal infrastructure to support the creation of knowledge communities across the S&T domain. <p>o Manage and execute Science & Technology (S&T) Business Process Reengineering (BPR) initiatives for the Deputy Under Secretary of Defense for Science and Technology (DUSD(S&T)). Analyze requirements for collecting laboratories capabilities and develop new data call process to electronically collect and disseminate DoD's FY01 RDT&E In-House Activities Report. Update the Research and Development Descriptive Summaries (RDDS) website with the latest BPR data. Continue enhancements to the DoD S&T InfoWeb, the S&T Collaboration Tool, and the Defense Technology Area Plans (DTAP) databases and websites. Identify FY 02 Best Practices for the DoD Technology Area Review and Assessment (TARA) Program. Continue development, population, and marketing of the Virtual Technology Expo (VTE) program. Conduct special studies to: 1) identify "best practices" to improve the effectiveness and timeliness of the transition of technology from the S&T community to Acquisition program (Project Phases I and II); 2) improve access and use of the S&T BPR sites; and 3) produce an S&T Products at a Glance publication. (1 Qtr - 4 Qtr; \$1.512 Million)</p>		
Page 5 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<p>o Continue research in use of Defense Virtual Library (DVL) architecture for preservation of objects harvested from the web. Complete specifications for preservation metadata in Extensible Markup Language (XML) and initiate work on Document Type Definition (DTD). Continue development of XML-based metadata registry. Initiate second phase of access protections at individual object level. Complete plan for phased implementation of architecture into DTIC operations. Implement Handle Service with expanded capabilities to facilitate external input and to enable multiple resolution. (2 Qtr - 4 Qtr; \$.350 Million)</p> <p>o Complete the modernization of the unclassified Web-Enabled Defense RDT&E Online System (WED) infrastructure, complete the WED/STINET merger into Private STINET and begin initial development of the classified Web-Enabled Defense RDT&E Online System (Classified WED) environment. Complete Functional Requirements for the Registration System, begin modifications of the existing relational database for the Registration System and implement Lightweight Directory Access Protocol (LDAP) to facilitate electronic registration. (2 Qtr - 4 Qtr; \$.403 Million)</p> <p>IAC: Provides basic core contract operations for DoD IACs to collect, analyze, synthesize and disseminate, worldwide Scientific and Technical Information (STI) in support of DoD's critical technologies and the warfighter. Provide in-depth analysis services and create STI products. Respond to technical inquiries; prepare state-of-the-art reports, handbooks and databooks; perform technology assessments; and support the exchange of information among the respective communities of various disciplines within scope for each of the DTIC sponsored, contractor operated IACs. (1 Qtr - 4 Qtr; \$9.541 Million)</p> <p>Examples of planned accomplishments include:</p> <ul style="list-style-type: none"> o Continue to provide substantial science and technological information in support of the Defense Technology Objectives and the Joint Warfighter Science and Technology Plan to develop and transition superior technology which enables an affordable and decisive military capability. o Continue efforts to promote IAC awareness through increased interaction with Laboratories, Acquisition Command and the CINCs/warfighters. o Support the warfighter, R&D and rapid support staff with push/pull emerging technology that provides services and creates unique products which will help to ensure military technological superiority. 		
Page 6 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<ul style="list-style-type: none"> o Enhance efforts to totally convert fragile historical archives into electronic media to preserve critical information and provide a totally paperless environment. o Develop Request for Proposal (RFP) packages for four IACs with projected award of two contracts. o Update and monitor secure systems. o Support the warfighter with push/pull technology that provides services and creates unique products which will help to ensure military technological superiority o All new Scientific and Technology Information (STI) acquisitions will collect STI in electronic media, or scan hardcopy STI into electronic media in support of the Total Electronic Migration System (TEMS) effort. <p>o Funds ongoing program management office operations. Identify and manage government information collections abandoned by disestablished organizations to be transferred and continue to incorporate into the IAC program. (1 Qtr - 4 Qtr; \$.339 Million) \$43.738M Total</p> <p><u>FY 2003 Plans:</u></p> <p>DTIC: Funds ongoing basic operations including input and preservation of information (media conversion where needed, to ensure interoperability, creation of metadata), delivery of products and services including web support, personnel, maintenance of equipment, postage and support services paid to other government agencies via Inter-service Support Agreements. Expand Activity Based Costing (ABC) Program, to include budgeting and performance measurements. (1 Qtr - 4 Qtr; \$31.274 Million)</p> <p>Examples of planned accomplishments include:</p> <ul style="list-style-type: none"> o Continue to provide substantial scientific and technological information in support of the Defense RDT&E effort by leveraging ongoing and completed research findings. Continue to identify and acquire government information collections for dissemination and preservation through the DTIC technical report collection. o Continue to integrate modernization techniques and equipment to provide state-of-the-art electronic access and of DTIC products and services. Continue modernization efforts for Electronic Document Management System (EDMS) to support software/hardware upgrades and additional storage. 		
Page 7 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<p>o Continue to update and monitor secure systems. Enhance efforts to convert the DTIC archive of technical reports to electronic media to preserve critical information and provide a paperless environment.</p> <p>o Continue to enhance the operational Distance Learning courses, with addition of state-of-the-art technology.</p> <p>o Expand the Defense Science & Technology (S&T) Knowledge Portal knowledge communities; provide enhanced collaboration tools, and develop enhanced capabilities to capture and disseminate tacit knowledge. Incorporate a software agent functionality into the DTIC S&T Knowledge Portal.</p> <p>o Manage and execute the Science & Technology (S&T) Business Process Reengineering (BPR) initiatives for the Deputy Under Secretary of Defense for Science and Technology (DUSD(S&T)). Implement new data call process to electronically collect and disseminate DoD's FY02 RDT&E In-House Activities Report. Update the Research and Development Descriptive Summaries (RDDS) website with the latest BPR data. Continue enhancements to the DoD S&T InfoWeb, the S&T Collaboration Tool, and the Defense Technology Area Plans (DTAP) databases and websites. Identify and implement FY03 Best Practices for the DoD Technology Areas Review and Assessment (TARA). Continue development, population, and marketing of the Virtual Technology Expo (VTE) program. Develop a Best Practices Website and tools with focus on improving technology transition from S&T to Acquisition (Phase III). Implement improved access to S&T BPR Websites. Conduct special studies. (1 Qtr - 4 Qtr; \$2.326M)</p> <p>o Determine suitability of Defense Virtual Library (DVL) architecture for preservation of web objects and evaluate preservation metadata selected in 2002, complete third phase of access protections at individual objects level. Complete Phase 1 of implementation of DVL architecture into DTIC. Expand Handle Service capabilities. (2 Qtr - 4 Qtr; \$.510 Million)</p> <p>o Complete development and testing of the classified Web-Enabled Defense RDT&E Online System (WED) using SIPRNET access and put into production. Complete development of new registration system and full-scale implementation. (1 Qtr - 4 Qtr; \$.635 Million)</p>		
Page 8 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/06	R-1 ITEM NOMENCLATURE Defense Technical Information Services/PE 0605801K	
<p>IAC: Provides basic core contract operations for DoD IACs to collect, analyze, synthesize and disseminate, worldwide Scientific and Technical Information (STI) in support of DoD's critical technologies and the warfighter. Provide in-depth analysis services and create STI products. Respond to technical inquiries; prepare state-of-the-art reports, handbooks and databooks; perform technology assessments; and support the exchange of information among the respective communities of various disciplines within scope for each of the DTIC sponsored, contractor operated IACs. (1 Qtr - 4 Qtr; \$9.769 Million)</p> <p>Examples of planned accomplishments include:</p> <ul style="list-style-type: none"> o Continue to provide substantial science and technological information in support of the Defense Technology Objectives and the Joint Warfighter Science and Technology Plan to develop and transition superior technology which enables an affordable and decisive military capability. o Support the warfighter, R&D and rapid support staff with push/pull emerging technology that provides services and creates unique products which will help to ensure military technological superiority. o Continue efforts to promote IAC awareness through increased interaction with laboratories, Acquisition Commands and the CINCs/warfighters. o Continue to enhance efforts to totally convert fragile historical archives into electronic media to preserve critical information and provide a totally paperless environment. o Update and monitor secure systems. o Continue STI acquisition in electronic media, scan hardcopy STI into electronic media in support of the Total Electronic Migration System (TEMS) effort. o Develop Request for Proposal (RFP) packages for three IACs. o Conduct Source Selection Evaluation Boards (SSEBs) and award contracts for two IACs. <p>o Funds ongoing program management office operations. Identify and manage government information collections abandoned by disestablished organizations to be transferred and incorporated into the IAC program. (1 Qtr - 4 Qtr; \$.735 Million) \$45.249M Total</p>		
Page 9 of 10		

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE		
RDTE&E, Defense-Wide/06	Defense Technical Information Services/PE 0605801K		
B. <u>Program Change Summary:</u>			
	<u>Cost in Millions</u>		
	<u>FY 01</u>	<u>FY 02</u>	<u>FY 03</u>
Previous President's Budget (FY 2002)	44.187	44.228	43.859
Appropriated Value	45.350	44.228	
Adjustment to Appropriated Value	-.969	-.490	
Adjustment to Budget Year since FY 2002 President's Budget			1.390
Current Budget Submission/President's Budget (FY 2003)	44.381	43.738	45.249
Change Summary Explanation:			
FY 2001 changes are due to below threshold reprogrammings.			
FY 2002 changes are due to undistributed congressional adjustments to Defense-Wide RDT&E appropriation.			
FY 2003 changes are due to revised fiscal guidance.			
C. <u>Other Program Funding Summary:</u> No related efforts.			

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE C4I Interoperability/PE 0208045K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element		35.920	40.861	43.199	43.874	44.853	45.781	46.933	Contg	Contg
Test and Evaluation/T30		26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg
Major Range Test Facility Base (MRTFB)/T40		9.682	11.091	12.291	12.485	13.164	13.507	13.926	Contg	Contg

A. Mission Description and Budget Item Justification: Provides life cycle test, evaluation, certification and technical support for all DoD National Security Systems/Information Technology Systems (NSS/ITS) to assure the warfighter that the Commander in Chief (CINC), Service, and Agency systems are effectively interoperable, compatible and integrated in a joint and combined environment. Serves as the Operational Test Agency (OTA) to test/certify the operational effectiveness and suitability of the Defense Information Systems Network (DISN), Defense Message System (DMS), Global Command and Control System (GCCS), Global Combat Support System (GCSS), and other systems managed or procured by the Defense Information Systems Agency. Functions as a member of DoD's Major Range and Test Facility Base (MRTFB). This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE			
RDT&E, Defense-Wide/07	C4I Interoperability/PE 0208045K			
B. <u>Program Change Summary:</u>				
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	
Previous President's Budget (FY 2002)	35.672	41.389	42.429	
Appropriated Value	37.072	41.389		
Adjustments to Appropriated Value	-1.152	-.528		
Adjustments to Budget Year Since FY 2002 President's Budget			.770	
Current Budget Submit/President's Budget (FY 2003)	35.920	40.861	43.199	
Change Summary Explanation:				
FY 2001 adjustments are due to below threshold reprogrammings.				
FY 2002 adjustments are due to undistributed Congressional reductions.				
FY 2003 adjustments are due to revised fiscal guidance.				
Page 2 of 15				

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Test and Evaluation/T30				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg

A. Mission Description and Budget Item Justification: This project provides direct test funds to support test and evaluation requirements of DoD Directive 4630.5 and DoD Directive 5000 series. Provides life cycle test, evaluation, certification and technical support for all DoD National Security Systems/Information Technology Systems (NSS/ITS) to assure the warfighter that the Commander in Chief (CINC), Service, and Agency systems are effectively interoperable, compatible and integrated in a joint and combined environment. Serves as the Operational Test Agency (OTA) to test/certify the operational effectiveness and suitability of the Defense Information Systems Network (DISN), Defense Message System (DMS), Global Command and Control System (GCCS), Global Combat Support System (GCSS), and other systems managed or procured by the Defense Information Systems Agency.

FY 2001 Accomplishments:

o Provided Operational Test and Evaluation (OT&E) of systems acquired, assigned or managed by the Defense Information Systems Agency (DISA) to determine if the systems met users' requirements through evaluation in their true operational environment using real users as operators. Conducted OT&E of Global Command and Control System (GCCS) major releases to ensure operational requirements were met in a real operational environment; conducted GCCS and Global Combat Support System (GCSS) functional tests for 8-10 applications to determine if the systems met functional requirements; interoperability test and certification between GCCS and Service versions of GCCS to ensure end-to-end interoperability; operational assessments of Defense Message System (DMS) software releases and follow-on maintenance releases to ensure operational effectiveness and suitability; conducted DMS functional tests for 20 systems/interfaces to determine if the system met functional requirements; conducted a continuous operational test and evaluation of DISN Video Services - Global (DVS-G) to ensure operational effectiveness and suitability; and assessed operational effectiveness and suitability of the DoD TELEPORT and NETWARS programs (Oct 2000 - Sep 2001; \$2.513M)

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Test and Evaluation/T30				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg

FY 2001 Accomplishments continued:

- o Conducted joint interoperability test and certification on DoD C4I systems to ensure end-to-end interoperability, compatibility and integration. Completed Tactical Data Information Link 11A/11B/16 certification tests (for example: Joint Stars Link 16, Patriot Link 16, F-15E Link 16, Joint Air Defense System Integrator (ADSI) Link 16, E-2 GRP II Link 16, and Icelandic Air Defense System Link 11); performed certification testing of Navy communications systems in support of Navy transition to DMS; performed certification testing of joint C4I systems to ensure end-to-end interoperability, compatibility and integration; conducted DoD Interoperability Communications Exercise (DICE) employing over 20 systems to determine end-to-end interoperability of DoD major switch systems (Oct 2000 - Sep 2001; \$11.981M)
- o Implemented Phase I of the Risk Mitigation Network, which will provide DoD with an off-line capability to test and resolve problems with systems that transport on or interface with the DISN (Oct 2000 - Sep 2001; \$5.413M)
- o Provided on-site exercise support for 8 exercises (pre-exercise architecture review and analysis, architecture documentation, operational assessments, traffic loading and simulation, testing), which included INTERNAL LOOK, FOAL EAGLE, TANDEM THRUST, BRIGHT STAR, CATHODE MISSION, and COBRA GOLD; on-site exercise support which identified and resolved technical issues, identified uncertified and/or untested interfaces, and determined compliance with CJCSM 6231; provided solutions to problems raised on-site and in hotline calls; published 4 issues of Lessons Learned Reports (Oct 2000 - Sep 2001; \$3.331M)
- o Provided combined interoperability test support to Commanders-in-Chief (CINCs) ensuring that U.S. and coalition systems interoperated within the Joint Task Force (JTF) (Oct 2000 - Sep 2001; \$3.000M)
- o Total \$26.238M

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07			C4I Interoperability/PE 0208045K				Test and Evaluation/T30				
COST (in millions)			FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost			26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg

FY 2002 Plans:

o Provide Operational Test and Evaluation (OT&E) of systems acquired, assigned or managed by the Defense Information Systems Agency (DISA) to determine if the systems meet users' requirements through evaluation in their true operational environment using real users as operators. Conduct OT&E of Global Command and Control System (GCCS) software versions and components to ensure operational requirements are met in a real operational environment; GCCS and Global Combat Support System (GCSS) functional tests for 8-10 applications to determine if the systems meet functional requirements; perform interoperability test and certification between GCCS and Service versions of GCCS to ensure end-to-end interoperability; conduct operational assessments of Defense Message System (DMS) software releases and follow-on maintenance releases to ensure operational effectiveness and suitability; conduct DMS functional tests for 20 systems/interfaces to determine if the system meets functional requirements; conduct a continuous operational test and evaluation of DISN Video Services - Global (DVS-G) to ensure operational effectiveness and suitability; and assess operational effectiveness and suitability of the DoD TELEPORT and NETWARS programs (Oct 2001 - Sep 2002; \$2.838M)

o Conduct joint interoperability test and certification on DoD C4I systems to ensure end-to-end interoperability, compatibility and integration. Complete Tactical Data Information Link 11A/11B/16 certification tests (for example: Airborne Warning and Control System (AWACS) E-3 Link 16, Special Information System (SIS) Senior Scout (SS) Link 11, Joint Stars Link 16, Airborne Battlefield Command and Control Center (ABCCC) Link 16, Forward Area Air Defense System (FAAD) Link 11B, and Modular Control Equipment (MCE) Link 11, 11B and 16); perform certification testing of Navy communications systems in support of Navy transition to DMS; perform certification testing of joint C4I systems to ensure end-to-end interoperability, compatibility and integration; conduct DoD Interoperability Communications Exercise (DICE) employing over 20 systems to determine end-to-end interoperability of DoD major switch systems (Oct 2001 - Sep 2002; \$11.807M)

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Test and Evaluation/T30				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg

FY 2002 Plans continued:

- o Continue to implement Phase I of the Risk Mitigation Network, which will provide DoD with an off-line capability to test and resolve problems with systems that transport on or interface with the DISN (Oct 2001 - Sep 2002; \$5.447M)
- o Provide management of the Joint Distributed Engineering Plant (JDEP) to begin building the reusable test infrastructure which will enable warfighters, system developers, and testers to evaluate the interoperability of joint C4ISR systems-of-systems. Tasks will include coordination of test events, testbed engineering, and data analysis. Focus will be continued test and evaluation of interoperability fixes to Theater Air and Missile Defense (TAMD) systems, and on expansion of the common test infrastructure to begin testing of systems providing for the ground commander's situational awareness and combat identification (Oct 2001 - Sep 2002; \$3.220M)
- o Provide projected on-site exercise support for 10 exercises (pre-exercise architecture review and analysis, architecture documentation, operational assessments, traffic loading and simulation, testing); on-site exercise support to identify and resolve technical issues, identify uncertified and/or untested interfaces, and determine compliance with CJCSM 6231; provide solutions to problems raised on-site and in hotline calls; publish 4 issues of Lessons Learned Reports (Oct 2001 - Sep 2002; \$3.458M)
- o Provide combined interoperability test support to Commanders-in-Chief (CINCs) to ensure that U.S. and coalition systems will interoperate within the Joint Task Force (JTF) (Oct 2001 - Sep 2002; \$3.000M)
- o Total \$29.770M

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Test and Evaluation/T30				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg

FY 2003 Plans:

o Provide Operational Test and Evaluation (OT&E) of systems acquired, assigned or managed by the Defense Information Systems Agency (DISA) to determine if the systems meet users' requirements through evaluation in their true operational environment using real users as operators. Conduct OT&E of Global Command and Control System (GCCS) software versions and components to ensure operational requirements are met in a real operational environment; GCCS and Global Combat Support System (GCSS) functional tests for 8-10 applications to determine if the systems meet functional requirements; perform interoperability test and certification between GCCS and Service versions of GCCS to ensure end-to-end interoperability; conduct operational assessments of Defense Message System (DMS) software releases and follow-on maintenance releases to ensure operational effectiveness and suitability; conduct DMS functional tests for 20 systems/interfaces to determine if the system meets functional requirements; conduct a continuous operational test and evaluation of DISN Video Services - Global (DVS-G) to ensure operational effectiveness and suitability; and assess operational effectiveness and suitability of the DoD TELEPORT and NETWARS programs (Oct 2002 - Sep 2003; \$3.082M)

o Conduct joint interoperability test and certification on DoD C4I systems to ensure end-to-end interoperability, compatibility and integration. Complete Tactical Data Information Link 11A/11B/16 certification tests; perform certification testing of Navy communications systems in support of Navy transition to DMS; perform certification testing of joint C4I systems to ensure end-to-end interoperability, compatibility and integration; conduct DoD Interoperability Communications Exercise (DICE) employing over 20 systems to determine end-to-end interoperability of DoD major switch systems (Oct 2002 - Sep 2003; \$12.979M)

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Test and Evaluation/T30				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg
<p><u>FY 2003 Plans continued:</u></p> <ul style="list-style-type: none"> o Implement Phase II of the Risk Mitigation Network, which will provide DoD with an off-line capability to test and resolve problems with systems that transport on or interface with the DISN (Oct 2002 - Sep 2003; \$4.919M) o Provide management of the Joint Distributed Engineering Plant (JDEP) to continue expansion of the common, reuseable test infrastructure to support C4ISR systems-of-systems testing for time critical targeting, precision strike, and close air support missions. Additional TAMD nodes will be added to the infrastructure as interoperability fixes become available for test. Ongoing tasks will include coordination of test events, testbed engineering, and data collection and analysis (Oct 2002 - Sep 2003; \$3.220M) o Provide projected on-site exercise support for exercises (pre-exercise architecture review and analysis, architecture documentation, operational assessments, traffic loading and simulation, testing); on-site exercise support to identify and resolve technical issues, identify uncertified and/or untested interfaces, and determine compliance with CJCSM 6231; provide solutions to problems raised on-site and in hotline calls; publish 4 issues of Lessons Learned Reports (Oct 2002 - Sep 2003; \$3.708M) o Provide combined interoperability test support to Commanders-in-Chief (CINCs) to ensure that U.S. and coalition systems will interoperate within the Joint Task Force (JTF) (Oct 2002 - Sep 2003; \$3.000M) o Total \$30.908M 										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07			C4I Interoperability/PE 0208045K				Test and Evaluation/T30			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		26.238	29.770	30.908	31.389	31.689	32.274	33.007	Contg	Contg

B. Other Program Funding Summary: NA

C. Acquisition Strategy: This project is supported by a competitively awarded, non-personal services contract composed of three prime contracts with multiple sub-contracts. The newly awarded contracts, which are fixed-price plus award fee level of effort, begin full performance 1 March 2002. They replace three similar cost plus award fee contracts, which will be phased out on 28 February 2002. These contracts provide maximum flexibility on assignment of tasks for cost and technical effectiveness, and allow for expansion and contraction of staff years as workload expands and contracts.

D. Schedule Profile:

FY 2001 - FY 2007

1st Quarter - 4th Quarter: Operational test and evaluation of C4I systems managed and/or procured by the Defense Information Systems Agency such as: Global Command and Control System (GCCS), Global Combat Support System (GCSS), Defense Message System (DMS), and Defense Information Systems Network (DISN); Tactical Data Information Link 11A/11B/16 certification tests to ensure interoperability among air defense systems; joint and combined interoperability tests to ensure that DoD and coalition systems will interoperate in a joint and/or combined environment; conduct DoD Interoperability Communications Exercise (DICE); implementation of C4I Risk Mitigation Network, which provides DoD with an off-line capability to test and resolve problems on systems that transport on or interface with the Defense Information System Network (DISN); establish management of the Joint Distributed Engineering Plant (JDEP) to provide a hardware-in-the-loop environment to identify, evaluate, isolate, and find solutions to Joint Force interoperability problems; provide CINC exercise support; identify solutions to operational problems such as: failure of a system to interoperate with another system when used in an operational environment; Lessons Learned Reports to document problems and fixes to those problems for distribution to the Commanders-in-Chief (CINCs) and Services; provide on-site support for real-world contingencies such as: Bosnia, Kosovo, and Haiti.

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Test and Evaluation/T30				
<u>Test and Evaluation</u>										
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering/Technical Services	CPAF/C	TRW Ft Hua, AZ	8.763	1.828					10.591	10.591
	CPAF/C	Interop Ft Hua, AZ	13.865	2.080					15.945	15.945
	CPAF/C	Validity Ft Hua, AZ	9.685	1.405					11.090	11.090
	FFP/LOE	TRW Ft Hua, AZ		2.559	03/02	4.453	03/03	26.718	33.730	33.730
	FFP/LOE	Interop Ft Hua, AZ		2.913	03/02	5.042	03/03	30.252	38.207	38.207
	FFP/LOE	Logicon Ft Hua, AZ		1.967	03/02	3.411	03/03	20.466	25.844	25.844
	Subtotal Contracts				12.752		12.906			
In house				17.018		18.002				
Total Project				29.770		30.908				

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07			C4I Interoperability/PE 0208045K				Major Range Test Facility Base/T40			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		9.682	11.091	12.291	12.485	13.164	13.507	13.926	Contg	Contg
<p>A. <u>Mission Description and Budget Item Justification</u>: This project provides Institutional funds for DISA's Joint Interoperability Test Command (JITC), which is a member of DOD's Major Range Test Facility Base (MRTFB), in accordance with DoD Directive 3200.11 and letter dated 21 Jan 1992 designating JITC as a member of the MRTFB. Institutional funds cover costs that cannot be passed along to customers, such as test support expenses, testbed maintenance expenses, base operating support and facility and logistics support.</p> <p><u>FY 2001 Accomplishments</u>:</p> <ul style="list-style-type: none"> o Developed and implemented JITC's interoperability testing systems enhancing the organizational capability to conduct interoperability certification and recertification testing of C4ISR systems. Provided exercise and real world contingency support to the CINC/Warfighter for some 100 interoperability and operational tests, and 6 major CINC/Warfighter supported exercises annually. Developed and maintained the JITC projects system providing JITC project and financial management capability to meet and fulfill the directives imposed by designation as an MRTFB. (Oct 2000 - Sep 2001; \$2.361M) o Provided base operations support to JITC's Interoperability, Operational and Conformance testing missions at Fort Huachuca, AZ and Indianhead, MD. (Oct 2000 - Sep 2001; \$1.433M) o With contractor assistance, operated and maintained the JITC testbeds and test facilities at Fort Huachuca, AZ, and Indianhead, MD completing some 100 interoperability and operational tests. (Oct 2000 - Sep 2001; \$5.888M) o Total \$9.682M 										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Major Range Test Facility Base/T40				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		9.682	11.091	12.291	12.485	13.164	13.507	13.926	Contg	Contg
<p><u>FY 2002 Plans:</u></p> <ul style="list-style-type: none"> o Develop and implement JITC's interoperability testing systems to enhance the organizational capability to conduct interoperability certification and recertification testing of C4ISR systems. Provide exercise and real world contingency support to the CINC/Warfighter for some 100 interoperability and operational tests and 6 major CINC/Warfighter supported exercises annually. Develop and maintain the JITC projects system to provide JITC project and financial management capability to meet and fulfill the directives imposed by designation as an MRTFB (Oct 2001 - Sep 2002; \$2.417M) o Provide base operations support to JITC's Interoperability, Operational and Conformance testing missions at Fort Huachuca, AZ and Indianhead, MD (Oct 2001 - Sep 2002; \$1.445M) o With contractor assistance, operate and maintain the JITC testbeds and test facilities at Fort Huachuca, AZ, and Indianhead, MD completing some 100 interoperability and operational tests (Oct 2001 - Sep 2002; \$6.249M) o Provide connectivity and network maintenance for the Joint Distributed Engineering Plant (JDEP) Network Operations Center (Oct 2001 - Sep 2002; \$.980) o Total \$11.091M 										
Page 12 of 15										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07			C4I Interoperability/PE 0208045K				Major Range Test Facility Base/T40				
COST (in millions)			FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost			9.682	11.091	12.291	12.485	13.164	13.507	13.926	Contg	Contg
<p><u>FY 2003 Plans:</u></p> <ul style="list-style-type: none"> o Develop and implement JITC's interoperability testing systems to enhance the organizational capability to conduct interoperability certification and recertification testing of C4ISR systems. Provide exercise and real world contingency support to the CINC/Warfighter for some 100 interoperability and operational tests and 6 major CINC/Warfighter supported exercises annually. Develop and maintain the JITC projects system to provide JITC project and financial management capability to meet and fulfill the directives imposed by designation as an MRTFB (Oct 2002 - Sep 2003; \$2.701M) o Provide base operations support to JITC's Interoperability, Operational and Conformance testing missions at Fort Huachuca, AZ and Indianhead, MD (Oct 2002 - Sep 2003; \$1.617M) o With contractor assistance, operate and maintain the JITC testbeds and test facilities at Fort Huachuca, AZ, and Indianhead, MD completing some 100 interoperability and operational tests (Oct 2002 - Sep 2003; \$6.983M) o Provide connectivity and network maintenance for the Joint Distributed Engineering Plant (JDEP) Network Operations Center (Oct 2002 - Sep 2003; \$.990M) o Total \$12.291M <p>B. <u>Other Program Funding Summary:</u> NA</p>											

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07			C4I Interoperability/PE 0208045K				Major Range Test Facility Base/T40				
COST (in millions)			FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost			9.682	11.091	12.291	12.485	13.164	13.507	13.926	Contg	Contg
<p>C. <u>Acquisition Strategy</u>: This project is supported by a competitively awarded, non-personal services contract composed of three prime contracts with multiple subcontracts. The newly awarded contracts, which are fixed-price plus award fee level of effort, begin full performance 1 March 2002. They replace three similar cost plus award fee contracts, which will be phased out on 28 February 2002. These contracts provide maximum flexibility on assignment of tasks for cost and technical effectiveness, and allow for expansion and contraction of staff years as workload expands and contracts.</p> <p>D. <u>Schedule Profile</u>:</p> <p><u>FY 2001 - FY 2007</u></p> <p>1st Quarter - 4th Quarter: Host Base Operations Support, MRTFB mandated cost accounting information systems, overhead supporting MRTFB, JDEP connectivity and maintenance, and testbed maintenance.</p>											

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I Interoperability/PE 0208045K				Major Range Test Facility Base/T40				
Major Range Test Facility Base (MRTFB)										
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering/Technical Services	CPAF/C	TRW Ft Hua, AZ	.743	.614					1.357	1.357
	CPAF/C	Interop Ft Hua, AZ	13.224	.892					14.116	14.116
	CPAF/C	Validity Ft Hua, AZ	2.143	.651					2.794	2.794
	FFP/LOE	TRW Ft Hua, AZ		.860	03/02	1.543	03/03	9.258	11.661	11.661
	FFP/LOE	Interop Ft Hua, AZ		1.249	03/02	2.227	03/03	13.362	16.838	16.838
	FFP/LOE	Logicon Ft Hua, AZ		.912	03/02	1.609	03/03	9.654	12.175	12.175
	Subtotal Contracts				5.178		5.379			
In-house				5.913		6.912				
Total Project				11.091		12.291				

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE National Military Command System (NMCS) Support/PE 0302016K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element		.608	1.003	1.053	1.152	1.267	1.295	1.320	Contg	Contg
NMCS Command Center Engineering/S32		.608	1.003	1.053	1.152	1.267	1.295	1.320	Contg	Contg

A. Mission Description and Budget Item Justification:

The National Military Command System (NMCS) provides the President of the United States, the Secretary of Defense, National Military Command Centers (NMCC), Executive Travel fleet, Office of the Secretary of Defense (OSD), and Chairman, Joint Chiefs of Staff support to maintain C2 capabilities, ensure continuous availability of emergency messaging, and maintaining situational and operational awareness. The program provides concept development, requirements definition and calibration, technical specifications, proofs-of-concept, testing, rapid prototyping, technology insertions, systems engineering and integration and technical assessments. Additionally, support provides informed, decision-making linkage between the President, the Secretary of Defense, and the Commanders-in-Chief of the Unified and Specified Commands. This engineering draws upon improved C2 methodologies and technology insertion opportunities to meet the command, control and information requirements for all crises and security threats involving US military forces. Support is provided to the Joint Staff in configuration management of over 150 systems and to the planning and implementation of the relocation of the NMCC as part of the Pentagon renovation. As the DoD designated NMCS Engineer, DISA places specific focus on the National Military Command Center (NMCC) and the Alternate NMCC (ANMCC). All efforts emphasize interoperability and are designed to contribute directly to the achievement of the global information infrastructure. The primary customer is the Joint Staff. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

Page 1 of 4

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002																									
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		R-1 ITEM NOMENCLATURE National Military Command System (NMCS) Support/PE 0302016K																									
<p><u>FY01 Accomplishments:</u></p> <ul style="list-style-type: none"> o NMCS Integration Engineering (1st Qtr - 4th Qtr; \$208K). <ul style="list-style-type: none"> - NMCC Command and Control System (NCCS) Five Year Plan, NMCC relocation transition concept & plan o Engineering & Evaluation (E&E) of NMCS upgrades (1st Qtr - 4th Qtr; \$400K). <ul style="list-style-type: none"> - NMCC tech insertion evaluations, NCCS Automated Message Handling System (AMHS) tests; Site R Integration Program (SRIP) engineering plans o Total \$.608M <p><u>FY02 Plans:</u></p> <ul style="list-style-type: none"> o NMCS Information Resource Management (1st Qtr - 4th Qtr; \$803K). <ul style="list-style-type: none"> - NMCS Master Reference Guide and Information Portal o Engineering & Evaluation (E&E) of NMCS upgrades (1st Qtr - 4th Qtr; \$200K). <ul style="list-style-type: none"> - NMCC tech insertion evals, Site R Integration Program (SRIP) engineering plans o Total \$1.003M <p><u>FY03 Plans:</u></p> <ul style="list-style-type: none"> o NMCS Information Resource Management (1st Qtr - 4th Qtr; \$853K). <ul style="list-style-type: none"> - NMCS Master Reference Guide and Information Portal o Engineering & Evaluation (E&E) of NMCS upgrades (1st Qtr - 4th Qtr; \$200K). <ul style="list-style-type: none"> - NMCC tech insertion evals, Site R Integration Program (SRIP) engineering plans o Total \$1.053M <p><u>B. Program Change Summary:</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="text-align: center;"><u>FY01</u></th> <th style="text-align: center;"><u>FY02</u></th> <th style="text-align: center;"><u>FY03</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 2002)</td> <td style="text-align: center;">.610</td> <td style="text-align: center;">1.014</td> <td style="text-align: center;">1.063</td> </tr> <tr> <td>Appropriated Value</td> <td style="text-align: center;">.641</td> <td style="text-align: center;">1.014</td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td style="text-align: center;">-.033</td> <td style="text-align: center;">-.011</td> <td></td> </tr> <tr> <td>Adjustments to Budget Year since FY 2002 President's Budget</td> <td></td> <td></td> <td style="text-align: center;">-.010</td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY 2003)</td> <td style="text-align: center;">.608</td> <td style="text-align: center;">1.003</td> <td style="text-align: center;">1.053</td> </tr> </tbody> </table>					<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	Previous President's Budget (FY 2002)	.610	1.014	1.063	Appropriated Value	.641	1.014		Adjustments to Appropriated Value	-.033	-.011		Adjustments to Budget Year since FY 2002 President's Budget			-.010	Current Budget Submit/President's Budget (FY 2003)	.608	1.003	1.053
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>																								
Previous President's Budget (FY 2002)	.610	1.014	1.063																								
Appropriated Value	.641	1.014																									
Adjustments to Appropriated Value	-.033	-.011																									
Adjustments to Budget Year since FY 2002 President's Budget			-.010																								
Current Budget Submit/President's Budget (FY 2003)	.608	1.003	1.053																								
Page 2 of 4																											

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002																																							
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	R-1 ITEM NOMENCLATURE National Military Command System (NMCS) Support/PE 0302016K																																								
<p>Change Summary Explanation: FY01 change due to below threshold reprogramming. FY02 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation. FY03 change reflects revised fiscal guidance.</p> <p>C. <u>Other Program Funding Summary:</u></p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY01</u></th> <th style="text-align: center;"><u>FY02</u></th> <th style="text-align: center;"><u>FY03</u></th> <th style="text-align: center;"><u>FY04</u></th> <th style="text-align: center;"><u>FY05</u></th> <th style="text-align: center;"><u>FY06</u></th> <th style="text-align: center;"><u>FY07</u></th> <th style="text-align: center;"><u>To</u> <u>Complete</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Operation & Maintenance</td> <td style="text-align: center;">1.400</td> <td style="text-align: center;">1.881</td> <td style="text-align: center;">2.057</td> <td style="text-align: center;">2.507</td> <td style="text-align: center;">2.445</td> <td style="text-align: center;">2.509</td> <td style="text-align: center;">2.584</td> <td style="text-align: center;">Contg</td> </tr> </tbody> </table> <p>D. <u>Acquisition Strategy:</u> Work is tasked via cost plus fixed fee contracts with multiple vendors. DISA calibrates requirements with customers and provides technical products and services through defined task orders, providing staffing flexibility as requirements increase and decrease. Contractual progress is measured and evaluated through earned value management, as defined in DOD 5000.2-R. Monthly reviews of schedule, status reports, deliverables and burn rates by the project manager and contracting officer's technical representatives also assist in contract performance, corrective action and risk mitigation.</p> <p>E. <u>Schedule Profile:</u></p> <table style="margin-left: 40px; border-collapse: collapse;"> <tbody> <tr> <td style="vertical-align: top;">FY01-03</td> <td style="vertical-align: top;">4th Qtr</td> <td style="vertical-align: top;">Integrate National C2 Systems; NMCC relocation engineering</td> </tr> <tr> <td></td> <td style="vertical-align: top;">4th Qtr</td> <td style="vertical-align: top;">Engineering and Evaluation of NMCS systems</td> </tr> <tr> <td></td> <td style="vertical-align: top;">4th Qtr</td> <td style="vertical-align: top;">Site R Integration Program (SRIP)</td> </tr> <tr> <td></td> <td style="vertical-align: top;">4th Qtr</td> <td style="vertical-align: top;">NMCS Information Resources Management Master Reference Guide/Information Portal</td> </tr> <tr> <td style="vertical-align: top;">FY04-07</td> <td style="vertical-align: top;">4th Qtr</td> <td style="vertical-align: top;">NMCC relocation engineering</td> </tr> <tr> <td></td> <td style="vertical-align: top;">4th Qtr</td> <td style="vertical-align: top;">Engineering and Evaluation of NMCS systems</td> </tr> <tr> <td></td> <td style="vertical-align: top;">4th Qtr</td> <td style="vertical-align: top;">Site R Integration Program (SRIP)</td> </tr> </tbody> </table>				<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To</u> <u>Complete</u>	Operation & Maintenance	1.400	1.881	2.057	2.507	2.445	2.509	2.584	Contg	FY01-03	4 th Qtr	Integrate National C2 Systems; NMCC relocation engineering		4 th Qtr	Engineering and Evaluation of NMCS systems		4 th Qtr	Site R Integration Program (SRIP)		4 th Qtr	NMCS Information Resources Management Master Reference Guide/Information Portal	FY04-07	4 th Qtr	NMCC relocation engineering		4 th Qtr	Engineering and Evaluation of NMCS systems		4 th Qtr	Site R Integration Program (SRIP)
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To</u> <u>Complete</u>																																	
Operation & Maintenance	1.400	1.881	2.057	2.507	2.445	2.509	2.584	Contg																																	
FY01-03	4 th Qtr	Integrate National C2 Systems; NMCC relocation engineering																																							
	4 th Qtr	Engineering and Evaluation of NMCS systems																																							
	4 th Qtr	Site R Integration Program (SRIP)																																							
	4 th Qtr	NMCS Information Resources Management Master Reference Guide/Information Portal																																							
FY04-07	4 th Qtr	NMCC relocation engineering																																							
	4 th Qtr	Engineering and Evaluation of NMCS systems																																							
	4 th Qtr	Site R Integration Program (SRIP)																																							
Page 3 of 4																																									

UNCLASSIFIED

Exhibit R-3 Cost Analysis		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT National Military Command System (NMCS) Support/PE 0302016K	PROJECT NAME AND NUMBER NMCS Command Center Engineering/S32

Support Costs:

<u>Cost Category</u>	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total PYs Cost</u>	<u>FY 02 Cost</u>	<u>FY 02 Award Date</u>	<u>FY 03 Cost</u>	<u>FY 03 Award Date</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
Engineering/Tech Svcs	CPFF/C	Raytheon E-Sys, Arlington, VA	0	.200	02/02	.200	02/03	Contg	Contg	1.700
Engineering/Tech Svcs	CPFF/C	SRA	.608	.803	10/01	.853	10/02	Contg	Contg	6.000
Total Cost			.608	1.003		1.053				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002																									
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Defense Information Infrastructure Engineering & Integration/PE 0302019K																													
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost																								
Total PE Cost: PE 0302019K		6.684	6.471	7.554	8.050	8.518	8.203	8.388	Contg	Contg																								
DII Systems Engineering and Support/T62		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg																								
Modeling & Simulation/E62		4.356	4.906	5.121	5.550	5.946	5.559	5.669	Contg	Contg																								
<p>A. <u>Mission Description and Budget Item Justification:</u> This program element funds efforts involving the following areas: the development and fielding of the Defense Information Infrastructure (DII) Common Operating Environment (COE), engineering support of the DII including resolution of critical interoperability and technical integration issues, and the assessment of C4I initiatives that reside on the DII COE to ensure compatibility, interoperability and technical integration. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.</p>																																		
<p>B. <u>Program Change Summary:</u></p> <table> <thead> <tr> <th></th> <th>FY 01</th> <th>FY 02</th> <th>FY 03</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 2002)</td> <td>6.773</td> <td>6.544</td> <td>6.790</td> </tr> <tr> <td>Appropriated Value</td> <td>5.704</td> <td>6.544</td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td>+.980</td> <td>-.073</td> <td></td> </tr> <tr> <td>Adjustments to Budget Year Since FY 2002 President's Budget</td> <td></td> <td></td> <td>+.764</td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY 2003)</td> <td>6.684</td> <td>6.471</td> <td>7.554</td> </tr> </tbody> </table>												FY 01	FY 02	FY 03	Previous President's Budget (FY 2002)	6.773	6.544	6.790	Appropriated Value	5.704	6.544		Adjustments to Appropriated Value	+.980	-.073		Adjustments to Budget Year Since FY 2002 President's Budget			+.764	Current Budget Submit/President's Budget (FY 2003)	6.684	6.471	7.554
	FY 01	FY 02	FY 03																															
Previous President's Budget (FY 2002)	6.773	6.544	6.790																															
Appropriated Value	5.704	6.544																																
Adjustments to Appropriated Value	+.980	-.073																																
Adjustments to Budget Year Since FY 2002 President's Budget			+.764																															
Current Budget Submit/President's Budget (FY 2003)	6.684	6.471	7.554																															
Page 1 of 15																																		

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RDT&E, Defense-Wide/07	Defense Information Infrastructure Engineering & Integration/PE 0302019K	
<p>Change Summary Explanation:</p> <p>FY 2001 change due to below threshold reprogramming.</p> <p>FY 2002 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation.</p> <p>FY 2003 change reflects increase to support initiatives such as the ramifications of securing applications and data in a web environment.</p>		
<p>Page 2 of 15</p>		

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				DII Systems Engineering and Support/T62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg
<p>A. <u>Mission Description and Budget Item Justification:</u> Efforts under this project will strengthen critical Defense Information Infrastructure (DII) foundation technologies and programs through application of precise, short-term, technical, engineering and integration expertise. Provides expertise in support of the major DII components, which include: DII Common Operating Environment (COE), COE Data, Defense Information System Network (DISN), Defense Message System (DMS) and medium grade messaging, Global Combat Support System (GCSS), Global Command and Control System (GCCS), DoD Directory, DII Public Key Infrastructure (PKI), DII Control Concept (DIICC), enterprise management, Information Assurance (IA) and other related components. This project supports the definition and implementation of various aspects of evolving the DII. The evolution of the DII requires coordinated implementation of the DII components to form a coherent global information grid. This project supports definition of the common environments, developing system architecture constructs for the DII and components, providing engineering design and guidance for component evolution, including incorporation of new technology from industry and implementing the infrastructure capability. Subtasks are assigned based on need to address specific technical problems, mitigate risks and take advantage of cross-program synergies.</p> <p><u>FY2001 Accomplishments:</u></p> <ul style="list-style-type: none"> o DII Component Support (1st Qtr - 4th Qtr; \$685K) <ul style="list-style-type: none"> - Evaluated Single Sign On (SSO) requirements; developed approach resulting in successful prototype demonstration. - Explored wireless standards, products, and trends; assisted in establishing wireless lab; participated in DISA sponsored portion of AFCEA wireless conference. - Facilitated and participated in the DMS Industry Panel and Senior Government Engineering Panel to recommend the roadmap for DMS. 										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				DII Systems Engineering and Support/T62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg

FY2001 Accomplishments (Continued):

- Developed concept for use of XML technology; developed spiral model development approach for XML capability.
- Developed SIPRNet Search Service (SSS) operational prototype.
- Represented DISA engineering in the Air Force Theater Ballistic Missile Core System (TBMCS) Technical Assessment Team. Efforts led to TBMCS reaffirmation to continue commitment to COE.
- o DII Integration (1st Qtr - 4th Qtr; \$788K)
 - Scheduled and established four Chief Engineers Panel (CEP) forums to allow for exchange of information among DISA Chief Engineers.
 - Served as secretariat for the Technical Advisory Group (TAG) focused on the DMS Way Ahead. Represented the TAG in coordinating activities with the Oversight Group.
 - Proposed approach to a series of network future TAG meetings and coordinated content and schedule.
 - Provided Program Executive Officer (PEO) Interchange technical support, identified key topics, prepared background material, and provided technical analysis. Supported the Joint Horizontal Integration (JHI) Group, the deputy level group working issues between PEO Interchanges.
 - Prepared analysis of differences between Internet Protocol (IP) Version 4 to Version 6 (IPV6).
 - Developed Information Dissemination Management (IDM) security Concept of Operations (CONOPS).
- o GCSS and GCCS Integration (1st Qtr - 4th Qtr; \$610K)
 - Provided technical lead for GCCS 4.x Working Group (G4WG) and other working group activities in support of GCCS
 - Provided inputs to and review of the GCCS 4.1 Systems Engineering Requirements Document
 - Evaluated DMS-GCCS integration for GCCS 4.1.

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				DII Systems Engineering and Support/T62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg

FY2001 Accomplishments (Continued):

- Participated with the GCCS PMO and Chief Engineer (CE) in discussing GCCS 3.x and 4.x scheduling details.
- Scheduled and participated in all Software Design Reviews for GCCS and followed-up on assigned actions.
- Contributed to analyses associated with the use of Accounts and Profiles Manager (APM)
- Contributed sections to the Requirements Identification Document (RID) Phase IV documentation and to the Assessment Working Level Integrated Product Team (AWIPT).
- Participated in GCCS discussions on PKI and directories and reviewed requirements and engineering plans.
- Developed white paper on the attributes of Bridges and Hummingbird.
- Identified and began evaluating candidate solutions for RID requirements without identified candidate solutions.
- Developed an approach to and outline of a GSORTS/RAS Configuration Management Plan.
- Participated in the revision of the GCCS Compliance Check List and associated waiver process.
- Provided white paper on Voice over IP (VoIP) in the context of IDM.
- o Cross Program Integration Engineering (1st Qtr - 4th Qtr; \$245K)
 - Coordinated a corporate view of COE benefits and lessons learned for use across sponsors. Briefing is now used to deal with the myths about COE and has been effective in allowing other sponsors to understand how and where they can best use COE.
 - Via the DII Council, evaluated TBMCS use of the DoD PKI and developed an approach that supports DoD directions and TBMCS needs.
- o Total \$2.328M

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				DII Systems Engineering and Support/T62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg

FY2002 Plans:

- o Technical support activities are those needed to develop engineering concepts, provide superior systems analyses, and assess system component designs. The detail of any given engineering task depends upon the status of each component at the particular point in evolution of the Global Information Grid.
- o DII Component Support (1st Qtr - 4th Qtr; \$500K)
 - Evolve SIPRNet Search Service (SSS) to COE components.
 - Implement and extend DISA wireless lab and wireless pilots.
- o DII Integration (1st Qtr - 4th Qtr; \$500K)
 - Define and develop enterprise services definitions and integration between services and with mission applications.
 - Develop and pilot an enterprise services management framework for Application Engineering products.
 - Continue technical and secretariat support to the Chief Engineers Panel (CEP) and the Technical Advisory Group (TAG)
 - Based on work for D-Force and GCCS, extend life-cycle engineering framework, processes, and tools to address all Application Engineering products.
- o GCSS and GCCS Integration (1st Qtr - 4th Qtr; \$350K)
 - Develop and support implementation of an operational single sign-on pilot with GCCS and GCSS.

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				DII Systems Engineering and Support/T62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg

FY2002 Plans (Continued):

- Continue technical support to the PEO Interchange with the Service C2 PEOs. As part of this, continue technical support, including defining implementation issues and solutions, to the flagship C2 CE/PM synchronization group. For example, reconcile migration plans for GCCS variants and GCSS variants based on their designs, development schedules, and fielding plans.
- o Cross Program Integration Engineering (1st Qtr - 4th Qtr; \$215K)
 - Continue to collaborate with Air Force, Army, and Navy programs to encourage use of DISA enterprise services and other products, identify issues with such use, and develop solutions to the issues.
 - Continue to support exchanges with the Services, OSD, the CINCs, and the Joint Staff to identify opportunities, issues, and solutions to improve DISA products.
- o Total \$1.565M

FY2003 Plans :

- o DII Component Support (1st Qtr - 4th Qtr; \$790K)
 - Perform DII component analysis, such as the use of COE components by GCCS and GCSS and the integration of certificate authentication into mission applications.
 - Support new and evolving architecture and implementation planning for DII components as necessary.
- o DII Integration (1st Qtr - 4th Qtr: \$875K)
 - Facilitate and perform analysis for an industry-based advisory panel. Advisory panels will concentrate on the impact of Internet technologies on C2 systems.
 - As requested, perform analysis related to integration within the DII components, and between DII and Service/Agency-level components.

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				DII Systems Engineering and Support/T62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg

FY2003 Plans (Continued):

- o GCSS and GCCS Integration (1st Qtr - 4th Qtr; \$400K)
 - Identify and resolve technical integration areas for versions of GCCS and GCSS under development, including integration with intelligence capabilities and other DII components as necessary.
 - Address evolving integration challenges such as Enterprise Services Management.
- o Cross Program Integration Engineering (1st Qtr - 4th Qtr; \$368K)
 - Facilitate cross-corporate harmonization of programs relative to DISA programs and the GIG.
 - Participate in and conduct analysis for the PEO Interchange. PEO attention will focus on the next generation of C2 systems and the fielding of systems currently in development. Interchange allows DOD to leverage achievements and benefit from learning opportunities across the Department.
- o Total \$2.433M

B. Other Program Funding Summary: N/A

C. Acquisition Strategy: MITRE, McLean, VA.

D. Schedule Profile:

FY01 - FY03

DII component support 1st Qtr - 4th Qtr

DII integration 1st Qtr - 4th Qtr

GCSS and GCCS integration 1st Qtr - 4th Qtr

Cross program integration engineering 1st Qtr - 4th Qtr

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07			PROGRAM ELEMENT DII Engineering & Integration/PE 0302019K				PROJECT NAME AND NUMBER DII Systems Engineering and Support/T62			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.328	1.565	2.433	2.500	2.572	2.644	2.719	Contg	Contg

Schedule Profile (Continued):

FY04-FY07

- o DII Component Support (1st Qtr - 4th Qtr)
 - Focus efforts on development and evolution of Global Information Grid (GIG) enterprise services.
 - Perform target analysis on identified issues to include COTS transformation of the Common Operating Environment.
- o DII Integration (1st Qtr - 4th Qtr)
 - Facilitate and perform analysis for an industry/government-based advisory panel. Advisory panels will concentrate on the impact of Internet/wireless technologies on C2 systems.
 - As requested, perform analysis related to integration within the DII /GIG components, and between DII and Service/Agency-level components.
- o GCSS and GCCS Integration (1st Qtr - 4th Qtr)
 - Identify and resolve technical integration areas with the next generation GCSS and GCCS.
- o Cross Program Integration Engineering (1st Qtr - 4th Qtr)
 - Facilitate cross-corporate harmonization of programs relative to DISA programs and the GIG.
 - Participate in and conduct analysis for the forum used for cross-Service synchronization of C2 program contents and schedule.

UNCLASSIFIED

Exhibit R-3 Cost Analysis		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT DII Engineering & Integration/PE 0302019K	PROJECT NAME AND NUMBER DII Systems Engineering and Support/T62

Support Costs:

<u>Cost Category</u>	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total PYs Cost</u>	<u>FY 02 Cost</u>	<u>FY 02 Award Date</u>	<u>FY 03 Cost</u>	<u>FY 03 Award Date</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
Engineering/Tech Svcs	FFRDC	MITRE, Mclean, VA	2.328	1.565	Various	2.433	Various	Contg	Contg	6.326

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				Modeling & Simulation/E62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		4.356	4.906	5.121	5.550	5.946	5.559	5.669	Contg	Contg
<p>A. <u>Mission Description and Budget Item Justification:</u> The mission of the DISA Modeling and Simulation/E62 project is to support the DOD communications planning and investment strategy for the successful deployment of DOD information systems by performing a broad spectrum of assessment activities in support of C4I programs. DISA has the lead in DOD for providing modeling, simulation and assessment of C4I requirements to DOD decision-makers—from the level of the Office of the Secretary of Defense (OSD) to the warfighter. DISA has achieved this position with services and a suite of analytical tools that are capable of identifying key decision points that impact DOD command and control information systems. This effort is essential to the DISA goal of achieving affordable, quality information services that provide cost-effective products and services. DISA modeling, simulation and assessment efforts support the full range of activities of system planning, engineering, implementation/upgrade, operations, training and security.</p> <p>DISA modeling, simulation and assessment services and tools will (1) support the key DISA programs of Defense Message System (DMS), Information Assurance (IA), Defense Information Systems Network (DISN), Public Key Infrastructure (PKI) and Defense Travel System (DTS); (2) assess the DISA's ability to support CINCs, JS, Services, and other Federal agencies' current and emerging C4ISR (surveillance and reconnaissance) mission-driven information requirements; (3) enhance the functionality of government-off-the-shelf (GOTS) tools to achieve a superior integrated environment for the modeling and simulation efforts of DISN, DMS, IA, Global Combat Support System (GCSS), Global Command and Control System (GCCS), and PKI; (4) investigate methods linking these models with other GOTS that are used in information network analysis; and (5) explore the available commercial-off-the-shelf (COTS) tools appropriate for developing models that will be used for performance assessment of DOD information system architecture and communications.</p> <p>Beginning in FY 2003 DISA's modeling, simulation and assessment services will start to incorporate assessments of network performance and capabilities into information assurance (IA) evaluations for network systems which will include: assisting in resizing the DISN to achieve assured services and reduced costs for the community-of-interest networks; developing integrated IA approaches and architectures to assess total system performance; assimilating IA capabilities and requirements into DISA services and operations; and developing new technology for IA to enhance attack detection, assess intrusion, determine courses of action, and expedite reaction through improved tools and procedures.</p>										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				Modeling & Simulation/E62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		4.356	4.906	5.121	5.550	5.946	5.559	5.669	Contg	Contg
<u>FY2001 Accomplishments:</u>										
<ul style="list-style-type: none"> o DISA Program Support (a) provided DISN performance assessments for existing and transitioning networks, applications, technology and develop recommendations for network performance improvement, survivability and reliability; (b) conducted end-to-end system performance assessment for Defense Message System (DMS), Public Key Infrastructure (PKI), Defense Travel System (DTS), Provisioning 2000 (P2K), Global Combat Support System (GCSS), and Global Command and Control System (GCCS); and (c) built new capability into models/tools to support assessments. (1stQtr - 4thQtr) \$1,426K o Warfighter & CINC Support (a) provided wartime performance and vulnerability assessments of the US Forces Korea communications infrastructure, and (b) developed a CINC network data collection tool to automate data collection for multiple communication modeling uses. (1stQtr - 4thQtr) \$814K o C3 Community Support used modeling and simulation (M&S) tools to evaluate communication and related systems of military campaign outcomes by (a) ensured availability of network models commensurate with the evolving DISN, (b) enhancing M&S capability to reflect the changing network technology development and incrementally building an integrated M&S tool based on COTS products, (c) supported business case studies, and (d) provided modeling support for the Joint Warfare System (JWARS) for design of "Blue" communication scenarios. (1stQtr - 4thQtr) \$2,116K o Total 4.356M 										
<u>FY2002 Plans:</u>										
<ul style="list-style-type: none"> o DISA Program Support will (a) continue DISN performance assessments for existing and transitioning networks, applications, technology and develop recommendations for network performance improvement, survivability and reliability, (b) conduct end-to-end system performance assessment for DMS, PKI, IA, DTS and GCCS, and (c) build new capability into models/tools to support these assessments. (1stQtr - 4thQtr) \$1,971K 										
Page 12 of 15										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07			DII Engineering & Integration/PE 0302019K				Modeling & Simulation/E62			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		4.356	4.906	5.121	5.550	5.946	5.559	5.669	Contg	Contg
<p>o Warfighter & CINC Support will provide: (a) wartime performance and vulnerability assessments of the DOD networks for the warfighting CINCs and (b) assessments of the impact of new technology programs on existing or planned DOD networks. (1stQtr - 4thQtr) \$850K</p> <p>o C3 Community Support Modeling and Simulation (M&S) Tools will: (a) continue to enhance M&S capability to reflect the evolving DISN network, (b) continue development and incremental builds to an integrated M&S tool based on COTS products end-to-end, and (c) continue configuration management support and verification and validation review of the Network Warfare System (NETWARS). (1stQtr - 4thQtr) \$2,085K</p> <p>o Total 4.906M</p> <p><u>FY2003 Plans:</u></p> <p>o DISA Program Support shall perform modeling and traffic engineering to support Defense Information Systems Network(DISN)/Global Information Grid (GIG) networks, (1stQtr - 4thQtr) \$1,600K</p> <p>o Warfighter & CINC Support will assess operations and technical impact of the CINC's ability to support communications during peacetime and wartime escalations, and make available fast turn-around assessment of reach-back traffic analysis, modeling and simulation using electronic data collection techniques during major theater exercises. (1stQtr - 4thQtr) \$890K</p> <p>o C3 Community Support will provide assessment of C4ISR impact during combat for use by Joint Staff, Secretary of Defense(OSD), and CINCs, (1stQtr- 4thQtr) \$2,631K</p> <p>o Total 5.121M</p>										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				Modeling & Simulation/E62				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		4.356	4.906	5.121	5.550	5.946	5.559	5.669	Contg	Contg

B. Other Program Funding Summary: O&M Funding (\$M)

<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	<u>To Complete</u>
7.333	7.969	8.366	6.792	7.044	7.273	7.532	Contg

C. Acquisition Strategy: Work will continue under existing contract vehicles.

D. Schedule Profile

- FY01 - Supported the key DISA programs by integrating DOD systems for better overall performance 1st Qtr - 4th Qtr
 Performed assessments of advanced technologies in support of new C2 initiatives, 1st Qtr - 4th Qtr
 Enhanced technical integration service capability to reflect the evolving DISN network, 1st Qtr - 4th Qtr
 Supported Joint Warfare System (JWARS), 1st Qtr - 4th Qtr
- FY02 - Continue to provide technical integration service support to the key DISA programs, 1st Qtr - 4th Qtr
 Continue to provide technical integration service assessments to OSD, CINCs, JCS & Services, 1st Qtr - 4th Qtr
- FY03 - Support key DISA programs, such as DMS, DISN, PKI, GCSS & GCCS, 1st Qtr - 4th Qtr
 Identify key decision points by ensuring availability of network models and IA, 1st Qtr - 4th Qtr

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		DII Engineering & Integration/PE 0302019K				Modeling & Simulation /E62				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYS Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Integration Services	FFRDC	MITRE, McLean, VA	.200	0	4/02	0	N/A	N/A	.200	.200
	FFRDC	RAND, Tyson Corner, VA	.300	.500	12/01	.450	12/02	Contg	Contg	1.250
	CPFF	Makesystems Washington, DC.	.607	.760	5/02	.790	5/03	Contg	Contg	2.157
	CPFF	SAIC Arlington, Va.	1.318	1.650	3/02	1.835	3/03	Contg	Contg	4.803
		Various Contracts	1.931	1.996	Various	2.046	Various			
Subtotal Product Development			4.356	4.906		5.121				
Total Costs			4.356	4.906		5.121				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Long Haul Communications/PE 0303126K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element (PE)		1.339	10.624	1.407	1.424	1.458	1.491	1.522	Contg	Contg
DISN Systems Engineering Support/T82		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg
Information Dissemination Management/IM01		0	9.261	*					Contg	Contg

A. Mission Description and Budget Item Justification: This program element funds system engineering for the Defense Information Systems Network (DISN) which provides defense-wide communications for the day-to-day operations of the DOD and serves as the core of DOD wartime communications for the President and Secretary of Defense, the Joint Chiefs of Staff (JCS), the Commanders-in Chief (CINCs), and other critical users. It provides for the engineering to consolidate the operational communications networks into DISN. This PE funds the critical and essential engineering required to use commercial equipment and service offerings, to implement the rapidly advancing communications technology, and to update the network design tools so as to continue providing tremendous cost savings, and to continue offering valuable new cost effective information technology capabilities and services to customers. It provides for the cost-effective development of needed information technology capabilities by targeting RDT&E efforts to DOD mission needs. This PE supports the military requirements identified by Joint Mission Needs Statement (JMNS) and Joint Capstone Requirements Document (JCRD). The program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

* Beginning in FY 2003, funding for Project IM01, Information Dissemination Management, has been realigned to PE 0303149K, C4I For The Warrior.

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE			
RDT&E, Defense-Wide/07	Long Haul Communications/PE 0303126K			
B. <u>Program Change Summary:</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	
Previous President's Budget (FY 2002)	1.346	10.744	8.153	
Appropriated Value	1.416	10.744		
Adjustments to Appropriated Value	-.077	-.120		
Adjustments to Budget Year since FY 2002 President's Budget			-6.746	
Current Budget Submission/President's Budget (FY 2003)	1.339	10.624	1.407	
Change Summary Explanation:				
FY 2001 decrease due to below threshold reprogramming.				
FY 2002 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation.				
FY 2003 change due to realignment of Project IM01, Information Dissemination Management, to PE 0303149K, C4I For The Warrior.				
Page 2 of 10				

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Long Haul Communications/PE 0303126K				DISN Systems Engineering Support/T82				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg

A. Mission Description and Budget Item Justification: This project funds the critical and essential engineering to continue providing cost savings and to offer valuable new cost-effective information technology capabilities and services to customers. It funds systems engineering to reduce the risks and delays of implementing new communications technologies by performing assessments and proof of concept implementations. It also provides engineering to develop/enhance computer-aided network topology design, analysis and modeling tools to: (a) improve performance and/or reduce cost of operational networks to satisfy customer requirements at lowest cost, (b) analyze/solve problems in operational networks and (c) produce cost-efficient designs for future networks using new technologies.

FY01 Accomplishments:

- o Engineered the insertion of advanced network technology into the DISN (e.g., wave division multiplexing, ATM cell encryption, and gigabit/terabit routing) (1st Qtr - 4th Qtr; \$406K).
- o Provided engineering support for the Network Engineering Assessment Facility which provides the testbed for performing risk-reduction, integration assessments of enhanced network technologies and transitioning those capabilities into the DISN. (1st Qtr - 4th Qtr; \$225K).
- o Upgraded a portion of workstations, LAN, and WAN hardware & system software as requirements/technology dictate.
 - Provided the information systems platform for design and analysis tools applied to operational and planned DISN voice, video, data and transport networks. (1st Qtr - 4th Qtr; \$100K).
- o Developed network topology design algorithms, heuristics and software based on a government prioritized list(1st Qtr - 4th Qtr; \$608K).
- o Total \$1.339M

FY02 Plans:

- o Engineer the insertion of technology into the DISN (e.g., Wave Division Multiplexing (WDM), optical cross-connect gigabit/terabit routers, E-SONET, Voice Over IP/ATM, MPLS, VPNs, ATM cell encryption, (FASTLANE v.3), broadcast quality video) (1st Qtr -4th Qtr; \$320K).

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Long Haul Communications/PE 0303126K				DISN Systems Engineering Support/T82				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg

FY02 Plans (cont'd):

- o Engineering support for the Network Engineering Assessment Facility which provides the testbed for performing risk-reduction, integration assessments of enhanced network technologies and transitioning those capabilities into the DISN. (1st Qtr - 4th Qtr; \$300K).
- o Upgrade a portion of workstations, LAN, and WAN hardware & system software as requirements/technology dictate. - Provides the information systems platform for design and analysis tools applied to operational and planned DISN voice, video, data and transport networks. (1st Qtr - 4th Qtr; \$100K).
- o Develop network topology design algorithms, heuristics and software based on a government prioritized list (1st Qtr - 4th Qtr; \$643K).
- o Total \$1.363M

FY03 Plans:

- o Engineer the insertion of technology into the DISN (e.g., Wave Division Multiplexing (WDM), gigabit/terabit routers, SONET LITE, Voice Over IP/ATM, MPLS, Quality of Service, VPNs, IP/ATM encryption (TACLANE), broadcast quality video) (1st Qtr - 4th Qtr; \$320K).
- o Engineering support for the Network Engineering Assessment Facility which provides the testbed for performing risk-reduction, integration assessments of enhanced network technologies and transitioning those capabilities into the DISN. (1st Qtr - 4th Qtr; \$341K).
- o Upgrade a portion of workstations, LAN, and WAN hardware & system software as requirements/technology dictate. - Provides the information systems platform for design and analysis tools applied to operational and planned DISN voice, video, data and transport networks. (1st Qtr - 4th Qtr; \$100K).
- o Develop network topology design algorithms, heuristics and software based on a government prioritized list (1st Qtr - 4th Qtr; \$646K).
- o Total \$1.407M

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Long Haul Communications/PE 0303126K				DISN Systems Engineering Support/T82				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg

B. Other Program Funding Summary: N/A

C. Acquisition Strategy: General Services Administration, Washington, DC; SETA Corporation, McLean, VA.

D. Schedule Profile:

FY01 4th Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN (e.g., wavelength multiplexing, ATM cell encryption, and gigabit/terabit routing).

FY02 4th Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN(e.g., Wave Division Multiplexing (WDM), Optical cross-connects, gigabit/terabit routers, E-SONET, Voice Over IP/ATM, MPLS, VPNs, ATM cell encryption (FASTLANE v.3) optical cross connect, broadcast quality video).

FY03 4th Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN(e.g., Wave Division Multiplexing (WDM), optical switching, gigabit/terabit routers, SONET LITE, Voice Over IP/ATM, MPLS, Quality of Service, VPNs, IP/ATM Encryption (TACLANE), broadcast quality video).

FY04 - FY07 4th Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN(e.g., Wave Division Multiplexing (WDM), Optical Switching, gigabit/terabit routers, IP over LAMBDA, Video Over IP/ATM, MPLS, Quality of Service, VPNs, IP/ATM Encryption (TACLANE), broadcast quality video).

Exhibit R-3 Cost Analysis		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Long Haul Communications/PE 0303126K	PROJECT NAME AND NUMBER DISN Systems Engineering Support/T82

Support Costs:

<u>Cost Category</u>	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Pys Cost</u>	<u>FY02 Cost</u>	<u>FY02 Award Date</u>	<u>FY 03 Cost</u>	<u>FY 03 Award Date</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
Systems Engineering	CPAF/ CPFF	Multiple	1.339	1.363	01/02	1.407	01/03	Contg	Contg	N/A

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07			PROGRAM ELEMENT Long Haul Communications/ PE 0303126K				PROJECT NAME AND NUMBER Information Dissemination Management/IM01			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		0	9.261	*					Contg	Contg

A. Mission Description and Budget Item Justification: Information Dissemination Management (IDM) integrates government-off-the-shelf (GOTS) and commercial-off-the-shelf (COTS) advanced information management technology to provide Information Awareness, Access, Delivery Management, and Support services to C4ISR (surveillance and reconnaissance) systems to enhance their information dissemination performance. The goal is to provide the warfighter three critical capabilities: awareness of the existence of operationally relevant information, access to the relevant information, and delivery of relevant information in an authenticated, secure, and timely manner. The Core IDM Services are defined by the "Framework for Information Dissemination Management" document distributed by ASD (C3I) in April 1998 as Awareness, Access, Delivery, and Support and satisfy requirements described in the IDM Mission Needs Statement validated by the Joint Requirements Oversight Council (JROC) in July 1999, and the Capstone Requirements Document approved by the JROC in January 2001. The IDM Core Services are implemented as Defense Information Infrastructure Common Operating Environment (DII COE) compliant segments. Rather than being developed as a "system", IDM is being incrementally developed as tools and services that will be incorporated into and fielded as integral parts of other host systems. This RDT&E project continues the developmental efforts that produced Releases 1, 2 and 3, with the incremental development and integration of IDM tools and services via an evolving IDM Toolbox planned for FY02 and beyond.

* Beginning in FY 2003, funding has been realigned to PE 0303149K C4I For The Warrior.

FY 2002 Plans:

o Field IDM Awareness and Delivery (A&D) capabilities to operational units. Emphasis will be on fielding to CINC locations. (1st Qtr - 4th Qtr; \$500K).

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		PROGRAM ELEMENT Long Haul Communications/ PE 0303126K				PROJECT NAME AND NUMBER Information Dissemination Management/IM01				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		0	9.261	*					Contg	Contg

- o Integrate the Access 1 (A1) capability into IDM tools and services and begin fielding (1st Qtr - 2nd Qtr; \$1,250K).
- o Begin the design and integration of the Operations Support (OPS) and Access 2 and Control (A2&C) capabilities of IDM (1st Qtr - 4th Qtr; \$2,719K).
- o Award competitive contract for continued incremental development of IDM tools and core services (1st Qtr - 3rd Qtr; \$1,350K).
- o Begin the evolution of the IDM Toolbox (3rd Qtr - 4th Qtr; \$3,442K).
- o Total \$9.261M

B. Other Program Funding Summary:

	<u>FY01</u>	<u>FY02</u>	<u>To Complete</u>
Operation and Maintenance,DW	5.529	0.608	Contg

C. Acquisition Strategy: All RDT&E work will be contracted out or funded using MIPRs. Product Development (Evolving IDM Toolbox): Full and Open Small Business Competition; Management Support: MITRE, GSA Schedule; Test and Evaluation: Joint Interoperability Test Command (JITC).

* Beginning in FY 2003, funding has been realigned to PE 0303149K C4I For The Warrior.

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		PROGRAM ELEMENT Long Haul Communications/ PE 0303126K				PROJECT NAME AND NUMBER Information Dissemination Management/IM01				
COST (in millions)	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost	0	0	9.261	*					Contg	Contg

D. Schedule Profile:

FY 2002

- o IDM A&D installed at various CINCs
- o IDM A1 integrated into IDM tools and services
- o Award development contract for continued development and maintenance of IDM Toolbox

* Beginning in FY 2003, funding has been realigned to PE 0303149K C4I For The Warrior.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 Cost Analysis		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Long Haul Communications/PE 0303126K	PROJECT NAME AND NUMBER Information Dissemination Management/IM01

Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Integration	C/CPAF	TBD	0	3.421	TBD	*	*	0	3.421	3.421
Product Development	C/CPAF	TBD	0	3.442	TBD	*	*	28.369	35.910	35.910
Management Support	Various	Various	0	1.850	Various	*	*	Contg	Contg	N/A
Test & Evaluation	MIPR	Various	0	0.548	Various	*	*	Contg	Contg	N/A
Totals				9.261						

* Beginning in FY 2003, funding has been realigned to PE 0303149K C4I For The Warrior.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Support of the National Communications System/P.E. 0303127K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element		4.222	4.912	15.046	5.118	5.253	5.380	5.502	Contg	Contg
Interoperability/N088		1.918	.989	.966	.992	1.014	1.013	1.012	Contg	Contg
NS/EP Programs/N709		2.304	3.923	14.080	4.126	4.239	4.367	4.490	Contg	Contg

A. Mission Description and Budget Item Justification:

This program element supports Executive Order 12472 of 3 April 1984 which assigns the National Communications System (NCS) the mission of assisting the President, the National Security Council, the Office of Science and Technology Policy, and the Office of Management and Budget in exercising their wartime and non-wartime telecommunications functions and responsibilities, and coordinating the planning for, and provisioning of, National Security and Emergency Preparedness (NS/EP) telecommunications for the federal government under all circumstances. To attain this objective, there are several National Security Decision Directives which require that initiatives be developed to improve the survivability and interoperability of the commercial telecommunications systems that support national security and emergency preparedness, to enhance the potential NS/EP functionality of U.S. commercial satellites, and to provide communications support for Government agencies which have responsibilities to carry out essential functions in any emergency. Interoperability supports the Federal Telecommunications Standards Program, and ensures interoperability among emerging government communications systems. Effective FY 2001, NS/EP Programs develops and implements evolutionary NS/EP capabilities for an enduring and effective telecommunications infrastructure. It consolidates Wireless Priority Service, Advanced Intelligent Network and includes an evolutionary initiative called the Information Sharing and Analysis System (ISAS). The NCS will conduct research and development for the expansion of a Cyber Warning Information Network (CWIN) which links the watch desks of seven government sites: the White House, the National Security Incident Response Center (NSIRC), the Intelligence Community Incident Response Center (ICIRC), the Federal Computer Incident Response Center (FedCIRC), the Joint Task Force Computer Network Operations (JTF-CNO), the National Communications System (NCS) and the National Infrastructure Protection Center (NIPC). This linkage will provide a Federal coordination capability in response to cyber events.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	R-1 ITEM NOMENCLATURE Support of the National Communications System/P.E. 0303127K	
<p>Wireless Priority Service explores evolving telecommunications technologies and applications and produces proof-of-concept solutions to satisfy current and future NS/EP needs, with emphasis on the investigation of potential wireless solutions for specialized NS/EP needs. Advanced Intelligent Network employs newly developed processing capabilities that tailor the extensive telecommunications resources of the Public Switched Network to enhance connectivity and survivability of services for essential government users during periods of emergency. The Information Sharing and Analysis System (ISAS) involves an industry-government sharing of information to help ensure reliable, restorable, and secure communications supporting National Security and Emergency Preparedness. This initiative is evolving from a manual process of collection and sharing of network outage information in the National Coordinating Center (NCC) to an automated process which includes a telecommunications ISAS. The NCC, which is a government/industry partnership, has been designated by the National Security Council as an Information Sharing and Analysis Center (ISAC) in accordance with the criteria of Presidential Decision Directive 63 and the National Plan for Information Systems Protection. CWIN will be further developed using various analytical processes to provide a Federal coordination capability and infrastructure vulnerability and interdependency analyses in response to cyber events. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.</p>		

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE			
RDT&E, Defense-Wide/07	Support of the National Communications System/P.E. 0303127K			
B. <u>Program Change Summary:</u>				
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	
Previous President's Budget (FY 2002)	4.235	4.968	5.086	
Appropriated Value	5.019	4.968		
Adjustments to Appropriated Value	-.797	-.056		
Adjustments to Budget Year Since FY 2002 President's Budget				+9.960
Current Budget Submit/President's Budget (FY 2003)	4.222	4.912	15.046	
Change Summary Explanation:				
Funding: FY 2001 change is due to below threshold reprogramming				
FY 2002 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation				
FY 2003 change is due to increase for support of Cyber Warning Information Network (CWIN) developmental initiatives.				
Page 3 of 13				

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Support of the NCS/PE 0303127K				Interoperability/N088				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.918	.989	.966	.992	1.014	1.013	1.012	Contg	Contg

A. Mission Description & Budget Item Justification:

This project analyzes new communications technologies and their effects on interoperability, reliability, and security of government communications; conducts related technical evaluations of standards development and implementation agreements; supports the Federal Telecommunications Standards Program; ensures interoperability among emerging government communication systems, including related information systems, by providing the required analyses to the NCS member organizations and other government agencies for specific types of communication and related information systems; and performs analyses to support priority treatment of NS/EP communications in commercial networks, including the Internet and wireless systems.

FY2001 Accomplishments:

- o Continued to develop technology, methods, and strategies to support development of industry standards and implementation agreements incorporating specific features to help ensure reliability of NS/EP communications through congested networks (\$350K) (1st Qtr - 4th Qtr)
- o Continued to develop procedures for analyzing interoperability of NS/EP communications and related information systems in various stress scenarios. (\$666K) (1st Qtr - 4th Qtr)
- o Assessed advanced emerging technology for its use by or impact on security and reliability of NS/EP communications. (e.g., photonic switching). (\$571K) (1st Qtr - 4th Qtr)
- o Continued to assess, evaluate, and extend advanced wireless communications technology and services for NS/EP communications (\$331K) (1st Qtr - 4th Qtr)
- o Total \$1.918M

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002																					
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER																								
RDT&E, Defense-Wide/07		Support of the NCS/PE 0303127K				Interoperability/N088																								
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost																				
Project Cost		1.918	.989	.966	.992	1.014	1.013	1.012	Contg	Contg																				
<p>FY2002 Plans:</p> <ul style="list-style-type: none"> o Continue analyzing technology underlying emerging communications (e.g., Internet) to develop methods of inserting features into networks to support priority service for NS/EP communications. (\$589K) (1st Qtr - 4th Qtr) o Continue analyzing emerging wireless and other significantly capacity-limited technologies to develop ways of obtaining NS/EP priority treatment in public networks. (\$400K) (1st Qtr - 4th Qtr) o Total \$.989M <p>FY2003 Plans:</p> <ul style="list-style-type: none"> o Develop schemes for preserving end-to-end priority treatment of NS/EP communications in public IP networks. (\$200K) (1st Qtr - 4th Qtr) o Develop interface applications and alternate techniques for network access. (\$266K) (1st Qtr - 4th Qtr) o Identify protocols for the convergence of voice and data systems. (\$200K) (1st Qtr - 4th Qtr) o Evaluate architectures in fiber optic networks using dense wavelength division multiplexing and photonic switching and buffering (\$100K) (1st Qtr - 4th Qtr) o Evaluate evolving photonic protocols and recommend NS/EP code points. (\$100K) (1st Qtr - 4th Qtr) o Evaluate photonic switching systems and label tagging concepts in light of priority service constraints. (\$100K) (1st Qtr - 4th Qtr) o Total \$.966M <p>B. Other Program Funding Summary:</p> <table border="1"> <thead> <tr> <th></th> <th><u>FY2001</u></th> <th><u>FY2002</u></th> <th><u>FY2003</u></th> <th><u>FY2004</u></th> <th><u>FY2005</u></th> <th><u>FY2006</u></th> <th><u>FY2007</u></th> <th>To Complete</th> <th>Total Cost</th> </tr> </thead> <tbody> <tr> <td>O&M,DW</td> <td>2.053</td> <td>2.033</td> <td>2.418</td> <td>4.273</td> <td>4.571</td> <td>4.571</td> <td>4.571</td> <td>Contg</td> <td>Contg</td> </tr> </tbody> </table>												<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	To Complete	Total Cost	O&M,DW	2.053	2.033	2.418	4.273	4.571	4.571	4.571	Contg	Contg
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	To Complete	Total Cost																					
O&M,DW	2.053	2.033	2.418	4.273	4.571	4.571	4.571	Contg	Contg																					

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Support of the NCS/PE 0303127K				Interoperability/N088				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.918	.989	.966	.992	1.014	1.013	1.012	Contg	Contg

C. Acquisition Strategy:

Work will continue under existing contract vehicles and new reimbursable orders.

D. Schedule Profile

- FY01 - 4th quarter: Receive reports that begin to define the expected technology of Next Generation Networks.
- FY02 - 4th quarter: Receive reports on strategies for mitigating impact of congestion on NS/EP communications in high-speed networks (e.g., priority services, intelligent network rerouting in emerging integrated, packet-based, commercial networks).
- FY03 - 4th quarter: Receive reports on end-to-end priority treatment of NS/EP communications in public networks.
- FY04 - 4th quarter: Receive reports on impact on NS/EP communications of infrastructure transition to changing Internet protocol features.
- FY05 - 4th quarter: Receive reports on advanced, emerging technologies affecting NS/EP communications, expected to include radically different backbone and edge architectures.
- FY06 - FY07
4th quarter: Receive reports on advanced, emerging technologies affecting NS/EP communications.

UNCLASSIFIED

Exhibit R-3 Cost Analysis									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Support of the NCS/PE 0303127K				Interoperability/N088				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PY's Cost	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Technical Support	FFRDC/Mipr	Mitre McLean, Va	.210	TBD		TBD		Contg	Contg	.210
Technical Support	RO	NTIA Boulder, CO	.808	.405	10/01	.410	10/02	Contg	Contg	1.623
Technical Support	CPFF/C	SW Research Kelly AFB, Tex	.206	.119	12/01	.120	12/02	Contg	Contg	.445
Technical Support	RO	NIST Gaithersburg, MD	.190	.129	02/02	.130	02/03	Contg	Contg	.449
Technical Support	FFP/C	SAIC San Diego, CA	.100	.188	12/01	.156	12/02	Contg	Contg	.444
Technical Support	FFP	Gartner Group Stanford, CT	.304	TBD		TBD		Contg	TBD	TBD
Subtotal Support Costs			1.818	.841		.816				
Report Development	CPAF/8(a)	Comtec Herndon, VA	.100	.148	08/02	.150	08/03	Contg	Cont	.398
Subtotal Product Development			.100	.148		.150				
Total Cost			1.918	.989		.966				

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Support of the NCS/PE 0303127K				NS/EP Programs/N709				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.304	3.923	14.080	4.126	4.239	4.367	4.490	Contg	Contg

A. Mission Description & Budget Item Justification:

This project is required to employ newly developed processing capabilities to tailor the extensive telecommunications resources of the existing Public Switched Network (PSN), which includes the Local Exchange Carrier (LEC) and Inter Exchange Carrier (IEC) networks, thus enhancing connectivity and survivability of services for essential government users during periods of emergency. Advanced Intelligent Network (AIN) is an evolving PSN capability consisting of signaling systems, switches, computer processing, databases, and transmission media. This research will result in the utilization of these components, in a customized set of network services that can be flexibly, rapidly, and cost effectively configured by customers upon request. Wireless Priority Service explores evolving telecommunications technologies and applications and produces proof-of-concept solutions to satisfy current and future NS/EP needs, with emphasis on the investigation of potential wireless solutions for specialized NS/EP needs. Information Sharing and Analysis System initiatives will develop and evolve a telecommunications Information Sharing and Analysis System (ISAS) for the National Coordinating Center (NCC), providing a means for industry and government to share information relating to the security of the nation's critical telecommunications infrastructure. In addition, ISAS tasking will develop modeling and analysis tools used in the Network Design and Analysis Center (NDAC) System. The Cyber Warning and Information Network (CWIN) will develop a communications architecture designed to facilitate the immediate sharing of critical cyber information within Government, and ultimately, with industry.

FY2001 Accomplishments:

- o Evaluated AIN capabilities and implementation for NS/EP. (\$300K) (1st Qtr - 4th Qtr)
- o Assessed Wireless Priority Services across cellular and satellite systems. (\$224K) (1st Qtr - 4th Qtr)
- o Defined, developed, demonstrated and tested NS/EP techniques and features for NS/EP enhancements. (\$450K) (1st Qtr - 4th Qtr)
- o Developed future service plans for Government Emergency Telecommunications Service (GETS) full operational capability. (\$486K) (1st Qtr - 4th Qtr)

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07			Support of the NCS/PE 0303127K				NS/EP Programs/N709			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.304	3.923	14.080	4.126	4.239	4.367	4.490	Contg	Contg
<ul style="list-style-type: none"> o Integrated enhancements, including NS/EP priorities and security, into current NCS Programs. (\$844K) (1st Qtr - 4th Qtr) o Total \$2.304M <p><u>FY2002 Plans:</u></p> <ul style="list-style-type: none"> o Develop proof-of-concept hardware and software to demonstrate potential solutions for specialized NS/EP needs. (\$135K) (1st Qtr - 4th Qtr) o Explore emerging telecommunications technologies for applications that will enhance National Security and Emergency Preparedness (NS/EP). Also define, develop, demonstrate and test such enhancements. (\$800K) (1st Qtr - 4th Qtr) o Evaluate potential enhancements to the Information Sharing and Analysis System (ISAS) that is used to share industry government information in support of NS/EP using the development of modeling and analysis tools. (\$200K) (1st Qtr - 4th Qtr) o Evaluate the security needs and vulnerabilities on national telecommunication networks that are needed for NS/EP applications for networks' protection. (\$200K) (1st Qtr - 4th Qtr) o Evaluate the potential for Government Emergency Telecommunications Service (GETS) enhancements in light of Advanced Intelligent Network (AIN) developments to improve GETS performance. (\$148K) (1st Qtr - 4th Qtr) o Develop analyses of technology and techniques to evolve the Critical Infrastructure Protection (CIP) tools from emphasis on switched circuits to include multiple technologies, such as data, wireless, new transmission media and methods, network access, and Internet services. (\$480K) (1st Qtr - 4th Qtr) o Develop techniques and methods of analyzing, demonstrating, and testing security systems for the CIP efforts. (\$1,280K) (1st Qtr - 4th Qtr) o Develop techniques and tools for correlating and analyzing data, including testing and evaluating commercial off-the-shelf tools in the CIP environment to improve correlation of events to identify network attacks, to more rapidly analyze events and predict effects on networks. (\$680K) (1st Qtr - 4th Qtr) o Total \$3.923M 										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07			Support of the NCS/PE 0303127K				NS/EP Programs/N709				
COST (in millions)			FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost			2.304	3.923	14.080	4.126	4.239	4.367	4.490	Contg	Contg
<p><u>FY2003 Plans:</u></p> <ul style="list-style-type: none"> o Explore emerging telecommunications technologies for applications that enhance NS/EP. (\$240K) (1st Qtr - 4th Qtr) o Explore geo location concepts for 3rd generation wireless systems. (\$100K) (2nd - 4th Qtr) o Develop proof-of-concept hardware and software to demonstrate potential solutions. (\$100K) (1st Qtr - 4th Qtr) o Evaluate new and proposed AIN capabilities for NS/EP potential. (\$294K) (1st Qtr-4th Qtr) o Define, develop, and demonstrate intelligent Network NS/EP enhancements. (\$300K) (1st Qtr-4th Qtr) o Research enhancements to ISAS program. (\$200K) (1st Qtr-4th Qtr) o Evaluate the security needs and vulnerabilities of Public Switched Telephone Network Next Generation Network (PSTN NGN) from a NS/EP perspective. (\$200K) (1st -4th Qtr) o Evaluate the vulnerabilities of potential Government Emergency Telecommunications Service (GETS) converged network enhancements. (\$191K) (1st Qtr-4th Qtr) o Continue to develop analyses of technology and techniques to evolve the Critical Infrastructure Protection (CIP) tools from emphasis on switched circuits to include multiple technologies such as data, wireless, new transmission media and methods, network access, and internet service provider service. (\$520K) (1st Qtr-4th Qtr) o Continue to develop techniques and methods of analyzing, demonstrating, and testing security tools for CIP efforts. (\$1,255K) (1st Qtr-4th Qtr) o Continue to develop techniques and tools for correlating and analyzing data, including testing and evaluating commercial off-the-shelf tools in the CIP environment. (\$680K) (1st Qtr-4th Qtr) o For the prototype Internet Anomaly Reporting System (IARS) and the Attack Early Warning System (AEWS), develop visualization tools that display anomalies and attack indications on a geographic global map; develop data warehousing, data mining and trending tools to provide automated capabilities for traffic analyses of the data collected from the prototype system. (\$7,000K) (1st Qtr-4th Qtr) o Develop proof-of-concept to share detailed information on IT and network security, intrusion detection and analysis tools, and IT security methods and procedures; establish two-way data feeds between intrusion detection operations centers and laboratories to provide near real-time IDS data and output for correlation and analysis; independently and collaboratively perform analysis of the aggregated data and share results. (\$2,000K)(1st Qtr-4th Qtr) 											

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07			PROGRAM ELEMENT Support of the NCS/PE 0303127K				PROJECT NAME AND NUMBER NS/EP Programs/N709			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.304	3.923	14.080	4.126	4.239	4.367	4.490	Contg	Contg

- o Develop procedures to address interdependency issues between critical infrastructures; develop proof-of-concept tools to perform interdependence analyses. (\$1,000K) (1st Qtr-4th Qtr)
- o Total \$14.080M

B. Other Program Funding Summary:

	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY 2005</u>	<u>FY2006</u>	<u>FY2007</u>	<u>To Complete</u>	<u>Total Cost</u>
O&M	25.709	21.454	19.434	18.419	18.443	18.611	18.937	Contg	Contg

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Support of the NCS/PE 0303127K				NS/EP Programs/N709				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.304	3.923	14.080	4.126	4.239	4.367	4.490	Contg	Contg
<p>C. <u>Acquisition Strategy</u>: Work will continue under current and re-competed contract vehicles, to include systems engineering and technical support (SETA), Federally Funded Research and Development Centers (FFRDCs), industrial firms, and small businesses.</p> <p>D. <u>Schedule Profile</u>:</p> <p>FY01 4th quarter: GETS (with NS/EP functionality) reaches full operational capability.</p> <p>FY02-03 4th quarter: NS/EP integration/implementation into wireless systems.</p> <p>FY04-07 4th quarter: NS/EP integration/implementation into alternate access technologies.</p> <p>FY02-07 4th quarter: Receive reports on current, state-of-the art techniques to include collection, storage, analysis and dissemination of information involving anomalous events in the Internet and other networks.</p> <p>FY02-07 4th quarter: Receive reports on the inclusion of new network transmission systems in ISAS data collection and analysis.</p> <p>Receive reports on including mobile wireless and other network access technologies in ISAS data collection and analysis.</p> <p>Receive reports on advanced methods of data analysis, including statistical analysis and "data mining." (Includes evaluation of tests of commercial off-the-shelf software and hardware).</p> <p>Receive reports on analyses of security vulnerabilities and their fixes for data acquisition, storage, and dissemination.</p> <p>FY03 4th quarter: Tool delivery for prototype IARS & AEWS</p> <p>FY03 4th quarter: Report on proof-of-concept of sharing IDS information</p> <p>FY03 4th quarter: Report on proof-of-concept for interdependency analyses; signed interdependency sharing agreements</p>										
Page 12 of 13										

UNCLASSIFIED

Exhibit R-3 Cost Analysis									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Support of the NCS/PE 0303127K				NS/EP Programs/N709				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PY's Cost	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Assistance	CPAF/ C	BAH McLean, VA	.300	1.197	Various	1.841	Various	Contg	Contg	3.338
Technical Assistance	FFRDC/ Mipr	Mitre McLean, Va	.844	.844	04/02	.844	04/03	Contg	Contg	2.532
Technical Assistance	8a	TBD	0	.600	12/01	.600	12/02	Contg	Contg	1.200
Technical Assistance	CPAF	Dyncorp Chantilly, Va	.224	.296	04/02	.301	04/03	Contg	Contg	.821
Technical Assistance	CPFF/ C	Akamai Cambridge, Mass	0	0	0	7.000	12/02	Contg	Contg	Contg
Technical Assistance	CPFF/ C	AT&T	0	0	0	2.000	12/02	Contg	Contg	Contg
Technical Assistance	RO	DOE	0	0	0	.500	12/02	Contg	Contg	Contg
Subtotal Support Costs			1.368	2.937		13.086				
Technical Reports	CPFF/ SS	Telcordia Morristown, NJ	.936	.686	03/02	.694	03/03	Contg	Contg	2.316
Technical Reports	RO	JPL Pasadena, CA	0	.300	03/02	.300	03/03	Contg	Contg	.600
Subtotal Product Development			.936	.986		.994				
Total Cost			2.304	3.923		14.080				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Minimum Essential Emergency Communications Network/PE 0303131K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element (PE)		7.204	6.910	7.199	7.316	7.420	7.541	7.691	Contg	Contg
Strategic C3 Support/T70		2.403	2.510	2.599	2.698	2.785	2.881	3.022	Contg	Contg
Special Projects/T64		4.801	4.400	4.600	4.618	4.635	4.660	4.669	Contg	Contg
<p>A. <u>Mission Description and Budget Item Justification:</u> This PE supports DISA's role as the Nuclear Command, Control, and Communications (NC3) system engineer in four major areas: (1) Systems Analysis, (2) Operational Assessments, (3) Systems Engineering and (4) Development of Concepts of Operation and Architectures. The NC3 system is composed of C3 assets that provide connectivity from the President and the Secretary of Defense through the National Military Command System (NMCS) to nuclear execution forces integral to fighting a "homeland-to-homeland," as well as theater, nuclear war. This MEECN includes the emergency action message (EAM) dissemination systems and those systems used for tactical warning/attack assessment (TW/AA), conferencing, force report back, re-targeting, force management and requests for permission to use nuclear weapons. Supporting efforts assure positive control of nuclear forces and connectivity between the Secretary of Defense and strategic and theater forces. Efforts assure an informed decision-making linkage between the Secretary and the Commanders-in-Chief (CINCs) of the Unified and Specified Commands. Additionally, through this PE, DISA provides direct and specialized support to ASD(C3I) and the Joint Staff (JS) and recommends support or non-support for NC3 programs as well as fail safe-procedures and risk reduction actions. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.</p>										
Page 1 of 8										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2002

APPROPRIATION/BUDGET ACTIVITY

RDT&E, Defense-Wide/07

R-1 ITEM NOMENCLATURE

Minimum Essential Emergency Communications Network/PE 0303131K

B. Program Change Summary

	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Previous President's Budget (FY 2002)	7.223	6.988	7.269
Appropriated Value	7.099	6.988	
Adjustments to Appropriated Value	+ .105	- .078	
Adjustments to Budget Years Since FY 2002 President's Budget			- .070
Current Budget Submit/President's Budget (FY 2003)	7.204	6.910	7.199

Change Summary Explanation:

FY01 change due to below threshold reprogramming.

FY02 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation.

FY03 change due to revised fiscal guidance.

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Minimum Essential Emergency Communications Network (MEECN)/PE 0303131K				Strategic C3 Support/T70				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.403	2.510	2.599	2.698	2.785	2.881	3.022	Contg	Contg
<p>A. <u>Mission Description & Budget Item Justification</u>: This project has three elements: Systems Analysis, Operational Assessments, and Systems Engineering. Together, these elements perform the mission of the NC3 systems engineer and provides NCA and Nuclear C3 support for ASD(C3I) and the Joint Staff. The first element, Systems Analysis, supports long-range planning and vulnerability assessments to ensure the NC3 system is adequate under all conditions of stress or war. This element analyzes the Nuclear Command and Control System (NCCS), i.e., strengths and weaknesses and recommends investment strategies to evolve the NCCS to achieve desired capabilities. Nuclear threats to include terrorist activities, both regional and global, are analyzed in special reports for ASD(C3I) and the Joint Staff. The second element is Operational Assessments of fielded C3 systems and weapon platforms. These assessments are the sole means for positive verification of communications plans, procedures, operation orders, training, equipment and end-to-end system configuration. Assessments include strategic and theater, and national level C3 interfaces into the NC3 system. DISA conducts tests in an operational setting with the Joint Staff, CINCs and nuclear forces worldwide. The third element is Systems Engineering and provides the Senior Leaders Communications System with technical and management advice, planning and engineering support, and Test & Evaluation (T&E). Leading edge C4I technology is assessed for all communication platforms supporting Executive Travelers/Senior Leaders to include the interoperability of hardware and operational procedures. This element supports the President's and other DOD aircraft, i.e., Air Force One and the National Airborne Operations Center (NAOC).</p>										
Page 3 of 8										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002																	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER																				
RDT&E, Defense-Wide/07		Minimum Essential Emergency Communications Network (MEECN)/PE 0303131K				Strategic C3 Support/T70																				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost																
Project Cost		2.403	2.510	2.599	2.698	2.785	2.881	3.022	Contg	Contg																
<p><u>FY 2001 Accomplishments:</u></p> <ul style="list-style-type: none"> o Continued NC3 operational assessments/positive command and control (1st Qtr - 4th Qtr; \$1,293K) o Continued NC3 strategic planning and analysis and special reports (1st Qtr - 4th Qtr; \$538K) o Continued NC3 systems engineering, Senior Leader Communications System (SLCS) (1st Qtr - 4th Qtr; \$572K) o Total \$2.403M <p><u>FY 2002 Plans:</u></p> <ul style="list-style-type: none"> o Continue NC3 operational assessments/positive command and control (1st Qtr - 4th Qtr; \$1,320K) o Continue NC3 strategic planning and analysis and special reports (1st Qtr - 4th Qtr; \$522K) o Continue NC3 systems engineering, Senior Leader Communications System (SLCS) (1st Qtr - 4th Qtr; \$668K) o Total \$2.510M <p><u>FY 2003 Plans:</u></p> <ul style="list-style-type: none"> o Continue NC3 operational assessments/positive command and control (1st Qtr - 4th Qtr; \$1,423K) o Continue NC3 strategic planning and analysis and special reports (1st Qtr - 4th Qtr; \$596K) o Continue NC3 systems engineering, Senior Leader Communications System (SLCS) (1st Qtr - 4th Qtr; \$580K) o Total \$2.599M <p>B. <u>Other Program Funding Summary:</u></p> <table border="0"> <tr> <td></td> <td><u>FY01</u></td> <td><u>FY02</u></td> <td><u>FY03</u></td> <td><u>FY04</u></td> <td><u>FY05</u></td> <td><u>FY06</u></td> <td><u>FY07</u></td> </tr> <tr> <td>Operations and Maintenance:</td> <td>3.408</td> <td>3.476</td> <td>3.133</td> <td>3.030</td> <td>3.117</td> <td>3.194</td> <td>3.288</td> </tr> </table>												<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	Operations and Maintenance:	3.408	3.476	3.133	3.030	3.117	3.194	3.288
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>																			
Operations and Maintenance:	3.408	3.476	3.133	3.030	3.117	3.194	3.288																			

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Minimum Essential Emergency Communications Network (MEECN)/PE 0303131K				Strategic C3 Support/T70				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		2.403	2.510	2.599	2.698	2.785	2.881	3.022	Contg	Contg
<p>C. <u>Acquisition Strategy</u>: Full and open competition resulted in 4 distinct contract vehicles with Raytheon, Arlington, VA; Science Applications International Corporation (SAIC), McLean, VA; Carson and Associates (Small Business); and General Services Administration, Washington, D.C.</p> <p>D. <u>Schedule Profile</u>: Events cited below are recurring events for each fiscal year (2001-2007).</p> <p>1st Qtr - Conduct Strategic Mobile Command Center Operation Order for Joint Staff (JS).</p> <p>1st Qtr - Plan/Conduct Strategic and Theater Communications Assessment (Polo Hat) for JS.</p> <p>1st Qtr - Conduct JS/CINC Staff Assistance Exercise (CINCSpace, CINSTRAT, National Airborne Operation Center).</p> <p>1st Qtr - Provide ASD(C3I) NC3 Review Report.</p> <p>1st Qtr - Assist in NCA and Nuclear C3 Aircraft modernization and overhaul.</p> <p>2nd Qtr - Provide NC3 Systems Engineer Annual Report to ASD(C3I).</p> <p>2nd Qtr - Conduct JS/CINC Staff Assistance Exercise (CINCPAC).</p> <p>2nd Qtr - Plan/Conduct Strategic and Theater Communications Assessment (Polo Hat) for JS.</p> <p>2nd Qtr - Provide Non-Strategic Communications Evaluation (CINCEUR).</p> <p>2nd Qtr - Assist in NCA and Nuclear C3 Aircraft modernization and overhaul.</p> <p>3rd Qtr - Plan/Conduct Strategic and Theater Communications Assessment (Polo Hat) for JS.</p> <p>3rd Qtr - Update Emergency Communications Procedures CJCS, Emergency Action Procedures (EAP) Vol. 7 for JS.</p> <p>3rd Qtr - Assist in NCA and Nuclear C3 Aircraft modernization and overhaul.</p> <p>4th Qtr - Plan/Conduct Strategic and Theater Communications Assessment (Polo Hat) for JS.</p> <p>4th Qtr - Update National Military Command System (NMCS)/DOD Emergency Communications Plan for JS.</p> <p>4th Qtr - Assist in NCA and Nuclear C3 Aircraft modernization and overhaul.</p>										
Page 5 of 8										

Exhibit R-3 Cost Analysis	DATE: February 2002
----------------------------------	----------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Minimum Essential Emergency Communications Network (MEECN)/PE 0303131K	PROJECT NAME AND NUMBER Strategic C3 Support/T70
--	--	--

Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/C CPAF CPFF MIPR	Multiple Performing Activities	2.403	2.510	12/01	2.599	12/02	Contg.	Contg.	N/A

Exhibit R-2a, RDT&E Project Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Minimum Essential Emergency Communications Network (MEECN)/PE 0303131K				Special Projects/T64				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		4.801	4.400	4.600	4.618	4.635	4.660	4.669	Contg	Contg
<p>A. <u>Mission Description & Budget Item Justification</u>: The mission is performing classified work. All aspects of this project are classified and require special access. Detailed information on this project is not contained in this document.</p> <p>B. <u>Other Program Funding Summary</u>: N/A.</p> <p>C. <u>Acquisition Strategy</u>: Information requires special access.</p> <p>D. <u>Schedule Profile</u>: Information requires special access.</p>										
Page 7 of 8										

UNCLASSIFIED

Exhibit R-3 Cost Analysis	DATE: February 2002
----------------------------------	----------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Minimum Essential Emergency Communications Network (MEECN)/PE 0303131K	PROJECT NAME AND NUMBER Special Projects/T64
--	--	--

<u>Support Costs</u>										
<u>Cost Category</u>	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total PYs Cost</u>	<u>FY 02 Cost</u>	<u>FY02 Award Date</u>	<u>FY 03 Cost</u>	<u>FY03 Award Date</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	<u>Total Value of Contract</u>
Systems Engineering	SS/C CPFF MIPR	Multiple CPAF Performing Activities	4.801	4.400	06/02	4.600	06/03	Contg.	Contg.	N/A

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE C4I for the Warrior/PE 0303149K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element (PE)		0.385	0	20.536	24.329	24.516	23.825	23.633	Contg	Contg
C4 Interoperability Assessment/T50		0.385	0	0	0	0	0	0	0	0.385
Joint & Coalition Task Force Applications Integration and Interoperability/T55		0	0	14.458	14.646	18.632	14.724	15.149	Contg	Contg
Information Dissemination Management/IM01		0	*	6.078	9.683	5.884	9.101	8.484	Contg	Contg
Defense Emergency Response Fund (DERF) (non-add) **		0	10.000	4.500	4.300	2.400	1.200	10.500	Contg	Contg

A. Mission Description and Budget Item Justification:
 This program element is the Chairman of the Joint Chiefs of Staff (CJCS) initiative that promotes joint and coalition C4I interoperability. Through it the DOD seeks to identify, prioritize, and solve C4I interoperability problems. These three overlapping phases lead the Department to global interoperability for US military forces deployed anywhere, on any mission, with maximum flexibility in force composition. Efforts under this PE provide focus and visibility into resolving C4I interoperability issues. Joint and Coalition Task Force Applications Integration and Interoperability is a new initiative that provides for integration and testing of joint and coalition command and control information applications. This project will develop interoperability prototypes, field them as pilots, and

* Beginning in FY 2003, funding for Information Dissemination Management has been realigned from PE 0303126K, Long Haul Communications. This is not a new start.

Page 1 of 11

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification		DATE: February 2002																									
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		R-1 ITEM NOMENCLATURE C4I for the Warrior/PE 0303149K																									
<p>** DERF funding will augment Project T55 efforts.</p> <p>integrate them into multiple C4I systems including the Global Command and Control System (GCCS). Information Dissemination Management involves the integration of advanced information management technology to provide information awareness, access, and delivery to C4ISR (surveillance and reconnaissance) systems. Its goal is to provide the warfighter with operationally relevant information in a secure, authenticated, and timely manner. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.</p> <p>B. <u>Program Change Summary:</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="text-align: right; width: 10%;"><u>FY 01</u></th> <th style="text-align: right; width: 10%;"><u>FY 02</u></th> <th style="text-align: right; width: 10%;"><u>FY 03</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 2002)</td> <td style="text-align: right;">.401</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Appropriated Value</td> <td style="text-align: right;">.405</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td style="text-align: right;">-.020</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Budget Year Since FY 2002 President's Budget</td> <td></td> <td></td> <td style="text-align: right;">+20.536</td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY 2003)</td> <td style="text-align: right;">.385</td> <td style="text-align: right;">0</td> <td style="text-align: right;">20.536</td> </tr> </tbody> </table> <p>Change Summary Explanation:</p> <p>FY 2001 change due to below threshold reprogramming.</p> <p>FY 2003 change due to two factors:</p> <p style="padding-left: 40px;">A new initiative, Project T55, Joint and Coalition Task Force Applications Integration and Interoperability, which provides funding to support the integration and testing of applications that will provide increased command and control capability within the Global Information Grid to benefit Joint Task Forces.</p> <p style="padding-left: 40px;">Also, Project IM01, Information Dissemination Management, was realigned from PE 0303126K, Long Haul Communications. This is not a new start.</p>					<u>FY 01</u>	<u>FY 02</u>	<u>FY 03</u>	Previous President's Budget (FY 2002)	.401	0	0	Appropriated Value	.405			Adjustments to Appropriated Value	-.020			Adjustments to Budget Year Since FY 2002 President's Budget			+20.536	Current Budget Submit/President's Budget (FY 2003)	.385	0	20.536
	<u>FY 01</u>	<u>FY 02</u>	<u>FY 03</u>																								
Previous President's Budget (FY 2002)	.401	0	0																								
Appropriated Value	.405																										
Adjustments to Appropriated Value	-.020																										
Adjustments to Budget Year Since FY 2002 President's Budget			+20.536																								
Current Budget Submit/President's Budget (FY 2003)	.385	0	20.536																								
Page 2 of 11																											

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07			C4I for the Warrior/PE 0303149K				Joint and Coalition Task Force Applications Integration and Interoperability/T55				
COST (in millions)			FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost			0	0	14.458	14.646	18.632	14.724	15.149	Contg	Contg
DERF (non-add)			0	10.000	4.500	4.300	2.400	1.200	10.500	Contg	Contg
<p>A. <u>Mission Description & Budget Item Justification:</u> This project provides for the integration and testing of Coalition and Joint Task Force (C/JTF) applications. As part of the DoD Transformation objectives, increased real-time execution capability at the deployed force level is required within the Global Information Grid and its Joint, Service, Allied, and non-DOD components and interfaces. This project will develop interoperability prototypes, field them as pilots in appropriate demonstrations (e.g., JFCOM evaluations, Joint Warrior Interoperability Demos) or exercises, and then integrate and harden them for transition into a Joint Deployable Command and Control capability to be embedded into multiple C4I systems including GCCS and the Services' systems. This capability will also include logistics interoperability and force protection C2 capability with coalition partners. As part of the SECDEF's Joint Task Force vision, the capability must support JTFs, which are deployed both to regional CINCs abroad and in the mission of Homeland Defense/Consequence Management. This project will provide functionality and interoperability with Federal, State, and Local agencies in the mission of Homeland Security C2.</p> <p><u>FY 2002 Plans:</u> This DERF funded effort supports Defense Collaborative Tool Suite (DCTS) initial fielding. It provides initial operational capability to the CINCs. DISA, as recently designated executive agent for DCTS, is responsible for leading a tiger team to provide rapid fielding to the CINCs of the DCTS Baseline established as the DoD standard by ASD C3I. (2nd-4th Qtrs; \$10.000 million) This effort is a non-add for the program because it is funded in the DERF.</p> <p><u>FY 2003 Plans:</u></p> <ul style="list-style-type: none"> o Work with US Joint Forces Command to support their prototyping of a JTF headquarters, including participation in Millennium Challenge and other experimentation. Provide components from COE, GCCS, GCSS, and relevant Advanced Concept Technology Demonstrations (ACTDs) as necessary to configure integrated demonstrations. (1st-4th Qtrs; \$0.350 million) 											

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07			C4I for the Warrior/PE 0303149K				Joint and Coalition Task Force Applications Integration and Interoperability/T55				
COST (in millions)			FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost			0	0	14.458	14.646	18.632	14.724	15.149	Contg	Contg
<ul style="list-style-type: none"> o Integrate functionality from GCCS, GCSS, relevant ACTDs and technology identified in JFCOM experimentation into a JTF headquarters capability (Joint C2 System/Joint Combat Support System, or JCCS/JCSS) which eventually can be embedded into COE compliant systems of GCCS/GCSS or any of the Services via the COE. (2nd-4th Qtrs; \$1.895 million) o Provide security enhancements as required to ensure compatibility of the Combined/Joint Task Force (C/JTF) capability with allied and coalition systems, including releasability of information and C2 interoperability in various modes of information exchange and collaborative operations. (2nd - 4th Qtr; \$0.530 million) o Provide mission-tailored JTF displays of synchronized, real-time combat information to support both operational and tactical decision-making across the Joint Task Force, consistent with the OSD Family of Interoperable Operational Pictures (FIOP) and Common Relevant Operational Picture (CROP) requirements. (4th Qtr; \$2.090 million) o Ensure capacity to process and integrate all relevant surveillance, tracking, and engagement information into the Common Relevant Operational Picture. (4th Qtr; \$1.890 million) o Integrate information, displays, & decision aids, shared across a joint force, for collaborative situation development, crisis assessment, courses of action development/selection, execution planning and execution. (3rd-4th Qtr; \$2.895 million) o Begin integration of tools for persistent Intelligence, Surveillance, Reconnaissance (ISR) management, surveillance, tracking, target nomination, terrain analysis, and engagement of high-volume precision strike and fire support by integrating components from various Services' programs and ACTDs onto an integrated COE framework. (1st-4th Qtrs; \$0.850 million) o Demonstrate Joint Decision Support tools for collaborative logistical and transportation planning between deployed joint forces, supporting logistics activities, and coalition logistics activities. Support near-real-time collaboration between operations and logistics planning and execution within the C/JTF. (2nd Qtr; \$0.500 million) o Provide applications access to all available communications paths, with an organic capability to visualize (as part of the common relevant operational picture) critical communications links and networks, defensive information operations, and information flow to and within the JTF, including allied and commercial connectivity. Demonstrate a capability to restrict/preempt users which exceed allocations. (1st - 3rd Qtrs; \$0.538 million) 											

Exhibit R-2a, RDT&E Project Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I for the Warrior/PE 0303149K				Joint and Coalition Task Force Applications Integration and Interoperability/T55				
COST (in millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost		0	0	14.458	14.646	18.632	14.724	15.149	Contg	Contg
<ul style="list-style-type: none"> o Demonstrate a capability for assured connectivity through the DISN network in support of critical information flows during congested network operations such as homeland defense. (2nd Qtr; \$0.350 million) o Deliver a C2 capability to coordinate force protection and homeland defense operations among CINCs, C/JTFs, Service Components, agencies, and allies, including a small-footprint deployable capability for advance teams and incident commanders. (2nd-4th Qtrs; \$2.090 million) o Conduct interoperability demonstrations and assessments of new ways to intercommunicate with coalition partners, including participation in Combined Federated Battle Labs USJFCOM coalition experiments. Ensure that evolving U.S. capabilities such as directories, PKI, XML-based data/file/document sharing, and collaboration are compatible with the co-evolving capabilities of allies. (1st-4th Qtrs; \$0.480 million) o Develop transportable DCTS and improve supporting network infrastructure (1st-4th Qtrs; \$4.500 million [DERF]) o Total \$14.458 million plus non-add DERF \$4.500 million <p>B. <u>Other Program Funding Summary</u>: not applicable.</p> <p>C. <u>Acquisition Strategy</u>: MITRE, Reston, VA; Houston Associates, Inc., Arlington, VA; SAIC, Arlington, VA; INRI, Newport News, VA; and, SSC, Charleston.</p> <p>D. <u>Schedule Profile</u>:</p> <p><u>FY 2003</u></p> <p>1st Qtr:</p> <ul style="list-style-type: none"> o Joint Command and Control Capability (JC3) Joint and Coalition communications foundation demonstration <p>2nd Qtr:</p> <ul style="list-style-type: none"> o Joint and Coalition integrated logistics decision support tools demonstration o Coalition releasability and assured delivery demonstration 										

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07			C4I for the Warrior/PE 0303149K				Joint and Coalition Task Force Applications Integration and Interoperability/T55				
COST (in millions)			FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost			0	0	14.458	14.646	18.632	14.724	15.149	Contg	Contg
<p>3rd Qtr:</p> <ul style="list-style-type: none"> o Integrated Joint and Coalition planning & decision making tools demonstration o JCCS Communications and Information Assurance Common Operational Picture (IA COP) demonstration <p>4th Qtr:</p> <ul style="list-style-type: none"> o Integrated C/JTF prototype, JC3 initial operational demonstration o Integrated Joint and Coalition Situation Assessment, Family of Interoperable Operational Pictures/Common Relevant Operational Picture (FIOP/CROP) demonstration o Integrated Intelligence, Surveillance, Reconnaissance, targeting & engagement/strike tools demonstration o Force protection and Homeland Defense C2 demonstration o Transportable DCTS demonstration <p>1st-4th Qtr:</p> <ul style="list-style-type: none"> o Deployable C/JTF Headquarters prototyping and experimentation at JFCOM o Coalition C2 interoperability demonstrations <p><u>FY 2004 - 2007</u></p> <ul style="list-style-type: none"> o DCTS to CINCs afloat o Integrated JC3 pilot deployment o Incorporate JC3 into Olympic Challenge 04 o Expand JC3 to include interfaces to Allied partners/NGOs/Civilian Agencies o Initial Operational Capability o Final Operational Capability o Transition to an O&M Executive Agent 											

UNCLASSIFIED

Exhibit R-3 Cost Analysis									DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER					
RDT&E, Defense-Wide/07		C4I for the Warrior/PE 0303149K				Joint and Coalition Task Force Applications Integration and Interoperability/T55					
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
<u>Product Development</u>											
<u>Engineering/technical services</u>											
	CPFF	HAI, Arlington, VA	N/A	N/A		1.200	Dec 02	Contg	Contg	1.200	
	CPAF	SAIC, Arlington, VA				2.500	Dec 02	Contg	Contg	2.500	
	MIPR	SSC, Charleston, SC				2.100	Dec 02	Contg	Contg	2.100	
	CPAF	INRI, Newport News, Va				1.500	Dec 02	Contg	Contg	1.500	
<u>All other Contracts</u>						4.600	Dec 02	Contg	Contg	N/A	
<u>Systems Engineering</u>											
	CPAF	MITRE, Arlington, VA				<u>2.558</u>	Nov 02	Contg	Contg	2.558	
TOTAL						14.458					
<u>DERF (non-add)</u>											
<u>Engineering/technical services</u>											
	T&M	HAI, Arlington, VA		0.860	Apr 02	1.260	Mar 03	Contg	Contg	2.120	
		SSC, Charleston, SC		0.640	Apr 02	0.540	Apr 03	Contg	Contg	1.180	
		SAIC, Arlington, VA		1.260	Mar 02	1.600	Apr 03	Contg	Contg	2.860	
<u>All other Contracts</u>						3.240	Mar 02		Contg	Contg	N/A
				2.535	May 02	0.600	May 03	Contg	Contg	N/A	
				0.991	Sep 02			Contg	Contg	N/A	
<u>Systems Engineering</u>											
	CPAF	MITRE, Arlington, VA		<u>0.474</u>	May 02	<u>0.500</u>	May 03	Contg	Contg	0.974	
TOTAL						10.000				4.500	

Exhibit R-2a, RDT&E Project Justification									DATE February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		C4I for the Warrior/PE 0303149K				Information Dissemination Management/IM01				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		0	*	6.078	9.683	5.884	9.101	8.484	Contg	Contg

A. Mission Description and Budget Item Justification: Information Dissemination Management (IDM) integrates government-off-the-shelf (GOTS) and commercial-off-the-shelf (COTS) advanced information management technology to provide Information Awareness, Access, Delivery Management, and Support services to C4ISR (surveillance and reconnaissance) systems to enhance their information dissemination performance. The goal is to provide the warfighter three critical capabilities: awareness of the existence of operationally relevant information, access to the relevant information, and delivery of relevant information in an authenticated, secure, and timely manner. The Core IDM Services are defined by the "Framework for Information Dissemination Management" document distributed by ASD (C3I) in April 1998 as Awareness, Access, Delivery, and Support and satisfy requirements described in the IDM Mission Needs Statement validated by the Joint Requirements Oversight Council (JROC) in July 1999, and the Capstone Requirements Document approved by the JROC in January 2001. The IDM Core Services are implemented as Defense Information Infrastructure Common Operating Environment (DII COE) compliant segments. Rather than being developed as a "system", IDM is being incrementally developed as tools and services that will be incorporated into and fielded as integral parts of other host systems. This RDT&E project continues the developmental efforts that produced Releases 1, 2 and 3, with the incremental development and integration of IDM tools and services via an evolving IDM Toolbox planned for FY02 and beyond.

* Beginning in FY 2003, funding has been realigned from PE 0303126K Long Haul Communications.

FY 2003 Plans:

o Continue fielding of Awareness and Delivery capabilities of IDM (IDM A&D), and of initial Access 1 capabilities (A1) to operational units. Emphasis will be on fielding to CINC locations. (1st Qtr - 4th Qtr; \$500K).

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07			PROGRAM ELEMENT C4I for the Warrior/PE 0303149K				PROJECT NAME AND NUMBER Information Dissemination Management/IM01			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		0	*	6.078	9.683	5.884	9.101	8.484	Contg	Contg

- o Continue development and integration of the Operations Support (OPS) and Access 2 and Control (A2&C) capabilities of IDM. The OPS tools will provide the warfighter an integrated graphical user interface for administration, status, and reporting. The A2 & C tools will provide commanders a capability to establish subscriptions for types of information products and to define information access policy. (1st Qtr - 4th Qtr; \$5,378K)
- o Begin design of minor enhancements to the IDM Toolbox considering new technologies. (3rd Qtr - 4th Qtr; \$200K).
- o Total \$6.078M

B. Other Program Funding Summary:

	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To Complete</u>
Operation and Maintenance, DW	0.345	0.469	0.479	0.610	0.622	Contg

C. Acquisition Strategy: All RDT&E work will be contracted out or funded using MIPRs. Product Development (Evolving IDM Toolbox): Full and Open Small Business Competition; Management Support: MITRE, GSA Schedule; Test and Evaluation: Joint Interoperability Test Command (JITC).

* Beginning in FY 2003, funding has been realigned from PE 0303126K Long Haul Communications.

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07			PROGRAM ELEMENT C4I for the Warrior/PE 0303149K				PROJECT NAME AND NUMBER Information Dissemination Management/IM01			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		0	*	6.078	9.683	5.884	9.101	8.484	Contg	Contg

D. Schedule Profile:

FY 2003

- o IDM A&D and A1 installed at various CINCs
- o IDM OPS and A2&C integrated into available IDM tools and services

FY 2004 - 2007

o Releases offering enhancements in awareness, access, and delivery capabilities. Depending upon emerging requirements and advances in technology, the enhancements could include event driven self-cataloging, enhanced profiling capability, information flow monitoring, notification enhancements, event tracking, and improved user interfaces.

* Beginning in FY 2003, funding has been realigned from PE 0303126K Long Haul Communications.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3 Cost Analysis		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT C4I for the Warrior/PE 0303149K	PROJECT NAME AND NUMBER Information Dissemination Management/IM01

Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	Various	Various	0	*	N/A	4.573	Various	Contg	Contg	N/A
Management Services	Various	Various	0	*	N/A	1.200	Various	Contg	Contg	N/A
Test & Evaluation	MIPR	Various	0	*	N/A	0.305	Various	Contg	Contg	N/A
Totals						6.078				

* Beginning in FY 2003, funding has been realigned from PE 0303126K Long Haul Communications.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Global Command and Control System (GCCS)/P.E. 0303150K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Command and Control System/CC01		0	0	15.604*	16.498	17.476	17.813	18.228	Contg	Contg
<p>A. <u>Mission Description & Budget Item Justification:</u> The GCCS is the cornerstone of the Command, Control, Communications, Computers, and Intelligence (C4I) for the Warrior (C4IFTW) effort and both replaced and exceeded the capabilities of the Worldwide Military Command & Control System. GCCS is a single joint command & control (C2) system that allows seamless integration of information for the Chairman, Joint Chiefs of Staff (CJCS), the CINCs, and the Services providing joint and multinational operations into the 21st century. A key C4I capability, GCCS is fielded at over 635 Joint sites worldwide, all networked via the DoD's classified private intranet. The system supports the Secretary of Defense and subordinate elements by providing synchronized operations from dispersed locations and provides Joint C4I to support the entire force projection cycle. It provides responsive command & control, the capability to assess the level of success, and retain flexibility to re-engage with precision by allowing the Joint Task Force (JTF) commander the ability to maintain dominant battlefield awareness through a fused, integrated, near real-time picture of the battlespace. Most importantly, GCCS supports DoD's transformation by focusing on near term concepts and injects new technologies that enhance the warfighters' effectiveness and lethality. The requested RDT&E funding is critical to supporting the DoD transformation by maintaining the program's ability to provide incremental improvements and to finance development activity and subsequent incorporation of revolutionary technological breakthroughs. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.</p> <p>*This project is not a new start nor does it reflect unexpected program growth. Beginning in FY 2003, funding has been realigned from the O&M to the RDT&E appropriation due to Congressional (HAC) direction and subsequent Departmental guidance regarding Information Technology budgeting.</p>										
Page 1 of 6										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Global Command and Control System (GCCS)/P.E. 0303150K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Command and Control System/CC01		0	0	15.604	16.498	17.476	17.813	18.228	Contg	Contg
<p>FY 2003 Plans:</p> <ul style="list-style-type: none"> o Conduct final test activities, and complete fielding and transition activities required to transition GCCS capabilities to the new GCCS infrastructure (1st-2nd Qtr; \$1,315K) o Conduct evolutionary block planning for future GCCS version releases. Specifically, conduct research to identify methods to accelerate the integration of advanced and emerging technologies within the GCCS. Conduct studies to identify key GCCS research and development activities (1st-2nd Qtr; \$250K) o Integrate Integrated Imagery (I3), Readiness Assessment Tool(RAS), and Joint Terrain Analysis Tool/Ground Template Toolkit (JTAT/GTT) within the GCCS (1st-2nd Qtr; \$1,565K) o Develop and integrate within the GCCS a responsive, automated, interoperable national and force-level (theater and tactical) targeting capability enhancing speed, range, and flexibility of US air, ground and naval power, and support the precision required for modern munitions (1st-2nd Qtr; \$1,252K) o Develop and integrate a capability to perform critical tasks related to the generation and registration of intelligence requirements, fusion of validated requirements into all-source collection plans, synchronization of collection plans with combat operations, execution of plans through tasking and requests for tasking, near-real-time assessment of execution effectiveness, and rapid modification of plans in response to assessment findings (1st-2nd Qtr; \$1,252K) o Demonstrate a capability to dynamically coordinate, and redirect, if warranted, Surveillance and Reconnaissance activities, with an array of National/Theater/Organic and possibly coalition/allied Surveillance and Reconnaissance resources, that contribute to satisfying the Commander's needs for information during war (2nd-3rd Qtr; \$1,252K) o Develop a capability that provides a single entry point into the Campaign Object (CO) database and supports several additional services for the adaptive courses of action (ACOA) application suite (2nd-3rd Qtr; \$1,252K) 										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Global Command and Control System (GCCS)/P.E. 0303150K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Command and Control System/CC01		0	0	15.604	16.498	17.476	17.813	18.228	Contg	Contg

- o Provide a visualization capability to display specified/implied tasks, builds multiple views for different plan phases and exports to PowerPoint briefings. It has a user interface for modeling and simulation engines, and provides overlays for showing future plans against the current Common Operational Picture (COP) (2nd-3rd Qtr; \$939K)
- o Develop techniques and tools to link CINC specified and implied mission tasks (created and stored in ACOA) with forces required for accomplishing the assigned mission (2nd-3rd Qtr; \$939K)
- o Develop a collaborative, Java-based multimedia application that intelligently organizes and presents a condensed overview of topical information (3rd-4th Qtr; \$939K)
- o Develop an integrated set of planning and execution tools to accelerate the joint military decision making process (3rd-4th Qtr; \$939K)
- o Integrate enhancements enabling military planners to build a force deployment plan, including a preliminary Time-Phased Force Deployment Data (TPFDD) package (3rd-4th Qtr; \$939K)
- o Explore emerging technologies capable of processing current data sources to provide a set of management support tools designed to assist operational and deployment planners in planning and managing forces for joint operations (3rd-4th Qtr; \$939K)
- o Develop a comprehensive set of core collaboration services including audio/video conferencing, whiteboard, chat, application sharing, file transfer, and remote desktop sharing (3rd-4th Qtr; \$939K)
- o Provide a capability to receive and display weather and weather effect information on the COP (3rd-4th Qtr; \$893K)

- o Total \$15.604M

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE							
RDT&E, Defense-Wide/07					Global Command and Control System (GCCS)/P.E. 0303150K							
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost		
Global Command and Control System/CC01		0	0	15.604	16.498	17.476	17.813	18.228	Contg	Contg		
B. <u>Program Change Summary:</u>					<u>FY01</u>	<u>FY02</u>	<u>FY03</u>					
Previous President's Budget (FY 2002)					N/A	N/A	0					
Appropriated Value												
Adjustments to Appropriated Value												
Adjustments to Budget Year Since FY 2002 President's Budget												
Current Budget Submit/President's Budget (FY 2003)					N/A	N/A	15.604					
Change Summary Explanation:												
FY 03 initialization is due to realignment of O&M to RDT&E funds in accordance with Departmental guidance regarding Information Technology budgeting.												
C. <u>Other Program Funding Summary:</u>					<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To Complete</u>
Operation and Maintenance:					57.247	67.423	51.343	54.690	57.700	58.848	60.302	Contg
Procurement:					3.645	3.525	3.454	3.529	3.606	3.656	3.728	Contg
D. <u>Acquisition Strategy:</u> Use performance based contracts when applicable. Indefinite Delivery Indefinite Quantity (IDIQ) MEGA Task contracts, GSA schedule and current contracts.												

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Global Command and Control System (GCCS)/P.E. 0303150K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Global Command and Control System/CC01		0	0	15.604	16.498	17.476	17.813	18.228	Contg	Contg

E. Schedule Profile:FY 20031st-2nd Qtr

- o Complete GCCS 4.x (migration and transition testing). Initiate fielding and transition to GCCS 4.x capability release(s)
- o Conduct evolutionary block planning for future GCCS version release(s)
- o Provide JOPES 2000 fielding and transition support to CINC sites designated by the Joint Staff

3rd-4th Qtr

- o Provide integration engineering support to incorporate Integrated Imagery (I3), Readiness Assessment Tool(RAS), and Joint Terrain Analysis Tool/Ground Template Toolkit (JTAT/GTT) within the GCCS 4.x capability release(s)

FY 2004-20071st - 4th Qtr

- o Field Block V of GCCS to CINC sites designated by the Joint Staff
- o Provide integration engineering support to the Army, AF, Navy, Marine Corps

UNCLASSIFIED

Exhibit R-3 Cost Analysis		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Global Command and Control System (GCCS) PE 0303150K	PROJECT NAME AND NUMBER Global Command and Control System/CC01

Cost Category	Contract Method & Type	Performing Activity & Location	Total Pys	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	TBD	TBD	0	0	N/A	15.604	TBD	Contg	Contg	15.604
Total						15.604				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RDT&E, Defense-Wide/07					Joint Spectrum Center (JSC)/PE 0303153K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Joint Spectrum Center (JS1)		8.194	8.751	19.102	19.159	19.356	14.603	14.786	Contg	Contg
<p>A. <u>Mission Description and Budget Item Justification</u>: The Joint Spectrum Center's (JSC) mission is to ensure the Department of Defense's effective use of the electromagnetic spectrum in support of national security and military objectives. The JSC serves as the DOD center of excellence for electromagnetic (EM) spectrum management matters in support of the Unified Commands, Joint Staff, Assistant Secretary of Defense for Command, Control, Communications and Intelligence (ASD (C³I)), Military Departments, and Defense Agencies. The JSC supports the Electronic Protect missions of Information Warfare (IW) as they relate to spectrum supremacy. It is responsible for developing and maintaining DOD standard information systems that support DoD spectrum related activities and processes. Specifically, the Center designs, develops, and maintains DOD automated spectrum management systems, evaluation tools, and databases employed by the Unified Commands, Military Departments, and Defense Agencies. The JSC databases are the prime sources of information for DOD use of the EM spectrum. The JSC provides technical assistance to the Office of Assistant Secretary of Defense (OASD) C³I, the Joint Staff, DOD activities and the Unified Commands in support of spectrum policy decisions and ensuring the development, acquisition, and operational deployment of systems that are compatible with other spectrum dependent systems operating within the same electromagnetic environment. The Center is the DOD focal point for technical spectrum related support, Electromagnetic Environmental Effects (E³), and EM interference resolution assistance to operational units including deployable support to CINC Joint Task Forces. The JSC mission is integral to other vital activities such as Information Operations (IO), Command and Control (C2) Protect and other defensive IW activities as directed by the Joint Staff. This program element is under Budget Activity 07 because it supports operational systems development.</p> <p><u>FY 2001 Accomplishments</u>:</p> <ul style="list-style-type: none"> o Provided Spectrum Technical and Analytical Support to OASD(C³I)/Joint Staff/ OSAM and the Services to accomplish studies required as a result of WRC 2000 (1st Qtr - 4th Qtr; \$1.432M) o Deployed Version 2.0 of Spectrum XXI and continued to improve analytical tools and databases (1st Qtr - 4th Qtr; \$4.928M) o Managed the DoD E3 Program including development of DoD standards, acquisition guidance, and assessment of operational hazards of EM radiation to ordnance (1st Qtr - 4th Qtr; \$1.834M) o Total \$8.194M 										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Joint Spectrum Center (JSC)/PE 0303153K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Joint Spectrum Center (JS1)		8.194	8.751	19.102	19.159	19.356	14.603	14.786	Contg	Contg
<p>FY 2002 Plans:</p> <ul style="list-style-type: none"> o Provide Spectrum Technical and Analytical Support to OASD(C³I)/Joint Staff/Office of Spectrum Management (OSAM) and the Services for the World Radio Conference (WRC) and related spectrum policy issues (1st Qtr - 4th Qtr; \$1.313M) o Develop and maintain spectrum analytic tools, and databases to include worldwide deployment of the DoD standard spectrum management information system, SPECTRUM XXI (Version 3.0) (1st Qtr - 4th Qtr; \$5.776M) o Manage the DoD E3 Program with increased support to DOT&E in evaluation of Acquisition Category (ACAT) 1 system E3 tests. (1st Qtr - 4th Qtr; \$1.662M) o Total \$8.751M <p>FY 2003 Plans:</p> <ul style="list-style-type: none"> o Provide Spectrum Technical/Analytical Support to OASD(C3I)/Joint Staff/OSAM and Services to accomplish studies required as a result of WRC 2003 (1st Qtr - 4th Qtr \$1.365M) o Deploy Version 4.0 of Spectrum XXI and continue to improve analytic tools and databases (1st Qtr - 4th Qtr \$6.008M) o Manage DoD E3 Program including development of DoD standards, acquisition guidance and training in E3, and assessment of operational hazards of electromagnetic radiation to ordnance (1st Qtr - 4th Qtr \$1.729M) o Investigate and develop spectrum efficient technologies to more effectively utilize and manage critical DoD access to the spectrum. Advances in modeling and simulation and knowledge management will be developed to support policy makers, guide acquisition managers, and assist warfighters to operate effectively in the dense electromagnetic battlespace (1st Qtr - 4th Qtr \$10.000M) o Total \$19.102M 										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Joint Spectrum Center (JSC)/PE 0303153K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Joint Spectrum Center (JS1)		8.194	8.751	19.102	19.159	19.356	14.603	14.786	Contg	Contg

B. Program Change Summary:

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
Previous President's Budget (FY 2002)	8.198	8.849	9.200
Appropriated Value	8.735	8.849	
Adjustments to Appropriated Value	-.541	-.098	
Adjustments to Budget Year Since FY 2002 President's Budget			+9.902
Current Budget Submit/President's Budget (FY 2003)	8.194	8.751	19.102

Change Summary Explanation:

FY 2001 change due to below threshold reprogramming.

FY 2002 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation.

FY 2003 increase due to investments to transform the Department's management and use of the electromagnetic spectrum. Initiatives include development of automated capabilities to provide world-wide secure real-time information on spectrum authorizations, evaluations of spectrum efficient and commercial technologies for implementation in DoD, and development of advanced modeling and simulation capabilities.

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Joint Spectrum Center (JSC)/PE 0303153K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Joint Spectrum Center (JS1)		8.194	8.751	19.102	19.159	19.356	14.603	14.786	Contg	Contg

C. Other Program Funding Summary:

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	<u>To Complete</u>
O&M,DW	13.216	13.481	13.968	14.160	14.532	14.766	15.124	Continuing

D. Acquisition Strategy: Engineering support services for the JSC are provided by contract. No in-house government capability exists, nor is it practical to develop one that can provide the expertise necessary to fulfill the mission and responsibilities of the JSC. The period of the previous cost plus award fee contract ended 30 September 2000. Full and open competition was used for the acquisition of a follow-on contract that became effective 24 August 2000 with a basic period of two years and three one year options.

E. Schedule Profile:

	<u>FY2001</u>				<u>FY2002</u>				<u>FY2003</u>				<u>FY2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Commerce Business Notice New Contract																
Contract Award																
Contract Performance Begins																
Exercise Option Year 1							X									
Exercise Option Year 2										X						
Exercise Option Year 3													X			

UNCLASSIFIED

Exhibit R-3 Cost Analysis								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Joint Spectrum Center/PE 0303153K				Joint Spectrum Center/JS1				
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering/Technical Spt	C/CPAF	IIT Research Inst Annapolis, MD	13.408					0	13.408	13.408
GFE	C/CPAF	IIT Research Inst Annapolis, MD	.800					0	.800	.800
Engineering/Technical Support MIPR	Various		1.655	.075	Various	.100	Various	0	1.830	1.830
Contractor Engineering/Technical Spt	C/CPFF	Various	1.619					0	1.619	1.619
Contractor Engineering/Technical Spt	C/CPAF	IIT Research Inst Annapolis, MD	6.870	7.806	02/02	18.132	10/02	36.775	69.583	69.583
GFE	C/CPAF	IIT Research Inst Annapolis, MD	.959	.870	02/02	.870	10/02	1.740	4.439	4.439
Subtotal Test & Evaluation			25.311	8.751		19.102				
Total			25.311	8.751		19.102				
Remarks:										
Previous contract expired on 30 September 2000. Follow-on contract was competitive acquisition and began on 24 August 2000 (2 year basic with 3 option years).										

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Teleport Program/P.E. 0303610K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Teleport Program/NS01		4.500	14.212	6.678	6.361	8.491	1.385	.198	Contg	Contg

A. Mission Description & Budget Item Justification:

The Department of Defense's (DoD) Teleport system is a phased, multigeneration approach to meet current warfighter communications reach-back requirements for a variety of scenarios, from small-scale conflicts to a major theater of war. The Teleport System is a key component that supports the Warfighting CINCs with extended multi-band satellite communication capability and seamless access to terrestrial components of the Defense Information Systems Network (DISN) for worldwide operations. The DoD Teleport System includes the X-band capabilities fielded under the Standard Tactical Entry Point (STEP) initiative. It expands throughput and enhances warfighter interoperability through access to and between existing and emerging military and commercial satellite communications systems. This program element includes operations, maintenance, life cycle management, and connectivity costs originally programmed for STEP. This system will be capable of rapid and dynamic reconfiguration to quickly respond to changing operational situations and priorities. This program element is under Budget Activity 07 because it supports operational systems development.

FY 2001 Accomplishments:

o FY01 funds were used to support Systems Engineering and Program Management (SEPM) and testing. Support included: SEPM: \$4.0M requirements analysis, system/site design, system integration and development to meet an FY02 Initial Operating Capability (IOC1). Support provided by government and contractors included site engineering, integration, preparation and review of site plans, Working Integrated Product Team (WIPT) support, site/equipment configuration and logistics management. (1st Qtr - 2nd Qtr FY 2002). \$4.0M

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Teleport Program/P.E. 0303610K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Teleport Program/NS01		4.500	14.212	6.678	6.361	8.491	1.385	.198	Contg	Contg
<p>o Test and Evaluation. Teleport consists of multiple components including SATCOM terminals of multiple frequency bands, SATCOM Modems, Multiplexers, Asynchronous Transfer Mode (ATM) switches, a voice switch, and other support hardware. The Teleport system was tested to prove functionality with deployed SATCOM users, as well as functionality with the DISN Long Haul segment and Sustaining Base segment. The testing objective was to verify that the critical integration elements of the Teleport System function as required to support the deployed Warfighter. (1st Qtr - 2nd Qtr FY 2002) (T&E):\$.5M</p> <p>o Total \$4.500M</p> <p><u>FY 2002 Plans:</u> The FY02 funds will be used to support Teleport Program implementation and will cover all Systems Engineering, Program Management, and Test Support. Support provided by government and contractor personnel includes site engineering, integration, Working Integrated Product Team (WIPT) support, site/equipment configuration and logistics management. Details follow:</p> <p>o Program Management Support will develop and update program documentation such as: Teleport Master Schedule, Teleport Program Work Breakdown Structure (WBS), Program Management Plan (PMP), Risk Management Plan (RMP), and Acquisition Strategy. Support will also develop program control mechanisms, maintain program documents, provide support to Working-level Integrated Product Teams (WIPTs), provide technical support, support the development of the DOD Teleport architecture and design, and perform technical analysis and develop technical reports. Logistics support to the DOD Teleport Program Management Office (PMO) will provide assistance in the development of deployment and logistics plans, including the development of a Product Support Management Plan (PSMP). (1st Qtr - 4th Qtr, \$11.959M)</p>										
Page 2 of 7										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Teleport Program/P.E. 0303610K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Teleport Program/NS01		4.500	14.212	6.678	6.361	8.491	1.385	.198	Contg	Contg
<p>o Testing and Evaluation for the DOD Teleport Program will provide proof of concept testing, perform Developmental Test and Evaluation at each installed site and Operational Test and Evaluation at each installed site. Funding will cover service installation and site certification and commissioning. (1st Qtr - 4th Qtr, \$2.253M)</p> <p>o Total \$14.212M</p> <p><u>FY 2003 Plans:</u> The FY03 funds will be used to support Teleport Program implementation and will cover all Systems Engineering, Program Management, and Test Support. Support provided by government and contractor personnel includes site engineering, integration, Working Integrated Product Team (WIPT) support, site/equipment configuration and logistics management. Details follow:</p> <p>o Program Management Support will support program control mechanisms, maintain program documents, provide support to Working-level Integrated Product Teams (WIPTs), provide technical support, and perform technical analysis and develop technical reports. Logistics support to the DOD Teleport Program Management Office (PMO) will provide assistance in the development of deployment and logistics plans, including the development of a Product Support Management Plan. (1st Qtr - 4th Qtr, \$5.007M)</p> <p>o The FY03 test funds will be used to support Gen Two pre-installation testing. This testing consists of Interoperability Certification Testing and Technical Component Testing. Funding will cover service installation and site certification and commissioning. (1st Qtr - 4th Qtr, \$1.671M)</p> <p>o Total \$6.678M</p>										

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Teleport Program/P.E. 0303610K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Teleport Program/NS01		4.500	14.212	6.678	6.361	8.491	1.385	.198	Contg	Contg
B. <u>Program Change Summary:</u>					<u>FY01</u>	<u>FY02</u>	<u>FY03</u>			
Previous President's Budget (FY 2002)					4.500	14.371	2.414			
Appropriated Value					4.500	14.371				
Adjustments to Appropriated Value						-.159				
Adjustments to Budget Year Since FY 2002 President's Budget							+4.264			
Current Budget Submit/President's Budget (FY 2003)					4.500	14.212	6.678			
Change Summary Explanation:										
FY02 change due to undistributed congressional adjustments to Defense-wide RDT&E Appropriation										
FY 03 amount represents revised program plan to support Teleport Implementation, Systems Engineering, and Test Support										
C. <u>Other Program Funding Summary:</u>										
	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>To Complete</u>		
Operation and Maintenance:		4.421	22.004	21.001	20.533	28.422	27.883	Contg		
Procurement:	2.000	96.675	53.542	58.172	39.314	35.674	15.825	Contg		

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Teleport Program/P.E. 0303610K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Teleport Program/NS01		4.500	14.212	6.678	6.361	8.491	1.385	.198	Contg	Contg
<p>D. <u>Acquisition Strategy</u>: All work will be contracted out or funded by using Military Interdepartmental Purchase Requests (MIPRs) to the Army or Navy.</p> <p>E. <u>Schedule Profile</u>:</p> <p><u>FY 2001</u></p> <ul style="list-style-type: none"> o Systems Engineering/Program Management support provided to Teleport Program Office (TPO) by support contractor, Program Manager Defense Communications Army Transmission Systems (PM DCATS), and Navy Space and Warfare Systems Command (SPAWAR) o Procurement support including execution and management of contracts, preparation of acquisition plans, statement of work, and Generation 1 Contract Award o The Teleport system will be tested to prove functionality with deployed SATCOM users, as well as functionality with the DISN Long Haul segment and Sustaining Base segment. <p><u>FY 2002</u> 1st - 4th Qtr</p> <ul style="list-style-type: none"> o Systems Engineering/Program Management support provided to Teleport Program Office (TPO) by support contractor, Program Manager Defense Communications Army Transmission Systems (PM DCATS), and Navy Space and Warfare Systems Command (SPAWAR) o All Quarters will have Systems Engineering/Program Management (SEPM) with document updates o Site Implementation for Generation One Initial Operational Capability (IOC1) (SEPT FY 2002) o Testing and Evaluation for the DOD Teleport Program will provide proof of concept testing. Perform Developmental Test and Evaluation at each installed site and Operational Test and Evaluation at each installed site. 										

Exhibit R-2, RDT&E Budget Item Justification								DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Teleport Program/P.E. 0303610K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Teleport Program/NS01		4.500	14.212	6.678	6.361	8.491	1.385	.198	Contg	Contg

FY 2003

- o Systems Engineering/Program Management support provided to Teleport Program Office (TPO) by support contractor, Program Manager Defense Communications Army Transmission Systems (PM DCATS), and Navy Space and Warfare Systems Command (SPAWAR)
- o All Quarters will have Systems Engineering/Program Management (SEPM) with document updates
- o Site Implementation for Generation One Initial Operational Capability (IOC2) (SEPT FY 2003)
- o Testing and Evaluation for the DOD Teleport Program will provide proof of concept testing. Perform Developmental Test and Evaluation at each installed site and Operational Test and Evaluation at each installed site.

FY 2004 - 2007

- o Systems Engineering/Program Management support provided to Teleport Program Office (TPO) by support contractor, Program Manager Defense Communications Army Transmission Systems (PM DCATS), and Navy Space and Warfare Systems Command (SPAWAR)
- o All Quarters will have Systems Engineering/Program Management (SEPM) with document updates
- o Site Implementation for Generation Two.
- o Testing and Evaluation for the DOD Teleport Program will provide proof of concept testing. Perform Developmental Test and Evaluation at each installed site and Operational Test and Evaluation at each installed site.

UNCLASSIFIED

Exhibit R-3 Cost Analysis									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT					PROJECT NAME AND NUMBER		
RDT&E, Defense-Wide/07			Teleport Program/P.E. 0303610K					Teleport Program/NS01		
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	MIPR	* Army, Ft. Monmouth, NJ * Navy, SPAWAR, San Diego, CA	4.000	9.528	02/02	5.007	10/02	Contg	Contg	Contg
	Cost Reimbursable (Booz Allen Hamilton)	* DISA Contract		2.431	12/01					
Test and Evaluation	Cost Reimbursable (TBD)	DISA Contract	.500	2.253	02/02	1.671	10/02	Contg	Contg	Contg
Total			4.500	14.212		6.678				

* Support will be a combination of service provided by government and contractor support and DISA contract. Level of Support by source has not been determined.

UNCLASSIFIED

DEFENSE CONTRACT AUDIT AGENCY
 Fiscal Year (FY) 2003 Budget Estimates
Exhibit R-1, RDT&E Program

Appropriation: RDT&E, Defense-Wide

DATE: February 2002

<u>R-1 Line</u> <u>Item No.</u>	Program Element <u>Number</u>	<u>Item</u>	Budget <u>Activity</u>	<u>TOA, Dollars in Millions</u>		
				<u>FY 01</u> <u>Cost</u>	<u>FY 02</u> <u>Cost</u>	<u>FY 03</u> <u>Cost</u>
129	0300205R	Information Technology Systems	7	-	0.546	0.550

Exhibit R-2, RDT&E Budget Item Justification				Date: February 2002						
APPROPRIATION/BUDGET ACTIVITY: 0400/07				R-1 ITEM NOMENCLATURE Program Element Name & No. Information Technology Systems 0300205R						
Cost (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total Program Element (PE) Cost	-	-	0.546	0.550	0.550	0.550	0.550	0.550	Continuing	

A. Mission Description and Budget Item Justification: DCAA's RDT&E funds support the development of several document and records management systems designed to automate and enhance its audit workflow, as well as meet the Congressional and DoD mandate to fully transition to electronic record management by 2003. FY 2002 is the first year in which DCAA has RDT&E funding. The Audit Planning & Performance System (APPS), a stand-alone audit workpaper and report system, is being modified to improve the workflow among the audit, supervisory and administrative staffs and to develop automated report writing capabilities. Further enhancements will integrate APPS with the DCAA Management Information Systems and other appropriate audit databases. The Records Management Project for filing and archiving has selected iRIMS, a COTS software solution for tracking, archiving, retrieving, and disposition of electronic records. The software is being adapted and tested to meet the records requirements for DCAA and to comply with DoD guidelines and security requirements.

* Prior to FY02, these efforts were funded in the Procurement, Defense-wide account. In accordance with recent changes in DoD IT budgeting policy, funding has been realigned to this RDT&E, Defense-wide account.

Exhibit R-2, RDT&E Budget Item Justification					Date: February 2002																					
APPROPRIATION/BUDGET ACTIVITY: 0400/07					R-1 ITEM NOMENCLATURE Program Element Name & No. Information Technology Systems 0300205R																					
Cost (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																
Total Program Element (PE) Cost	-	-	0.546	0.550	0.550	0.550	0.550	0.550																		
<p><u>FY 2002 Plan</u> (0.226) APPS enhancement and integration (0.320) Record and Document Management software modification and integration</p> <p>B. <u>Program Change Summary</u></p> <table border="0"> <thead> <tr> <th></th> <th><u>FY 2001</u></th> <th><u>FY 2002</u></th> <th><u>FY 2003</u></th> </tr> </thead> <tbody> <tr> <td>Previous Budget (02 Amended PB)</td> <td>-</td> <td>0.550</td> <td>0.550</td> </tr> <tr> <td>Adjustments to Budget Years</td> <td>-</td> <td>-0.004</td> <td>-</td> </tr> <tr> <td>Current Budget Submit (2003 Pres Bud)</td> <td>-</td> <td>0.546</td> <td>0.550</td> </tr> </tbody> </table> <p>C. Other Program Funding Summary - N/A</p> <p>D. Acquisition Strategy - APPS upgrade will be awarded on a competitive basis; Records Management contract will be competitively awarded.</p> <p>E. Schedule Profile - N/A</p>												<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	Previous Budget (02 Amended PB)	-	0.550	0.550	Adjustments to Budget Years	-	-0.004	-	Current Budget Submit (2003 Pres Bud)	-	0.546	0.550
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>																							
Previous Budget (02 Amended PB)	-	0.550	0.550																							
Adjustments to Budget Years	-	-0.004	-																							
Current Budget Submit (2003 Pres Bud)	-	0.546	0.550																							

Defense Logistics Agency
FY 2003 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 0400D Research, Development, Test & Eval, Defwide

Date: 21 FEB 2002

Line No	Program Element Number	Item	Act	Thousands of Dollars			S E C
				FY 2001	FY 2002	FY 2003	
---	-----	----	---	-----	-----	-----	-
40	0603712S	Generic Logistics R&D Technology Demonstrations	3	51,690	84,043	25,451	U
55	0603805S	Dual Use Application Programs	3	5,987			U
		Advanced Technology Development		57,677	84,043	25,451	
116	0605798S	Defense Technology Analysis	6	7,975	4,950	5,201	U
		RDT&E Management Support		7,975	4,950	5,201	
162	0708011S	Industrial Preparedness	7	9,006	41,392	13,072	U
		Operational Systems Development		9,006	41,392	13,072	
Total Defense Logistics Agency				74,658	130,385	43,724	

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
TOTAL PROGRAM ELEMENT	51.690	84.043	25.451	27.735	28.689	30.332	31.430	Cont	Cont
#1: Material Acquisition: Electronics	9.865	9.441	9.898	10.340	10.401	10.508	10.588	Cont	Cont
#2: Advanced Logistics Support	1.582	-----	-----	-----	-----	-----	-----	-----	1.582
#3: Intelligent Demand Manager	1.717	-----	-----	-----	-----	-----	-----	-----	1.717
#4: Computer to Computer Negotiations	2.305	2.986	3.662	3.809	3.025	3.227	2.819	Cont	Cont
#5: Pay Per Use Logistics System	1.443	2.372	1.796	2.485	2.070	2.148	1.946	Cont	Cont
#6: Aging Aircraft Sustainment Tech/Air Logistics/ Corrosion Prevention Control & Info Distribution	5.303	5.126	4.498	5.175	5.408	5.503	5.594	Cont	Cont
#7: Virtual Reality Medical Assembly	1.945	1.315	0.607	2.456	3.001	3.002	1.989	Cont	Cont
#8: Diminishing Manufacturing Source Data (DMS)	-----	0.994	-----	-----	-----	-----	-----	-----	0.994
#9: On Demand Manufacturing/CATT	2.972	2.782	-----	-----	-----	-----	-----	-----	5.754
#10: Competitive Sustainment (CS)	2.972	1.987	4.990	3.470	4.784	5.944	8.494	-----	32.641
#11: Defense Microelectronics Activities	21.586	57.040	-----	-----	-----	-----	-----	-----	78.626
<p>A. Mission Description & Budget Item Justification: The DoD logistics vision calls for providing flexible, cost effective and prompt materiel support, logistics information and services, achieving the leanest possible infrastructure and the employment of the best commercial and government sources and practices. The DLA Logistics R&D program will develop and demonstrate high risk, high payoff technology that will provide a significantly higher level of support at lower costs, than would be otherwise attainable. The DLA program is a key part of the DARPA/DLA Advanced Logistics Program. Focused Logistics is one of the five basic tenants of Joint Vision 2010. The DLA logistics R&D program contributes directly to achieving JV 2010's vision of logistics "support in hours or days versus weeks." The objective of the Advanced Logistics Program is a collaborative environment that will allow the Operations community (J3) and Logistics planning community (J4), TRANSCOM, and DLA to seamlessly interact on operations planning and execution of wartime operations. In addition, DLA will use the same system in peacetime to significantly reduce Logistics Response Time and reduce the cost of DLA operations while maintaining readiness.</p>									

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration
<p>#1 MATERIAL ACQUISITIONS: ELECTRONICS: Funds continued enhancement of Generalized Emulation of Microcircuits effort and continue the Advanced Microcircuit Emulation (AME) which started in FY 1997. Program reduces weapons system support costs by providing an alternative to circuit board redesigns and lifetime buys. To date, GEM has delivered 50,000 microcircuits of over 140 different types affecting more than 170 different weapon systems. It has eliminated 226 backorder lines.</p> <p>#2 ADVANCED TECHNOLOGY LOGISTICS SUPPORT NETWORK (ATSN): Effort develops a total logistics approach to applying advanced decision supports to center's goals well into the new century. Emphasis on cost-effective resourcing for wartime needs, customer choices, and fast, predictable deliveries.</p> <p>#3 INTELLIGENT DEMAND MANAGER: Demonstrated improved wholesale supply availability attained from real time tracking of spares consumption at the lowest level of the supply system by developing advanced data mining and data visualization technologies.</p> <p>#4 COMPUTER TO COMPUTER NEGOTIATIONS: Improve timely response to DLA customer requirements by identifying gaps in the supply-chain systems between DLA and the Services. Develop interfaces that will allow cross-organizational computer-to-computer 'negotiations' to facilitate decision-making process. The system will be a 'bolt-on' to DLA's upcoming BSM systems.</p> <p>#5 PAY PER USE LOGISTICS SYSTEM: Supplement the core Business System Modernization (BSM) applications through dynamic access to, utilization of, and payment for services of commercial Application Service Providers (ASP), especially during emergency and wartime operations.</p> <p>#6 AGING AIRCRAFT SUSTAINMENT TECHNOLOGY: Aging systems take progressively more time and money to maintain. This program develops, tests and transfers cost effective logistics support technologies on such systems as B-52, KC-135, and C-130 and other aircraft and related systems that remain in use well beyond their design life. Congressional adds for Air Logistics and the Corrosion Prevention Control and Information Distribution projects are also funded here.</p> <p>#7 VIRTUAL MEDICAL ASSEMBLY: Improve DLA's ability to tailor medical assemblages to specific missions by using agent technology to simulate demand patterns and interdependencies. The system will use "bottoms-up" demand generation in conjunction with DLA business processes to rapidly and accurately source, assemble and distribute medical assemblages.</p> <p>#8 DIMINISHING MANUFACTURING SOURCE DATA (DMS): With continually aging weapon systems, the military has demonstrated the need for a centralized approach to the solution of DMS and obsolete parts problems. By creating and maintaining a data warehouse of parts across all services and weapon systems, a large cost savings will be recognized by alleviating the duplication of similar services in individual weapon and support system programs.</p> <p>#9 ON DEMAND MANUFACTURING/CATT: This program has established a network of suppliers and technology for long lead-time, difficult to procure, weapons systems spares. FY 2000 was the final year of the ODM program. Congressional support continues CATT.</p>	

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration
<p>#10 COMPETITIVE SUSTAINMENT: This was a congressional add through FY 2002, which recognized the need to make a substantial reduction to the cost of support for aging weapon systems. It has been included in the P.B. request for FY 2003.</p> <p>#11 DEFENSE MICROELECTRONICS ACTIVITY: This was added by Congress to evaluate the feasibility and practicality of some candidate solutions to the technological challenges of emerging DoD microcircuit obsolescence for broad classes of microelectronics components that are strategically important to DoD.</p>	

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration				
B. Program Change Summary:					
	COST IN MILLIONS				
	FY 2001	FY 2002	FY 2003		
Previous President's Budget Submission	47.740	30.373	22.504		
Adjustment to Appropriated Value	+3.950	+53.670	+ 2.947		
Omnibus/Reprogramming	-----	-----	-----		
Congressional Rescission	-----	-----	-----		
Defense Emergency Response Fund (DERF)	-----	-----	-----		
Current Budget Submission	51.690	84.043	25.451		
<p>Change Summary Explanation: FY 2001 reflects congressionally approved funding (+\$3.950 million) for a new start ULPBSCS DMEA program. FY 2002 reflects (+\$52.2 million) congressionally added dollars for several electronic/related DMEA projects (+\$47.4 million); CATT (+\$2.8 million); Diminishing Manufacturing Source Data (DMS) (+\$1.0 million), Corrosion Prevention Control and Info Distribution (+\$1.0 million); and congressional adjustments per Section 8123 Business Processes Reform (-\$0.530 million). FY 2002 also reflects an internal realignment of TOA (+\$2.0 million) from IP/ManTech (SCM) to fund CS. FY 2003 funding is based on Agency R&D priorities/TOA redistribution: a reduction in TOA to support higher Departmental priorities (-\$2.0 million); internal departmental realignment of Agency funds (+\$5.0 million) from the IP/ManTech R&D (SCM) project to fund the Competitive Sustainment (CS) project line under Log R&D; and adjustments (-\$0.053 million).</p>					
C. Other Program Funding Summary: N/A					
D. Execution - for the execution year (CY), provide a list of funding recipients within the following categories:					
	FY 2002	#1 MAE	#6 Aging Aircraft	#11 DMEA	TOTALS
Labs/centers	-----	-----	-----	-----	-----
Universities	-----	\$0.5M	\$25.5M	\$26.0M	
FFRDCs	-----	-----	-----	-----	-----
Contractors	\$8.4M	\$3.2M	\$31.5M	\$43.1M	
Other	\$1.0M	\$0.432	-----	\$1.432M	

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)		DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3		Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#1: MATERIAL ACQUISITION: ELECTRONICS		9.865	9.441	9.898	10.340	10.401	10.508	10.588	Cont	Cont
<p>A. Mission Description and Justification</p> <p>Develop a capability to emulate most obsolete digital integrated circuits (ICs) in the federal catalog using a single, flexible manufacturing line. DoD has estimated that \$2.9B is spent every five years in redesigning circuit card assemblies. Much of these redesigns are driven by IC obsolescence. The commercial suppliers of ICs typically terminate production lines every 18 months, moving on to the next generation of ICs. Because DoD maintains weapons systems much longer than 3 years, this creates an obsolescence problem that can only be overcome through buying excessive inventories of parts before the production lines close or redesigning the next higher assembly to eliminate the obsolete part. DLA, as the manager of 88% of the IC supply class, must have a capability to manufacture these devices. This project develops this capability and will expand it to succeeding generations of obsolete ICs through the Advanced Microcircuit Emulation program.</p> <p>(U) Program Accomplishments and Plans:</p> <p>(U) FY 2001 Accomplishments: Development and demonstration of microcircuits supplied to numerous systems, including: C-17, AV-8 (Harrier), B-52, F-15, F-16, Multiple Launch Rocket System, UYK-44, Joint Surveillance Target Attack Radar System (STARS), Phalanx, distributors, and Defense Supply Center Columbus (DSCC) (various systems). Continued Application Specific Integrated Circuits (ASIC) emulation with F-15, A-10, and Boeing. Next generation emulation array (200K) in fabrication. Inserted advanced Mixed Signal device into Joint STARS. Achieved Mil Quality certification (MIL-PRF-38535) for first AME fabrication process. New High Speed process demonstrated through production of microcircuits.</p> <p>(U) FY 2002 Plans: Low Rate Initial Production (LRIP) 200K ASIC emulation array. Design advanced (High Performance) 200K emulation array. LRIP High Speed Process. Continual cost reduction for ASIC emulation.</p> <p>(U) FY 2003 Plans: Design 400K ASIC emulation array. LRIP advanced 200K emulation array. Continual cost reduction for ASIC emulation.</p>										

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#1: MATERIAL ACQUISITION: ELECTRONICS	9.865	9.441	9.898	10.340	10.401	10.508	10.588	Cont	Cont
B. Program Change Summary:									
	COST IN MILLIONS								
	FY 2001	FY 2002	FY 2003						
Previous President's Budget Submission	9.865	9.500	9.917						
Adjustment to Appropriated Value	-----	-0.059	-0.019						
Congressional Rescission	-----	-----	-----						
Defense Emergency Response Fund (DERF)	-----	-----	-----						
Current Budget Submission	9.865	9.441	9.898						
Change Summary Explanation: FY 2002 and FY 2003 reflect agency TOA program priorities; and Section 8123, Business Processes Reform/management efficiencies applied in FY 2002 (-\$0.059 million); and adjustments in FY 2003. FY 2003 (-\$0.019 million). The Semiconductor Industry Association's Roadmap was used for definition of the program requirements. There has been an eight-year industry acceleration of microcircuit technology (actual vs. roadmap) from the time when the Advanced Microcircuit Emulation Program was planned. MAE resources allow emulation technology to keep pace with the more rapid technology obsolescence of today's marketplace. The resulting emulation ability will support DSCC and the weapon systems for microcircuits that are not otherwise procurable. Both the percentage of PRs filled and Weapon System readiness levels will increase.									
C. Other Program Funding Summary: No funding dependencies on other programs. No related programs.									
D. Schedule Profile: The AME Program will eliminate the need to redesign in many cases by producing a form, fit, and function "drop-in" replacement for the old microcircuits using current technology. The Generalized Emulation of Microcircuits (GEM) Production Program addresses the microcircuits built in the 1960s-1970s. The AME Program addresses the 1980s and early 1990s devices.									
	FY 2001	FY 2002	FY 2003	FY 2004					
Quarters	1234	1234	1234	1234					
Mixed Signal Joint STARS Insertion	X								
High Voltage C-17 insertion	X								
High Speed Emulation Demonstration	X								
200K Emulation Array in fabrication	X								
Design Advanced 200K Emulation Array		X							
LRIP 200K Emulation Array		X							
Design 400 K Emulation Array					X				
LRIP Advanced 200K Emulation Array					X				
Advanced Emulation Process Demonstration								XX	
Cost Reduction for ASIC Emulation	XXXX	XXXX	XXXX					XXXX	

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#2: ADVANCED TECHNOLOGY LOGISTICS SUPPORT NETWORK	1.582	-----	-----	-----	-----	-----	-----	-----	1.582
<p>A. Mission Description and Justification</p> <p>Advanced Technology Logistics Support Network (ATSN) initiative is designed to assure the warfighter that readiness is achievable with increasing reliance on commercial inventories and continued government inventory draw down. Its focus is to demonstrate a readiness decision support system prototype that can assist logisticians in assessing our capability to support peace and wartime requirements. It will develop and utilize direct electronic access to commercial and government asset positions and commercial and government demand history and usage projections. Algorithms will be developed to predict the state of readiness achievable for peacetime or contingency plans, given commercial and government assets and commercial and government usage history and projections. Feedback mechanisms will be developed for contingency re-planning. Feedback mechanisms will also be developed to communicate revised readiness models which will aid in stock level decisions and changes to contractual arrangements with commercial sources to address shortfalls in the state of readiness.</p> <p>The ATSN program has far reaching applicability in allowing DLA and its customers to fully capitalize on the many emerging logistics related information technology advancements. The program will bring this advanced technology to both peacetime customer support and mobilization support. These new technologies are critical elements to the achievement of DLA's programmed out-year savings in conjunction with implementation of reengineering initiatives and acquisition reform.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: Develop production model for readiness decision support. Develop the capability to estimate commercial capability to support emergency needs for all medical pharmaceutical surgical, and equipment items. Expand coverage and readiness models to other commodities. Develop concept of operations, requirements specification for subsistence and industrial commodities. (U) FY 2002 Plans: N/A (U) FY 2003 Plans: N/A</p>									

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																																												
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																																												
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																																																				
#2: ADVANCED TECHNOLOGY LOGISTICS SUPPORT NETWORK	1.582	-----	-----	-----	-----	-----	-----	-----	1.582																																																				
<p>B. Program Change Summary:</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td>1.582</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Omnibus/Reprogramming</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Congressional Rescission</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Current Budget Submission</td> <td>1.582</td> <td>-----</td> <td>-----</td> </tr> </tbody> </table> <p>Change Summary Explanation: N/A</p> <p>C. Other Program Funding Summary: No funding dependencies on other programs. DARPA's FAST program (PE #62301E); DARPA's Intelligent Integration of Information (I-3) (PE #62301E) program.</p> <p>D. Schedule Profile: Defense Supply Center Philadelphia (DSCP) will manage the ATSN program and will implement the communications network developed under US Link. Objectives include reduction in customer delivery time variances from 50% to 3%, reduced inventories (both retail & wholesale), on-line requisition status, and lower unit prices.</p> <table border="0"> <thead> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Quarters</td> <td>1234</td> <td>1234</td> <td>1234</td> </tr> <tr> <td>Production model integration - Medical</td> <td></td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Additional commodities - Subsistence & Industrial, Clothing</td> <td>XXXX</td> <td></td> <td></td> </tr> <tr> <td>Integration with GCCS</td> <td>XXXX</td> <td></td> <td></td> </tr> </tbody> </table>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	1.582	-----	-----	Adjustment to Appropriated Value	-----	-----	-----	Omnibus/Reprogramming	-----	-----	-----	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	1.582	-----	-----		FY 2001	FY 2002	FY 2003	Quarters	1234	1234	1234	Production model integration - Medical		N/A	N/A	Additional commodities - Subsistence & Industrial, Clothing	XXXX			Integration with GCCS	XXXX		
	COST IN MILLIONS																																																												
	FY 2001	FY 2002	FY 2003																																																										
Previous President's Budget Submission	1.582	-----	-----																																																										
Adjustment to Appropriated Value	-----	-----	-----																																																										
Omnibus/Reprogramming	-----	-----	-----																																																										
Congressional Rescission	-----	-----	-----																																																										
Defense Emergency Response Fund (DERF)	-----	-----	-----																																																										
Current Budget Submission	1.582	-----	-----																																																										
	FY 2001	FY 2002	FY 2003																																																										
Quarters	1234	1234	1234																																																										
Production model integration - Medical		N/A	N/A																																																										
Additional commodities - Subsistence & Industrial, Clothing	XXXX																																																												
Integration with GCCS	XXXX																																																												

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																												
#3: INTELLIGENT DEMAND MANAGER	1.717	-----	-----	-----	-----	-----	-----	-----	1.717																												
<p>A. Mission Description and Justification</p> <p>The use of artificial intelligence for managing items has been explored in the past, but changes in information technology environment and data availability could significantly increase the potential to better manage items and anticipate demands from customers. This will most likely have a significant benefit for the management of Numerical Stock Objective items.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: - Demonstrated improved wholesale supply availability attained from real time tracking of spares consumption at the lowest level of the supply system by developing advanced data mining and data visualization technologies. - Analyzed tools (Starlight and Data Mining) and researched how can we exploit these technologies to identify relationships that can be used to more accurately project demand--especially on new systems entering the inventory or on proven systems where unforecasted demand may occur due to aging weapon systems. Used simulation models such as PARIS to evaluate alternate scenarios, cost trade-offs, and inventory management policy decisions. Project results shared with other LOG R&D programs and inventory control points. (U) FY 2002 Plans: N/A (U) FY 2003 Plans: N/A</p> <p>B. Program Change Summary:</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td>1.717</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Congressional Rescission</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Current Budget Submission</td> <td>1.717</td> <td>-----</td> <td>-----</td> </tr> </tbody> </table> <p>Change Summary Explanation: N/A</p>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	1.717	-----	-----	Adjustment to Appropriated Value	-----	-----	-----	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	1.717	-----	-----
	COST IN MILLIONS																																				
	FY 2001	FY 2002	FY 2003																																		
Previous President's Budget Submission	1.717	-----	-----																																		
Adjustment to Appropriated Value	-----	-----	-----																																		
Congressional Rescission	-----	-----	-----																																		
Defense Emergency Response Fund (DERF)	-----	-----	-----																																		
Current Budget Submission	1.717	-----	-----																																		

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#3: INTELLIGENT DEMAND MANAGER	1.717	-----	-----	-----	-----	-----	-----	-----	1.717
C. Other Program Funding Summary: No funding dependencies.									
D. Schedule Profile:									
Quarters	FY 2001 1234	FY 2002 1234	FY 2003 1234						
Awards for concept studies			N/A	N/A					
Awards for prototype development									
Prototype development	XXXX								

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#4: COMPUTER TO COMPUTER NEGOTIATIONS	2.305	2.986	3.662	3.809	3.025	3.227	2.819	Cont	Cont
<p>A. Mission Description and Justification</p> <p>Problem Statement: Current DLA/Service systems are unable to allow accurate visibilities to respond to the rapidly changing requirements. Cross-organizational system interfaces are needed for the supply chain decision-making process. The re-engineering effort under BSM does provide for eventual solution, however there are immediate needs to identify areas of gaps and develop interfaces, such as the integration of Service ERP system to the DLA Depot inventory system (DSS), where the BSM long-term solution will not meet the existing compelling needs.</p> <p>Approach: The purpose of this activity is to capture supply-chain-wide visibilities and to use knowledge based intelligent workflow technologies to develop system interfaces that support the establishment of automated business processes and transactions between the Services and DLA.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: Initiated the R&D development towards the expansion of computer software agent to agent negotiation techniques utilizing the ALP architecture in support of DLA application in classes I(Subsistence) and VIII(Medical) supply support plans. (U) FY 2002 Plans: US Army Medical Materiel Agency (USAMMA) and Defense Supply Center Philadelphia, Medical (DSCP-M) need to develop a shared systems interface for demand forecasting and achievement of medical set assembly goals in FY02. A prototype will be developed to mitigate the long lead-times and static nature in medical assembly processes and address gaps in the current legacy ERP systems at DLA and USAMMA. This prototype will be developed and implemented in coordination with ongoing BSM goals and objectives. (U) FY 2003 Plans: Finalize the USAMMA prototype to a production system. Expand scope by assessing gaps and evaluating feasibility for applications in other DLA managed commodities.</p> <p>Rationale for Investment: Development of this interface will enable the identification of gaps and improvements to USAMMA/DLA's current assembly/kitting processes as well as development of new just-in-time capabilities. Improvements developed and lessons learned are to be applied to other DLA commodities and business areas. The current re-engineering effort under BSM provides for conversion of the DSS system to SAP applications. Therefore, the USAMMA initiative to provide links to and from their SAP ERP system with DSS is significant in that the linkage process could become a model for the similar BSM implementation of SAP. Since DSCP - specifically the Clothing and Textile and Subsistence Directorates - will need to ensure that the organic capability is built into the SAP implementation to link to outside "systems", the USAMMA experience will be a valuable asset to successful BSM implementation.</p>									

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#4: COMPUTER TO COMPUTER NEGOTIATIONS	2.305	2.986	3.662	3.809	3.025	3.227	2.819	Cont	Cont
B. Program Change Summary:									
		FY 01	FY 02	FY 03					
Previous President's Budget Submission		2.305	3.005	3.668					
Adjustment to Appropriated Value		-----	-0.019	-0.006					
Congressional Rescission		-----	-----	-----					
Defense Emergency Response Fund (DERF)		-----	-----	-----					
Current Budget Submission		2.305	2.986	3.662					
Change Summary Explanation: FY 2002 and FY 2003 reflect Section 8123, Business Processes Reform/Management efficiencies (-\$0.019 million) n FY 2002; and adjustments in FY 2003 (-\$0.006).									
C. Other Program Funding Summary: No funding dependencies.									
D. Schedule Profile:									
		FY 01	FY 02	FY 03		FY 04			
Quarters		1234	1234	1234		1234			
Analyze USAMMA Requirements			X						
Awards for USAMMA Prototype Development			X						
USAMMA System Development			XXX						
Enhance for Finalize Production System				XXX					
Assess Gaps and Evaluate Feasibility for Expanded Scope					XX				
Develop & Implement for other DLA/DSCP managed commodities					X		XXXX		

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#5: PAY PER USE LOGISTICS SYSTEM	1.443	2.372	1.796	2.485	2.070	2.148	1.946	Cont	Cont
<p>A. Mission Description and Justification</p> <p>The emergence of complex networked computer systems promises to enhance DoD Logistics functions with new sources of information and services. Our vendor communities are developing rich sources of commodity information and information services. Functions that are currently done by government personnel and contractors might be better done on a "pay-per-use" basis by these new sources. For example, in times of conflict, the number of transactions processed by DLA systems do not increase greatly, but the number of items purchased does. The job of finding adequate sources and product equivalents is still labor intensive. Access to web-based information sources would improve procurement efficiency and the readiness of our customers.</p> <p>There are two basic issues that must be solved if we are to make use of these new capabilities. First, there must be a level of trust and assurance established with our commercial partners. This program will develop ways of automating information assurance relationships, especially in an environment that might be under attack. Second, the richness of information that is exchange must be increased. Use of human cognitive engineering will be used to support the functions of our knowledge workers to increase their efficiency while improving the quality of the services provided.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: N/A (U) FY 2002 Plans: Initial awards will be made for concept studies. The concepts will be evaluated and prototypes will begin to be developed. Explore using the Advanced Logistics Program (ALP) technology to allow for interoperability between existing DLA applications. (U) FY 2003 Plans: Continue prototype developments from FY 2001. Develop experiments for interoperability with ERP application in business systems modernization.</p>									

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																												
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																												
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																																				
#5: PAY PER USE LOGISTICS SYSTEM	1.443	2.372	1.796	2.485	2.070	2.148	1.946	Cont	Cont																																				
B. Program Change Summary:																																													
<table border="0"> <tr> <td></td> <td align="center" colspan="3">COST IN MILLIONS</td> </tr> <tr> <td></td> <td align="center">FY 2001</td> <td align="center">FY 2002</td> <td align="center">FY 2003</td> </tr> <tr> <td>Previous President's Budget Submission</td> <td align="right">1.443</td> <td align="right">2.387</td> <td align="right">2.800</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="right">-----</td> <td align="right">-0.015</td> <td align="right">-1.004</td> </tr> <tr> <td>Congressional Rescission</td> <td align="right">-----</td> <td align="right">-----</td> <td align="right">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="right">-----</td> <td align="right">-----</td> <td align="right">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="right">1.443</td> <td align="right">2.372</td> <td align="right">1.796</td> </tr> </table>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	1.443	2.387	2.800	Adjustment to Appropriated Value	-----	-0.015	-1.004	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	1.443	2.372	1.796								
	COST IN MILLIONS																																												
	FY 2001	FY 2002	FY 2003																																										
Previous President's Budget Submission	1.443	2.387	2.800																																										
Adjustment to Appropriated Value	-----	-0.015	-1.004																																										
Congressional Rescission	-----	-----	-----																																										
Defense Emergency Response Fund (DERF)	-----	-----	-----																																										
Current Budget Submission	1.443	2.372	1.796																																										
<p>Change Summary Explanation: FY 2002 reflects Section 8123, Business Processes Reform/Management efficiencies (-0.015 million). FY 2003 reflects \$1M in TOA returned the Department to support higher priorities; and adjustments (-\$0.004 million).</p>																																													
C. Other Program Funding Summary: No funding dependencies.																																													
<table border="0"> <tr> <td>D. Schedule Profile:</td> <td align="center">FY 2001</td> <td align="center">FY 2002</td> <td align="center">FY 2003</td> </tr> <tr> <td> Quarters</td> <td align="center">1234</td> <td align="center">1234</td> <td align="center">1234</td> </tr> <tr> <td>Formulate the Broad Agency Announcement (BAA)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Open the BAA</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Awards for concept studies</td> <td align="center">X</td> <td></td> <td></td> </tr> <tr> <td>Awards for prototype development</td> <td align="center">XXX</td> <td></td> <td></td> </tr> <tr> <td>Prototype development</td> <td align="center">XXX</td> <td></td> <td></td> </tr> <tr> <td>Interoperability among existing applications</td> <td align="center">XXXX</td> <td></td> <td></td> </tr> <tr> <td>Interoperability with ERP application</td> <td></td> <td align="center">XXXX</td> <td align="center">XXXX</td> </tr> </table>										D. Schedule Profile:	FY 2001	FY 2002	FY 2003	Quarters	1234	1234	1234	Formulate the Broad Agency Announcement (BAA)				Open the BAA				Awards for concept studies	X			Awards for prototype development	XXX			Prototype development	XXX			Interoperability among existing applications	XXXX			Interoperability with ERP application		XXXX	XXXX
D. Schedule Profile:	FY 2001	FY 2002	FY 2003																																										
Quarters	1234	1234	1234																																										
Formulate the Broad Agency Announcement (BAA)																																													
Open the BAA																																													
Awards for concept studies	X																																												
Awards for prototype development	XXX																																												
Prototype development	XXX																																												
Interoperability among existing applications	XXXX																																												
Interoperability with ERP application		XXXX	XXXX																																										

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																												
#6: AGING AIRCRAFT SUSTAINMENT TECH/AIR LOGISTICS/CORROSION PREVENTION CONTROL & INFO DISTRIBUTION	5.303	5.126	4.498	5.175	5.408	5.503	5.594	Cont	Cont																												
<p>A. Mission Description and Justification:</p> <p>Weapon systems, particularly aircraft, are staying in the inventory much longer than originally anticipated. For example, the KC-135 had a 40 year design life and is now planning to stay in service for 86 years. Similar life extensions also apply to the B-52 and the C-130. The result is often aircraft parts, that were never planned to be replaced, have to be procured and placed on the airplane. Unfortunately, the technical data, manufacturing processes and supplier base that originally provided these items are no longer available. These circumstances lead to unacceptably long logistics response times and increased costs.</p> <p>A completely new strategy is needed to address this problem. Immediate focus is parts availability for the warfighters. This must encompass not only the design associated with re-engineering the item but also manufacturing techniques that can produce very low quantity items in a cost effective manner. A partnership among the DoD, manufacturing industries and academia has proven most effective in addressing the problem. Past models have shown that lead-times can be reduced from 273 days to 97 days for complex parts, new suppliers can be added to the base, and costs significantly reduced.</p> <p>Air Logistics and Corrosion Prevention Control & Information Distribution are congressional adds. Program requirements have not yet been defined.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: Development of Aging Aircraft Program Management Plan (PMP). Identification of DoD key players focused on Aging Aircraft. (U) FY 2002 Plans: Identify/implement Aging Aircraft projects based on PMP. (U) FY 2003 Plans: Continue identification and implementation of Aging Aircraft projects based on PMP.</p> <p>B. Program Change Summary:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td align="right">5.303</td> <td align="right">4.158</td> <td align="right">4.508</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="center">-----</td> <td align="right">+0.968</td> <td align="right">-0.010</td> </tr> <tr> <td>Congressional Rescission</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="right">5.303</td> <td align="right">5.126</td> <td align="right">4.498</td> </tr> </tbody> </table>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	5.303	4.158	4.508	Adjustment to Appropriated Value	-----	+0.968	-0.010	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	5.303	5.126	4.498
	COST IN MILLIONS																																				
	FY 2001	FY 2002	FY 2003																																		
Previous President's Budget Submission	5.303	4.158	4.508																																		
Adjustment to Appropriated Value	-----	+0.968	-0.010																																		
Congressional Rescission	-----	-----	-----																																		
Defense Emergency Response Fund (DERF)	-----	-----	-----																																		
Current Budget Submission	5.303	5.126	4.498																																		

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#6: AGING AIRCRAFT SUSTAINMENT TECH/AIR LOGISTICS/CORROSION PREVENTION CONTROL & INFO DISTRIBUTION	5.303	5.126	4.498	5.175	5.408	5.503	5.594	Cont	Cont
<p>Change Summary Explanation: FY 2001 funding for this program reflects AAST (\$4.015 million) and congressional adds for Air Logistics (\$0.297 million) and Corrosion Prevention Control and Information Distribution (\$0.991 million) programs. FY 2002 reflects (+\$1.0 million) in congressionally added funds for Corrosion Prevention Control and Info Distribution; and Section 8123, Business Processes Reform/Management efficiencies adjustments (-\$0.032 million). FY 2003 reflects adjustments (-\$0.010 million).</p> <p>C. Other Program Funding Summary: No funding dependencies.</p> <p>D. Schedule Profile:</p>									
	FY 2001	FY 2002	FY 2003						
Quarters	1234	1234	1234						
AGING AIRCRAFT SUSTAINMENT TECHNOLOGY									
Formulate BAA Announcement									
Open BAA	XXXX								
Awards for concept development	X								
Awards for prototype development	XXXX								
Prototype Development	XXXX		XXXX						
Technology demonstration projects	XXXX		XXXX		XXXX				
AIR LOGISTICS									
Commercial Business Daily (CBD) Announcement					X		N/A		N/A
Award	X								
Performance	XX								
CORROSION PREVENTION CONTROL & INFO DISTRIBUTION									
CBD Announcement	X				N/A				N/A
Award	X								
Performance	XX								

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																												
#7: VIRTUAL REALITY MEDICAL ASSEMBLY	1.945	1.315	0.607	2.456	3.001	3.002	1.989	Cont	Cont																												
<p>A. Mission Description and Justification:</p> <p>Defense Logistics Agency (DLA) has the responsibility to procure Medical Assemblies for the Services. These Medical Assemblies are complex in nature and change frequently to accommodate new types of form, fit, function, and utility. This program will attempt to utilize technology to reduce lead times, to reduce the logistics footprint, and to reduce overall assembly life-cycle costs.</p> <p>This effort began in FY 2001 with Joint Application Development (JAD) sessions to formalize requirements. Market analysis will be performed to identify the most appropriate virtual reality technology to employ, and detailed system specifications will be created. In FY 2002, a prototype of first-aid kits will be developed. In addition, formal requirements will be developed for a more complex medical assembly. In FY 2003, the first-aid kit assembly will be made ready for a production environment, the more complex medical assembly will be prototyped, and commercial data interfaces will be established. In FY 2004, DLA will prototype an entire field hospital assembly and will look to apply the technology to other processes within DLA. In FY 2005, DLA plans for full-scale production and demonstrations.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: N/A (U) FY 2002 Plans: Completed concept study for the Virtual Medical Assembly application and developed prototype. (U) FY 2003 Plans: Validate the functionality of the prototype. Evaluate the expansion of requirements for the use of additional technologies, as funds allow.</p> <p>B. Program Change Summary: N/A</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td>1.945</td> <td>1.323</td> <td>1.611</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td>-----</td> <td>-0.008</td> <td>-1.004</td> </tr> <tr> <td>Congressional Rescission</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Current Budget Submission</td> <td>1.945</td> <td>1.315</td> <td>0.607</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2002 reflects Section 8123, Business Processes Reform/Management efficiencies (-\$0.008 million). FY 2003 reflects \$1.0 million in TOA returned to the Department to support higher priorities; and adjustments (-\$0.004 million).</p>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	1.945	1.323	1.611	Adjustment to Appropriated Value	-----	-0.008	-1.004	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	1.945	1.315	0.607
	COST IN MILLIONS																																				
	FY 2001	FY 2002	FY 2003																																		
Previous President's Budget Submission	1.945	1.323	1.611																																		
Adjustment to Appropriated Value	-----	-0.008	-1.004																																		
Congressional Rescission	-----	-----	-----																																		
Defense Emergency Response Fund (DERF)	-----	-----	-----																																		
Current Budget Submission	1.945	1.315	0.607																																		

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#7: VIRTUAL REALITY MEDICAL ASSEMBLY	1.945	1.315	0.607	2.456	3.001	3.002	1.989	Cont	Cont
C. Other Program Funding Summary: No funding dependencies.									
D. Schedule Profile: Quarters Formulate the BAA announcement Open the BAA Awards for concept studies Awards for prototype development Prototype development	FY 2001 1234	FY 2002 1234	FY 2003 X XXX XXXX						

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																								
#8: DIMINISHING MANUFACTURING SOURCE DATA (DMS)	-----	0.994	-----	-----	-----	-----	-----	-----	0.994																								
<p>A. Mission Description and Justification: As aircraft, ships, and other vehicles are being expected to operate much longer than originally designed, the supply of parts for these systems has become a significant problem. When systems and components can no longer be obtained they are called diminishing manufacturing source (DMS) problems. Throughout the military, there are literally hundreds of independent operations attempting to solve steadily worsening DMS problems. Because these operations are very "stove-piped" in their existence, they do not share information across weapon systems, even though many of the parts are common. The only method to decrease this ever expanding cost to solve DMS problems would be to have a central repository of part solutions, shared across all weapon systems and all services. In order to create a central repository of military parts, a very large data warehouse will need to be created and populated with solutions to these DMS part problems.</p> <p>(U) Program Achievements and Plans:</p> <p>(U) FY 2001 Accomplishments: N/A (U) FY 2002 Plans: In this initial year, the shell of the data warehouse will be put together and integrated with other existing DMS databases, to avoid duplication. (U) FY 2003 Plans: N/A</p> <p>B. Program Change Summary: N/A</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td>-----</td> <td>0.994</td> <td>-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Current Budget Submission</td> <td>-----</td> <td>0.994</td> <td>-----</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2002 reflects congressionally added funds (+\$1.0 million) and adjustments per Section 8123, Business Processes Reform/Management efficiencies (-\$0.006 million).</p> <p>C. Other Program Funding Summary: None</p> <p>D. Schedule Profile: N/A</p>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	-----	-----	-----	Adjustment to Appropriated Value	-----	0.994	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	-----	0.994	-----
	COST IN MILLIONS																																
	FY 2001	FY 2002	FY 2003																														
Previous President's Budget Submission	-----	-----	-----																														
Adjustment to Appropriated Value	-----	0.994	-----																														
Defense Emergency Response Fund (DERF)	-----	-----	-----																														
Current Budget Submission	-----	0.994	-----																														

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																												
#9: ON DEMAND MANUFACTURING/CATT	2.972	2.782	-----	-----	-----	-----	-----	-----	5.754																												
<p>A. Mission Description and Justification:</p> <p>This initiative is necessary to identify and establish commercial manufacturing capabilities so that DLA Centers can acquire parts as they are needed (on demand) rather than investing in excessive stock, or risking non-availability of essential parts when needed. Contracting relationships will be established to obtain small quantities of military unique items of low demand, with significantly lower costs and greatly improved response time. This is an effort to use private sector manufacturers, in addition to all other measures to obtain parts quickly. CATT establishes a network of companies to produce parts in a very short production lead-time with minimum administration.</p> <p>(U) Program Achievements and Plans: (U) FY 2001 Accomplishments: Continue capacity field tools for ODM division support. (U) FY 2002 Plans: N/A (U) FY 2003 Plans: N/A</p> <p>B. Program Change Summary: N/A</p> <table border="0"> <tr> <td></td> <td align="center" colspan="3">COST IN MILLIONS</td> </tr> <tr> <td></td> <td align="center">FY 2001</td> <td align="center">FY 2002</td> <td align="center">FY 2003</td> </tr> <tr> <td>Previous President's Budget Submission</td> <td align="center">2.972</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td align="center">-----</td> <td align="center">+2.782</td> <td align="center">-----</td> </tr> <tr> <td>Congressional Rescission</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="center">2.972</td> <td align="center">+2.782</td> <td align="center">-----</td> </tr> </table> <p>Change Summary Explanation: FY 2001 reflects congressionally added funds for this program (+\$3.0 million) and (-\$0.028 million) to reflect a pro-rata share of congressional adjustments. FY 2002 reflects congressionally added funds (+\$2.8 million) and adjustments per Section 8123, Business Reform/Management efficiencies (-\$0.018 million).</p>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	2.972	-----	-----	Adjustments to Appropriated Value	-----	+2.782	-----	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	2.972	+2.782	-----
	COST IN MILLIONS																																				
	FY 2001	FY 2002	FY 2003																																		
Previous President's Budget Submission	2.972	-----	-----																																		
Adjustments to Appropriated Value	-----	+2.782	-----																																		
Congressional Rescission	-----	-----	-----																																		
Defense Emergency Response Fund (DERF)	-----	-----	-----																																		
Current Budget Submission	2.972	+2.782	-----																																		

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#9: ON DEMAND MANUFACTURING/CATT	2.972	2.782	-----	-----	-----	-----	-----	-----	5.754
C. Other Program Funding Summary: None									
D. Schedule Profile:									
Quarters	FY 2001	FY 2002	FY 2003						
Continue work at centers to develop contractual vehicles with industry	1234	1234	N/A	N/A					
Establish Commercial ODM on EMALL	XXXX								
Establish Public Manufacturing ODM on EMALL Implementation	XXXX								

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																												
#10: COMPETITIVE SUSTAINMENT (CS)	2.972	1.987	4.990	3.470	4.784	5.944	8.494	-----	32.641																												
A. Mission Description and Justification:																																					
<p>Competitive Sustainment (CS) was added by Congress in FY 2000 in recognition of the need to make a substantial reduction to the cost of support for aging weapon systems. A competitive source selection process was conducted for a manager of an industry coalition to conduct the work. The project conducts industry/Government pilots in the following five areas: 1) effective supply partnerships; 2) significant improvement in quality and access to technical data; 3) a streamlined maintenance process; 4) upgrade strategies for increased reliability and 5) innovative training. The goals are to reduce total costs of spares/replacements, cut the time from requirement to delivery for supplies and cut repair cycle.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: Competitive Contract awarded and pilot projects initiated. (U) FY 2002 Plans: Complete a strategic investment plan, complete initial pilots and develop new pilot activities. (U) FY 2003 Plans: Complete pilots initiated in FY 2001 and begin transition into production systems/business practices.</p>																																					
B. Program Change Summary:																																					
<table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td align="right">2.972</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="center">-----</td> <td align="right">1.987</td> <td align="right">4.990</td> </tr> <tr> <td>Congressional Rescission</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="right">2.972</td> <td align="right">1.987</td> <td align="right">4.990</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2001 reflects congressionally added funds for this program (+\$3.0 million) and (-\$0.028 million) to reflect a pro-rata share of congressional adjustments. FY 2002 reflects funding internally realigned from IP/ManTech PE, (SCM), for CS (+\$2.0 million) less adjustment for Section 8123, Business Processes Reform/Management efficiencies (-\$0.013 million). FY 2003 reflects funding internally realigned from IP/ManTech PE, (SCM), for CS (+\$5.0 million); and inflation adjustments (-\$0.010 million).</p>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	2.972	-----	-----	Adjustment to Appropriated Value	-----	1.987	4.990	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	2.972	1.987	4.990
	COST IN MILLIONS																																				
	FY 2001	FY 2002	FY 2003																																		
Previous President's Budget Submission	2.972	-----	-----																																		
Adjustment to Appropriated Value	-----	1.987	4.990																																		
Congressional Rescission	-----	-----	-----																																		
Defense Emergency Response Fund (DERF)	-----	-----	-----																																		
Current Budget Submission	2.972	1.987	4.990																																		
C. Other Program funding Summary: Coordinated with Army and Air Force Sustainment programs with no funding dependencies from other Agencies. A complementary program exists in PE 070811S to address unique Sustainment manufacturing problems.																																					
D. Scheduled Profile:																																					
		FY 2001	FY 2002	FY 2003																																	
	Quarters	1234	1234	1234																																	
CBD announcement			N/A	N/A																																	
Award																																					
Performance		XXXX																																			

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#11: DEFENSE MICROELECTRONICS ACTIVITY	21.586	57.040	-----	-----	-----	-----	-----	-----	78.626
A. Mission Description and Justification:									
<p>DMEA's mission is to leverage advanced technologies to extend the life of weapon systems, to solve operational problems (e.g., reliability and maintainability) and to address diminishing manufacturing sources. The DMEA provides technical and application engineering support for the implementation of advanced microelectronics research technologies from design through assembly and installation. The DMEA manages an organic capability to support these strategically important technologies within the DoD. These advanced technologies are translated into solutions for military needs. DMEA's RDT&E program is comprised of a mix of studies, investigations, planning efforts, developments, fabrications, and the insertions of solutions. Applies to all DoD systems using electronics e.g., F-22, B-2, AWACS, F-16, F-15, F-14, GPS, USQ-113, JAST, EA-6B, M-65, AN/TSC-93B, and AN/GSC-49 (V).</p>									
(U) Program Accomplishments and Plans:									
<p>(U) FY 2001 Accomplishments: Continued development of a viable method to deposit ultra-pure silicon, which is the fundamental material for microelectronics and semiconductor devices. Continued to develop methods for replacing highly complex microcircuits using VHDL, modern synthesis tools, programmable cores, and silicon foundry resources to achieve FFF replacements while minimizing design methodologies and processes to emulate digital logic, analog, mixed signal and power microelectronic components. Continued to develop a digital electronic warfare (EW) receiver to replace the existing F-22 analog technology EW receiver. Began developing the Ultra-Low Power Battlefield Sensor Communication System (ULBPSCS) (\$3.950 million); F-22 Digital EW Product Improvement (4.955 million); Silicon-Based Nanostructures (2.476 million); Complementary Metal Oxide Semiconductor Retrofits (2.476 million); Gate Array Reverse Engineering (1.983 million); Multiple Soft Core Integration (2.972 million); Systems Simulation of Electronically Compressed Function (2.774 million); Ultra-Low Power Battlefield Sensor Communication System (3.950 million).</p>									
<p>(U) FY 2002 Plans: Continue development of a viable method to deposit ultra-pure silicon in production-scale quantities. Continue to develop methods for replacing highly complex microcircuits using VHDL, modern synthesis tools, programmable cores, and silicon foundry resources to achieve FFF replacements while minimizing design methodologies and processes to emulate digital logic, analog, mixed signal, radiation hardened, and power microelectronic components. Begin to systematically clarify the feasibility of applying nanoscience and technology to defense requirements. Continue to develop a digital electronic warfare (EW) receiver to replace the existing F-22 analog technology EW receiver. Begin "productizing" spray cooling technology and insert the technology in Cross-Platform Migrations. Begin to resolve thermal issues in very high density electronics and advanced electronics packaging. Continue to develop an Ultra-low Power Battlefield Sensor Communication System (ULBPSCS).</p>									

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#11: DEFENSE MICROELECTRONICS ACTIVITY	21.586	57.040	-----	-----	-----	-----	-----	-----	78.626
Silicon-28 Program (\$1.987 million), Sub-micron CMOS and CMOS/SOS Lithography (\$2.385 million), Strategic Radiation Hardened Microelectronics (\$2.286 million), Center for Nanoscience Innovation (\$8.447 million), Electronic Digital Warfare (\$2.484 million), Optimizing Electronics for Advanced Controlled Environment Systems (\$4.969 million), Spray Cooling Migration Program (\$7.652 million), Ultra-low Power Battlefield Sensor Communication System (ULBPSCS) (\$26.830 million).									

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration																																
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																								
#11: DEFENSE MICROELECTRONICS ACTIVITY	21.586	57.040	-----	-----	-----	-----	-----	-----	78.626																								
(U) FY 2003 Plans: N/A																																	
B. Program Change Summary: FY 2001 funding reflects a \$17.8 million congressional add (-\$0.164 million) to reflect pro rata share of congressional adjustments and +\$3.950 million per transfer of ULPBSCS funds from DOD, WHS to DLA. FY 2002 reflects additional congressionally added funds: (+\$47.400 million for several electronic/related projects), and Section 8123 Business Processes Reform/Management efficiencies (-\$0.360 million).																																	
<table border="0"> <thead> <tr> <th></th> <th align="center" colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th align="center">FY 2001</th> <th align="center">FY 2002</th> <th align="center">FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td align="right">17.636</td> <td align="right">10.000</td> <td align="center">-----</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="right">+3.950</td> <td align="right">+47.040</td> <td align="center">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="right">21.586</td> <td align="right">57.040</td> <td align="center">-----</td> </tr> </tbody> </table>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	17.636	10.000	-----	Adjustment to Appropriated Value	+3.950	+47.040	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	21.586	57.040	-----
	COST IN MILLIONS																																
	FY 2001	FY 2002	FY 2003																														
Previous President's Budget Submission	17.636	10.000	-----																														
Adjustment to Appropriated Value	+3.950	+47.040	-----																														
Defense Emergency Response Fund (DERF)	-----	-----	-----																														
Current Budget Submission	21.586	57.040	-----																														
C. Other Program Funding Summary: No funding dependencies on other programs.																																	
D. Schedule Profile:																																	
		FY 2001	FY 2002	FY 2003																													
	Quarters	1234	1234	1234																													
	Ultra-pure Silicon Methodology	XX																															
	Programmable Core Solution Sets	XXXX																															
	CMOS 5-Volt Process Replacement	XXX	XXX																														
	Gate Array Reverse Engineering	XXX	XX																														
	Multiple Soft Core Integration	XX	XXX																														
	Simulation of Electronically Compressed Function	X	XXX																														

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3	Program Element: 0603712S Logistics R&D Technology Demonstration								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#11: DEFENSE MICROELECTRONICS ACTIVITY	21.586	57.040	-----	-----	-----	-----	-----	-----	78.626

D. Schedule Profile: (Continued)

	FY 2001	FY 2002	FY 2003
Quarters	1234	1234	1234
Silicon-based Nanostructures (Si-28)	XXX	XXXX	
Sub-micron CMOS and CMOS/SOS Lithography		XX	XXX
Strategic Radiation Hardened Microelectronics		XX	XXX
Center for Nanoscience Innovation		XX	XXXX
F-22 Digital EW Product Improvement	XXXX	XXXX	
Optimizing Elec. for Adv. Controlled Environment Systems		XX	XXXX
Spray Cooling Migration Program		XX	XXXX
Ultra-Low Power Battlefield Sensor Communication System	X	XXXX	XXX

UNCLASSIFIED

FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3				Program Element: 0603805S DUAL USE APPLICATIONS PROGRAM					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMP	TOTAL
TOTAL PROGRAM ELEMENT: NATIONAL CENTER FOR MANUFACTURING SCIENCES (NCMS/CTMA)	5.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.987
<p>A. Mission Description & Budget Item Justification:</p> <p>The Commercial Technology and Maintenance Activities (CTMA) program is a cooperative agreement between National Center for Manufacturing Sciences (NCMS) and the Deputy Under Secretary of Defense for Logistics to co-sponsor technology development, deployment and validation with DoD organic maintenance activities through NCMS member companies. NCMS is a not-for-profit collaborative research consortium of North American corporations. It is the largest cross-industry consortium in the United States (240 member companies, an annual R&D project portfolio exceeding \$80 million).</p> <p>The primary goals of the program are to transfer best commercial technologies and best practices to DoD maintenance activities via NCMS member companies. By partnering with NCMS members, the DoD maintenance activities are able to assess the benefits of new manufacturing technologies in their own facilities, working with industry leaders solving manufacturing problems through collaboration.</p> <p>The Department of Army, Defense Supply Service Washington (DSSW) is the contracting office for the program. The statement of work in the CTMA contract, DASW01-98-0002, remains essentially unchanged since the original contract was issued in FY 1998, and subsequent year funding has been added to the contract by modification.</p>									

UNCLASSIFIED

FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2a Exhibit)				DATE: FEBRUARY 2002																														
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3				Program Element: 0603805S DUAL USE APPLICATIONS PROGRAM																														
COST (MILLIONS)	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMP	TOTAL																								
NATIONAL CENTER FOR MANUFACTURING SCIENCES (NCMS/CTMA)	5.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.987																								
<p>A. Mission Description and Justification:</p> <p>Program Element: Under the CTMA contract, NCMS obtains approval for new projects from DUSD(Logistics) prior to implementation. Project proposals are circulated for comment among senior maintenance officials in each of the Military Services prior to approval. NCMS performs the accounting, contracting, legal, administrative and program management functions for approved projects. They also provide quarterly and annual reports on CTMA projects and final reports upon progress completion.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: *Twenty-two project proposals approved under the CTMA program. *Eighteen pilots in process or completed at sixteen maintenance activities representing all four Military Services. *Examples of projects include composite repair, laser welding, next generation inspection systems, flexible manufacturing, advanced distributed learning, small lot size manufacturing, advanced coatings, and rapid prototyping.</p> <p>(U) FY 2002 Plans: N/A (U) FY 2003 Plans: N/A</p> <p>B. Program Change Summary:</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 01</th> <th>FY 02</th> <th>FY 03</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td>-----</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td>5.987</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Current Budget Submission</td> <td>5.987</td> <td>0.000</td> <td>0.000</td> </tr> </tbody> </table> <p>C. Other Program Funding Summary: This is a congressionally added program. DERF - N/A</p> <p>Related Programs: In FY 01 the Congress added this funding to the Office of the Secretary of Defense (OSD) O&M D-W appropriation. Reprogramming Action FY 01-21IR transferred funding (+\$5.9 million) to the DLA RDT&E, D-W appropriation.</p>												COST IN MILLIONS				FY 01	FY 02	FY 03	Previous President's Budget Submission	-----	0.000	0.000	Adjustment to Appropriated Value	5.987	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	5.987	0.000	0.000
	COST IN MILLIONS																																	
	FY 01	FY 02	FY 03																															
Previous President's Budget Submission	-----	0.000	0.000																															
Adjustment to Appropriated Value	5.987	-----	-----																															
Defense Emergency Response Fund (DERF)	-----	-----	-----																															
Current Budget Submission	5.987	0.000	0.000																															

UNCLASSIFIED

UNCLASSIFIED

FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2a Exhibit)		DATE: FEBRUARY 2002																						
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 3		Program Element: 0603805S DUAL USE APPLICATIONS PROGRAM																						
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMP	TOTAL															
NATIONAL CENTER FOR MANUFACTURING SCIENCES (NCMS/CTMA)	5.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.987															
<p>D. Schedule Profile: NCMS prepares a list of tentative projects based on identified needs at the beginning of each fiscal year. New projects are proposed throughout the year based largely on this list.</p> <table border="0"> <tr> <td></td> <td></td> <td>FY 01</td> <td>FY 02</td> <td>FY 03</td> </tr> <tr> <td></td> <td>Quarters</td> <td>1234</td> <td>1234</td> <td>1234</td> </tr> <tr> <td>NCMS/CTMA-Phase</td> <td></td> <td>XXXX</td> <td>N/A</td> <td>N/A</td> </tr> </table>												FY 01	FY 02	FY 03		Quarters	1234	1234	1234	NCMS/CTMA-Phase		XXXX	N/A	N/A
		FY 01	FY 02	FY 03																				
	Quarters	1234	1234	1234																				
NCMS/CTMA-Phase		XXXX	N/A	N/A																				

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis (DTA)					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
Total PE Cost	7.975	4.950	5.201	5.298	5.409	5.523	5.642	Continuing	Continuing
001 DOD Technology Analysis Office (DTAO)	4.218	4.187	4.423	4.528	4.654	4.780	4.907	Continuing	Continuing
002 Technology Integration	0.784	0.763	0.778	0.770	0.755	0.743	0.735	Continuing	Continuing
003 Commodity Management System Consolidation (CMSC)	2.973	-----	-----	-----	-----	-----	-----	0.0	2.973
A. Mission Description and Budget Item Justification: (See Enclosures)									
B. Program Change Summary:									
	FY 01	FY 02	FY 03						
Previous President's Budget Submission	7.975	5.109	5.182						
Adjustments to Appropriated Value	-----	- 0.159	+0.019						
Congressional Rescission	-----	-----	-----						
Defense Emergency Response Fund (DERF)	-----	-----	-----						
Current Budget Submission	7.975	4.950	5.201						
<p>Change Summary Explanation: CMSC is a congressionally added program. FY 2001 reflects +\$3.0 million in congressionally added funds excluding undistributed reductions for CMSC; the DTA PE's fair share of Title IV reductions per Section 8086 of the FY2001 Appropriations Act (-\$0.056 million); and its fair share of the gov't-wide rescission (-\$0.017 million). FY 2002 funding reflects (-\$0.109 million) pursuant to Section 8123, Business Processes Reform; and Section 8032 (Federally Funded Research and Development Centers (FFRDCs) (-\$0.050 million) adjustments. FY 2003 includes adjustments (-\$0.019 million).</p>									

UNCLASSIFIED

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
001 DOD Technology Analysis Office	4.218	4.1871	4.423	4.528	4.654	4.780	4.907	Continuing	Continuing

A. Mission Description and Budget Item Justification:

This program element is found in Budget Authority 6, RDT&E Management Support, to provide engineering, scientific and analytical support to the Office of the Deputy Under Secretary of Defense (Science and Technology) (ODUSD(S&T)) in its responsibility for direction, overall quality, and content of the Science and Technology (S&T) program and ensuring that the technology being developed is affordable and minimizes system development risk. The primary purpose of program element is to facilitate the development of the S&T program and conduct assessments and analyses of the S&T program to ensure maximum utilization of Research and Development funds to accomplish the overall objectives of the S&T program. Funds are required for technical and analytical support, equipment, supplies, travel, and publications.

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
001 DOD Technology Analysis Office	4.218	4.187	4.423	4.528	4.654	4.780	4.907	Continuing	Continuing

FY 2001 Accomplishments:

- Provided engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in developing strategies and plans to exploit and develop technology. (\$0.303 million)
- Provided engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in conducting analyses, developing policies, making recommendations, and developing guidance for science and technology plans and programs. (\$1.262 million)
- Provided engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in reviewing proposed and approved science and technology programs and made recommendations to optimize effectiveness of the DoD investments in science and technology. (\$0.681 million)
- Provided engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in oversight of science and technology issues and initiatives and responding to Congressional special interests. (\$1.972 million)

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
001 DOD Technology Analysis Office	4.218	4.187	4.423	4.528	4.654	4.780	4.907	Continuing	Continuing
<p>FY 2002 Plans:</p> <ul style="list-style-type: none"> • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in developing strategies and plans to exploit and develop technology. (\$0.294 million) • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in conducting analyses, developing policies, making recommendations, and developing guidance for science and technology plans and programs. (\$1.298 million) • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in reviewing proposed and approved science and technology programs and make recommendations to optimize effectiveness of the DoD investments in science and technology. (\$0.700 million) • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in oversight of science and technology issues and initiatives and responding to Congressional special interests. (\$1.895 million) 									

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
001 DOD Technology Analysis Office	4.218	4.187	4.423	4.528	4.654	4.780	4.907	Continuing	Continuing
<p>FY 2003 Plans:</p> <ul style="list-style-type: none"> • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in developing strategies and plans to exploit and develop technology. (\$0.294 million) • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in conducting analyses, developing policies, making recommendations, and developing guidance for science and technology plans and programs. (\$1.298 million) • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in reviewing proposed and approved science and technology programs and make recommendations to optimize effectiveness of the DoD investments in science and technology. (\$0.700 million) • Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in oversight of science and technology issues and initiatives and responding to Congressional special interests. (\$2.131 million) 									

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
001 DOD Technology Analysis Office	4.218	4.187	4.423	4.528	4.654	4.780	4.907	Continuing	Continuing

B. Program Change Summary:

	FY 01	FY 02	FY 03
President's Budget Submission	4.218	4.321	4.403
Adjustments to Appropriated Value		-0.134	+0.020
Congressional Rescission	-----	-----	-----
Current Budget Submission	4.218	4.187	4.423

Change Summary Explanation: FY 2001 reflects (-\$0.039 million) in congressional adjustments. FY 2002 funding reflects (-\$0.134 million) pursuant to Section 8123, Business Processes Reform (-\$0.092 million); and Section 8032, (FFRDCs) (-\$0.042 million) adjustments. FY 2003 funding reflects adjustments (+\$0.020 million).

C. Other Program Summary Funding Summary: DERP - N/A

D. Schedule Profile:

	FY 01				FY 02				FY 03			
	1	2	3	4	1	2	3	4	1	2	3	4
Operations	.040	.080	.020	.020	.040	.080	.020	.020	.040	.080	.020	.020
S&T Support	.816	2.041	.992	.209	.801	2.044	.982	.200	.825	2.303	1.082	.053

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
002 Technology Integration	0.784	0.763	0.778	0.770	0.755	0.743	0.735	Continuing	Continuing

A. Mission Description and Budget Justification

Technology Integration (TI) activities advance international science and technology (S&T) cooperation of specific projects of bilateral or multilateral interest. It provides the management support for U.S. participation in NATO's Research and Technology Organization (RTO) and "The Technical Cooperative Program" (TTCP). TI oversees, coordinates and reviews RTO and TTCP activities in which the U.S. has an interest including ongoing and proposed collaborative programs, technical symposia and conferences, and standard operating procedures. This Defense Reform Initiative-related effort will leverage Tri-Service S&T dollars through new and ongoing international partnerships. TI also provides selective funding support for administration, travel, conferences, and technical evaluations related to RTO activities carried out by the Services and other organizations.

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
002 Technology Integration	0.784	0.763	0.778	0.770	0.755	0.743	0.735	Continuing	Continuing
<p>FY 2001 Accomplishments:</p> <ul style="list-style-type: none"> • Through an international technology watch effort, identified ongoing and proposed S&T efforts that could complement efforts or fill shortfalls in meeting U.S. S&T requirements, objectives and goals. (\$0.395 million) • Fostered international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Established data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (\$0.148 million) • Sought opportunities for international cooperation in high priority S&T. Conducted intradepartmental coordination to achieve goals as necessary. (\$0.241 million) 									

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
002 Technology Integration	0.784	0.763	0.778	0.770	0.755	0.743	0.735	Continuing	Continuing
<p>FY 2002 Plans:</p> <ul style="list-style-type: none"> • Through an international technology watch effort, identify ongoing and proposed S&T efforts that could complement efforts or fill shortfalls in meeting U.S. S&T requirements, objectives and goals. (\$0.375 million) • Foster international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Then establish data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (\$0.150 million) • Seek opportunities for international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals as necessary. (\$0.238 million) 									

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
002 Technology Integration	0.784	0.763	0.778	0.770	0.755	0.743	0.735	Continuing	Continuing
<p>FY 2003 Plans:</p> <ul style="list-style-type: none"> • Through an international technology watch effort, identify ongoing and proposed S&T efforts that could complement efforts or fill shortfalls in meeting U.S. S&T requirements, objectives and goals. (\$0.399 million) • Foster international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Then establish data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (\$0.150 million) • Seek opportunities for international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals as necessary. (\$0.229 million) 									

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002									
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis									
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL				
002 Technology Integration	0.784	0.763	0.778	0.770	0.755	0.743	0.735	Continuing	Continuing				
B. Program Change Summary: N/A													
			FY 01	FY 02	FY 03								
President's Budget Submission			0.784	0.788	0.779								
Adjustments to Appropriated Value			-----	-0.025	-0.001								
Congressional Rescission			-----	-----	-----								
Current Budget Submission			0.784	0.763	0.778								
Change Summary Explanation: FY 2001 reflects (-0.007 million) in congressional adjustments. FY 2002 reflects (-\$0.025 million) pursuant to Section 8123, Business Processes Reform (-\$0.017 million); and Section 8032, (FFRDCs) (-\$0.008 million) adjustments. FY 2003 funding reflects (-\$0.001 million).													
C. Other Program Funding Summary: DERP - N/A													
D. Schedule Profile:													
		FY 01				FY 02				FY 03			
		1	2	3	4	1	2	3	4	1	2	3	4
Operations	.013	.013	.013	.013	.010	.010	.010	.005	.010	.015	.015	.014	
S&T Support	.333	.284	.100	.015	.354	.264	.100	.010	.354	.264	.091	.015	

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
003 CMSC	2.973	-----	-----	-----	-----	-----	-----	0.0	2.973

A. Mission Description and Budget Justification

Commodity Management System Consolidation. Congressional add in FY 2001.

FY 2001 Programs:

The Commodity Management System Consolidation (CMSC) and Integration team is charged with transitioning Commodity Systems to support the DOD Logistics 2010 Vision. This plan includes reducing response time, operational costs, and inventory and enhances customer satisfaction. To support this, the existing commodity management systems, in use by the Defense Logistics Agency (DLA), must be migrated to a common operating environment, which utilizes shared data, business rules that are accessible to DLA, its customers and its suppliers. Requirements to be met include: 1) Development of an automated parts ordering tool allowing a technician working off an Interactive Electronic Technical Manual (IETM) to requisition parts interactively from the technical manual's illustrated parts breakdown in a paperless manner. 2) Develop a Supply Chain Management Council (SCMC) web site that allows SCMC and other personnel to access up-to-date information on the Council's mission, goals, minutes, briefings, papers, etc. 3) Development of a web based SCM Analysis site, that allows customers to describe logistics requirements and obtain a proposed integrated solution based on the tools currently available, i.e. prime vendor, e-commerce, Long-Term Contracts (LTCs), etc.

Consolidation and integration of all the commodity management systems used by the DLA is a large-scale effort. In order to manage program risk, the migration strategy must be designed to include a series of manageable successes, which combine incremental development, testing and fielding manageable subsets of the databases of legacy systems. This build a little, test a little approach assists DLA in early identification of risks of technology changes, staff turnovers, and of business process changes, and will provide management information to migrate these risks effectively and with a minimum of effort. It also improves the flexibility of the overall migration effort. Structurally, project flexibility will allow DLA to reprioritize portions of the migration effort to resolve critical issues.

UNCLASSIFIED
FY 2003 BUDGET REVIEW

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget 0400/06				Program Element: 0605798S Defense Technology Analysis					
COST (MILLIONS)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	COST TO COMPLETE	TOTAL
003 CMSC	2.973	-----	-----	-----	-----	-----	-----	0.0	2.973
B. Program Change Summary									
			FY 01		FY 02		FY 03		Total Cost
President's Budget Submission			2.973		-----		-----		2.973
Adjustments to Appropriated Value			-----		-----		-----		-----
Congressional Rescission					-----		-----		-----
Current Budget Submission			2.973		-----		-----		2.973
Change Summary Explanation: N/A									
C. Other Program Funding Summary: N/A									
D. Schedule Profile: Commodity Management System Consolidation									
			FY 01		FY 02		FY 03		
			1 2 3 4		1 2 3 4		1 2 3 4		
Project Exploration, Discovery, And Target User Group Selection			X X X						
Prototype Requirements			X X	X					
Develop Ordering "Leave-In-Place" Prototype			X X	X X X X					
Incorporate Knowledge Management Capabilities					X X				

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
TOTAL PROGRAM ELEMENT	9.006	41.392	13.072	15.330	10.274	9.656	9.635	Cont	Cont
#1: Combat Rations	1.854	1.967	1.978	2.017	2.058	2.059	2.055	Cont	Cont
#2: Apparel Research Network (ARN)	2.274	2.989	3.010	3.007	2.999	3.000	2.993	Cont	Cont
#3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	4.021	2.305	2.319	2.322	2.405	2.499	2.494	-----	18.365
#4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	0.857	1.306	1.965	1.990	2.013	2.098	2.093	-----	12.322
#5: Customer Value Industrial Plant Equipment (CV:IPE)	-----	1.393	1.403	1.202	0.799	-----	-----	-----	4.797
#6: Supply Chain Management (SCM)	-----	18.145	-----	-----	-----	-----	-----	-----	18.145
#7: Classified Programs (CP)	-----	-----	2.397	4.792	-----	-----	-----	-----	7.189
#8: ERIM Defense/Competitive Sustainment Initiative	-----	7.635	-----	-----	-----	-----	-----	-----	7.635
#9: Laser Additive Manufacturing (LAM)	-----	5.652	-----	-----	-----	-----	-----	-----	5.652
<p>A. Mission Description & Budget Item Justification: Manufacturing Technology (ManTech) reduces costs and lead times, and increases quality, by developing and applying advanced manufacturing technology. DLA ManTech includes Combat Rations Network for Technology Implementation (CORANET), Apparel Research Network (ARN), Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), and Procurement Readiness Optimization-Forging Advance System Technology (PRO-FAST).</p> <p>#1. CORANET assures combat ration availability of specified variety, quality, and affordability to the Components through commercial-military integration, ration processing and packaging research, and menu variety and producibility improvement. CORANET is part of the Joint Defense Manufacturing Technology Program, Advanced Manufacturing Enterprise Strategic Plan.</p> <p>#2. ARN concentrates on achieving customer driven uniform manufacturing by establishing electronic links among all participants in the supply chain from the end user to the fabric supplier. The program is part of the Joint Defense Manufacturing Technology Program, Advanced Manufacturing Enterprise Strategic Plan.</p> <p>#3. PRO-ACT develops and delivers cost effective weapons parts. It also develops better casting processes. The program is part of the Joint Defense Manufacturing Technology Program.</p> <p>#4. PRO-FAST will develop ways to make forgings for land, sea, and air weapons that are better, cheaper, and faster to produce.</p>									

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology
<p>#5. CV:IPE will develop and implement lean concepts in a depot overhaul environment for Industrial Plant Equipment.</p> <p>#6. SCM will ensure the Agency stays abreast of the latest supply chain management principals and techniques that will improve the supply availability of DLA managed items by assembling supply chains to shorten lead times and reduce costs.</p> <p>#7. CP - N/A</p> <p>#8. ERIM Defense/Competitive Sustainment Initiative will substantially reduce the cost of support for aging weapon systems by addressing the manufacturing requirements associated with producing parts for aging weapon systems.</p> <p>#9. LAM will develop a rapid manufacturing technology that produces high performance military and commercial components via laser additive manufacturing with reduced lead times and cost.</p>	

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE: FEBRUARY 2002																												
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																												
<p>B. Program Change Summary:</p> <table style="margin-left: auto; margin-right: auto; border: none;"> <thead> <tr> <th></th> <th colspan="3" style="text-align: center;">COST IN MILLIONS</th> </tr> <tr> <th></th> <th style="text-align: center;">FY 2001</th> <th style="text-align: center;">FY 2002</th> <th style="text-align: center;">FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td style="text-align: center;">9.006</td> <td style="text-align: center;">17.544</td> <td style="text-align: center;">18.093</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">+23.848</td> <td style="text-align: center;">- 5.021</td> </tr> <tr> <td>Congressional Rescission</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td style="text-align: center;">9.006</td> <td style="text-align: center;">41.392</td> <td style="text-align: center;">13.072</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2001 reflects (+\$2.000 million) for the congressionally added Metalcasting program and IP/ManTech's fair share of Title IV reductions per Section 8086 of the FY 2001 Appropriations Act (-\$0.064 million), and its fair share of a government-wide rescission (-\$0.020 million). FY 2002 reflects congressionally added funding for the Supply Chain Management (SCM) program (+\$12.8 million); ERIM Defense/Competitive Sustainment Initiative (+\$7.7 million); Laser Additive Manufacturing (LAM)(+\$5.7 million), adjusted for Section 8123 Business Processes Reform (-\$0.274 million), Section 8032 (Federally Funded Research and Development Centers (FFRDC) (-\$0.035 million), and a General Reduction (-\$0.043 million). FY 2003 funding reflects realignment from SCM to Log R&D's CS project (-\$5.0 million); and adjustments (-\$0.021 million).</p>			COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	9.006	17.544	18.093	Adjustment to Appropriated Value	-----	+23.848	- 5.021	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	9.006	41.392	13.072
	COST IN MILLIONS																												
	FY 2001	FY 2002	FY 2003																										
Previous President's Budget Submission	9.006	17.544	18.093																										
Adjustment to Appropriated Value	-----	+23.848	- 5.021																										
Congressional Rescission	-----	-----	-----																										
Defense Emergency Response Fund (DERF)	-----	-----	-----																										
Current Budget Submission	9.006	41.392	13.072																										

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#1: COMBAT RATIONS	1.854	1.967	1.978	2.017	2.058	2.059	2.055	Cont	Cont
<p>A. Mission Description and Justification</p> <p>DLA buys about \$200 million worth of Combat Rations annually. The product is military unique. The limited industrial base is barely capable of producing variety and quantities needed for surge, and has been dependent on orders from Government to remain viable. This initiative ensures that DLA will have an industrial base to continue to support warfighters with needed combat rations. The program partners identify problems and develop new technology for implementation in their plants, after demonstrations conducted at a University demonstration site, unifying the civilian and military manufacturing processes to expand the base. The Joint Steering Group of users, designers, and buyers assures that selected projects contribute to DLA mission.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: *Developed and evaluated new retort rack material for cost, durability. *Provided assistance for implementation of Multiple Unit Leak Detector (MULD) equipment in Meals Ready to Eat (MRE) plants. *Developed and implement leak-seal inspection equipment for trays. *Continued work on technology development and implementation. *Evaluated Ultrasonic Technology for cost/quality benefits in combat ration manufacturing. *Integrated Machine Vision capability to prevent seal defects on polymeric tray and Multivac pouch sealing equipment.</p> <p>(U) FY 2002 Plans: *Implement retort rack material results. *Continue to implement MULD equipment in MRE plants. *Continue to develop and implement leak-seal inspection equipment for trays. *Restructure CORANET II based on proposals received from BAA responders. *Act on results from the evaluation of the Ultrasonic Technology for cost/quality benefits in combat ration manufacturing. *Continue the integration and prevention of seal defects. *Continue to examine industrial base opportunities with Partners. *Continue to develop new technology for transfer and implementation into plants in the industrial base. *Continue work on technology development and implementation. *Plan for follow-on development program to support combat rations industrial base. *Update strategic plans and business case for CORANET II.</p> <p>(U) FY 2003 Plans: *Continue work on technology development and implementation.</p>									

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)		DATE: FEBRUARY 2002																																										
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7		Program Element: 0708011S Manufacturing Technology																																										
COST (MILLIONS)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																																		
#1: COMBAT RATIONS		1.854	1.967	1.978	2.017	2.058	2.059	2.055	Cont	Cont																																		
B. Program Change Summary: Restructure to emphasize implementation of an existing program.																																												
<table border="0"> <tr> <td></td> <td align="center" colspan="3">COST IN MILLIONS</td> </tr> <tr> <td></td> <td align="center">FY 2001</td> <td align="center">FY 2002</td> <td align="center">FY 2003</td> <td></td> </tr> <tr> <td>Previous President's Budget Submission</td> <td align="right">1.854</td> <td align="right">1.984</td> <td align="right">+1.982</td> <td></td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="right">-----</td> <td align="right">-0.017</td> <td align="right">-0.004</td> <td></td> </tr> <tr> <td>Congressional Rescission</td> <td align="right">-----</td> <td align="right">-----</td> <td align="right">-----</td> <td></td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="right">-----</td> <td align="right">-----</td> <td align="right">-----</td> <td></td> </tr> <tr> <td>Current Budget Submission</td> <td align="right">1.854</td> <td align="right">1.967</td> <td align="right">1.978</td> <td></td> </tr> </table>												COST IN MILLIONS				FY 2001	FY 2002	FY 2003		Previous President's Budget Submission	1.854	1.984	+1.982		Adjustment to Appropriated Value	-----	-0.017	-0.004		Congressional Rescission	-----	-----	-----		Defense Emergency Response Fund (DERF)	-----	-----	-----		Current Budget Submission	1.854	1.967	1.978	
	COST IN MILLIONS																																											
	FY 2001	FY 2002	FY 2003																																									
Previous President's Budget Submission	1.854	1.984	+1.982																																									
Adjustment to Appropriated Value	-----	-0.017	-0.004																																									
Congressional Rescission	-----	-----	-----																																									
Defense Emergency Response Fund (DERF)	-----	-----	-----																																									
Current Budget Submission	1.854	1.967	1.978																																									
Change Summary Explanation: FY 2002 reflects Section 8123, Business Processes Reform (-\$0.013 million), Section 8032 (FFRDC) reductions (-\$0.002 million), and a General Reduction (-\$0.002 million). FY 2003 reflects adjustments (-\$0.004 million).																																												
C. Other Program Funding Summary: No funding dependencies. No projects cost over \$1.0M/year. No test articles. Related Programs: None. DERP - (N/A)																																												
D. Schedule Profile: The Combat Ration Network for Technology Implementation (CORANET) is the ManTech program managed at DLA Headquarters, through contracts from the Defense Supply Center, Philadelphia, to accomplish specific short-term projects (STPs). STPs usually continue < \$0.250 thousand/year, <\$0.500 thousand total.																																												
	FY 2001	FY 2002	FY 2003																																									
Quarters	1234	1234	1234																																									
CORANET Project Areas Identified:																																												
Implement Multiple Unit Leak Detection Equipment	XXXX	XX																																										
Machine Vision Inspection of Poly Trays	XXXX	XX																																										
Polymeric Tray Seal Integrity Testing	XXXX	XXXX	XX																																									
Polymeric Tray Demonstration Production	XXXX	XXXX	XXXX																																									
Retort Rack Material Improvement Study (Pouches)	XXXX	X																																										
Menu Variety vs. Cost Decision Matrix																																												
Modified Atmosphere Packaging Sensitive Items	XX																																											
Ultrasonic Seal/MRE Pouches Study	XX	XXXX	XXXX																																									
Horizontal F/F/Seal Ration Demo Production	XXXX	XXXX	XXXX																																									
Verification of MRE Specification	XXXX	XXXX	XXXX																																									
Retort Rack Material and Design Study (Trays)		XXX																																										

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-3 Exhibit)				DATE: FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7				Program Element: 0708011S Manufacturing Technology				
A. Project Cost Breakdown								
Combat Rations								
Project Cost Categories				FY 2001	FY 2002	FY 2003		
a. Manufacturing Process Support Costs				1.854	1.967	1.978		
b. DERF				N/A	N/A	N/A		
B. Budget Acquisition History and Planning Information								
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program
				1.854	1.967	1.978	Cont	Cont
Ameriquel	Cost, No Fee	11/01/2001	TBD					
Georgia, Univ of	Cost, No Fee	11/01/2001	TBD					
NCFST	Cost, No Fee	11/01/2001	TBD					
Ohio State Univ	Cost, No Fee	11/01/2001	TBD					
R&DA	Cost, No Fee	11/01/2001	TBD					
Rutgers	Cost, No Fee	10/25/2001	TBD					
SAIC	Cost, No Fee	11/01/2001	TBD					
SOPAKCO	Cost, No Fee	11/01/2001	TBD					
Stegner	Cost, No Fee	11/01/2001	TBD					
Sterling	Cost, No Fee	10/25/2001	TBD					
TEES (TAMU)	Cost, No Fee	11/01/2001	TBD					
Tennessee, Univ of	Cost, No Fee	11/01/2001	TBD					
Wornick	Cost, No Fee	11/01/2001	TBD					
Washington State Univ	Cost, No Fee	11/01/2001	TBD					
Demonstration Site	Cost Share	12/01/2001	Demos Plus Projects					
Operator Rutgers Univ								
Government Furnished Property	N/A							

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#2: APPAREL RESEARCH NETWORK	2.274	2.989	3.010	3.007	2.999	3.000	2.993	Cont	Cont
<p>A. Mission Description and Justification:</p> <p>The Department of Defense, through the Defense Logistics Agency, purchases an average of \$1 billion of clothing and textile items per year. The current lead-time is up to 15 months and the current inventory acquisition value is \$1 billion. ARN is a Manufacturing Technology program to improve the responsiveness of the industrial base that supplies the clothing items to the Military Services. It enables the small business oriented apparel producers to access state-of-the-art technologies through its R&D and technology transfer mechanism. The goal of this program is to reduce the average apparel lead-time from 6 months to 6 weeks and to reduce the inventory carrying costs by 50%. A 50% reduction in carrying cost would further reduce the cost to the customer.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: *ARN Supply Chain Systems roll-out to Marine Corps Recruit Depot (MCRD) San Diego was completed and further roll-out to MCRD Parris Island is scheduled to take place at beginning of FY 2002. *With the completion of Army Recruit Training Centers, the R&D focus will be shifted to wholesale inventory and manufacturing area.</p> <p>(U) FY 2002 Plans: *Further roll-out to include all other services Recruit Training Centers and NEXCO stores. *3D Scanning integration to the supply chain system. *Implementation of the ARN Supply-Chain Automated Processing (ASAP) to the defense manufactures industrial base. *Continuation of the wholesale inventory drawdown and balanced inventory flow to all manufacturers.</p> <p>(U) FY 2003 Plans: *Expand the scope from the recruit items (50%) to include all C&T managed items and develop a virtual storeroom vision.</p>									

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)		DATE: FEBRUARY 2002																																																											
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7		Program Element: 0708011S Manufacturing Technology																																																											
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																																																				
#2: APPAREL RESEARCH NETWORK	2.274	2.989	3.010	3.007	2.999	3.000	2.993	Cont	Cont																																																				
<p>B. Program Change Summary:</p> <table align="center"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td align="right">2.274</td> <td align="right">3.015</td> <td align="right">3.015</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="center">-----</td> <td align="right">-0.026</td> <td align="right">-0.005</td> </tr> <tr> <td>Congressional Rescission</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="right">2.274</td> <td align="right">2.989</td> <td align="right">3.010</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2002 reflects adjustments per Section 8123, Business Processes Reform/Management efficiencies (-\$0.020 million), Section 8032 (FFRDCs)(-\$0.003 million), and a General Reduction (-\$0.003 million). FY 2003 reflects adjustments (-\$0.005 million).</p> <p>C. Other Program Funding Summary: DERF - N/A</p> <p>D. Schedule profile:</p> <table align="center"> <thead> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> <tr> <th>Quarters</th> <th>1234</th> <th>1234</th> <th>1234</th> </tr> </thead> <tbody> <tr> <td>Operate Clemson Demo</td> <td align="center">XXXX</td> <td align="center">XXXX</td> <td></td> </tr> <tr> <td>3-D Scan Data Extractions & System Integration</td> <td align="center">XXXX</td> <td align="center">XXXX</td> <td align="center">XXXX</td> </tr> <tr> <td>Balanced Inventory Flow-Supply Chain Integration</td> <td align="center">XXXX</td> <td align="center">XXXX</td> <td align="center">XXXX</td> </tr> <tr> <td>Functional Economic Analysis of Organization Clothing Operation</td> <td></td> <td align="center">XX</td> <td align="center">XXXX</td> </tr> </tbody> </table>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	2.274	3.015	3.015	Adjustment to Appropriated Value	-----	-0.026	-0.005	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	2.274	2.989	3.010		FY 2001	FY 2002	FY 2003	Quarters	1234	1234	1234	Operate Clemson Demo	XXXX	XXXX		3-D Scan Data Extractions & System Integration	XXXX	XXXX	XXXX	Balanced Inventory Flow-Supply Chain Integration	XXXX	XXXX	XXXX	Functional Economic Analysis of Organization Clothing Operation		XX	XXXX
	COST IN MILLIONS																																																												
	FY 2001	FY 2002	FY 2003																																																										
Previous President's Budget Submission	2.274	3.015	3.015																																																										
Adjustment to Appropriated Value	-----	-0.026	-0.005																																																										
Congressional Rescission	-----	-----	-----																																																										
Defense Emergency Response Fund (DERF)	-----	-----	-----																																																										
Current Budget Submission	2.274	2.989	3.010																																																										
	FY 2001	FY 2002	FY 2003																																																										
Quarters	1234	1234	1234																																																										
Operate Clemson Demo	XXXX	XXXX																																																											
3-D Scan Data Extractions & System Integration	XXXX	XXXX	XXXX																																																										
Balanced Inventory Flow-Supply Chain Integration	XXXX	XXXX	XXXX																																																										
Functional Economic Analysis of Organization Clothing Operation		XX	XXXX																																																										

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002		
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology		
A. Project Cost Breakdown Apparel Research Network			
Project Cost Categories	FY 2001	FY 2002	FY 2003
a. Manufacturing Process Support Costs	2.274	2.989	3.010
b. DERF	N/A	N/A	N/A
B. Budget Acquisition History and Planning Information Performing organizations			
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC
_____	_____	_____	_____
Note: All contracts are Fixed Cost or CPFF			
PDIT	CPFF/C	09/22/1997	N/A
Clemson University	CPFF/C	12/09/1994	2.274
Cyberware	CPFF/C	05/10/1995	2.989
EDI Integration	CPFF/C	12/13/1994	3.010
Southern Tech	CPFF/C	12/09/1994	
Government Furnished Property N/A			

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#3: Procurement Readiness Optimization-Advanced Casting Technologies (PRO-ACT)	4.021	2.305	2.319	2.322	2.405	2.499	2.494	-----	18.365
<p>A. Mission Description and Justification:</p> <p>Metal castings are used whenever a complex metal shape is needed at an economical price. Many critical weapon system spares are castings. Castings frequently appear to be the cause of lead-time problems. The program demonstrates how to design, procure and implement castings to save time and money.</p> <p>PRO-ACT objectives include (1) development of teams for long-term solutions, tools and networks to aid the DoD casting supply chain; (2) identify and invest in critical tools to accelerate design and acquisition of weapon system castings; (3) develop and deploy continuously improving industry standards, best practices and guidelines for superior lead-times with short run and traditional production as supply chain tools; (4) deploy tools for sourcing and best value source selection, Tech Data Package modernization and process model capture and re-use; (5) provide a complete industry supply chain for robust sourcing and delivery of DoD metalcasting requirements-particularly in vanishing vendor and vanishing product scenarios; (6)demonstrate the economic superiority of cast components to meet weapons systems requirements.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: *Enhanced the technical knowledge of the DOD workforce via 10 seminars with over 200 persons enrolled. *Reviewed over 200 parts for cost savings. *Benchmarked 8 sites to establish best in class metrics (5 in conjunction with United Defense Limited Partners (UDLP) Crusader and 3 in conjunction with the Navy Sea Systems Command (NAVSEA) MK38 Handgrip Team. *Build and facilitate UDLP Crusader casting design teams to achieve weight and cost savings.</p> <p>(U) FY 2002 Plans: *Continue to convert high cost weldments and machined parts to cost effective castings. *Deploy an electronic casting design learning system, an ISO9000: 2000 Toolkit for metalcasters. *Worcester Polytechnic Institute (WPI)- Demo Prototype of the (Alloy Selection) Electronic Design Toolkit *University of Iowa (Uiowa) - Porosity Prediction Model Software.</p> <p>(U) FY 2003 Plans: *Non-Ferrous Founders Society (NFFS) - Tooling Database will be demonstrated to users, and transitioned to industry *Ohio State University (OSU) - Integrated CASTView system rollout with added features.</p>									

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#3: Procurement Readiness Optimization-Advanced Casting Technologies (PRO-ACT)	4.021	2.305	2.319	2.322	2.405	2.499	2.494	-----	18.365
B. Program Change Summary:									
COST IN MILLIONS									
Previous President's Budget Submission	4.021	2.325	2.323						
Adjustment to Appropriated Value	-----	-0.020	-0.004						
Congressional Rescission	-----	-----	-----						
Defense Emergency Response Fund (DERF)	-----	-----	-----						
Current Budget Submission	4.021	2.305	2.319						
Change Summary Explanation: FY 2001 reflects congressionally added funds for the Metalcasting program (+\$2.0 million) minus (\$0.038 million) to reflect a pro rata share of congressional adjustments. FY 2002 reflects adjustments per Section 8123, Business Processes Reform/Management efficiencies (-\$0.015 million), Section 8032 (FFRDCs) (-\$0.002 million), and a General Reduction (-\$0.003 million). FY 2003 includes adjustments (-\$0.004 million).									
C. Other Program Funding Summary: No funding dependencies. DERP - N/A									
D. Schedule Profile:									
Quarters	FY 2001	FY 2002	FY 2003						
Castings Advanced Technology - Integration Team (CAST-IT)	1234	1234	1234						
Advanced Design & Acquisition	XXXX	XXXX	XXXX						
Foundry Research	XXXX	XXXX	XXXX						

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002																														
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																														
<p>A. Project Cost Breakdown</p> <p>Procurement Readiness Optimization--Advanced Casting Technologies (PRO-ACT)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:45%;"></th> <th style="width:15%;">FY 2001</th> <th style="width:15%;">FY 2002</th> <th style="width:15%;">FY 2003</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">a. Manufacturing Process Support Costs</td> <td align="center">4.021</td> <td align="center">2.305</td> <td align="center">2.319</td> </tr> <tr> <td style="padding-left: 20px;">b. DERP</td> <td align="center">N/A</td> <td align="center">N/A</td> <td align="center">N/A</td> </tr> </tbody> </table> <p>B. Budget Acquisition History and Planning Information</p> <p>Performing organizations</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Contractor or Government Performing Activity_____</th> <th style="width:15%;">Contractor Method/Type Or Funding Vehicle_____</th> <th style="width:15%;">Award or Obligation Date _____</th> <th style="width:15%;">Performing Project Activity BAC_____</th> <th style="width:10%;">FY 2001</th> <th style="width:10%;">FY 2002</th> <th style="width:10%;">FY 2003</th> <th style="width:10%;">Budget to Complete</th> <th style="width:10%;">Total Program</th> </tr> </thead> <tbody> <tr> <td>Advanced Technology Institute (ATI)</td> <td>Cost Share</td> <td>06/23/00</td> <td>N/A</td> <td align="center">4.021</td> <td align="center">2.305</td> <td align="center">2.319</td> <td align="center">Cont</td> <td align="center">Cont</td> </tr> </tbody> </table> <p>Government Furnished Property: None</p>			FY 2001	FY 2002	FY 2003	a. Manufacturing Process Support Costs	4.021	2.305	2.319	b. DERP	N/A	N/A	N/A	Contractor or Government Performing Activity_____	Contractor Method/Type Or Funding Vehicle_____	Award or Obligation Date _____	Performing Project Activity BAC_____	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program	Advanced Technology Institute (ATI)	Cost Share	06/23/00	N/A	4.021	2.305	2.319	Cont	Cont
	FY 2001	FY 2002	FY 2003																												
a. Manufacturing Process Support Costs	4.021	2.305	2.319																												
b. DERP	N/A	N/A	N/A																												
Contractor or Government Performing Activity_____	Contractor Method/Type Or Funding Vehicle_____	Award or Obligation Date _____	Performing Project Activity BAC_____	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																							
Advanced Technology Institute (ATI)	Cost Share	06/23/00	N/A	4.021	2.305	2.319	Cont	Cont																							

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#4: PROCUREMENT READINESS OPTIMIZATION-FORGING ADVANCED SYSTEM TECHNOLOGY (PRO-FAST)	0.857	1.306	1.965	1.990	2.013	2.098	2.093	-----	12.322
<p>A. Mission Description and Justification:</p> <p>Forgings are frequently identified as lead-time drivers. PRO-FAST will demonstrate readiness improvements by developing and applying innovative methods of designing, manufacturing, and buying weapon system spares through advanced forging technologies. Program will be executed through project teams, which include all elements of the forging supply chain. Program will result in the delivery of tools such as industry standards, best practices, guidelines, and productivity enhancements, which have enduring value.</p> <p>Program Accomplishments and Plans:</p> <p>FY 2001 Accomplishments:</p> <ul style="list-style-type: none"> *Extrude Hone Corporation conducted an experiment to forge a small aluminum aerospace component. Tooling was produced quickly and tried on a forging press to yield a rapid short run. *Ohio State University baselined two (2) Department of Defense contractors and identified ample opportunity for the introduction of lean manufacturing concepts on the forge shop floor. *FORGE-IT lead time demonstration process developed and targeted for deployment at Defense Supply Centers Richmond, Philadelphia, and Columbus and Ogden Air Logistics Center. *FORGE-IT Team produced listing of specifications for data search of forgings DLA-wide. *FORGE-IT Team prepared Forging Acquisition Seminar for deployment at supply centers. <p>FY 2002 Plans:</p> <ul style="list-style-type: none"> *The University of Toledo is to investigate and develop a framework for a national tooling database and concepts for dynamic partnering between customers and forges. *The Colorado School of Mines will start developing and deploying forging seminar modules in concert with FORGE-IT Team. *Ohio State University will continue assessing shop floor operations at Department of Defense contract forge shops to identify opportunities to install lean manufacturing processes. *FORGE-IT to potentially implement Technical and Enterprise Solutions at Defense Supply Richmond, Philadelphia, and Columbus, Ogden Air Logistics Center, and Aviation and Missile Command. *Rapid Solidification Processing Tooling is to roll out its first RSP Machine in FY 2002 with a production rate of 1 tool per hour. *Extrude Hone is to continue characterizing the performance of 3D printed materials in a forge. *Scientific Forming to assess and expand the implementation of forging simulation not only with respect to forging material flow but also with respect to tooling material behavior. 									

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																																				
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																																																				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																																												
#4: PROCUREMENT READINESS OPTIMIZATION-FORGING ADVANCED SYSTEM TECHNOLOGY (PRO-FAST)	0.857	1.306	1.965	1.990	2.013	2.098	2.093	-----	12.322																																												
<p>A. Mission Description and Justification: *Ohio State University, teamed with Sikorsky, Weber Metals, and Extrude Hone, will quantify rapid tooling concepts for short run production of H-60 Helicopter components by characterizing rapid tooling design and rapid tooling materials. Demonstrations will occur in 2002.</p> <p>(U) FY 2003 Plans: *Ohio State University will conduct demonstration & validation of forging cells; Colorado School of Mines will begin web assisted forging materials qualification, and University of Toledo will demonstrate dynamic supply chain partnering guidelines.</p> <p>B. Program Change Summary:</p> <table align="center"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td align="center">0.857</td> <td align="center">1.316</td> <td align="center">1.969</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="center">-----</td> <td align="center">-0.010</td> <td align="center">-0.004</td> </tr> <tr> <td>Congressional Rescission</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="center">0.857</td> <td align="center">1.306</td> <td align="center">1.965</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2002 reflects adjustments per Section 8123, Business Processes Reform/Management efficiencies (-\$0.008 million), Section 8032 (FFRDCs)(-\$0.001 million), and a General Reduction (-\$0.001 million). FY 2003 reflects adjustments (-\$0.004 million).</p> <p>C. Other Program Funding Summary: No funding dependencies. DERF - N/A</p> <p>D. Schedule Profile:</p> <table align="center"> <thead> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Quarters</td> <td align="center">1234</td> <td align="center">1234</td> <td align="center">1234</td> </tr> <tr> <td>Technology Developments</td> <td align="center">XXXX</td> <td align="center">XXXX</td> <td align="center">XXXX</td> </tr> <tr> <td>Spare Parts Lead Time Demonstration</td> <td align="center">XXXX</td> <td align="center">XXXX</td> <td align="center">XXXX</td> </tr> </tbody> </table>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	0.857	1.316	1.969	Adjustment to Appropriated Value	-----	-0.010	-0.004	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	0.857	1.306	1.965		FY 2001	FY 2002	FY 2003	Quarters	1234	1234	1234	Technology Developments	XXXX	XXXX	XXXX	Spare Parts Lead Time Demonstration	XXXX	XXXX	XXXX
	COST IN MILLIONS																																																				
	FY 2001	FY 2002	FY 2003																																																		
Previous President's Budget Submission	0.857	1.316	1.969																																																		
Adjustment to Appropriated Value	-----	-0.010	-0.004																																																		
Congressional Rescission	-----	-----	-----																																																		
Defense Emergency Response Fund (DERF)	-----	-----	-----																																																		
Current Budget Submission	0.857	1.306	1.965																																																		
	FY 2001	FY 2002	FY 2003																																																		
Quarters	1234	1234	1234																																																		
Technology Developments	XXXX	XXXX	XXXX																																																		
Spare Parts Lead Time Demonstration	XXXX	XXXX	XXXX																																																		

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002																														
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																														
<p>A. Project cost Breakdown</p> <p>Procurement Readiness Optimization--Forging Advanced System Technology</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:45%;">Project Cost Categories</td> <td style="width:15%;">FY 2001</td> <td style="width:15%;">FY 2002</td> <td style="width:15%;">FY 2003</td> </tr> <tr> <td> a. Manufacturing Technology</td> <td align="right">0.857</td> <td align="right">1.306</td> <td align="right">1.965</td> </tr> <tr> <td> b. DERF</td> <td align="center">N/A</td> <td align="center">N/A</td> <td align="center">N/A</td> </tr> </table> <p>B. Budget Acquisition History and Planning Information</p> <p>Performing organizations</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%; text-align:left;">Contractor or Government Performing Activity</th> <th style="width:15%; text-align:left;">Contractor Method/Type Or Funding Vehicle</th> <th style="width:15%; text-align:left;">Award or Obligation Date</th> <th style="width:15%; text-align:left;">Performing Project Activity BAC</th> <th style="width:10%; text-align:right;">FY 2001</th> <th style="width:10%; text-align:right;">FY 2002</th> <th style="width:10%; text-align:right;">FY 2003</th> <th style="width:10%; text-align:right;">Budget to Complete</th> <th style="width:10%; text-align:right;">Total Program</th> </tr> </thead> <tbody> <tr> <td>Advanced Technology Institute (ATI)</td> <td>Cost Share</td> <td>02/09/2001</td> <td></td> <td align="right">0.857</td> <td align="right">1.306</td> <td align="right">1.965</td> <td align="center">-----</td> <td align="right">12.322</td> </tr> </tbody> </table> <p>Government Furnished Property: None.</p>		Project Cost Categories	FY 2001	FY 2002	FY 2003	a. Manufacturing Technology	0.857	1.306	1.965	b. DERF	N/A	N/A	N/A	Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program	Advanced Technology Institute (ATI)	Cost Share	02/09/2001		0.857	1.306	1.965	-----	12.322
Project Cost Categories	FY 2001	FY 2002	FY 2003																												
a. Manufacturing Technology	0.857	1.306	1.965																												
b. DERF	N/A	N/A	N/A																												
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																							
Advanced Technology Institute (ATI)	Cost Share	02/09/2001		0.857	1.306	1.965	-----	12.322																							

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)				DATE: FEBRUARY 2002																																
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7				Program Element: 0708011S Manufacturing Technology																																
COST (MILLIONS)				FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																								
#5: CUSTOMER VALUE INDUSTRIAL PLANT EQUIPMENT (CV:IPE)				-----	1.393	1.403	1.202	0.799	-----	-----	-----	4.797																								
<p>A. Mission Description and Justification: This program will improve the customer value of DLA's Industrial Plant Equipment (IPE) operations. IPE is the enabler for manufacturing and maintenance activities everywhere, such as Air Logistics Centers, Shipyards, Maintenance Depots and bases. DLA manages IPE, both new and rebuilds. Our customers are demanding shorter rebuild cycles and higher performance machines. We will reduce rebuild times by (1) developing cost estimating and scheduling tools based on mathematical models (neural networks, parametric models and simulation models), and integrating these tools with condition sensors (geometry, vibration, temperature, power, control response, lubricant condition) that gather data on machine parameters, so that fast, accurate cost estimates and schedules can be developed for any condition machine; (2) implementing Lean Manufacturing Principles in a maintenance environment. The goal of lean manufacturing is to eliminate waste in all its forms. Higher performance machines will be developed thru a toolbox to design and install high speed machining modules as a retro-fit on IPE.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 Accomplishments: (U) FY 2002 Plans: Gather data for mathematical cost estimating models. Begin to implement lean principles. Start to design high speed machining modules. (U) FY 2003 Plans: Continue implementing lean principles and designing of high speed machining modules.</p>																																				
<p>B. Program Change Summary:</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td>-----</td> <td>1.404</td> <td>1.404</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td>-----</td> <td>-0.011</td> <td>-0.001</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Current Budget Submission</td> <td>-----</td> <td>1.393</td> <td>1.403</td> </tr> </tbody> </table> <p>Change Summary Explanation: FY 2002 reflects adjustments per Section 8123, Business Processes Reform/Management efficiencies (-\$0.009 million), Section 8032 (FFRDCs) (-\$0.001 million), and a General Reduction (-\$0.001 million). FY 2003 reflects adjustments (-\$0.001 million).</p>														COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	-----	1.404	1.404	Adjustment to Appropriated Value	-----	-0.011	-0.001	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	-----	1.393	1.403
	COST IN MILLIONS																																			
	FY 2001	FY 2002	FY 2003																																	
Previous President's Budget Submission	-----	1.404	1.404																																	
Adjustment to Appropriated Value	-----	-0.011	-0.001																																	
Defense Emergency Response Fund (DERF)	-----	-----	-----																																	
Current Budget Submission	-----	1.393	1.403																																	
<p>C. Other Program Funding Summary: No funding dependencies.</p>																																				
<p>D. Schedule Profile:</p> <table border="0"> <thead> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Quarters</td> <td>1234</td> <td>1234</td> <td>1234</td> </tr> <tr> <td>Flow time reductions</td> <td>N/A</td> <td>XXXX</td> <td>XXXX</td> </tr> <tr> <td>High speed machining</td> <td></td> <td>XXXX</td> <td>XXXX</td> </tr> </tbody> </table>														FY 2001	FY 2002	FY 2003	Quarters	1234	1234	1234	Flow time reductions	N/A	XXXX	XXXX	High speed machining		XXXX	XXXX								
	FY 2001	FY 2002	FY 2003																																	
Quarters	1234	1234	1234																																	
Flow time reductions	N/A	XXXX	XXXX																																	
High speed machining		XXXX	XXXX																																	

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002																																							
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																																							
<p>A. Project cost Breakdown</p> <p>Customer Value Industrial Plant Equipment</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:45%;">Project Cost Categories</td> <td style="width:15%; text-align: center;">FY 2001</td> <td style="width:15%; text-align: center;">FY 2002</td> <td style="width:15%; text-align: center;">FY 2003</td> </tr> <tr> <td style="padding-left: 20px;">a. Manufacturing Technology</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">1.393</td> <td style="text-align: center;">1.403</td> </tr> <tr> <td style="padding-left: 20px;">b. DERF</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </table> <p>B. Budget Acquisition History and Planning Information</p> <p>Performing organizations</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%; text-align: left;">Contractor or Government Performing Activity</th> <th style="width:15%; text-align: left;">Contractor Method/Type Or Funding Vehicle</th> <th style="width:15%; text-align: left;">Award or Obligation Date</th> <th style="width:15%; text-align: left;">Performing Project Activity BAC</th> <th style="width:10%; text-align: center;">FY 2001</th> <th style="width:10%; text-align: center;">FY 2002</th> <th style="width:10%; text-align: center;">FY 2003</th> <th style="width:10%; text-align: center;">Budget to Complete</th> <th style="width:10%; text-align: center;">Total Program</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> </tr> </thead> <tbody> <tr> <td>TBD</td> <td>TBD</td> <td>03/2002</td> <td></td> <td style="text-align: center;">-----</td> <td style="text-align: center;">1.393</td> <td style="text-align: center;">1.403</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">4.797</td> </tr> </tbody> </table> <p>Government Furnished Property: None.</p>		Project Cost Categories	FY 2001	FY 2002	FY 2003	a. Manufacturing Technology	-----	1.393	1.403	b. DERF	N/A	N/A	N/A	Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program					-----	-----	-----	-----	-----	TBD	TBD	03/2002		-----	1.393	1.403	-----	4.797
Project Cost Categories	FY 2001	FY 2002	FY 2003																																					
a. Manufacturing Technology	-----	1.393	1.403																																					
b. DERF	N/A	N/A	N/A																																					
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																																
				-----	-----	-----	-----	-----																																
TBD	TBD	03/2002		-----	1.393	1.403	-----	4.797																																

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)				DATE: FEBRUARY 2002																																												
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7				Program Element: 0708011S Manufacturing Technology																																												
COST (MILLIONS)				FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																																				
#6: Supply Chain Management (SCM)				-----	18.145	-----	-----	-----	-----	-----	-----	18.145																																				
<p>A. Mission Description and Justification:</p> <p>The DLA mission is to get the right item, at the right time, to the right place, at the right price, every time, in support of America's warfighter. To accomplish its mission DLA must use an integrated combat logistics solution that is coordinated among the services and across DoD to meet all combat support requirements in peace and war. There is a need for the Agency to stay abreast of the latest supply chain management principals and techniques that will improve the supply availability of DLA managed items by assembling supply chains to shorten lead times and reduce costs. The Agency must ensure that outsourcing strategies are coordinated; performance measures are in place to measure effectiveness, that the organizational structure promotes successful supply chain management and to incorporate the latest electronic commerce initiatives into its supply chain.</p> <p>B. Program Change Summary: This is a Congressional Add.</p> <table border="0" style="margin-left: 40px;"> <tr> <td></td> <td align="center" colspan="3">COST IN MILLIONS</td> </tr> <tr> <td></td> <td align="center">FY 2001</td> <td align="center">FY 2002</td> <td align="center">FY 2003</td> </tr> <tr> <td>Previous President's Budget Submission</td> <td align="center">-----</td> <td align="center">7.500</td> <td align="center">5.000</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="center">-----</td> <td align="center">+10.645</td> <td align="center">- 5.000</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="center">-----</td> <td align="center">18.145</td> <td align="center">-----</td> </tr> </table> <p>Change Summary Explanation: FY 2002 reflects congressionally added funds for the supply chain management program (+\$12.8 million) subsequent to a B/T internal realignment to the Log R&D PE to support CS (-\$2.0 million). FY 2002 also reflects adjustments for Section 8123, Business Processes Reform/Management efficiencies (-\$0.121 million), Section 8032 (FFRDCs) (-\$0.015 million), and a General Reduction (-\$0.019 million). FY 2003 reflects a realignment to the Log R&D PE to support CS.</p> <p>C. Other Program Funding Summary: No funding dependencies</p> <p>D. Schedule Profile:</p> <table border="0" style="margin-left: 40px;"> <tr> <td></td> <td align="center">FY 2001</td> <td align="center">FY 2002</td> <td align="center">FY 2003</td> </tr> <tr> <td> Quarters</td> <td align="center">1234</td> <td align="center">1234</td> <td align="center">1234</td> </tr> <tr> <td>Issue competitive solicitation</td> <td align="center">XXXX</td> <td align="center">XXXX</td> <td></td> </tr> </table>														COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	-----	7.500	5.000	Adjustment to Appropriated Value	-----	+10.645	- 5.000	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	-----	18.145	-----		FY 2001	FY 2002	FY 2003	Quarters	1234	1234	1234	Issue competitive solicitation	XXXX	XXXX	
	COST IN MILLIONS																																															
	FY 2001	FY 2002	FY 2003																																													
Previous President's Budget Submission	-----	7.500	5.000																																													
Adjustment to Appropriated Value	-----	+10.645	- 5.000																																													
Defense Emergency Response Fund (DERF)	-----	-----	-----																																													
Current Budget Submission	-----	18.145	-----																																													
	FY 2001	FY 2002	FY 2003																																													
Quarters	1234	1234	1234																																													
Issue competitive solicitation	XXXX	XXXX																																														

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002																														
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																														
<p>A. Project cost Breakdown Supply Chain Management (SCM) Project Cost Categories</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:45%;"></td> <td style="width:15%; text-align: center;">FY 2001</td> <td style="width:15%; text-align: center;">FY 2002</td> <td style="width:15%; text-align: center;">FY 2003</td> </tr> <tr> <td style="padding-left: 20px;">a. Development and Demonstration</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">18.145</td> <td style="text-align: center;">-----</td> </tr> <tr> <td style="padding-left: 20px;">b. DERF</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </table> <p>B. Budget Acquisition History and Planning Information Performing organizations</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%; text-align: left;">Contractor or Government Performing Activity</th> <th style="width:15%; text-align: left;">Contractor Method/Type Or Funding Vehicle</th> <th style="width:15%; text-align: left;">Award or Obligation Date</th> <th style="width:15%; text-align: left;">Performing Project Activity BAC</th> <th style="width:10%; text-align: center;">FY 2001</th> <th style="width:10%; text-align: center;">FY 2002</th> <th style="width:10%; text-align: center;">FY 2003</th> <th style="width:10%; text-align: center;">Budget to Complete</th> <th style="width:10%; text-align: center;">Total Program</th> </tr> </thead> <tbody> <tr> <td>Contract Supt</td> <td>Cost</td> <td>TBD</td> <td></td> <td style="text-align: center;">-----</td> <td style="text-align: center;">18.145</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">18.145</td> <td style="text-align: center;">18.145</td> </tr> </tbody> </table> <p>Government Furnished Property: None.</p>			FY 2001	FY 2002	FY 2003	a. Development and Demonstration	-----	18.145	-----	b. DERF	N/A	N/A	N/A	Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program	Contract Supt	Cost	TBD		-----	18.145	-----	18.145	18.145
	FY 2001	FY 2002	FY 2003																												
a. Development and Demonstration	-----	18.145	-----																												
b. DERF	N/A	N/A	N/A																												
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																							
Contract Supt	Cost	TBD		-----	18.145	-----	18.145	18.145																							

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#7: Classified Programs (CP)	-----	-----	2.397	4.792	-----	-----	-----	-----	7.189
<p>A. Mission Description and Justification:</p> <p>N/A</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 N/A (U) FY 2002 Plans: N/A (U) FY 2003 Plans: N/A</p> <p>B. Program Change Summary: N/A</p> <p>President's Budget Submission Adjustment to Appropriated Value Defense Emergency Response Fund (DERF) Current Budget Submission</p> <p>Change Summary Explanation: N/A</p> <p>C. Other Program Funding Summary: No funding dependencies</p> <p>D. Schedule Profile: N/A</p>									

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002																														
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																														
<p>A. Project cost Breakdown</p> <p>Classified Programs</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:45%;">Project Cost Categories</td> <td style="width:10%;">FY 2001</td> <td style="width:10%;">FY 2002</td> <td style="width:10%;">FY 2003</td> </tr> <tr> <td style="padding-left: 20px;">a. Development and Demonstration</td> <td align="center">-----</td> <td align="center">-----</td> <td align="right">2.397</td> </tr> <tr> <td style="padding-left: 20px;">b. DERF</td> <td align="center">N/A</td> <td align="center">N/A</td> <td align="center">N/A</td> </tr> </table> <p>B. Budget Acquisition History and Planning Information</p> <p>Performing organizations</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%; text-align:left;">Contractor or Government Performing Activity</th> <th style="width:15%; text-align:left;">Contractor Method/Type Or Funding Vehicle</th> <th style="width:15%; text-align:left;">Award or Obligation Date</th> <th style="width:15%; text-align:left;">Performing Project Activity BAC</th> <th style="width:10%;">FY 2001</th> <th style="width:10%;">FY 2002</th> <th style="width:10%;">FY 2003</th> <th style="width:10%;">Budget to Complete</th> <th style="width:10%;">Total Program</th> </tr> </thead> <tbody> <tr> <td>Contract Supt</td> <td>Cost</td> <td>TBD</td> <td></td> <td></td> <td></td> <td align="right">2.397</td> <td align="right">4.792</td> <td align="right">7.189</td> </tr> </tbody> </table> <p>Government Furnished Property: None.</p>		Project Cost Categories	FY 2001	FY 2002	FY 2003	a. Development and Demonstration	-----	-----	2.397	b. DERF	N/A	N/A	N/A	Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program	Contract Supt	Cost	TBD				2.397	4.792	7.189
Project Cost Categories	FY 2001	FY 2002	FY 2003																												
a. Development and Demonstration	-----	-----	2.397																												
b. DERF	N/A	N/A	N/A																												
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																							
Contract Supt	Cost	TBD				2.397	4.792	7.189																							

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)				DATE: FEBRUARY 2002																																
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7				Program Element: 0708011S Manufacturing Technology																																
COST (MILLIONS)				FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																								
#8: ERIM Defense/Competitive Sustainment Initiative				-----	7.635	-----	-----	-----	-----	-----	-----	7.635																								
<p>A. Mission Description and Justification: ERIM Competitive Sustainment (CS) was added by Congress in FY 02 in recognition of the need to substantially reduce the cost of support for aging weapon systems by addressing the manufacturing requirements associated with producing parts for aging weapon systems. A competitive source selection process was conducted for a manager of an industry coalition to conduct the work. There is a related project (P.E. 060712S # 10) that conducts industry/Government pilots in the following five areas: 1) effective supply partnerships; 2) significant improvement in quality and access to technical data; 3) a streamlined maintenance process; 4) upgrade strategies for increased reliability and 5) innovative training. The goals are to reduce total costs of spares/replacements, cut the time from requirement to delivery for supplies and cut repair cycle time.</p> <p>The ManTech portion of this program will specifically address the manufacturing problems facilities associated with sustainment, for example, qualifying a new processes when the original process no longer exists.</p> <p>(U) Program Accomplishments and Plans: (U) FY 2001 N/A (U) FY 2002 Plans: Identify manufacturing areas that must be addressed to improve sustainment. Award pilots that address manufacturing areas. (U) FY 2003 Plans: N/A</p> <p>B. Program Change Summary: This is a Congressional add to enhance manufacturing capability for Sustainment in FY 2002 (+\$7.7 million) less congressional adjustments (-\$0.065 million). It complements the broader scope Log R&D program by addressing the manufacturing problems.</p> <table border="0" style="width: 100%;"> <tr> <td></td> <td align="center">FY 2001</td> <td align="center">FY 2002</td> <td align="center">FY 2003</td> </tr> <tr> <td>Previous President's Budget Submission</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td align="center">-----</td> <td align="center">7.635</td> <td align="center">-----</td> </tr> <tr> <td>Congressional Rescission</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td align="center">-----</td> <td align="center">-----</td> <td align="center">-----</td> </tr> <tr> <td>Current Budget Submission</td> <td align="center">-----</td> <td align="center">7.635</td> <td align="center">-----</td> </tr> </table> <p>Change Summary Explanation: Congressional add to the Manufacturing Technology Program to accommodate manufacturing issues associated with sustainment.</p> <p>C. Other Program Funding Summary: Complements Log R&D Competitive Sustainment (P.E. 0603712S).</p>														FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	-----	-----	-----	Adjustment to Appropriated Value	-----	7.635	-----	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	-----	7.635	-----
	FY 2001	FY 2002	FY 2003																																	
Previous President's Budget Submission	-----	-----	-----																																	
Adjustment to Appropriated Value	-----	7.635	-----																																	
Congressional Rescission	-----	-----	-----																																	
Defense Emergency Response Fund (DERF)	-----	-----	-----																																	
Current Budget Submission	-----	7.635	-----																																	

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#8: ERIM Defense/Competitive Sustainment Initiative	-----	7.635	-----	-----	-----	-----	-----	-----	7.635
D. Scheduled Profile: Quarters CBD announcement Award Performance	FY 2001 1234	FY 2002 1234	FY 2003 N/A	FY 2004 N/A	FY 2005 X	FY 2006 XX	FY 2007 XXXX		

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002																																							
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																																							
<p>A. Project cost Breakdown ERIM Defense/Competitive Sustainment Initiative</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:45%;">Project Cost Categories</td> <td style="width:15%; text-align: center;">FY 2001</td> <td style="width:15%; text-align: center;">FY 2002</td> <td style="width:15%; text-align: center;">FY 2003</td> </tr> <tr> <td style="padding-left: 20px;">a. Development and Demonstration</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">7.635</td> <td style="text-align: center;">-----</td> </tr> <tr> <td style="padding-left: 20px;">b. DERF</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </table> <p>B. Budget Acquisition History and Planning Information Performing organizations</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%; text-align: left;">Contractor or Government Performing <u>Activity</u></th> <th style="width:15%; text-align: left;">Contractor Method/Type Or Funding <u>Vehicle</u></th> <th style="width:10%; text-align: left;">Award or Obligation Date</th> <th style="width:10%; text-align: left;">Performing Project Activity <u>BAC</u></th> <th style="width:10%; text-align: center;">FY 2001</th> <th style="width:10%; text-align: center;">FY 2002</th> <th style="width:10%; text-align: center;">FY 2003</th> <th style="width:10%; text-align: center;">Budget to Complete</th> <th style="width:10%; text-align: center;">Total Program</th> </tr> </thead> <tbody> <tr> <td>ERIM/ATI</td> <td>Competitive Contract Awarded</td> <td>2Q02</td> <td></td> <td style="text-align: center;">-----</td> <td style="text-align: center;">7.635</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">7.635</td> </tr> <tr> <td>Contract Supt</td> <td>Cost</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>TBD</td> </tr> </tbody> </table> <p>Government Furnished Property: None.</p>		Project Cost Categories	FY 2001	FY 2002	FY 2003	a. Development and Demonstration	-----	7.635	-----	b. DERF	N/A	N/A	N/A	Contractor or Government Performing <u>Activity</u>	Contractor Method/Type Or Funding <u>Vehicle</u>	Award or Obligation Date	Performing Project Activity <u>BAC</u>	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program	ERIM/ATI	Competitive Contract Awarded	2Q02		-----	7.635	-----	-----	7.635	Contract Supt	Cost							TBD
Project Cost Categories	FY 2001	FY 2002	FY 2003																																					
a. Development and Demonstration	-----	7.635	-----																																					
b. DERF	N/A	N/A	N/A																																					
Contractor or Government Performing <u>Activity</u>	Contractor Method/Type Or Funding <u>Vehicle</u>	Award or Obligation Date	Performing Project Activity <u>BAC</u>	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																																
ERIM/ATI	Competitive Contract Awarded	2Q02		-----	7.635	-----	-----	7.635																																
Contract Supt	Cost							TBD																																

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)		DATE: FEBRUARY 2002							
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7		Program Element: 0708011S Manufacturing Technology							
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#9: Laser Additive Manufacturing (LAM)	-----	5.652	-----	-----	-----	-----	-----	-----	5.652

A. Mission Description and Justification:

This program will develop a rapid manufacturing capability that produces high performance military and commercial components via laser additive manufacturing. It will be executed to realize as many applications as possible across the services and also support the DLA mission. The Laser Additive Manufacturing (LAM) process has the ability to produce components with properties bridging between the high end of castings and the low end of forgings. The major advantages are a reduced cycle time of up to 75%, reduced cost, elimination of forging dies and casting molds, inserts and fixtures, and reduced machining requirements. A joint advisory board will be constituted to provide oversight. Initial applications are planned for components of aerospace systems including fighters, and helicopters, applications for missiles including rhenium motors and thrusters, and other components. A portion of the program will also focus on repairs. Weapon system contractors such as Boeing and Sikorsky will also be participating to assure the smooth transition of the technology.

(U) Program Accomplishments and Plans:

(U) FY 2001 N/A

(U) FY 2002 Plans:

*Establish Tri-service joint advisory board.

*Select target aerospace components for transition

*Develop a qualification matrix for the parts

*Process prototype parts and qualify the process, material, and the part

*Research DOD parts that can be repaired at a reduced cost versus procurement of new parts

*Establish a test matrix for repair parts to qualify the repair

*Produce and qualify prototype parts

*Develop technology for non-aerospace applications.

*Transition the LAM process for as many parts as possible

(U) FY 2003 Plans: N/A

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E BUDGET PROJECT JUSTIFICATION SHEET (R-2a Exhibit)	DATE: FEBRUARY 2002																																																																																								
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																																																																																								
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																																																																																
#9: Laser Additive Manufacturing (LAM)	-----	5.652	-----	-----	-----	-----	-----	-----	5.652																																																																																
<p>B. Program Change Summary:</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">COST IN MILLIONS</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Adjustment to Appropriated Value</td> <td>-----</td> <td>5.652</td> <td>-----</td> </tr> <tr> <td>Congressional Rescission</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Defense Emergency Response Fund (DERF)</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Current Budget Submission</td> <td>-----</td> <td>5.652</td> <td>-----</td> </tr> </tbody> </table> <p>Change Summary Explanation: This is a Congressional add in FY 2002 (+\$5.7 million) less congressional adjustments (-\$0.048 million).</p> <p>C. Other Program Funding Summary: No funding dependencies</p> <p>D. Schedule Profile:</p> <table border="0"> <thead> <tr> <th></th> <th colspan="3">Quarters</th> </tr> <tr> <th></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> </tr> <tr> <th></th> <th>1234</th> <th>1234</th> <th>1234</th> </tr> </thead> <tbody> <tr> <td>LAM Project Areas Identified:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Establish joint advisory board to provide oversight</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Select target components for transition</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Develop a qualification matrix for the parts</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Process prototype parts and qualify the process, material, and the part</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>Research DOD parts that can be repaired at a reduced cost versus procurement of new parts 3qtr</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Establish a test matrix for repair parts to qualify the repair</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Produce and qualify prototype parts</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>Develop technology for non-aerospace applications.</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>Transition the LAM process for as many parts as possible</td> <td></td> <td>X</td> <td>X</td> </tr> </tbody> </table>											COST IN MILLIONS				FY 2001	FY 2002	FY 2003	Previous President's Budget Submission	-----	-----	-----	Adjustment to Appropriated Value	-----	5.652	-----	Congressional Rescission	-----	-----	-----	Defense Emergency Response Fund (DERF)	-----	-----	-----	Current Budget Submission	-----	5.652	-----		Quarters				FY 2001	FY 2002	FY 2003		1234	1234	1234	LAM Project Areas Identified:				Establish joint advisory board to provide oversight		X		Select target components for transition		X		Develop a qualification matrix for the parts		X		Process prototype parts and qualify the process, material, and the part		X	X	Research DOD parts that can be repaired at a reduced cost versus procurement of new parts 3qtr				Establish a test matrix for repair parts to qualify the repair				Produce and qualify prototype parts		X	X	Develop technology for non-aerospace applications.		X	X	Transition the LAM process for as many parts as possible		X	X
	COST IN MILLIONS																																																																																								
	FY 2001	FY 2002	FY 2003																																																																																						
Previous President's Budget Submission	-----	-----	-----																																																																																						
Adjustment to Appropriated Value	-----	5.652	-----																																																																																						
Congressional Rescission	-----	-----	-----																																																																																						
Defense Emergency Response Fund (DERF)	-----	-----	-----																																																																																						
Current Budget Submission	-----	5.652	-----																																																																																						
	Quarters																																																																																								
	FY 2001	FY 2002	FY 2003																																																																																						
	1234	1234	1234																																																																																						
LAM Project Areas Identified:																																																																																									
Establish joint advisory board to provide oversight		X																																																																																							
Select target components for transition		X																																																																																							
Develop a qualification matrix for the parts		X																																																																																							
Process prototype parts and qualify the process, material, and the part		X	X																																																																																						
Research DOD parts that can be repaired at a reduced cost versus procurement of new parts 3qtr																																																																																									
Establish a test matrix for repair parts to qualify the repair																																																																																									
Produce and qualify prototype parts		X	X																																																																																						
Develop technology for non-aerospace applications.		X	X																																																																																						
Transition the LAM process for as many parts as possible		X	X																																																																																						

UNCLASSIFIED

**UNCLASSIFIED
FY 2003 BUDGET REVIEW**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: FEBRUARY 2002																														
APPROPRIATION/BUDGET ACTIVITY: RTD&E, Defense-Wide/Budget Activity 7	Program Element: 0708011S Manufacturing Technology																														
<p>A. Project cost Breakdown Laser Additive Manufacturing (LAM)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align:left;">Project Cost Categories</th> <th style="text-align:center;">FY 2001</th> <th style="text-align:center;">FY 2002</th> <th style="text-align:center;">FY 2003</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">a. Development and Demonstration</td> <td style="text-align:center;">-----</td> <td style="text-align:center;">5.652</td> <td style="text-align:center;">-----</td> </tr> <tr> <td style="padding-left: 20px;">b. DERF</td> <td style="text-align:center;">N/A</td> <td style="text-align:center;">N/A</td> <td style="text-align:center;">N/A</td> </tr> </tbody> </table> <p>B. Budget Acquisition History and Planning Information Performing organizations</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align:left;">Contractor or Government Performing Activity</th> <th style="text-align:left;">Contractor Method/Type Or Funding Vehicle</th> <th style="text-align:left;">Award or Obligation Date</th> <th style="text-align:left;">Performing Project Activity BAC</th> <th style="text-align:center;">FY 2001</th> <th style="text-align:center;">FY 2002</th> <th style="text-align:center;">FY 2003</th> <th style="text-align:center;">Budget to Complete</th> <th style="text-align:center;">Total Program</th> </tr> </thead> <tbody> <tr> <td>Contract Supt</td> <td>Cost</td> <td>TBD</td> <td></td> <td style="text-align:center;">-----</td> <td style="text-align:center;">5.652</td> <td style="text-align:center;">-----</td> <td style="text-align:center;">-----</td> <td style="text-align:center;">5.652</td> </tr> </tbody> </table> <p>Government Furnished Property: None.</p>		Project Cost Categories	FY 2001	FY 2002	FY 2003	a. Development and Demonstration	-----	5.652	-----	b. DERF	N/A	N/A	N/A	Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program	Contract Supt	Cost	TBD		-----	5.652	-----	-----	5.652
Project Cost Categories	FY 2001	FY 2002	FY 2003																												
a. Development and Demonstration	-----	5.652	-----																												
b. DERF	N/A	N/A	N/A																												
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																							
Contract Supt	Cost	TBD		-----	5.652	-----	-----	5.652																							

UNCLASSIFIED

DoD Human Resources Activity
 FY 2003 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 0400D Research, Development, Test & Eval, Defwide

Date: 21 FEB 2002

Line No	Program Element Number	Item	Act	Thousands of Dollars			S E C
				FY 2001	FY 2002	FY 2003	
---	-----	----	---	-----	-----	-----	-
92	0605014SE	Information Technology Development	5	26,550			U
		Engineering and Manufacturing Development		26,550			
119	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	6	8,696	8,720	8,963	U
		RDT&E Management Support		8,696	8,720	8,963	
Total DoD Human Resources Activity				35,246	8,720	8,963	

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5					PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
TOTAL PROGRAM ELEMENT	26.550	-	-	-	-	-	-	26.550	26.550
#4: DoD Integrated Military Human Resources System	19.702	-	-	-	-	-	-	19.702	19.702
#5: Smart (Common Access) Card	6.848	-	-	-	-	-	-	6.848	6.848
<p>A. Mission Description & Budget Item Justification:</p> <p>The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD(P&R)).</p> <p>#4. DoD Integrated Military Human Resources System. The Defense Integrated Military Human Resource System (DIMHRS), located in Budget Activity 5, is a single, fully integrated military personnel and pay management system for all DoD Services and Components. The system will be capable of supporting integrated personnel and pay management on local databases, as well as updating headquarters and corporate level systems. The program supports the functional areas of manpower and training/education. It also significantly improves support to the Joint Staff and Unified Combatant Commanders by providing the capability to track personnel regardless of Service/Component in and around any location or theater of operation.</p> <p>#5. The DoD Smart (Common Access) Card. The DoD Smart (Common Access) Card was directed by the Deputy Secretary of Defense in his memo of 10 November 1999, subject: Smart Card Adoption and Implementation. This card is the Uniformed Services ID Card, the DoD civilian ID card, carry the PKI authentication token, and provides logical and physical access for all DoD active duty, Selected Reserve, National Guard, DoD civilian employees, and DoD contractors inside the firewall. Software must be developed to integrate the Local Registration Authority (LRA) function for PKI with the ID card function of the RAPIDS workstation; print appropriate information on the face of the card; and populate the chip. Although the roll-out</p>									

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE: February 2002																														
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5	PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)																														
<p>of this card began in FY 2001, given the compressed schedule as well as the significant advances in smart card technology each year, this card will continue to go through upgraded capabilities over the next several years.</p> <p>B. Program Change Summary:</p> <table style="margin-left: auto; margin-right: auto; border: none;"> <thead> <tr> <th style="text-align: left;"></th> <th colspan="3" style="text-align: center;">COST IN MILLIONS</th> <th style="text-align: right;"></th> </tr> <tr> <th style="text-align: left;"></th> <th style="text-align: center;">FY 2001</th> <th style="text-align: center;">FY 2002</th> <th style="text-align: center;">FY 2003</th> <th style="text-align: right;">Total Cost</th> </tr> </thead> <tbody> <tr> <td>President's Budget Submission (PPB)</td> <td style="text-align: center;">26.550</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: right;">26.550</td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td style="text-align: center;">-----</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Congressional Rescission:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Current President's Budget Submission</td> <td style="text-align: center;">26.550</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: right;">26.550</td> </tr> </tbody> </table> <p>FY2001 reflects \$19.702 million in congressionally added funds for the DIMHRS program (transferred from the O&M appropriation), and \$6.848 for the Smart (Access) Card program. FY 2001 PPB reflects this PE's fair share of Title IV reductions per Section 8086 of the FY 2001 Appropriations Act (-\$0.188 million); and its fair share of a Government-wide rescission (-\$0.059 million). FYs 2002 and 2003 reflect transfer of the DIMHRS program to the Navy.</p> <p>C. Other Program Funding Summary: DERF - N/A</p>			COST IN MILLIONS					FY 2001	FY 2002	FY 2003	Total Cost	President's Budget Submission (PPB)	26.550	-	-	26.550	Adjustments to Appropriated Value	-----				Congressional Rescission:					Current President's Budget Submission	26.550	-	-	26.550
	COST IN MILLIONS																														
	FY 2001	FY 2002	FY 2003	Total Cost																											
President's Budget Submission (PPB)	26.550	-	-	26.550																											
Adjustments to Appropriated Value	-----																														
Congressional Rescission:																															
Current President's Budget Submission	26.550	-	-	26.550																											

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5					PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#4: DoD Integrated Military Human Resources System	19.702	-	-	-	-	-	-	19.702	19.702
A. Mission Description & Budget Item Justification:									
<p>DIMHRS will be a single, fully integrated military personnel and pay management system for all DoD Services and Components. The system will be capable of supporting integrated personnel and pay management on local databases, as well as updating headquarters and corporate level systems. The program will also support the functional areas of manpower and training/education. It will also significantly improve support to the Joint Staff and Unified Combatant Commanders by providing the capability to track personnel regardless of Service/Component in and around any location or theater of operation.</p>									
B. Program Change Summary:									
	COST IN MILLIONS								
	FY 2001	FY 2002	FY 2003		Total Cost				
President's Budget Submission (PPB)	19.702	-	-		19.702				
Adjustments to Appropriated Value	-----								
Congressional Rescission:									
Current President's Budget Submission	19.702	-	-		19.702				
<p>FY 2001 reflects a transfer of resources from the O&M, D-W appropriation in accordance with Congressional guidance. Congressional action transferred the program to the Navy beginning FY 2002.</p>									
C. Other Program Funding Summary: DERF - N/A									

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5					PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#4: DoD Integrated Military Human Resources System	19.702	-	-	-	-	-	-	19.702	19.702
<p>D. Schedule Profile</p> <p>FY 2001 Accomplishments (19.702)</p> <ul style="list-style-type: none"> • Developed of first/second useful assets (Evolutionary build) • Continued Human Resource Commercial-Off-The-Shelf (COTS) evaluation and make selection • Continued development of migration strategy • Continued pilot demonstrating/testing the systems architecture for performance and scalability • Completed Phase I activities/products for MAIS ACAT 1A Program <p>FY 2002 Plans (-)</p> <p>N/A</p> <p>FY 2003 Plans (-)</p> <p>N/A</p>									

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5					PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#5: Smart (Common Access) Card	6.848	-	-	-	-	-	-	6.848	6.848
A. Mission Description & Budget Item Justification:									
<p>The DoD Smart (Common Access) Card was directed by the Deputy Secretary of Defense in his memo of 10 November 1999, subject: Smart Card Adoption and Implementation. This card is the Uniformed Services ID Card, the DoD civilian ID card, carries the PKI authentication token, and provides logical and physical access for all DoD active duty, Selected Reserve, National Guard, DoD civilian employees, and DoD contractors inside the firewall. Software must be developed to integrate the Local Registration Authority (LRA) function for PKI with the ID card function of the RAPIDS workstation; print appropriate information on the face of the card; and populate the chip. Although the roll-out of this card began in FY 2001, given the compressed schedule as well as the significant advances in smart card technology each year, this card will continue to go through upgraded capabilities over the next several years.</p>									
B. Program Change Summary:									
					COST IN MILLIONS				
					FY 2001	FY 2002	FY 2003	Total Cost	
President's Budget Submission (PPB)					6.848	-	-	6.848	
Adjustments to Appropriated Value					-----				
Congressional Rescission:									
Current President's Budget Submission					6.848	-	-	6.848	
C. Other Program Funding Summary: DERF - N/A									

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5					PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#5: Smart (Common Access) Card	6.848	-	-	-	-	-	-	6.848	6.848
<p>D. Schedule Profile</p> <p>FY 2001 Accomplishments (6.848)</p> <ul style="list-style-type: none"> • The card issued in FY 2001 did not meet the anticipated requirements for FY 2002. However, the rate of technology growth allowed the use of a higher capacity card in FY 2002. Plans for FY 2002 built on the initial capability fielded in FY 2001 to take advantage of technological growth and met some of the lower priority requirements • Supported the fielding of the DoD Common Access Card to RAPIDS sites around the world • Supported the upgrade of both military and civilian ID card functions that could not be supported for the initial fielding • Supported the upgrade of the PKI LRA/RAPIDS integration as PKI continues to define its requirements for Class 4 tokens • Designed and developed the chip back-up feature that will handle connected user application sites and non-connected user application sites • Designed and developed chip restore feature to allow a RAPIDS site to issue a new smart card and restore the data on the chip from the last back-up • Added additional modules for space and application allocation on the chip as approved by the Smart Card Configuration Management Control Board <p>FY 2002 Plans (-) N/A</p> <p>FY 2003 Plans (-) N/A</p>									

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: February 2002																											
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5	PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)																											
A. Project Cost Breakdown																												
Development of the Defense Integrated Military Human Resources System (DIMHRS)																												
Project Cost Categories	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"></td> <td style="width: 10%; text-align: center;">FY 2001</td> <td style="width: 10%; text-align: center;">FY 2002</td> <td style="width: 10%; text-align: center;">FY 2003</td> </tr> <tr> <td style="padding-left: 20px;">a. Systems Design and Development</td> <td style="text-align: center;">19.702</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="padding-left: 20px;">b. DERF - N/A</td> <td></td> <td></td> <td></td> </tr> </table>		FY 2001	FY 2002	FY 2003	a. Systems Design and Development	19.702	-	-	b. DERF - N/A																		
	FY 2001	FY 2002	FY 2003																									
a. Systems Design and Development	19.702	-	-																									
b. DERF - N/A																												
B. Budget Acquisition History and Planning Information																												
Performing Organizations																												
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Contractor or Government Performing Activity</th> <th style="width: 15%;">Contractor Method/Type Or Funding Vehicle</th> <th style="width: 15%;">Award or Obligation Date</th> <th style="width: 10%;">Performing Project Activity</th> <th style="width: 10%;">FY 2001</th> <th style="width: 10%;">FY 2002</th> <th style="width: 10%;">FY 2003</th> <th style="width: 10%;">Budget to Complete</th> <th style="width: 10%;">Total Program</th> </tr> </thead> <tbody> <tr> <td>Information Tech SEA</td> <td>Center New Orleans, LA</td> <td>Jan 00</td> <td>N/A</td> <td style="text-align: right;">13.702</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: right;">13.702</td> <td style="text-align: right;">13.702</td> </tr> <tr> <td>Various</td> <td>Time & Mat</td> <td></td> <td></td> <td style="text-align: right;">6.000</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: right;">6.000</td> <td style="text-align: right;">6.000</td> </tr> </tbody> </table>	Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program	Information Tech SEA	Center New Orleans, LA	Jan 00	N/A	13.702	-	-	13.702	13.702	Various	Time & Mat			6.000	-	-	6.000	6.000	
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program																				
Information Tech SEA	Center New Orleans, LA	Jan 00	N/A	13.702	-	-	13.702	13.702																				
Various	Time & Mat			6.000	-	-	6.000	6.000																				

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: February 2002							
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 5	PROGRAM ELEMENT: 0605014S, Information Technology Development (DHRA)							
A. Project Cost Breakdown								
Smart (Common Access) Card								
Project Cost Categories	FY 2001 FY 2002 FY 2003							
a. Support Costs	6.848 - -							
b. DERF N/A								
B. Budget Acquisition History and Planning Information								
Performing Organizations								
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2001	FY 2002	FY 2003	Budget to Complete	Total Program
Sun Systems	FP/MIPR	12/00	GSA	6.848	-	-	6.848	6.848
EDS	CPFF/FF/MIPR	03/99-02/00	GSA					
SRA	FFP/MIPR	01/00	DSSW					
TRW	FFP/MIPR	02/00	GSA					
Driefus Assoc.	FFP/MIPR	01/99	Navy					
Entrust	FP/MIPR	09/00	GSA					
CSC	FP/MIPR	02/00	CECOM					
Novell	FFP/MIPR	02/00	GSA					

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6					PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
TOTAL PROGRAM ELEMENT	8.696	8.720	8.963	9.015	8.941	9.141	9.347	Cont	Cont
#1: Joint Service Training & Readiness System Development	3.862	3.875	3.945	3.968	3.935	4.023	4.113	Cont	Cont
#2: Defense Training Resource Analysis	3.032	3.043	3.102	3.121	3.094	3.199	3.271	Cont	Cont
#3: DoD Enlistment Processing and Testing	1.802	1.802	1.916	1.926	1.912	1.919	1.963	Cont	Cont
A. Mission Description and Budget Item Justification:									
<p>The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD(P&R)).</p> <p>#1. Joint Service Training & Readiness System Development. The Joint Service programs were established by the Secretary of Defense to improve the training and readiness of the Active and Reserve Components. The project is a Budget Activity 6, RDT&E Management Support project to expedite the prototype development of new training and readiness technologies and Joint Service Training and readiness systems that improve the training and readiness effectiveness and enhance the performance of the military forces. It also facilitates the sharing of training and readiness information, while allowing for the transfer of emerging and innovative technologies among the Services and private sector.</p> <p>#2. Defense Training Resources Analysis. The project is a Budget Activity 6, RDT&E Management Support project to support the DHRA and DoD training managers (OSD, Joint Staff, Unified Commands, and the Services) in promoting more efficient and effective use of training resources, increasing the effectiveness of military training, and enhancing the readiness and performance of the military forces. Projects analyze the contributions to readiness of various training techniques and programs and use the results to expedite new training concepts and procedures that increase unit effectiveness or decrease costs. Emphasis is placed on developing analytical tools and systematic methodologies to improve training resource allocations.</p>									

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE: February 2002																														
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6	PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY																														
<p>#3. DoD Enlistment Processing and Testing. The project is located in Budget Activity 6, RDT&E Management Support, to administer testing programs which enable the Armed Services to select highly qualified military recruits. The DoD uses a single test, the Armed Services Vocational Aptitude Battery (ASVAB) to determine eligibility of military applicants and to report recruit quality data to Congress. High quality recruits are obtained from administering the ASVAB annually to approximately 600,000 applicants for Military Service as part of the DoD Enlistment Testing program, and to 1 million students in the DoD Student Testing program. Each Service also uses ASVAB test forms developed in this program as part of their in-service testing programs. New ASVAB test forms and related support materials are implemented approximately every four years. This allows DoD to make measurable improvements as well as decrease the likelihood of test compromise. Ongoing RDT&E efforts include development and evaluation of procedures which (1) reduce or eliminate threats to the validity of the ASVAB test scores generated; (2) improve the efficiency of the test development, calibration, and validation process; and (3) improve selection and classification decisions made by each Service through more effective use of test score information. In addition, periodic assessments are required to provide DoD manpower planners and Congress with information on aptitude trends in the population from which recruits are drawn.</p> <p>B. Program Change Summary:</p> <table style="margin-left: auto; margin-right: auto; border: none;"> <thead> <tr> <th style="text-align: left;"></th> <th colspan="4" style="text-align: center;">COST IN MILLIONS</th> </tr> <tr> <th style="text-align: left;"></th> <th style="text-align: center;">FY 2001</th> <th style="text-align: center;">FY 2002</th> <th style="text-align: center;">FY 2003</th> <th style="text-align: center;">Total Cost</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Previous President's Budget Submission (PPB)</td> <td style="text-align: center;">8.696</td> <td style="text-align: center;">8.834</td> <td style="text-align: center;">8.979</td> <td style="text-align: center;">Continuing</td> </tr> <tr> <td style="text-align: left;">Adjustments to Appropriated Value</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-.114</td> <td style="text-align: center;">-0.016</td> <td></td> </tr> <tr> <td style="text-align: left;">Congressional Rescission:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">Current President's Budget Submission</td> <td style="text-align: center;">8.696</td> <td style="text-align: center;">8.720</td> <td style="text-align: center;">8.963</td> <td style="text-align: center;">Continuing</td> </tr> </tbody> </table> <p>FY 2002 funding reflects (-\$0.114 million) pursuant to Section 8123: Business Processes Reform (-\$0.061 million); Section 8032 (Federally Funded Research and Development Centers (FFRDCs))(-\$0.050 million); and a General Reduction,(-\$0.003 million) congressional adjustments. FY 2003 funding reflects adjustments (-\$0.016 million).</p> <p>C. Other Program Funding Summary: DERF - N/A</p>			COST IN MILLIONS					FY 2001	FY 2002	FY 2003	Total Cost	Previous President's Budget Submission (PPB)	8.696	8.834	8.979	Continuing	Adjustments to Appropriated Value	-----	-.114	-0.016		Congressional Rescission:					Current President's Budget Submission	8.696	8.720	8.963	Continuing
	COST IN MILLIONS																														
	FY 2001	FY 2002	FY 2003	Total Cost																											
Previous President's Budget Submission (PPB)	8.696	8.834	8.979	Continuing																											
Adjustments to Appropriated Value	-----	-.114	-0.016																												
Congressional Rescission:																															
Current President's Budget Submission	8.696	8.720	8.963	Continuing																											

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6					PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#1: Joint Service Training & Readiness System Development	3.862	3.875	3.945	3.968	3.935	4.023	4.113	Cont	Cont
A. Mission Description & Budget Item Justification:									
<p>#1. The Joint Service programs were established by the Secretary of Defense to improve the training and readiness of the Active and Reserve Components. The PE is located in Budget Activity 6, RDT&E Management Support, to expedite the prototype development of new training and readiness technologies and Joint Service training and readiness systems which improve the training and readiness effectiveness and enhance the performance of the military forces. It also facilitates the sharing of training and readiness information, while allowing for the transfer of emerging and innovative technologies among the Services and private sector.</p>									
B. Program Change Summary:									
					COST IN MILLIONS				
					FY 2001	FY 2002	FY 2003	Total Cost	
Previous President's Budget Submission (PPB)					3.862	3.925	3.952	Continuing	
Adjustments to Appropriated Value					-----	-.050	-0.007		
Congressional Rescission:									
Current President's Budget Submission					3.862	3.875	3.945	Continuing	
C. Other Program Funding Summary: DERF - N/A									

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6					PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#1: Joint Service Training & Readiness System Development	3.862	3.875	3.945	3.968	3.935	4.023	4.113	Cont	Cont
D. Schedule Profile									
FY 2001 Accomplishments (3.862)									
<ul style="list-style-type: none"> • Coordinated ADL architecture, standards, and guidelines across DoD, federal agencies, and NATO allies • Refined the ADL Master Plan by focusing on opportunities for collaboration and reuse • Sponsored prototype training technology development and applications that support joint warfighting • Supported the evolution and realization of joint training in the context of Joint Vision (JV) 2010 • Assessed the cost-benefit of distributed learning technologies • Supported prototype development and assessment of DoD Knowledge Management Systems and Portals 									
FY 2002 Plans (3.875)									
<ul style="list-style-type: none"> • Continue to coordinate the evolution of ADL architecture, standards, and guidelines across DoD, Federal Agencies, and NATO allies • Update and expand the ADL Master Plan by focusing on inter-agency, combined, and coalition training with NATO allies and Partnership For Peace (PFP) countries • Sponsor prototype training technology development and applications that support joint, interagency, and coalition training communities • Assess the cost-benefit of new learning technologies especially intelligent tutors and intelligent systems • Support prototype development, assessment, and application of DoD's Knowledge Management Systems and Portals 									

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6					PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#1: Joint Service Training & Readiness System Development	3.862	3.875	3.945	3.968	3.935	4.023	4.113	Cont	Cont
FY 2003 Plans (3.945) <ul style="list-style-type: none"> • Continue to coordinate the evolution of ADL architecture, standards, and guidelines across DoD, federal agencies, and NATO allies • Update and expand the ADL Master Plan by focusing on inter-agency, combined, and coalition training with NATO allies and PFP countries • Sponsor prototype training technology development and applications that support joint, interagency, and coalition training communities • Assess the cost-benefit of new learning technologies especially intelligent tutors and intelligent systems • Support prototype development, assessment, and application of DoD's Knowledge Management Systems and Portals • Advance the live, virtual, and constructive simulation training baseline to include developmental systems and visionary views to compose trends and assess macro-functionality in the context of JV2020. 									

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6					PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#2: Defense Training Resource Analysis	3.032	3.043	3.102	3.121	3.094	3.199	3.271	Cont	Cont
A. Mission Description & Budget Item Justification:									
<p>#2. This project supports the DHRA and DoD training managers (OSD, Joint Staff, Unified Commands, and the Services) in promoting more efficient and effective use of training resources, increasing the effectiveness of military training, and enhancing the readiness and performance of the military forces. Projects analyze the contributions to readiness of various training techniques and programs and use the results to expedite new training concepts and procedures that increase unit effectiveness or decrease costs. Emphasis is placed on developing analytical tools and systematic methodologies to improve training resource allocations.</p>									
B. Program Change Summary:									
					COST IN MILLIONS				
					FY 2001	FY 2002	FY 2003	Total Cost	
Previous President's Budget Submission (PPB)					3.032	3.083	3.108	Continuing	
Adjustments to Appropriated Value					-----	-.040	-0.006		
Congressional Rescission:									
Current President's Budget Submission					3.032	3.043	3.102	Continuing	
C. Other Program Funding Summary: DERF - N/A									

UNCLASSIFIED

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6					PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY				
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#2: Defense Training Resource Analysis	3.032	3.043	3.102	3.121	3.094	3.199	3.271	Cont	Cont
D. Schedule Profile									
FY 2001 Accomplishments (3.032)									
<ul style="list-style-type: none"> • Tested system development to provide resources, facilities, and simulations for effective Service level and joint training • "Normalized" Status of Readiness and Training System (SORTS) to address changes in training policy and force structure • Analyzed test results of program to increase use of private sector entities in performing training functions • Continued development and implementation of policy for conducting cost-effective Joint, Service, and Agency training 									
FY 2002 Plans (3.043)									
<ul style="list-style-type: none"> • Assess project efforts accomplished under policy, guidelines, and directives after they mature • Analytical support to address sustainability of training ranges strategy to protect the capability of our ranges to support needed testing and training requirements • Clarify the existing planning and requirements system for each service; and suggest a more comprehensive optimization-based planning process for aviation training • Document and explain DoD's spare parts funding history, current budget and program plans, and any outstanding unfunded requirements • Improving Current CINC Assessment and Joint Processes 									
FY 2003 Plans (3.102)									
<ul style="list-style-type: none"> • Inventory the encroachment problems facing training ranges across the Department; assess the contribution of the Service efforts and existing Department efforts to deal with encroachment; and assist in developing an OSD agenda to deal with the problems across the Military Departments • Assess readiness implications of the spare parts funding and future programs for resolving spare parts shortfalls 									

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE: February 2002																																		
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6					PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY																																		
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL																														
#3: DoD Enlistment Processing and Testing	1.802	1.802	1.916	1.926	1.912	1.919	1.963	Cont	Cont																														
<p>A. Mission Description & Budget Item Justification: #3. The primary mission is to test and implement more accurate methods of assessing aptitudes required for military enlistment, success in training, and performance on the job. The program also supports implementing methods that are useful in the identification of persons with the high aptitudes required by today's smaller and technically more demanding military.</p> <p>B. Program Change Summary:</p> <table style="margin-left: auto; margin-right: auto; border: none;"> <thead> <tr> <th></th> <th colspan="4" style="text-align: center;">COST IN MILLIONS</th> </tr> <tr> <th></th> <th style="text-align: center;">FY 2001</th> <th style="text-align: center;">FY 2002</th> <th style="text-align: center;">FY 2003</th> <th style="text-align: center;">Total Cost</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget Submission (PPB)</td> <td style="text-align: center;">1.802</td> <td style="text-align: center;">1.826</td> <td style="text-align: center;">1.919</td> <td style="text-align: center;">Continuing</td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">-.024</td> <td style="text-align: center;">-0.003</td> <td></td> </tr> <tr> <td>Congressional Rescission:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Current President's Budget Submission</td> <td style="text-align: center;">1.802</td> <td style="text-align: center;">1.802</td> <td style="text-align: center;">1.916</td> <td style="text-align: center;">Continuing</td> </tr> </tbody> </table> <p>C. Other Program Funding Summary: DERF - N/A</p> <p>D. Schedule Profile</p> <p>FY 2001 Accomplishments (1.802) <u>DoD Enlistment Testing Program (ETP) (1.083)</u></p> <ul style="list-style-type: none"> • Completed Military Entrance Testing (MET) site feasibility study • Conducted validity studies of Assembling Objects • Completed Interest Finder response bias evaluation • Continued exploration of new procedures for detection of item/test compromise and item parameter drift; Developed procedures for multidimensional adaptive testing <u>DoD Student Testing Program (STP) (.719)</u> • Examined ways to increase high school usage of the Career Exploration Program • Completed work on STP high school participation rate and prediction of civilian job success 											COST IN MILLIONS					FY 2001	FY 2002	FY 2003	Total Cost	Previous President's Budget Submission (PPB)	1.802	1.826	1.919	Continuing	Adjustments to Appropriated Value	-----	-.024	-0.003		Congressional Rescission:					Current President's Budget Submission	1.802	1.802	1.916	Continuing
	COST IN MILLIONS																																						
	FY 2001	FY 2002	FY 2003	Total Cost																																			
Previous President's Budget Submission (PPB)	1.802	1.826	1.919	Continuing																																			
Adjustments to Appropriated Value	-----	-.024	-0.003																																				
Congressional Rescission:																																							
Current President's Budget Submission	1.802	1.802	1.916	Continuing																																			

UNCLASSIFIED
DEFENSE HUMAN RESOURCES ACTIVITY
Research, Development, Test and Evaluation
Fiscal Year (FY) 2003 Budget Estimates

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)						DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY: RDT&E, Defense-Wide/Budget Activity 6						PROGRAM ELEMENT: 0605803S, DEFENSE HUMAN RESOURCES ACTIVITY			
COST (MILLIONS)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMP	TOTAL
#3: DoD Enlistment Processing and Testing	1.802	1.802	1.916	1.926	1.912	1.919	1.963	Cont	Cont
FY 2002 Plans (1.802) <u>DoD Enlistment Testing Program (ETP) (1.081)</u> <ul style="list-style-type: none"> • Implement new forms of the ASVAB • Continue exploration of procedures for trying out new test items "on-line" • Explore possibilities for equating new forms of the ASVAB "on-line" • Explore uses of multidimensional adaptive tests • Start trial implementation of new methods for detection of test item compromise • Begin implementation of CAT-ASVAB in the MET sites <u>DoD Student Testing Program (STP) (.721)</u> <ul style="list-style-type: none"> • Introduce new forms of the ASVAB for the STP • Revise the STP materials to accommodate the newly restructured ASVAB • Implement new career exploration program with new materials • Implement new normative information and score scale for the interest-finder and aptitude norms for the ASVAB • Revise <i>Military Careers</i> to be compatible with the O*NET FY 2003 Plans (1.916) <u>DoD Enlistment Testing Program (ETP) (1.150)</u> <ul style="list-style-type: none"> • Implement new score scale (Norms) for the STP • Implement procedures for the detection of test compromise • Publish new test manual • Begin full-scale implementation of new tests developed from on-line item calibration procedures • Begin implementation of new tests of spatial reasoning given Service approval and completion of validity work • Initiate investigation of new tests for use in the ASVAB • Continue research line into use of multidimensional CAT scoring procedures <u>DoD Student Testing Program (STP) (.766)</u> <ul style="list-style-type: none"> • Implement new materials and publish new technical Manual • Begin trials of on-line internet testing in the nation's high schools • Implement new evaluation of the STP • Implement occupational linkages to O*NET 									

UNCLASSIFIED

Defense Security Cooperation Agency
 FY 2003 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 0400D Research, Development, Test & Eval, Defwide

Date: 21 FEB 2002

Line No	Program Element Number	Item	Act	Thousands of Dollars			S E C -
				FY 2001	FY 2002	FY 2003	
---	-----	----	---	-----	-----	-----	-
126	0605127T	Partnership for Peace (PfP) Information Management System	7	1,914	1,908	1,920	U
		Operational Systems Development		----- 1,914	----- 1,908	----- 1,920	
		Total Defense Security Cooperation Agency		----- 1,914	----- 1,908	----- 1,920	

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification								Date: February 2002	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE				
RDT&E, Defense Wide, Budget Activity 7					PE 0605127T "PIMS"				
COST (\$ in Millions)	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	Cost to Complete	Total Cost
Partnership for Peace Information Management System (PIMS)									
Total PE Cost	1.914	1.908	1.920	1.962	2.005	2.055	1.842	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Partnership for Peace Information Management System (PIMS) is an OSD/C3I managed DOD leadership project supporting enhanced cooperation, bilaterally and multilaterally, in accordance with US policy and to US benefit. Firmly based on priority requirements, the Program has established a common, real-time information infrastructure that has given allies and Partner countries the ability to access and exchange information critical to the cooperative growth activities underpinning the spirit of PfP. PIMS is part of the NATO Enlargement Facilitation Act of 1996 and implements the Congressional endorsement for the modernization of Defense capabilities in eligible PfP countries relative to their telecommunications infrastructures. R&D funding is essential to ensuring PIMS can support this mandate.

PIMS supports PfP preparation for future coalition initiatives by development and integration of a full range of databases and advanced IT applications to support the practical aspects of US and NATO-approved PfP cooperative activities. In addition, special capabilities such as mapping and geodesy, multinational digitized imagery, and data derived from remote sensing technologies must also be integrated into PIMS if it is to provide the requisite mission support services necessary to achieve the interoperability/integration goals outlined in Joint Vision 2020 for working in concert with allied and coalition forces, especially in order to effectively coordinate counter-terrorism education and training efforts within this strategic region. This is particularly important in areas where the infrastructure is developing and areas where environmental and geopolitical conditions are unsettled. Many countries are subject to both refugee crisis and terrorist retribution. PIMS R&D funding will also be critical to the development of system enhancements necessary to support the SecDef's proposal for building an improved PfP education and training framework. The plan envisions a lead role for PIMS to provide research, development, and specialized engineering services in support of a distributed education environment via a Consortium of Defense Academies and Security Institutes; an exercise simulation network; and a cooperative network of nationally sponsored PfP training centers. Other senior DOD directed PIMS initiatives include an electronic crisis information exchange capability among the countries of Southeastern Europe. Finally, R&D dollars must be made available for PIMS technical developmental efforts associated with the Defense Information Infrastructure (DII), Global Information Grid (GIG) interoperability initiatives, and conformance with the Clinger-Cohen Act.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification

Date: February 2002

Program Plans

- Development of databases to support OSD and Joint Staff policy objectives designed to enhance the PfP mission outlined in the Partnership Work Programme (PWP) that assist in the development of elements essential to national security. Near term goals include the expansion of information and research within the areas of Military Support to Law Enforcement (MSLE), Installation & Environment (IE), and Civil Emergency Planning (CEP); there is a critical need for effective IT capabilities that assist the PfP Nations on national and regional levels in the development of infrastructure requirements such as border control, emergency response and other capacity building capabilities (\$0.6 Million)
- Research, testing, evaluation, and integration of a new set of collaborative tools (hardware, software, and wireless applications) to be housed within a regional portal to assist in real-time exchange among users, to provide a repository for user generated and traditionally vetted information pertaining to activities within the PfP region, to coordinate planning requirements between US and national organizations and agencies working common goals and initiatives, and to develop a platform for the delivery of programs (nursing, distance learning, emergency medical training, etc.) related to Military Medicine. (\$0.8 Million)
- System enhancements in support of Military Support to Law Enforcement and DUSA-IA's Civil Military Emergency Planning (CMEP), which leverage new communications technologies, wireless applications, hand-held electronic devices (cameras, electronic mail, electronic notebook), and software to maximize PIMS accessibility, flexibility, and utility in support of increased US DOD processing requirements for preparedness in coalition operations (simulation, tools, exercise support, and interactive training), Storage Area Network (SAN) for the PfP hub to accommodate the expanding PIMS capabilities, provide the PIMS infrastructure with greater efficiency, manageability, scalability, and to link network hosts to multiple storage devices for data sharing among PIMS users. (\$0.5 million)

Specific Application and Process Improvements represent specific types of program and system improvements that will directly support development of OSD databases, interoperability initiatives, and communications enhancements. In addition, funds will provide directly support to the PIMS Program Office in implementing the multiple facets of the PIMS program for both US and Partners.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification

Date: February 2002

B. Program Change Summary:

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
FY 2002 Previous President's Budget	1.914	1.922	1.920	
FY 2002 Amended President's Budget				
Adjustment to Appropriated Value				
Congressional reduction		(.014)		
Inflation Adjustment				
FY 2003 Budget Estimate Submission	1.914	1.908	1.920	

Change Summary Explanation

US Policy has put increased emphasis on DOD development of information capabilities that will serve not only coalition efforts in military operations but that will support non-traditional arenas such as Civil Emergency Planning and Military Support to Law Enforcement. Additionally, enhanced technical and procedural interoperability among US organizations, PfP nations, and allies remains a high priority.

C. Other Program Funding Summary

	<u>FY 00</u>	<u>FY 01</u>	<u>FY 02</u>	<u>FY 03</u>	<u>FY 04</u>	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>	<u>To Complete</u>	<u>Total Cost</u>
O&M (PfP)									TBD	TBD
O&M (PfP - PIMS)	5.443	5.0	6.0	6.0	6.0	6.0	6.0	6.0	Continuing	
Total PfP									TBD	TBD

D. Acquisition Strategy:

PIMS employs an evolutionary acquisition strategy by establishing a well-defined core capability while planning for incremental upgrades and enhancements to the overall system capabilities. Each enhancement is treated as an individual acquisition; its scope and content the result of continuous feedback from PIMS users, supporting organizations, and the desired application of new technology balanced against the constraints of time and cost. Whenever possible, existing assets are leveraged to preserve US IT infrastructure investments and offer an economically prudent solution to increase mission effectiveness across the spectrum of PIMS participants.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification

Date: February 2002

E. Schedule Profile

Per developmental milestones listed below.

Quarter	<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>				<u>FY 2005</u>			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone I	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
II		x	x		x	x														
III		x	x		x	x														
IV		x	x		x	x	x	x	x	x										
V			x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
VI					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
VII						x	x		x	x	x	x	x	x	x	x	x	x	x	x
VIII							x		x	x	x	x	x	x	x	x	x	x	x	x

I Database Development – R&D support to multiple DOD international outreach initiatives, i.e. OSD/SOLIC (Peacekeeping), OSD/Policy (Environmental Security), Joint Staff (Exercise Planning and Professional Military Education (NDU)), OSD/Health Affairs (Medical Education), OSD/ISA (Distance Learning Initiatives), DUSA-IA (Civil-Military Emergency Planning), ASD/FM&P (Military Support to Law Enforcement)

- Identify information requirements, common formats and exchange mechanisms between, PfP, NATO, and US
- Develop databases and support mechanisms to allow collaborative data warehousing and sharing by relevant participants
- Test and execute solutions in exercise environment
- Upgrade/modify warehousing and data mining techniques
- Continued development of databases supporting US requirements
- Development of transitional approaches to other CINCS

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification

Date: February 2002

II Enhanced Network and System Management

Evaluate network management tools

Test in operational configuration and evaluate results

Implement Solution

Develop diagnostic tools for IT and systemic measurement

Enhance Security Accreditation

Technology enhancements: wireless applications, hand-held electronic devices (cameras, electronic mail, electronic notebooks)

Provide authentication access to the PIMS architecture with PKI

Implement the Storage area Network for data sharing among PIMS users and storage consolidation

III Mandated System Migration

Identify appropriate segments

Continued migration of PIMS servers to DII-compliant Architecture

Develop and tailor GCCS releasable applications to PfP mission requirements

Compliance with the DII/Common Operating Environment (COE)

Compliance with the Global Information Grid (GIG) and other DoD mandated networks and architectures

IV Alternative Commercial Satellite Solutions

Research video compression techniques and other state of the art IT communication enhancements

Test in operational environment

Implement initial solution

Enhance video capability

V Defense Messaging System (DMS) Integration

Evaluate requirement for implementation across constrained bandwidth architecture

Initiate for test and evaluation

PIMS modification/enhancement

Full implementation of DMS

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification

Date: February 2002

VI Expansion of Long Haul/Wide Area Communications Infrastructure

Assess current network capacity and new requirements

Design, engineer, and test necessary upgrades

Implement expanded, improved architecture

Continued evaluation of new technologies to enhance cost avoidance

VII Theater Interoperability

Evaluate interface requirements with existing target Theater and NATO systems

Develop required interface

Evaluate and test security guards, filters, and firewalls

Implement Virtual Private Network (VPN) to secure links to public networks

VIII Voice Systems

Identify voice over TCP/IP network solutions

Test and select most efficient process

Implement enhanced connectivity.

Research customer and mission driven security options.

UNCLASSIFIED

DEFENSE SECURITY SERVICE
 Fiscal Year (FY) 2003 Budget Estimates
 Exhibit R-1, RDT&E Programs

Appropriation: 0400D Research, Development, Test & Eval, Defwide

Date: February 2002

<u>R-1 Line</u> <u>Item No</u>	<u>Program</u> <u>Element</u> <u>Number</u>	<u>Item</u>	<u>Budget</u> <u>Activity</u>	<u>TOA, \$ in Millions</u>		
				<u>FY2001</u> <u>Cost</u>	<u>FY2002</u> <u>Cost</u>	<u>FY2003</u> <u>Cost</u>
145	0305127V	Foreign Counterintelligence Activities	07	0.439	0.659	0.474

Exhibit R-2, RDT&E Budget Item Justification

Date: February 2002

APPROPRIATION/BUDGET ACTIVITY 97 0400 4900/07				R-1 ITEM NOMENCLATURE Foreign Counterintelligence Activities 0305127V				
COST (in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	Total Cost
Small and Miscellaneous Grant	0.439	0.659	0.474	0.483	0.494	0.504	0.514	3.567

A. Mission Description and Budget Item Justification

The DoD Polygraph Institute administers the RDT&E funds contained in the DSS budget. The mission to complete congressionally mandated research and development functions at the government's central facility for deception research is accomplished via the following strategic objectives: (a) evaluate the validity of psychophysiological detection of deception (PDD) techniques used by the Department of Defense (DoD); (b) investigate countermeasures and anticountermeasures; and (c) conduct developmental research on PDD techniques, instruments, and analytic methods. In addition to these congressional mandated missions, the DoDPI Research program is investigating alternative measures, technology, and analysis techniques such as voice analysis, thermal imaging, impedance cardiography, visual activity, electroencephalography, electromyography, vagal tone, electrocardiology, high definition-ERP, fMRI, and Laser Doppler technologies. Proposals in this area clearly identify and support a nexus between the proposed work and the detection of deception.

In January 1999, DoDPI began an effort to enhance its presence in the scientific, academic, and technological communities. This is in response to the need for more advanced technical expertise. This initiative seeks to give the DoDPI a research workforce that is competitive with the best minds from the complex cerebral worlds of academia, and the emerging technologies. Moreover, these partnerships seek to take advantage of the highest quality University labs and industrial technology that may have solutions to our subjects of interest. While the Institute is interested in, and will support basic research, the majority of our funding will be awarded to proposals describing applied research that is of immediate use to the PDD community. The research topics of interest have been divided into the categories of Special Projects, Emerging Alternative Technology, Applied Topics, PDD Data Analyses, and Deterrence.

B. Program Change Summary

	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	<u>Total Cost</u>
FY2002 President's Budget	0.439	0.664	0.474	0.483	0.494	0.504	0.514	3.572
Mgmt Efficiencies Reduction		(0.005)						(0.005)
FY2003 President's Budget	0.439	0.659	0.474	0.483	0.494	0.504	0.514	3.567

C. Other Program Funding Summary

D. Acquisition Strategy: N/A

E. Schedule Profile: There are no scheduled acquisition, program, T&E, or contract milestones.

UNCLASSIFIED

**FISCAL YEAR (FY) 2003 PRESIDENT'S BUDGET SUBMISSION
FOR THE
OPERATIONAL TEST AND EVALUATION, DEFENSE (OT&E,D) APPROPRIATION (0460)**

February, 2002

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-1, RDT&E Programs

Department of Defense

OPERATIONAL TEST AND EVALUATION, DEFENSE APPROPRIATION (0460)

Date:
February 2002

<u>R-1 Line</u> <u>Item No</u>	<u>Program</u> <u>Element</u> <u>Number</u>	<u>Item</u>	<u>Budget</u> <u>Activity</u>	<u>FY 2001</u> <u>Cost</u>	<u>FY 2002</u> <u>Cost</u>	<u>FY 2003</u> <u>Cost</u>
1	0603941D8Z [U]	Test & Evaluation Science & Technology	3	0	7,944 ¹	6,010
2	0604940D8Z [U]	Central Test and Evaluation Investment	6	134,157	131,720	123,276
3	0605118D8Z [U]	Operational Test and Evaluation	6	20,978	17,258	19,725
4	0605131D8Z [U]	Live Fire Testing	6	17,054	12,797	10,102
5	0605804D8Z [U]	Development Test and Evaluation	6	52,786	60,525	62,941
Total	Operational Test & Evaluation, Defense			224,975	230,244	222,054

¹ – Test & Evaluation Science & Technology PE 0603941D8Z is a new program element starting in FY 2002

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2)					February 2002				
OPERATIONAL TEST AND EVALUATION, DEFENSE (0460) BUDGET ACTIVITY THREE				TEST AND EVALUATION SCIENCE AND TECHNOLOGY (T&E/S&T) PROGRAM ELEMENT (PE) 0603941D8Z					
\$'s in Millions	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMPLETE	TOTAL COST
PE 0603941D		7.944	6.010	5.974	5.912	5.900	5.842	Continuing	Continuing

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

This is a new start program in FY 2002. For the first time, there is a structured program that fosters a robust Test and Evaluation and Science and Technology (T&E/S&T) planning process. This program will allow test technologies to pace evolving weapons technology, and is absolutely critical to ensuring that we have the capability to fully and completely test the advanced systems that will be fielded in the future. The operational demands under which the DoD conducts Test and Evaluation (T&E) of increasingly sophisticated weapon systems have grown exponentially. Weapon technology is quickly outdistancing our ability to adequately test systems as they develop. The T&E/S&T program:

- exploits new technologies and processes to meet important T&E requirements,
- expedites the transition of new technologies from the laboratory environment to the T&E community,
- leverages/exploits commercial equipment and networking innovations to support the T&E community.

Additionally, the program will examine emerging test requirements derived from transformation initiatives to identify needed technology areas and develop a long-range roadmap for technology insertion. This program will leverage and employ applicable 6.2 applied research from the highly developed technology base in the DoD Service Laboratories and Test Centers, industry, and academia to accelerate the development of new test capabilities.

This Research Category 6.3 PE, Advanced Technology Development, develops and demonstrates high payoff technologies for current and future DoD test capabilities.

UNCLASSIFIED

(U) PROGRAM PLANS:

FY 2002 Plans:

Spectrum Efficient Technology: Specific goals in the spectrum area include increasing bandwidth efficiency by a factor of three over the next five years, increase use of available frequencies by 100% over the next ten years, and increase information capacity of range telemetry data systems by a factor of seven over the next 15 years. T&E/S&T program will initiate projects that develop advanced technologies that address these goals. Specifically, in FY 2002 projects will be initiated that increase spectral efficiencies by orders of magnitude and investigate alternative frequencies and the technical obstacles that must be overcome, including transmitter power, antennas, Doppler effects, channel characteristics, and atmospheric attenuation. Technology investigations in this area directly supports the increasing data rates that advanced weapon systems require.

Multi-Spectral Sensors Test and Evaluation: Investigate and evaluate test technologies required to test complex multi-spectral sensor arrays and to provide multi-spectral test environments (that simulate battlefield environments) that stimulate the advanced weapon systems currently under development. Specific challenges to the test community are data fusion requirements, visualization techniques, and information assurance. Advances are sought in remote sensing systems; detector algorithms; human-machine interface development (e.g. heads-up displays); computational tools (e.g. signature models); sensor system target detection, acquisition, and identification and targeting assessments; countermeasure survivability and countermeasure enhancements; multi-spectral sensor fusion, networking, and sensor integration component testing; innovative approaches to test facilities and test instrumentation platforms (all weather sensor suites); land combat sensor analysis; target-background/foreground interactions; both human and materiel performance metrics development and testing; integrated multi-spectral sensor information development; fire-and-forget, and hit-to-kill sensor T&E concepts.

Hypersonic Testing Technologies: Investigate technologies needed for test and evaluation of hypersonic (MACH 10+) ground test capabilities. Areas of research that require advances in test and evaluation technologies are those associated with: ramjets, scramjets, hypersonic combustors, hypersonic weapon lethality and survivability assessment, high temperature engine components, infrared and radio-frequency materials for hypersonic weapons systems, stability and control, guidance and control, innovative flight test technologies for hypersonic vehicles, integrated propulsion and airframe testing, computational T&E tools, hypersonic flow diagnostics, plasma dynamics and electromagnetic-flow field interactions or other drag reduction technologies, and hypersonics aerothermodynamics.

Embedded Instrumentation: Investigate and develop requirements for, and benefits of, embedded, non-intrusive test instrumentation employing microelectronic, microelectromechanical (MEMS), and nano-size technologies. Initial investigations will focus on micro-miniaturization of instrumentation components such as inertial measurement units, multi axis stress/strain gauges, field-programmable gate

UNCLASSIFIED

arrays with embedded analog/digital converters, wireless sensors, and power supplies. Embedded test instrumentation will be crucial to testing systems such as low observable, multi spectral stealth, and hypersonic weapons.

T&E/S&T Master Plan: This plan will document the near and long term test capability shortfalls in a test technology roadmap. This plan will be consistent with the Department's other planning documents such as Joint Vision 2020, the Defense Science and Technology plans, and the Defense Planning Guidance to insure that the projects funded by this office meet future needs.

Official Travel : Perform official travel to carry out oversight of T&E/S&T program.

FY 2003 Plans:

Funding levels preclude new starts in FY 2003, however a limited subset of the most critical and promising technology developments for FY 2002 will be continued to complete their transition to the T&E community.

B. (U) PROGRAM CHANGE SUMMARY

(\$ in Millions)	<u>FY 2001</u> <u>Appropriation</u>	<u>FY 2002</u> <u>Amended President's</u> <u>Budget Request</u>	<u>FY 2003</u> <u>Clinton Budget</u>
FY 2002 President's Budget		16.000	6.000
Congressional Reduction		(8.000)	
Appropriated Value		8.000	
Adjustments to Program Value			
Congressional Reduction (Sec 8123, PL 107-117)		(0.056)	
Inflation Adjustment			(0.080)
Program Adjustment			0.090
Current Budget Submit		7.944	6.010

C. (U) OTHER PROGRAM FUNDING NA

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2)						February 2002			
OPERATIONAL TEST AND EVALUATION, DEFENSE (0460) BUDGET ACTIVITY SIX				CENTRAL TEST AND EVALUATION INVESTMENT PROGRAM (CTEIP) PROGRAM ELEMENT (PE) 0604940D8Z					
\$'s in Millions	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMPLETE	TOTAL COST
PE 0604940D	134.157	131.720	123.276	125.286	126.923	129.453	131.355	Continuing	Continuing

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

Since its inception in FY 1990, this program element has been, and continues to be, used to fund the development of critically needed, high priority Test and Evaluation (T&E) capabilities for joint/multi-Service requirements. The Central Test and Evaluation Investment Program (CTEIP) uses a corporate investment approach to combine Service and Defense Agency T&E needs, maximize opportunities for joint efforts, and eliminate unwarranted duplication of test capabilities. CTEIP focuses investments on projects that will have high productivity returns on investment. Projects under the CTEIP Program Element (PE) support two basic tasks: investments to improve the test capabilities base (Joint Improvement and Modernization (JIM) projects), and development of near-term solutions to test capability shortfalls in support of an ongoing operational test program (Resource Enhancement Project (REP)).

The JIM funds critically needed T&E investments in the major functional areas of test mission command, control, communications and instrumentation; electronic warfare systems; threat and computational simulation test and evaluation; space systems T&E; weapons effects test capabilities; targets; and physical and environmental test capabilities. The investments include both the demonstrations of advanced technologies needed to test increasingly complex and sophisticated weapon systems and the transition of these technologies into test capabilities. Examples of project subject matter include: automated data collection, processing, display and archiving; smart munitions testing; modeling and simulation; advanced electronic combat systems; low-observable technologies and signature measurements; targets and target control; time-space-position-information; end-game measurement; testing of advanced materials application; test design; and advanced sensors and space systems. CTEIP continues as the focal point for fostering common architectures throughout the test and training communities to enhance the sharing of resources and links between test and training ranges. CTEIP has provided special focus to institutionalize the use of modeling and simulation as a practical test method; to link ranges through internetting to enhance inter-range and inter-Service cooperation and resource sharing; and, to ensure development and acquisition of common instrumentation necessary for a more efficient test infrastructure. These efforts directly support the Department's initiative to improve the effectiveness of the Simulation, Test and Evaluation Process (STEP). Analyses of alternative solutions are

UNCLASSIFIED

conducted for each investment project to validate T&E requirements, to define integrated support systems, and to determine overall cost effectiveness of the proposed test investments. The use of DoD-wide criteria for requirement validation, prioritization, and risk assessment ensures an effective test resource investment program.

The REP funds development of near-term solutions for critical ongoing operational tests supporting decisions on major, high priority defense acquisition programs. The requirements for these solutions and test assets are generally not known more than two years in advance of a critical test event, and as such, are not programmable within the normal planning and budgeting process. These unanticipated operational test (OT) capability requirements arise from several sources such as a new threat system identified during OT planning, acquisition of foreign military assets that are critical in determining weapon system operational effectiveness, short timelines between system design maturity and scheduled OT, and emerging test requirements resulting from operational concept changes or system of systems testing. Funding these activities under the CTEIP provides the opportunity to coordinate and integrate these near-term test requirements with the total DoD test and evaluation investment planning, and ensures their availability and legacy for other programs that may have similar testing requirements.

This Research Category 6.4 PE supports the development and application of proven technologies to provide major test and evaluation capabilities required to meet DoD component weapon system test requirements.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

FY 2001 Accomplishments:

JIM Projects:

- Completed development of the High Speed Massive Memory capability, an ultra high speed and high capacity electronic media storage device that will capture data from high resolution digital imaging devices and transfer it to a data reduction workstation for post-event analysis.
- Completed the Acoustic Signature Measurement and Unaugmented Tracking System (ASMUTS) and continued the Air-to-Ground and Ground Signature Measurement Systems (AGSMS and GSMS) developments within the Tri-Service Signature Measurement and Database System project.
- Completed the concept development phase and initiated the system development phase of the Electromagnetic Transient Test and Evaluation Facility project to provide a capability to assess aircraft hardness to electro-magnetic transient environments to meet MILSTD 464 requirements.
- Completed the concept development phase and initiated the system development phase for the DECADE Radiation Test Facility-- Enhanced project to develop and field an upgraded, above ground ionizing radiation test capability to meet existing and emerging nuclear weapons effects test requirements.
- Completed the concept development phase and initiated the system development phase of the Global Positioning System (GPS) Signal Validation project to develop a Joint GPS inverted range as a realistic field testing environment for testing new GPS modernization signals.
- Completed the concept development phase of the Advanced Instrumentation Data & Control System project to develop state-of-the-art

UNCLASSIFIED

- instrumentation and control systems to meet DoD T&E requirements for propulsion systems, aerodynamic systems and space systems.
- Continued development of Programmable Resource Control for the Multi-object Tracking Radar and deferred the system development phase of the Advanced Mobile Object Acquisition System (AMOAS) project.
- Continued development of the Advanced Range Telemetry project to improve the efficiency, reliability, utility, and availability of aeronautical telemetry spectrum by adapting advances in commercial communications technology.
- Continued development of the Joint Modeling and Simulation System project to provide interoperability among the Services' models and simulations.
- Continued development of the Long-Term Test Capability (LTTC) camera and the Multi-System Controller (MSC), and initiated the integration of an infrared sensor with the Super High-Speed Visible camera under the Airborne Separation Video project.
- Continued requirements development and program planning of the Magdalena Ridge Observatory capability to provide a dual-use, state-of-the-art optical tracking system. Transferred project to Naval Research Laboratory for execution.
- Continued system development of the Roadway Simulator capability for light truck testing and initiated development of a capability for heavy truck testing.
- Continued the Holloman High Speed Sled Track (HHSST) conventional upgrade to develop techniques and capabilities necessary for improved reliability and also to provide increased payload/velocity and instrumentation capabilities.
- Continued the system development phase of the Airborne Icing Tanker project to develop an airborne icing capability for testing various DoD aircraft systems at both high and low altitude, suitably presenting natural rain and icing conditions.
- Continued the system development phase of the Electromagnetic Environmental Effects Generating System project to provide a multi-service test facility capable of assessing actual performance of a full-scale, fixed, or rotary-winged aircraft completely immersed in a user-specified radio frequency environment.
- Continued the system development phase of the Hardened Sub-Miniature Telemetry and Sensor System project to develop and demonstrate a new generation of rugged, miniaturized, on-board instrumentation applicable to weapon system flight tests.
- Continued the system development phase of the Multi-Service Target Control System project to provide upgraded, interoperable tri-Service target control systems.
- Continued the systems development phase of the Communication, Navigation, Identification Simulator and the Generic Radar Target Generator instrumentation projects within the Joint Installed System Test Facility project.
- Continued the Test Technology Development and Demonstration project.
- Continued the Transportable Range Augmentation Control System project to develop a suite of transportable equipment and instrumentation for common range control functions.
- Continued the Tri-Service and CTEIP support projects.
- Initiated development of the Infrared Sensor Stimulator product improvement under the Joint Installed Systems Test Facility Product Improvements project to provide improved installed systems capabilities needed to support Joint Strike Fighter testing.
- Initiated development of the Training Enabling Architecture (TENA) object model definition and tools for resource management and test/exercise management within the Foundation Initiatives 2010 project.

UNCLASSIFIED

UNCLASSIFIED

- Initiated the concept development phase of the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and modeling/simulation tools required to test and evaluate current and developmental chemical/biological (CB) detector systems over the entire range of expected use conditions.
- Initiated the concept development phase of the Enhanced Range Application project to provide a state-of-the-art Airborne Range Data System that supports next generation data collections requirements.
- Initiated the concept development phase of the Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) project to develop a capability to test increasingly complex multi-discipline fusion concepts.
- Initiated the concept development phase of the Joint Data Acquisition Network Standards project to provide a suite of standards to establish component interoperability within a vehicular data acquisition network.
- Initiated the Digital Video Laboratory project to provide digital video data analysis and reporting capability for aircraft stores separation.
- Initiated the system development phase of the Land and Sea Vulnerability Test Capability project to provide an instrumented land-sea interface test capability at the Aberdeen Test Center.
- Initiated, within the Joint Advanced Missile Instrumentation project, integration of time-space-position information (TSPI), flight termination / safe arm (FTSA), and end game scoring (EGS) functions into Tomahawk and Advanced Medium Range Air-to-Air Missile (AMRAAM) systems development. Conducted qualification testing of the TSPI, FTSA, and EGS functions.

Resource Enhancement Project:

- Completed Real Time Surface-to-Air Mission (SAM) Models for OT&E subproject to develop real-time surface-to-air (RTSAM) models to be used in virtual simulations being developed for the F-22 and Joint Strike Fighter (JSF) test and evaluation programs.
- Completed the Electronic Order of Battle – Environment Generator System subproject to develop computer-driven simulations replicating selectable threat and friendly electronic environments for operational testing of the Team Portable Collection System (TPCS), the Mobile Electronic Warfare Support System (MEWSS), and the Technical Control and Analysis Center (TCAC).
- Completed the Instrumentation of the IBIS Hammer System subproject for use in IDECM radio frequency countermeasures (RFCM) and IDECM Integration testing.
- Completed the Joint OT&E Simulation Environment Facility subproject which provides a representative warfare / contingency operations environment for OT&E of network centric C4I systems such as the Defense Message System and Global Command and Control System.
- Completed the Threat Area Missile Defense (TAMD) Interoperability Assessment Capability subproject to support PAC 3 and TAMD Family of Systems operational testing.
- Completed the Weapons Analysis Facility Enhancement subproject to develop threat submarine, surface combatant and surface launched torpedo models, complete model interfaces with new high speed computing hardware and verify and validate upgraded environmental, countermeasure and threat target models.
- Continued the Geometric Automated Video Enhanced Location System subproject to locate events / detonations needed to answer accuracy critical operational issues (COIs) for field artillery systems, airborne systems, and non-lethal weapon systems.
- Continued the Geometric Pairing subproject to design and develop a geometric pairing (pointing) device to be used with Air Defense weapons against aircraft during Comanche operational test.

UNCLASSIFIED

- Continued the Radio Frequency Phase Distribution Upgrade subproject which procures Advanced Tactical Electronic Warfare Simulator (ATEWES) Microwave Phase Distribution (MDS) hardware and develops software subsystems to meet EA-6B Improved Capability (ICAP) III LR-700 receiver upgrade and planned follow-on interferometer receiver systems test.
- Continued the Shallow Water ASW Target subproject to modify an existing, manned diesel-electric research submarine for use as an Anti-Submarine Warfare (ASW) target to support Mk54 and Mk 48 Advanced Capability (ADCAP) torpedo testing.
- Continued to identify candidate subprojects based on critical OT&E test capability shortfalls.
- Initiated and completed the Deliberate and Crisis Action Planning and Execution Segments (DCAPES) and Theater Battle Management Core System (TBMCS) Command and Control Test Capability subproject to provide specialized computer hardware and data collection instrumentation needed to provide and command and control test capability.
- Initiated and completed the F-22 Operational Test Mission Planning Resource Augmentation subproject to provide a realistic operational effectiveness and suitability test capability for the F-22 Mission Support System combined developmental test/operational test (DT/OT) and initial operation test and evaluation (IOT&E).
- Initiated and completed the Portable Joint Link-16 Monitoring Capability subproject to provide an integrated real-time Joint Data Network analysis capability.
- Initiated the Countermeasure Threat Emulator subproject to fabricate programmable countermeasure devices to emulate foreign countermeasures that can be deployed from submarines or surface ships.
- Initiated the development of the SA-XX Modifications subproject to provide a critical modern missile seeker test capability and to provide a key threat simulator for the radio frequency (RF) countermeasures portion of the Integrated Defensive Electronic Countermeasures (IDECM) suite.
- Initiated the Information Assurance Suite subproject to select commercial off-the-shelf (COTS) hardware, instrumentation, and systems that can be utilized to test vulnerability to information warfare techniques.
- Initiated the Intelligence Modeling and Simulation for Evaluation subproject to develop a computer based high-fidelity simulation to accurately represent the disposition of enemy forces, the tasking and collection of intelligence sensors, generation of intelligence messages, and delivery of intelligence products to appropriate users.
- Initiated the National Air Intelligence Center (NAIC) Aircraft Threat Models development for F-22 Air Combat Simulation subproject to provide air combat threat models required for virtual simulations being developed for F-22 test and evaluation.
- Initiated the XM-11S subproject to correct fidelity deficiencies of the XM11S Simulator antenna, transmitter, and receiver subsystems.

Official Travel

Performed official travel to carry out oversight of the CTEIP program.

FY 2002 Plans :

JIM Projects:

- Complete concept development phase and initiate systems development phase of the Enhanced Range Applications Project to provide a state-of-the-art Airborne Range Data System that supports next generation data collection requirements.

UNCLASSIFIED

- Complete concept development phase and initiate systems development phase of the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and modeling/simulation tools required to test and evaluate current and developmental CB detector systems over the entire range of expected use conditions.
- Complete concept development phase and initiate systems development phase of the Joint Data Acquisition Network Standards project to provide a suite of standards to establish component interoperability within a vehicular data acquisition network.
- Complete concept development phase and initiate systems development phase of the Joint Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) project to develop a capability to test increasingly complex multi-discipline fusion concepts.
- Complete development of Programmable Resource Control for the Multi-Object Tracking Radar under the Advanced Mobile Object Acquisition System (AMOAS) project.
- Complete development of the Roadway Simulator capability for light truck testing, continue development of a capability for heavy truck testing, and initiate development of a capability for tractor-trailer combination testing.
- Complete integration of Joint Advanced Missile Instrumentation project capability into Tomahawk and AMRAAM. Complete development and testing of time-space-position information (TSPI), flight termination / safe arm (FTSA), and end game scoring (EGS) functions.
- Complete the Airborne Icing Tanker project to develop an airborne icing capability for testing various DoD aircraft systems at both high and low altitude, suitably presenting natural rain and icing conditions.
- Complete the Communication, Navigation, Identification Simulator and the Generic Radar Target generator instrumentation projects within the Joint Installed System Test Facility project.
- Complete the development of the Long-Term Test Capability (LTTC), the Super High-Speed Visible (SHV) camera, and the integration of an infrared sensor with the SHV, under the Airborne Separation Video project.
- Complete the Hardened Sub-Miniature Telemetry and Sensor System project to develop and demonstrate a new generation of rugged, miniaturized, on-board instrumentation applicable to weapon system flight tests.
- Complete the Holloman High Speed Sled Track conventional upgrade to develop techniques and capabilities necessary for improved reliability and also to provide increased payload/velocity and instrumentation capabilities.
- Complete the Transportable Range Augmentation Control System project to develop a suite of transportable equipment and instrumentation for common range control functions.
- Continue development of software tools for test/exercise planning and analysis and range integration products within the Foundation Initiatives 2010 project.
- Continue development of the Infrared Sensor Stimulator product improvement under the Joint Installed Systems Test Facility Product Improvements project to provide improved installed systems capabilities needed to support Joint Strike Fighter testing.
- Continue development of the Joint Modeling and Simulation System project to provide interoperability among the Services' models and simulations.
- Continue system development phase for the DECADE Radiation Test Facility--Enhanced project to develop and field an upgraded, above ground ionizing radiation test capability to meet existing and emerging nuclear weapons effects test requirements.

UNCLASSIFIED

UNCLASSIFIED

- Continue the Air-to-Ground and Ground Signature Measurement Systems (AGSMS and GSMS) developments within the Tri-Service Signature Measurement and Database System project.
- Continue the Digital Video Laboratory project to provide digital video data analysis and reporting capability for aircraft stores separation, as part of the Digital Video Systems Development project development.
- Continue the system development phase of the Advanced Range Telemetry project to improve the efficiency, reliability, utility, and availability of aeronautical telemetry spectrum by adapting advances in commercial communications technology.
- Continue the system development phase of the Electromagnetic Environment Effects Generating System project to provide a multi-service test facility capable of assessing actual performance of a full-scale, fixed, or rotary-winged aircraft completely immersed in a user-specified radio frequency environment.
- Continue the system development phase of the Electromagnetic Transient Test and Evaluation Facility project to provide a capability to assess aircraft hardness to electromagnetic transient environments to meet MILSTD 464 requirements.
- Continue the system development phase of the GPS Signal Validation project to develop a Joint GPS inverted range as a realistic field test environment for testing new GPS modernization signals.
- Continue the system development phase of the Land and Sea Vulnerability Test Capability project to provide an instrumented land-sea interface test capability at the Aberdeen Test Center.
- Continue the system development phase of the Multi-Service Target Control System project to provide upgraded, interoperable tri-Service target control systems.
- Continue the Test Technology Development and Demonstration project.
- Continue the Tri-Service and CTEIP support projects.
- Continue threat system simulator development efforts under the Threat System Simulator Development project to improve integration, reduce potential duplication in threat and target development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Initiate and complete support for the Big Crow program for test and evaluation activities relating to DoD weapon systems.
- Initiate concept development of the Soft Impact Location Capability project to provide the necessary instrumentation, signal processing, communication, and data processing capabilities to detect and locate the point and angle of impact of projectile and missile weapons within an 800m by 800m impact area.
- Initiate development of the Hardened Sub-Miniature Telemetry and Sensor System Product Improvement project to develop and demonstrate a new generation of rugged, miniaturized, on-board instrumentation applicable to smart munitions flight tests.
- Initiate the concept development phase of the Digital Video Systems Development project, to provide DoD test and evaluation facilities and ranges the necessary instrumentation to enable collection, processing, storage, and distribution of data from high-performance digital imagery systems.
- Initiate the system development phase of the Advanced Instrumentation Data & Control System project to develop state-of-the-art instrumentation and control systems to meet DoD T&E requirements for propulsion systems, aerodynamic systems and space systems.

Resource Enhancement Project:

UNCLASSIFIED

- Complete the Countermeasure Threat Emulator subproject to fabricate programmable countermeasure devices to emulate foreign countermeasures that can be deployed from submarines or surface ships.
- Complete the Geometric Automated Video Enhanced Location System subproject to locate events / detonations needed to answer accuracy critical operational issues (COIs) for Army field artillery systems, Army airborne systems, and Marine non-lethal weapon systems.
- Complete the Geometric Pairing subproject to design and develop a geometric pairing (pointing) device to be used with Air Defense weapons against aircraft during Comanche operational test.
- Complete the Information Assurance Suite subproject to select commercial off-the-shelf (COTS) hardware, instrumentation, and systems that can be utilized to test vulnerability to information warfare techniques.
- Complete the Intelligence Modeling and Simulation for Evaluation subproject to develop a computer based high-fidelity simulation to accurately represent the disposition of enemy forces, the tasking and collection of intelligence sensors, generation of intelligence messages, and delivery of intelligence products to appropriate users.
- Complete the NAIC Aircraft Threat Models development for F-22 Air Combat Simulation subproject to provide air combat threat models required for virtual simulations being developed for F-22 test and evaluation.
- Complete the Radio Frequency Phase Distribution Upgrade subproject which procures Advanced Tactical Electronic Warfare Simulator (ATEWES) Microwave Phase Distribution (MDS) hardware and develops software subsystems to meet EA-6B Improved Capability (ICAP) III LR-700 receiver upgrade and planned follow-on interferometer receiver systems test.
- Complete the SA-XX Modifications subproject to provide a critical modern missile seeker test capability and to provide a key threat simulator for the RF countermeasures portion of the IDECM suite.
- Complete the Shallow Water ASW Target subproject to modify an existing, manned diesel-electric research submarine for use as an Anti Submarine Warfare (ASW) target to support Mk54 and Mk 48 ADCAP torpedo testing.
- Complete the XM-11S subproject to correct fidelity deficiencies of the XM11S Simulator antenna, transmitter, and receiver subsystems.
- Continue to identify candidate subprojects based on critical OT&E test capability shortfalls.
- Initiate and complete Project Memorex to digitally record threat modes and translate into simulator data files for the Combat Electromagnetic Environment Simulator.
- Initiate and complete the Nellis Combined Air Operations Center (CAOC) Joint Tactical Information Distribution System (JTIDS) Test equipment subproject to provide JTIDS recording, playback, monitoring and simulation.
- Initiate and complete the Standoff Cloud Referee System subproject to provide real time information on simulant aerosol cloud location, movement and concentration.
- Initiate the Advanced Electronically Steerable Array (AESA) Jammer subproject to develop a simulator that can replicate three threat ground-to-air jammers.
- Initiate the Commander Air Defense Environment Test Tool subproject to develop a test tool to emulate, stimulate and evaluate the Single Integrated Air Picture C4I system of systems in support of the Area Air Defense Commander.
- Initiate the Common Vehicular Instrumentation Initiative subproject to develop a new generation of modular instrumentation to support

UNCLASSIFIED

vehicle and platform testing.

- Initiate the Flexible Interoperable Transceiver Execution subproject to support the engineering effort required to incorporate the FIT protocols and spectrum efficient technologies in the design of the new Mobile Automated Instrumentation Suite transceivers.
- Initiate the Joint Information Assurance Laboratory subproject to develop a T&E capability based on a notional Global Information Grid configured to replicate the war fighter's operational environment.
- Initiate the Susceptibility Testing for Global Air Traffic Management Avionics subproject to define at the message level a signal set of harmful transmissions and develop an analysis capability to support evaluation of aircraft susceptibility.
- Initiate the Weapon Set-to-Hit Threat Target subproject to provide an unmanned, cost effective target for conducting set-to-hit testing of existing and future torpedoes.

Official Travel

Perform official travel to carry out oversight of the CTEIP program.

FY 2003 Plans :

JIM Projects:

- Continue the systems development phase of the Joint Data Acquisition Network Standards project to provide a suite of standards to establish component interoperability within a vehicular data acquisition network.
- Complete development of the Roadway Simulator capability for heavy truck testing and continue development of capability for tractor-trailer combination testing.
- Complete the Advanced Range Telemetry project to improve the efficiency, reliability, utility, and availability of aeronautical telemetry spectrum by adapting advances in commercial communications technology.
- Complete the concept development phase and initiate the systems development phase of the Soft Impact Location Capability project to provide the necessary instrumentation, signal processing, communication, and data processing capabilities to detect and locate the point and angle of impact of projectile and missile weapons within an 800m by 800m impact area.
- Complete the concept development phase and initiate the systems development phase of the Digital Video Systems Development project, to provide DoD test and evaluation facilities and ranges the necessary instrumentation to enable collection, processing, storage, and distribution of data from high-performance digital imagery systems.
- Complete the Electromagnetic Environment Effects Generating System project to provide a multi-service test facility capable of assessing actual performance of a full-scale, fixed, or rotary-winged aircraft completely immersed in a user-specified radio frequency environment.
- Complete the Joint Modeling and Simulation System project to provide interoperability among the Services' models and simulations.
- Complete the Tri-Service Signature Measurement and Database System project to provide the capability to characterize the detailed spatial, spectral, and temporal signatures of aircraft, missiles, ground vehicles, ships, undersea vehicles, and their countermeasures in realistic environments.
- Continue development of the Hardened Sub-Miniature Telemetry and Sensor System Product Improvement project to develop and demonstrate a new generation of rugged, miniaturized, on-board instrumentation applicable to smart munitions flight tests.

UNCLASSIFIED

- Continue development of the Infrared Sensor Stimulator product improvement under the Joint Installed Systems Test Facility Product Improvements project to provide improved installed systems capabilities needed to support Joint Strike Fighter testing.
- Continue the system development phase and demonstration of time-space-position information (TSPI), flight termination / safe arm (FTSA), end game scoring (EGS), and Telemetry functions on advanced missile platforms under the Joint Advanced Missile Instrumentation project.
- Continue the system development phase for the DECADE Radiation Test Facility--Enhanced project to develop and field an upgraded, above ground ionizing radiation test capability to meet existing and emerging nuclear weapons effects test requirements.
- Continue the system development phase of the Advanced Instrumentation Data & Control System project to develop state-of-the-art instrumentation and control systems to meet DoD T&E requirements for propulsion systems, aerodynamic systems and space systems.
- Continue the system development phase of the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and modeling/simulation tools required to test and evaluate current and developmental CB detector systems over the entire range of expected use conditions.
- Continue the system development phase of the Electromagnetic Transient Test and Evaluation Facility project to provide a capability to assess aircraft hardness to electro-magnetic transient environments to meet MILSTD 464 requirements.
- Continue the system development phase of the Enhanced Range Applications Project to provide a state-of-the-art Airborne Range Data System that supports the next generation data collection requirements.
- Continue the system development phase of the Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) project to develop a capability to test increasingly complex multi-discipline fusion concepts.
- Continue the system development phase of the Land and Sea Vulnerability Test Capability project to provide an instrumented land-sea interface test capability at the Aberdeen Test Center.
- Continue the system development phase of the Multi-Service Target Control System project to provide upgraded, interoperable tri-Service target control systems.
- Continue the Test Technology Development and Demonstration project.
- Continue the Tri-Service and CTEIP support projects.
- Continue threat system simulator development efforts under the Threat System Simulator Development project to improve integration, reduce potential duplication in threat and target development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Initiate standardization of the TENA object model and continue development of software tools and integration products within the Foundation Initiatives 2010 project.

Resource Enhancement Project:

- Complete the AESA Jammer subproject to develop a simulator that can replicate three threat ground-to-air jammers.
- Complete the Commander Air Defense Environment Test Tool subproject to develop a test tool to emulate, stimulate and evaluate the Single Integrated Air Picture C4I system of systems in support of the Area Air Defense Commander.
- Complete the Common Vehicular Instrumentation Initiative subproject to develop a new generation of modular instrumentation to support vehicle and platform testing.

UNCLASSIFIED

- Complete the Flexible Interoperable Transceiver Execution subproject to support the engineering effort required to incorporate the FIT protocols and spectrum efficient technologies in the design of the new Mobile Automated Instrumentation Suite transceivers.
- Complete the Joint Information Assurance Laboratory subproject to develop a T&E capability based on a notional Global Information Grid configured to replicate the war fighter's operational environment.
- Complete the Susceptibility Testing for Global Air Traffic Management Avionics subproject to define at the message level a signal set of harmful transmissions and develop an analysis capability to support evaluation of aircraft susceptibility.
- Complete the Weapon Set-to-Hit Threat Target subproject to provide an unmanned, cost effective target for conducting set-to-hit testing of existing and future torpedoes.
- Continue near term tasks/subprojects to resolve critical OT&E test capability shortfalls.
- Continue to identify candidate subprojects based on critical OT&E test capability shortfalls.

Official Travel

Perform official travel to carry out oversight of the CTEIP program.

B. (U) PROGRAM CHANGE SUMMARY

(\$ in Millions)	<u>FY 2001</u> <u>Appropriation</u>	<u>FY 2002</u> <u>Amended President's</u> <u>Budget Request</u>	<u>FY 2003</u> <u>Clinton Budget</u>
FY 2002 President's Budget	134.157	113.642	122.719
Roadway Simulator		9.500	
Digital Video Laboratory		1.500	
Digital Video System Development		4.000	
Big Crow		4.000	
Appropriated Value	134.157	132.642	
Adjustments to Program Value			
Congressional Reduction		(0.922)	
Inflation Adjustment			(1.280)
Program Adjustment			1.837

UNCLASSIFIED

Current Budget Submit	134.157	131.720	123.276
-----------------------	---------	---------	---------

C. (U) OTHER PROGRAM FUNDING NA

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2)						February 2002			
OPERATIONAL TEST AND EVALUATION, DEFENSE (0460) BUDGET ACTIVITY SIX				OPERATIONAL TEST AND EVALUATION (OT&E) PROGRAM ELEMENT (PE) 0605118D8Z					
\$'s in Millions	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMPLETE	TOTAL COST
PE 0605118D	20.978	17.258	19.725	19.950	20.235	20.617	20.972	Continuing	Continuing

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

The Director of Operational Test and Evaluation (DOT&E) is responsible under Title 10 for policy and procedures for all aspects of operational test and evaluation within the Department of Defense (DoD), with particular focus on Operational Test And Evaluation (OT&E) that supports major weapon system production decisions. Currently there are approximately 220 programs and Advanced Concept Technology Demonstrations (ACTD) on the DOT&E oversight list including 140 Major Defense Acquisition Programs (MDAPs). These MDAPs may not proceed beyond low-rate initial production (LRIP) until OT&E of the program is completed. This requires early involvement by DOT&E in the planning phase of each program to ensure adequate testing and satisfactory progress through the acquisition milestones toward operational effectiveness, suitability goals and full-rate production. Key elements of the DOT&E's oversight authority include: the approval of Service Test and Evaluation Master Plans (TEMPs) and Service OT&E plans; assessment of the adequacy of OT&E and the operational effectiveness and suitability of the weapon system; and participation in DoD-wide planning, programming and budgeting activities to highlight test and evaluation capabilities, needs and priorities. This Program Element also includes funds to perform official travel in support of its activities.

Funds are used to purchase Federally Funded Research and Development Centers (FFRDC) support in the science/engineering disciplines. The contractor support reviews Service TEMP's and test plans and provides expert recommendations to ensure test adequacy; observes preparation for, and conduct of, field operational tests (OTs); assists in the assessment, analysis and evaluation of OT results and reports evaluations to the Director and DoD senior management; and conducts assessments on programs to include evaluation of projected resource requirements and funding levels for OT&E.

This Research Category 6.5 PE supports management activities for the DOT&E for oversight of operational test and evaluation of the Department's weapon systems.

UNCLASSIFIED

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

FY 2001 Accomplishments: Programs on the oversight list include:

Land Warfare Programs

- Abrams Tank (M1A2) System Enhancement Program (SEP)
- Aerial Common Sensor
- AN/TPQ-47 Counterfire System
- Army Tactical Missile System Brilliant Anti-Armor Submunition (ATACMS/BAT) P3I
- Battlefield Combat Information System
- Blackhawk (UH-60L) Service Life Extension Program (SLEP)
- Bradley Fighting Vehicle System (BFVS)-A3/M2A3 and M3A3 Programs
- Chemical Demilitarization
- Chinook (CH-47) Improved Cargo Helicopter
- Comanche (RAH-66)
- CRUSADER Howitzer & Resupply Vehicle
- Distributed Common Ground Station-Army
- Excalibur
- Family of Medium Tactical Vehicles (FMTV)
- Future Combat System (FCS)
- Future Scout / Calvary System (FSCS)
- Guided Multiple Launch rocket system
- High Mobility Artillery Rocket (HIMARS)
- Interim Armored Vehicle
- Javelin Advanced Anti-Tank Weapon System
- Joint Biological Point Detection System
- Joint Biological Remote Early Warning System
- Joint Biological Stand-off Detection System
- Joint Chemical Agent Detector
- Joint Service Light NBC Reconnaissance
- Joint Service Lightweight Standoff
- Joint Warning & Reporting Network
- JSTARS Common Ground Station (CGS)
- Kiowa Warrior (OH-58D)

R-1 Shopping List – Item No 3- 2 of 20

Exhibit R-2, RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

- Land Warrior
- Line of Sight Anti-Tank (LOSAT) Weapon System
- Longbow Apache (AH-64D)
- Longbow Hellfire Missile System
- Multiple Launched Rocket System (MLRS) Upgrade
- Nuclear-Biological-Chemical Reconnaissance System (NBCRS) Vehicle
- Objective Crew Served Weapons System
- Objective Individual Combat Weapons System
- Sense and Destroy Armor (SADARM)
- Stinger-RMP
- Tactical Control System
- Tactical Unmanned Aerial Vehicle (UAV)
- Tube Launched, Optically Tracked, Wire Guided (TOW) - Fire and Forget
- Wide Area Munition P3I

Naval Warfare Programs

- Acoustic Rapid COTS Insertion Sonar
- Advanced Amphibious Assault Vehicle (AAAV)
- Advanced Combat Direction System (ACDS) Block I
- Advanced Integrated Electronic System
- Advanced Land Attack Missile
- Advanced SEAL Delivery System
- Aegis SPY Radar (AN/SPY-1B/D/D(V))
- AMNIS/RAMICS
- Amphibious Assault Ship (LPD-17)
- Amphibious Helicopter Assault Replacement LHA® Class
- Amphibious Helicopter Dock LHD Class
- AN/SQQ-89 Antisubmarine Warfare Combat System
- Auxiliary Dry Cargo Carrier (T-AKE(X))
- Common Command and Decision System
- Cooperative Engagement Capability (CEC)
- Cruiser Conversion
- CVN-68 Class
- CVN-77 Warfare System
- DD21 Land Attack Destroyer

UNCLASSIFIED

- DDG-51 Arleigh Burke Class Destroyer
- Evolved Sea Sparrow Missile (ESSM)
- Extended Range Guided Munition (ERGM)
- Fixed Distributive System (FDS) and Advanced Deployable System (ADS)
- Future Sea-Based Tactical Aviation Platform (CVN/(X))
- Joint Command and Control Capability (X) Class
- Maritime Prepositioning Force (Future)
- MH-60R Helicopter
- MK-48 Advanced Capability (ADCAP) Torpedo
- Multi-mission Maritime Aircraft (MMA)
- Rolling Airframe Missile (RAM)
- Sea Sparrow AIM/RIM-7
- Seawolf Class Nuclear Attack Submarine/Combat System (SSN-21/BSY-2)
- SH-60R Multi-Mission Helicopter Program
- SH-60S Fleet Combat Support Helicopter
- Ship Self-Defense System (Mark 1 & Mark 2)
- SSGN Class
- SSN-23 Jimmy Carter
- Standard Missile SM-2 BLK III/IIIA/B
- Standard Missile SM-2 BLK IV
- Strategic Sealift Ship (SSP)
- Submarine External Communications System (SubECS)
- T-AGOS
- Vertical Launch ASROC
- Virginia (SSN 774) Class Submarine
- Vertical Tactical Unmanned Aerial Vehicle (VTUAV)

Air Warfare Programs

- Advanced Early Warning (AEW)
- Advanced Medium Range Air-to-Air Missile (AMRAAM)
- AIM-9X Missile
- AV-8B Remanufacture
- B1B Lancer
- B2A Spirit
- C-130 Avionics Modernization Program (AMP)

UNCLASSIFIED

- C-130J All Variants (KC-130J, EC-130J, WC-130J, C-130J-30, and C-130J)
- C-17 Airlift Aircraft
- C-5 Avionics Modernization Program (AMP)
- C-5 Reliability & Reengineering Program
- Combat Search and Rescue Replacement
- Combat Survivor/Evader Locator
- F/A-18 C/D Hornet
- F/A-18 E/F Super Hornet
- F-22 Raptor Fighter
- Global Hawk High Altitude Endurance UAV (HAEUAV)
- Joint Air-to-Surface Strike Missile (JASSM)
- Joint Direct Attack Munition (JDAM)
- Joint Helmet Mounted Cueing System
- Joint Primary Aircraft Training System (JPATS)
- Joint Standoff Weapon (JSOW) Baseline
- Joint Standoff Weapon (JSOW) BLU-108
- Joint Standoff Weapon (JSOW) Unitary
- Joint Strike Fighter (JSF)
- Joint Surveillance Target Attack Radar System (JSTARS)
- Large Aircraft Infrared Countermeasures
- Miniaturized Munitions Capability
- Predator Medium Altitude Endurance UAV
- Sensor Fused Weapon (SFW) P3I
- Standoff Land Attack Missile-Expanded Response (SLAM-ER)
- T-45 Training System
- Tactical Aviation Mission Planning System (TAMPS)
- USMC H1 Upgrade
- V-22 Osprey

Electronic Warfare Programs

- AN/AAR-47 Upgrade (Missile Approach Warning System)
- AN/ALR-56 (All Versions) Radar Warning Receiver-All Upgrades
- AN/ALR-67 (All Versions)-includes AN/ALR-67(V)
- AN/ALR-69
- AN/APR-39 (All Versions) Radar Warning Receiver-All Upgrades

R-1 Shopping List – Item No 3- 5 of 20

Exhibit R-2, RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

- ASPJ (ALQ-165)
- B-1B Lancer Conventional Mission Upgrade Program (CMUP)/Defensive System Upgrade Program (DSUP)
- EA-6B Prowler-All Upgrades
- F-15 Tactical Electronic Warfare System (TEWS) including AN/ALQ-135 Self-Protection Jammer
- Integrated Defensive Electronic Countermeasures (IDECM)
- Suite of Integrated Infrared Countermeasures/Common Missile Warning System (SIIRCM/CMWS)
- Suite of Integrated Radio Frequency Countermeasures (SIRFC)

Command, Control, Communications, and Intelligence Programs

- Advanced Field Artillery Tactical Data System (AFATDS)
- All Source Analysis System (ASAS)/Army Tactical Command and Control System (ATCCS)
- Army Global Command and Control System (AGCCS)
- Army Tactical Command and Control System (ATCCS) Capstone
- Battlefield Digitization
- Business Systems Modernization (BSM)
- Combat ID
- Combat Service Support Control System (CSSCS)
- Composite Health Care System II (CHCS II)
- Corporate Executive Information System (CEIS)
- Defense Civilian Personnel Data System
- Defense Civilian Personnel Data System (DCPDS)
- Defense Integrated Military Human Resources System (DIMHRS)
- Defense Joint Accounting System (DJAS)
- Defense Medical Logistics Standard Support (DMLSS)
- Defense Message System (DMS)
- Defense Procurement Payment System (DPPS)
- DFAS Corporate Database/Warehouse (DCD/DCW)
- E-3A Airborne Warning and Control System (AWACS) Radar System Improvement Program (RISP)
- E-C2 Hawkeye Airborne Early Warning
- F-15 Fighter Data Link (FDL)
- Force XXI Battle Command Brigade and Below (FBCB2)
- Forward Area Air Defense Command, Control, Communications, and Intelligence System (FAAD) C3I
- Fuels Automated System (FAS)
- Global Command Support System -Air Force (GCSS-AF)

R-1 Shopping List – Item No 3- 6 of 20

Exhibit R-2, RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

- Global Transportation Network (GTN)
- Integrated Logistics System-Supply (ILS-S)
- Integrated Maintenance Data System (IMDS)
- Joint Ammunition Management Standard System (JMASS)
- Joint Computer Aided Acquisition and Logistics Support (JCALS)
- Joint Simulation System (JSIMS)
- Joint Tactical Radio System (JTRS)
- Maneuver Control System (MCS)
- MILSTAR Satellite Communications System
- Multifunctional Information Distribution System (MIDS)
- NAVSTAR GPS User Equipment (UE)
- Navy Marine Corps Intranet (NMCI)
- Navy Standard Integrated Personnel System (NSIPS)
- Reserve Component Automation System (RCAS)
- Standard Procurement System (SPS)
- Theater Medical Information Program (TMIP)
- TRANSCOM Regulating and Command & Control Evacuation System (TRAC2ES)
- Transportation Coordinators' Automated Information for Movement System II (TC-AIMS II)
- Unmanned Aerial Vehicle Tactical Control System (UAV-TCS)
- Warfighter Information Network – Terrestrial (WIN-T)

Strategic Warfare and Space Systems Programs

- Evolved Expendable Launch Vehicle (EELV)
- Medium Extended Air Defense System (MEADS)
- National Airspace System
- National Missile Defense (NMD) System
- Patriot P3I and Patriot Upgrade
- Sea Based Mid Course
- Theater High Altitude Area Defense (THAAD)
- TITAN IV Space Booster
- Tomahawk Block IV
- Tomahawk Theater Mission Planning Center

Test Improvement

The FY01 Defense Appropriations Bill provided an additional \$4.0M under the project title Improvement in Test. The following five initiatives

UNCLASSIFIED

were funded:

1. Simulation Testing Operations Rehearsal Model (STORM). Managed by the Army Test and Evaluation Center, STORM provides simulation of the command, control, communications and intelligence (C⁴I) networks of various command organizations. This effort allows the operational tester to more fully stress C⁴I networks that are in use during field tests.
2. Fiber Optic Cable Upgrade to the Nevada Test and Training Range (NTTR). This effort will partially fund the upgrade of the current unreliable link between Indian Springs and Nellis AFB, providing a secure, encrypted high-bandwidth fiber optic link for real-time analysis work.
3. Commander, Operational Test and Evaluation Force (COMOPTEVFOR) Modeling and Simulation (M&S) Computer Laboratory. This effort provides partial funding for the M&S laboratory that will allow COMOPTEVFOR to do evaluations more thoroughly and efficiently.
4. Navy Test and Evaluation Training. This effort enables Navy Training to develop instructional courses to train fleet operators in the technologies necessary for modern testing.
5. Marine Corps Operational Test and Evaluation Activity (MCOTEA) Network Infrastructure Upgrade at Quantico. This effort was used to procure the servers and other equipment to host a Management Information Network (MIN) to support MCOTEA staff in the conduct of OT&E for 53 programs. MCOTEA had been sharing an Air Force server that resides at Kirtland AFB. The server was accessible only through the Internet, resulting in significant down time and a reduction in the ability to work test plans and assessments

Performed official travel to carry out oversight of the OT&E of the DoDs weapons systems.

FY 2002 Plans : Programs on the draft FY 2002 oversight list include:

Land Warfare Programs:

- Abrams Tank (M1A2) System Enhancement Program (SEP)
- Aerial Common Sensor
- AN/TPQ-47 Counterfire Radar
- Army Tactical Missile System/Brilliant Anti-Armor Submunition (ATACMS/BAT) P3I
- Battlefield Combat Information System (BCIS)
- Blackhawk (UH-60L) Service Life Extension Program (SLEP)
- Bradley Fighting Vehicle System (BFVS)-A3/M2A3 and M3A3 Programs
- Chemical Demilitarization
- Chinook (CH-47) Improved Cargo Helicopter
- Comanche (RAH-66)
- Common Ground Station (CGS)
- CRUSADER Howitzer & Resupply Vehicle
- Distributed Common Ground Station-Army
- Excaliber (155 Shell)

R-1 Shopping List – Item No 3- 8 of 20

Exhibit R-2, RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

- Family of Medium Tactical Vehicles (FMTV)
- Future Combat System (FCS)
- Future Scout / Calvary System (FSCS)
- Guided MLRS
- High Mobility Artillery Rocket System
- Interim Armored Vehicle
- Interim Armored Vehicle (IAV)
- Joint Biological Point Detection
- Joint Biological Remote Early Warning
- Joint Biological Standoff Detection System
- Joint Chemical Agent Detector
- Joint Service Light NBC Reconnaissance
- Joint Service Lightweight Standoff
- Joint Warning & Reporting Network
- Kiowa Warrior (OH-58D)
- Land Warrior
- Line of Sight Anti-Tank (LOSAT) Weapon System
- Longbow Apache (AH-64D)
- Longbow Hellfire Missile System
- Multiple Launched Rocket System (MLRS) Upgrade
- Nuclear-Biological-Chemical Reconnaissance System (NBCRS) Vehicle
- Objective Crew Served Weapons System
- Objective Crew Weapon System
- Objective Individual Combat weapons system
- Objective Individual Weapon System
- Stinger-RMP
- Tactical Control System
- Wide Area Munition P3I

Naval Warfare Programs:

- Acoustic Rapid COTS Insertion Sonar (ARCI)
- Advanced Amphibious Assault Vehicle (AAAV)
- Advanced Integrated Electronic Warfare System (AIEWS)
- Advanced Land Attack Missile
- Advanced SEAL Delivery System

UNCLASSIFIED

- Aegis SPY Radar (AN/SPY-1B/D/D(V))
- AMNS/RAMICS
- Amphibious Assault Ship (LPD-17)
- Amphibious Helicopter Dock Class
- AN/SQQ-89 Anti-submarine warfare system
- Auxiliary Dry Cargo Carrier (T-AKE(X))
- Cooperative Engagement Capability (CEC)
- Cruiser Conversion
- CVN-77 Warfare System
- DD(X)
- DDG-51 Arleigh Burke Class Destroyer
- Evolved Sea Sparrow Missile (ESSM)
- Extended Range Guided Munition (ERGM)
- Fixed Distributive System (FDS) and Advanced Deployable System (ADS)
- Future Sea-Based Tactical Aviation Platform (CVN/(X))
- JCC(X)
- LHA(R)
- MH-60R Multi-Mission Helicopter Program
- MH-60S Fleet Combat Support Helicopter
- MK-48 Advanced Capability (ADCAP) Torpedo
- Rolling Airframe Missile (RAM)
- Seawolf Class Nuclear Attack Submarine/Combat System (SSN-21/BSY-2)
- Ship Self-Defense System (Mark 1 & Mark 2)
- SSGN/Trident Conversion
- SSN-23 Jimmy Carter
- Standard Missile SM-2 BLK III/A/B
- Strategic Sealift Ship (SSP)
- Submarine External Communications System (SubECS)
- T-AGOS/SURTASS Surveillance Ship/Low Frequency Active (LFA) Sonar
- Virginia (SSN 774) Class Submarine

Air Warfare Programs:

- Advanced Early Warning (AEW)
- Advanced Medium Range Air-to-Air Missile (AMRAAM)
- AIM-9X Missile

UNCLASSIFIED

- AN/SQQ-89 Antisubmarine Warfare Combat System
 - AV-8B
 - B1B Lancer
 - B2A Spirit
 - C-130 Avionics Modernization Program (AMP)
 - C-130J All Variants (KC-130J, EC-130J, WC-130J, C-130J-30, and C-130J)
 - C-17 Airlift Aircraft
 - C-5 Avionics Modernization Program (AMP)
 - C-5 Reliability & Reengineering Program
 - Combat Search and Rescue Replacement
 - Combat Survivor/Evader Locator
 - F/A-18 C/D Hornet
 - F/A-18 E/F Super Hornet
 - F-22 Air Superiority Fighter
 - Global Hawk High Altitude Endurance UAV (HAEUAV)
 - Joint Air-to-Surface Strike Missile (JASSM)
 - Joint Direct Attack Munition (JDAM)
 - Joint Helmet Mounted Cueing System
 - Joint Primary Aircraft Training System (JPATS)
 - Joint Standoff Weapon (JSOW) Baseline
 - Joint Standoff Weapon (JSOW) BLU-108
 - Joint Standoff Weapon (JSOW) Unitary
 - Joint Strike Fighter (JSF)
 - Joint Surveillance Target Attack Radar System (JSTARS)
 - Large Aircraft Infrared Countermeasures
 - Predator Medium Altitude Endurance UAV
 - Small Diameter Bombs
 - UCAV (Air Force)
 - UCAV (Navy)
 - USMC H1 Upgrade
 - V-22 Osprey
- Electronic Warfare Programs:
- Advanced Early Warning (AEW)
 - AN/ALR-56 (All Versions) Radar Warning Receiver-All Upgrades

UNCLASSIFIED

- AN/ALR-67 (All Versions)-includes AN/ALR-67(V)
- AN/APR-39 (All Versions) Radar Warning Receiver-All Upgrades
- ASPJ (ALQ-165)
- B-1B Lancer Conventional Mission Upgrade Program (CMUP)/Defensive System Upgrade Program (DSUP)
- EA-6B Prowler-All Upgrades
- F-15 Tactical Electronic Warfare System (TEWS) including AN/ALQ-135 Self-Protection Jammer
- Integrated Defensive Electronic Countermeasures (IDECM)
- Large Aircraft IRCM
- Suite of Integrated Infrared Countermeasures/Common Missile Warning System (SIIRCM/CMWS)
- Suite of Integrated Radio Frequency Countermeasures (SIRFC)

Command, Control, Communications, and Intelligence Programs

- Advanced Field Artillery Tactical Data System (AFATDS)/ Army Battle Command System (ABCS)
- All Source Analysis System (ASAS) (ABCS)
- Army Global Command and Contrail System (AGCCS)
- Business Systems Modernization (BSM)
- Combat ID
- Combat Service Support Control System (CSSCS)/ABCS
- Composite Health Care System II (CHCS II)
- Corporate Executive Information System (CEIS)
- Defense Civilian Personnel Data System (DCPDS)
- Defense Integrated Military Human Resources System (DIMHRS)
- Defense Joint Accounting System (DJAS)
- Defense Medical Logistics Standard Support (DMLSS)
- Defense Message System (DMS)
- Defense Procurement Payment System (DPPS)
- DFAS Corporate Database/Warehouse (DCD/DCW)
- E-3A Airborne Warning and Control System (AWACS) Radar System Improvement Program (RISP)
- E-C2 Hawkeye Airborne Early Warning
- Force XXI Battle Command Brigade and Below (FBCB2)
- Forward Area Air Defense Command Control Communications and Intelligence System (FAAD C3I)/ABCS
- Fuels Automated System (FAS)
- Global Command Support System -Air Force (GCSS-AF)
- Global Transportation Network (GTN-21)
- Integrated Logistics System-Supply (ILS-S)

R-1 Shopping List – Item No 3- 12 of 20

Exhibit R-2, RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

- Integrated Maintenance Data System (IMDS)
- Integrated System Control (ISYSCON)/Tactical Internet Manager (TIMS)
- Joint Ammunition Management Standard System (JMASS)
- Joint Computer Aided Acquisition and Logistics Support (JCALS)
- Joint Simulation System (JSIMS)/Warfighter Simulation (WARSIM)
- Joint Tactical Radio System (JTRS)
- Maneuver Control System (MCS)/ABCS
- MILSTAR Satellite Communications System
- Multifunctional Information Distribution System (MIDS)
- NAVSTAR GPS User Equipment (UE)
- Navy Marine Corps Intranet (NMCI)
- Navy Standard Integrated Personnel System (NSIPS)
- Reserve Component Automation System (RCAS)
- Standard Procurement System (SPS)
- Theater Medical Information Program (TMIP)
- TRANSCOM Regulating and Command & Control Evacuation System (TRAC2ES)
- Transportation Coordinators' Automated Information for Movement System II (TC-AIMS II)
- Unmanned Aerial Vehicle Tactical Control System (UAV-TCS)
- Warfighter Information Network – Terrestrial (WIN-T)

Strategic Warfare and Space Systems Programs

- Evolved Expendable Launch Vehicle (EELV)
- Medium Extended Air Defense System (MEADS)
- National Airspace System
- National Missile Defense (NMD) System
- Patriot P3I and Patriot Upgrade
- Sea Based Mid Course
- Theater High Altitude Area Defense (THAAD)
- Tomahawk Theater Mission Planning Center

Perform official travel to carry out oversight of the OT&E of the DoDs weapons systems.

FY 2003 Plans: Programs on the projected FY 2003 oversight list include:

Land Warfare Programs:

- Abrams Tank (M1A2) System Enhancement Program (SEP)
- Aerial Common Sensor

UNCLASSIFIED

- AN/TPQ-47 Counterfire Radar
- Army Tactical Missile System/Brilliant Anti-Armor Submunition (ATACMS/BAT) P3I
- Battlefield Combat Information System (BCIS)
- Blackhawk (UH-60L) Service Life Extension Program (SLEP)
- Bradley Fighting Vehicle System (BFVS)-A3/M2A3 and M3A3 Programs
- Chemical Demilitarization
- Chinook (CH-47) Improved Cargo Helicopter
- Comanche (RAH-66)
- Common Ground Station (CGS)
- CRUSADER Howitzer & Resupply Vehicle
- Distributed Common Ground Station-Army
- Excaliber (155 Shell)
- Family of Medium Tactical Vehicles (FMTV)
- Future Combat System (FCS)
- Future Scout / Cavalry System (FSCS)
- Guided MLRS
- High Mobility Artillery Rocket System
- Interim Armored Vehicle
- Interim Armored Vehicle (IAV)
- Joint Biological Point Detection
- Joint Biological Remote Early Warning
- Joint Biological Standoff Detection System
- Joint Chemical Agent Detector
- Joint Service Light NBC Reconnaissance
- Joint Service Lightweight Standoff
- Joint Warning & Reporting Network
- Kiowa Warrior (OH-58D)
- Land Warrior
- Line of Sight Anti-Tank (LOSAT) Weapon System
- Longbow Apache (AH-64D)
- Longbow Hellfire Missile System
- Multiple Launched Rocket System (MLRS) Upgrade
- Nuclear-Biological-Chemical Reconnaissance System (NBCRS) Vehicle
- Objective Crew Served Weapons System

R-1 Shopping List – Item No 3- 14 of 20

Exhibit R-2, RDT&E Budget Item Justification

UNCLASSIFIED

UNCLASSIFIED

- Objective Crew Weapon System
- Objective Individual Combat weapons system
- Objective Individual Weapon System
- Stinger-RMP
- Tactical Control System
- Wide Area Munition P3I

Naval Warfare Programs:

- Acoustic Rapid COTS Insertion Sonar (ARCI)
- Advanced Amphibious Assault Vehicle (AAAV)
- Advanced Integrated Electronic Warfare System (AIEWS)
- Advanced Land Attack Missile
- Advanced SEAL Delivery System
- Aegis SPY Radar (AN/SPY-1B/D/D(V))
- AMNS/RAMICS
- Amphibious Assault Ship (LPD-17)
- Amphibious Helicopter Dock Class
- AN/SQQ-89 Anti-submarine warfare system
- Auxiliary Dry Cargo Carrier (T-AKE(X))
- Cooperative Engagement Capability (CEC)
- Cruiser Conversion
- CVN-77 Warfare System
- DD(X)
- DDG-51 Arleigh Burke Class Destroyer
- Evolved Sea Sparrow Missile (ESSM)
- Extended Range Guided Munition (ERGM)
- Fixed Distributive System (FDS) and Advanced Deployable System (ADS)
- Future Sea-Based Tactical Aviation Platform (CVN/(X))
- JCC(X)
- LHA(R)
- MH-60R Multi-Mission Helicopter Program
- MH-60S Fleet Combat Support Helicopter
- MK-48 Advanced Capability (ADCAP) Torpedo
- Rolling Airframe Missile (RAM)
- Seawolf Class Nuclear Attack Submarine/Combat System (SSN-21/BSY-2)

UNCLASSIFIED

- Ship Self-Defense System (Mark 1 & Mark 2)
- SSGN/Trident Conversion
- SSN-23 Jimmy Carter
- Standard Missile SM-2 BLK III/A/B
- Strategic Sealift Ship (SSP)
- Submarine External Communications System (SubECS)
- T-AGOS/SURTASS Surveillance Ship/Low Frequency Active (LFA) Sonar
- Virginia (SSN 774) Class Submarine

Air Warfare Programs:

- Advanced Early Warning (AEW)
- Advanced Medium Range Air-to-Air Missile (AMRAAM)
- AIM-9X Missile
- AN/SQQ-89 Antisubmarine Warfare Combat System
- AV-8B
- B1B Lancer
- B2A Spirit
- C-130 Avionics Modernization Program (AMP)
- C-130J All Variants (KC-130J, EC-130J, WC-130J, C-130J-30, and C-130J)
- C-17 Airlift Aircraft
- C-5 Avionics Modernization Program (AMP)
- C-5 Reliability & Reengineering Program
- Combat Search and Rescue Replacement
- Combat Survivor/Evader Locator
- F/A-18 C/D Hornet
- F/A-18 E/F Super Hornet
- F-22 Air Superiority Fighter
- Global Hawk High Altitude Endurance UAV (HAEUAV)
- Joint Air-to-Surface Strike Missile (JASSM)
- Joint Direct Attack Munition (JDAM)
- Joint Helmet Mounted Cueing System
- Joint Primary Aircraft Training System (JPATS)
- Joint Standoff Weapon (JSOW) Baseline
- Joint Standoff Weapon (JSOW) BLU-108
- Joint Standoff Weapon (JSOW) Unitary

UNCLASSIFIED

- Joint Strike Fighter (JSF)
- Joint Surveillance Target Attack Radar System (JSTARS)
- Large Aircraft Infrared Countermeasures
- Predator Medium Altitude Endurance UAV
- Small Diameter Bombs
- UCAV (Air Force)
- UCAV (Navy)
- USMC H1 Upgrade
- V-22 Osprey

Electronic Warfare Programs:

- AN/ALR-56 (All Versions) Radar Warning Receiver-All Upgrades
- AN/ALR-67 (All Versions)-includes AN/ALR-67(V)
- AN/APR-39 (All Versions) Radar Warning Receiver-All Upgrades
- ASPJ (ALQ-165)
- B-1B Lancer Conventional Mission Upgrade Program (CMUP)/Defensive System Upgrade Program (DSUP)
- EA-6B Prowler-All Upgrades
- F-15 Tactical Electronic Warfare System (TEWS) including AN/ALQ-135 Self-Protection Jammer
- Integrated Defensive Electronic Countermeasures (IDECM)
- Suite of Integrated Infrared Countermeasures/Common Missile Warning System (SIIRCM/CMWS)
- Suite of Integrated Radio Frequency Countermeasures (SIRFC)

Command, Control, Communications, and Intelligence Programs:

- NEW - Integrated System Control (ISYSCON)/Tactical Internet Manager (TIMS)
- Advanced Field Artillery Tactical Data System (AFATDS)/ Army Battle Command System (ABCS)
- All Source Analysis System (ASAS)/ABCS
- Combat Service Support Control System (CSSCS)/ABCS
- Composite Health Care System II (CHCS II)
- Defense Message System (DMS)
- E-C2 Hawkeye Airborne Early Warning
- E-3A Airborne Warning and Control System (AWACS) Radar System Improvement Program (RISP)
- Force XXI Battle Command Brigade and Below (FBCB2)
- Army Global Command and Contrail System (AGCCS)
- Global Command Support System -Air Force (GCSS-AF)
- Integrated Maintenance Data System (IMDS)
- Joint Ammunition Management Standard System (JMASS)

UNCLASSIFIED

- Joint Computer Aided Acquisition and Logistics Support (JCALS)
- Joint Tactical Radio System (JTRS)
- Maneuver Control System (MCS)/ABCS
- Multifunctional Information Distribution System (MIDS)
- NAVSTAR GPS User Equipment (UE)
- Navy Standard Integrated Personnel System (NSIPS)
- Unmanned Aerial Vehicle Tactical Control System (UAV-TCS)
- Theater Medical Information Program (TMIP)
- Combat ID
- Defense Medical Logistics Standard Support (DMLSS)
- Forward Area Air Defense Command Control Communications and Intelligence System (FAAD C3I)/ABCS
- MILSTAR Satellite Communications System
- Reserve Component Automation System (RCAS)
- Warfighter Information Network – Terrestrial (WIN-T)
- Joint Simulation System (JSIMS)/Warfighter Simulation (WARSIM)
- Global Transportation Network (GTN-21)
- Standard Procurement System (SPS)
- Business Systems Modernization (BSM)
- Corporate Executive Information System (CEIS)
- DFAS Corporate Database/Warehouse (DCD/DCW)
- Defense Integrated Military Human Resources System (DIMHRS)
- Defense Joint Accounting System (DJAS)
- Defense Procurement Payment System (DPPS)
- Fuels Automated System (FAS)
- Integrated Logistics System-Supply (ILS-S)
- Navy Marine Corps Intranet (NMCI)
- Transportation Coordinators' Automated Information for Movement System II (TC-AIMS II)

Strategic Warfare and Space Systems Programs:

- Evolved Expendable Launch Vehicle (EELV)
- Medium Extended Air Defense System (MEADS)
- Sea Based Mid Course
- National Missile Defense (NMD) System
- Patriot P3I and Patriot Upgrade
- Theater High Altitude Area Defense (THAAD)

UNCLASSIFIED

- Tomahawk Theater Mission Planning Center
- National Airspace System

Will perform official travel to carry out oversight of the OT&E of the DoDs weapons systems.

UNCLASSIFIED

B. (U) PROGRAM CHANGE SUMMARY

(\$ in Millions)	<u>FY 2001</u> <u>Appropriation</u>	<u>FY 2002</u> <u>Amended President's</u> <u>Budget Request</u>	<u>FY 2003</u> <u>Clinton Budget</u>
FY 2002 President's Budget	20.978	17.379	17.542
Appropriated Value	20.978	17.379	
Adjustments to Program Value			
Congressional Reduction		(0.121)	
Inflation Adjustment			(0.080)
Program Adjustment			2.263
Current Budget Submit	20.978	17.258	19.725

C. (U) OTHER PROGRAM FUNDING NA

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2)					February 2002				
OPERATIONAL TEST AND EVALUATION, DEFENSE (0460) BUDGET ACTIVITY SIX					LIVE FIRE TESTING (LFT) PROGRAM ELEMENT (PE) 0605131D8Z				
\$'s in Millions	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMPLETE	TOTAL COST
PE 0605131D	17.054	12.797	10.102	10.244	10.412	10.620	10.794	Continuing	Continuing

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

This PE directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying weapons platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual U.S. and threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process, and is required to be completed before weapons programs proceed beyond low-rate initial production. It also includes realistic modeling and simulation (M&S), to include pretest predictions, to assure the maximum benefit from the testing. The LFT&E program is essential, especially in view of the escalating costs of technologically sophisticated weapons systems.

The LFT PE also supports the DoD's Joint Live Fire (JLF) Program, which actually preceded the LFT&E program, begun in 1984 under an OSD charter to test fielded front-line U.S. and threat combat aircraft and armor systems for their vulnerabilities and fielded weapons, both U.S. and threat, for their lethality against their respective targets. The Congress, seeing the vulnerability and lethality issues raised by the JLF program, decided that there must be legislation to require that this realistic testing be done on new systems before they reach the field. Hence the LFT Legislation, Title 10, Section 2366 was passed in 1987.

In the FY 1997 DoD Appropriations Act, the Congress appropriated an initial \$3.0M for the Live Fire Testing and Training (LFT&T) program, formalizing an important LFT&E program relationship. The funding strengthens the natural relationship between LFT activities and the M&S being developed to support the Services' testing and training activities. The LFT&T program is directed by a Senior Advisory Group consisting of DOT&E's Deputy Director for LFT (Chair) and the four Military Service leaders for training technology located in Orlando, Florida. In FY 1998, the Congress appropriated \$4.0M for continuation and expansion of the program. Again, in FY 1999, the Congress appropriated

UNCLASSIFIED

\$5.0M for further continuation and expansion of the program. Once more, in FY 2000, the Congress appropriated \$7.0M for continuation and expansion of the program. For FY 2001, the Congress added \$7.5M to the LFT PE to continue and expand the LFT&T program, specifying that \$1.5M be dedicated to the Augmented Reality for Firefighting initiative started in FY 1997. Again in FY 2002 Congress added \$3.0M to continue the LFT&T program.

The LFT PE also funds other activities used to support the functions of the LFT&E, JLF, and LFT&T programs. The other activities, outlined below, are “User Casualty Assessment,” “Exploring New Technologies/Advanced Concepts and Survivability Initiatives,” and “Assuring Modeling and Simulation Adequacy.” Efforts in those categories underwent significant changes during FY 2000, as emphasis grew on M&S in support of LFT&E.

This Research Category 6.5 PE supports LFT&E management activities for the oversight of RDT&E of new systems, as well as RDT&E of fielded systems.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

FY 2001 Accomplishments:

Review and Monitor Major Test and Evaluation (T&E) Programs: Completed LFT&E technical assessments for those systems approaching due dates for LFT&E reporting to Congress. Oversight of continuing vulnerability efforts in the category of armored vehicles included: the Advanced Amphibious Assault Vehicle, the M2/M3 Bradley FVS upgrade, the Crusader field artillery system, the family of Interim Armored Vehicles (IAV), and the M1A2 Abrams Tank. Under the category of ships and submarines, efforts continued on the Advanced SEAL Delivery System (ASDS), the CVN(X) next generation aircraft carrier, the DDG-51 guided missile destroyer, the DD 21 Land Attack Destroyer, the T-AKE Lewis and Clark Dry Cargo/Ammunition Ship, the replacement amphibious assault ship LHA(R), the LPD-17 San Antonio Amphibious Transport ship, the Seawolf (SSN-21) submarine, and the Virginia Class (SSN-774) attack submarine. Under aircraft, vulnerability oversight continued on the Airborne Laser (ABL) system, the B-1B Lancer Conventional Mission Upgrade Program (CMUP), the B-2 Spirit, the UH-60M Blackhawk, the C-130J Hercules, the CH-47F Chinook, the RAH-66 Comanche, the F-22 Raptor, the F-35 Joint Strike Fighter, the F/A-18E/F Super Hornet AESA Upgrade the KC-130J, the OH-58D Kiowa Warrior, the MH-60R Multi-mission Helicopter, the MH-60S Cargo Helicopter, C-130 AMP, the AH-1Z Helicopter Upgrade, the UH-1Y Helicopter Upgrade, and the V-22 Osprey. Oversight of lethality efforts in the category of surface attack weapons included the Airborne Mine Neutralization System (AMNS), the ATACMS Block II (Base BAT and P³I BAT), the EX-171 Extended Range Guided Munition, the AGM-158A Joint Air to Surface Stand-off Missile (JASSM), the Javelin Alternate Main Charge Warhead (AMCW) and Javelin Enhanced Tandem Integration (JETI) systems, the AGM-154B and AGM-154C Joint Standoff Weapons (JSOW), the Line-of-Sight Antitank Weapon, the M829E3 120mm APFSDS-T cartridge, the Objective Crew Served Weapon (OCSW), the Objective Individual Combat Weapon (OICW), the Rapid Airborne Mine Clearance System, the Sense and Destroy Armor Munition (SADARM), the Sensor Fuzed Weapon (SFW), the Tactical Tomahawk, the Multiple Launch Rocket System (MLRS) (Guided), the TOW Fire and Forget, the Wide Area Munition (WAM) PI, and the XM982 Excalibur extended range artillery projectile. Oversight of lethality of air and missile defense systems

UNCLASSIFIED

included the AIM-9X Sidewinder missile upgrade, the Advanced Medium Air-to-Air Missile (AMRAAM), the Evolved Sea Sparrow Missile (ESSM), the Medium Extended Air Defense System (MEADS), the MLRS Guided Rocket, the Navy Area Tactical Ballistic Missile Defense System, the National Missile Defense (NMD) System, Navy Theater Wide missile defense, the Patriot Advanced Capability (PAC-3), the Rolling Airframe Missile (RAM) HAS, and Theater High Altitude Area Defense (THAAD).

Manage JLF Programs: Conducted tests of fielded systems not previously tested under Air, Land, or Sea JLF programs. JLF began to plan and execute a lethality test of a helicopter-launched Hellfire missile against a small-ship target. Lethality testing of U.S. weapons against a SCUD missile began. We started lethality tests against an additional foreign target vehicle, continued testing of a second vehicle, and completed testing of the third classified vehicle started in FY 1999. Phase II of the fuel filler (metal mesh) testing and a C-130 mission abort study was completed. Vulnerability testing of F-14 and F-16 aircraft continued to address different subsystems, issues, and possibly threat munitions. The final JLF tests of the CH-47D rotor blades were started by firing at dynamic, loaded rotor blades on an operating helicopter. Advanced planning and feasibility studies were completed for potential future projects, such as EA-6B composite wing, fire suppression for the C-130 wing leading edge, AH-1 tail rotor blade static, anti-helicopter mine threat, engine vulnerability, and damage digitization equipment development. The analysis of the C-130 wing hydrodynamic ram test data was completed.

User Casualty Assessment: Initiated an effort oriented towards investigating the training and operational factors which affect the incidence of gravitational loss of consciousness (G-LOC) in aircrew. The work was subdivided into six areas: (1) an analysis of gravity tolerance as a function of flight hours flown; (2) an assessment of the causal factors for differences in G-LOC rates between the Air Force and Navy, and factor(s) accounting for the significant decrease in the Navy G-LOC rate in 1991; (3) a determination of whether mishaps designated as “controlled flight into terrain” were actually G-LOC related mishaps; (4) an examination of why a poor anti-G straining maneuver continues to be the primary causal factor for G-LOC incidents; (5) a review of why the rate of G-LOC incidents has increased steadily in the Air Force since 1990; and (6) an evaluation of the causal factors for high G-LOC rates in the Air Force T-37 aircraft. Conducted a ground collision avoidance system (GCAS) G-LOC flight demonstration consisting of two sorties replicating actual factual G-LOC instances utilizing an automatic GCAS incorporated within an F-16 aircraft.

Exploring New Technologies/Advanced Concepts and Survivability Initiative: Continued to sponsor testing of contractor-supplied passive ullage protective systems. Test results will be reported and supplied to participating contractors as well as the services and major airframe manufacturers.

Physics Based Evaluations: Continued strong emphasis on understanding the application of physics-based M&S to test programs and the evaluation of their adequacy. Generated resources for continuing Safety and Survivability of Aircraft Initiative (SSAI) and provided funding for other efforts stemming from the LFT&E physics-based modeling workshops. Assured that programmatic focus is maintained in the development and application of M&S tools and that training capabilities are continuously improved to reflect more credible models. Pushing for a more consistent infrastructure for managing the M&S that supports T&E specifically and the acquisition process in general. In an environment of shrinking resources it is

UNCLASSIFIED

essential to understand the marginal return on M&S investment. Completed an update to and release of the Target Interaction, Lethality, and Vulnerability (TILV) Master Plan to support Directed Energy Weapons.

LFT&T: Continued projects started in prior years and start new projects to the extent funding allows. Began dedicated project in Augmented Reality based firefighting.

Radio Frequency (RF) Weapons Vulnerability Assessment: Performed an outdoor, live fire, open-air test with the F-16B, Block 15 as the test asset. Two different RF devices were employed, each varying in waveform characteristics, rise time, pulse repetition frequency, burst length, and power level, in the testing. Conducted a demo of two RF sources against business and medical electronic equipment at a DoD test facility. Completed calculations to relate transient electric fields inside a building to those incident on an exterior wall. Prepared plans for work to deal with identifying the possible biological effects on the military crew or members of the crew subsequent to exposure to a high power microwave threat.

Official Travel: Performed official travel to carry out oversight of LFT&E programs.

FY 2002 Plans :

Review and Monitor Major T&E Programs: Complete LFT&E technical assessments for those systems approaching due dates for reporting to Congress. Oversight of continuing vulnerability efforts in the category of armored vehicles will include: the Advanced Amphibious Assault Vehicle, the M2/M3 Bradley FVS upgrade, the Crusader field artillery system, the family of Interim Armored Vehicles (IAV), and the M1A2 Abrams Tank. Under the category of ships and submarines, efforts continued on the Advanced SEAL Delivery System (ASDS), the CVN(X) next generation aircraft carrier, the DDG-51 guided missile destroyer, the DD (X) Future Surface Combatant, the T-AKE Lewis and Clark Dry Cargo/Ammunition Ship, the replacement amphibious assault ship LHA(R), the LPD-17 San Antonio Amphibious Transport ship, the SSGN Land Attack/Special Ops/Arsenal Submarine, the Seawolf (SSN-21) submarine, and the Virginia Class (SSN-774) attack submarine. Under aircraft, vulnerability oversight will continue on the Airborne Laser (ABL) system, the B-1B Lancer Conventional Mission Upgrade Program (CMUP), the B-2 Spirit, the UH-60M Blackhawk, the C-130J Hercules, the CH-47F Chinook, the RAH-66 Comanche, the F-22 Raptor, the F-35 Joint Strike Fighter, the F/A-18E/F Super Hornet AESA Upgrade the KC-130J, the OH-58D Kiowa Warrior, the MH-60R Multi-mission Helicopter, the MH-60S Cargo Helicopter, C-130 AMP, the AH-1Z Helicopter Upgrade, the UH-1Y Helicopter Upgrade, and the V-22 Osprey. Oversight of lethality efforts in the category of surface attack weapons will include the Airborne Mine Neutralization System (AMNS), the ATACMS Block II (Base BAT and P³I BAT), the EX-171 Extended Range Guided Munition, the AGM-158A Joint Air to Surface Stand-off Missile (JASSM), the Javelin Alternate Main Charge Warhead (AMCW) and Javelin Enhanced Tandem Integration (JETI) systems, the AGM-154B and AGM-154C Joint Standoff Weapons (JSOW), the Line-of-Sight Antitank Weapon, the M829E3 120mm APFSDS-T cartridge, the Objective Crew Served Weapon (OCSW), the Objective Individual Combat Weapon (OICW), the Rapid Airborne Mine Clearance System, the Sense and Destroy Armor Munition (SADARM), the Sensor Fuzed Weapon (SFW), the Tactical Tomahawk, the Multiple Launch Rocket System (MLRS) (Guided), the TOW Fire and Forget, the Wide Area Munition (WAM) PI, and the XM982 Excalibur extended range artillery projectile. Oversight of lethality of

UNCLASSIFIED

air and missile defense systems will include the AIM-9X Sidewinder missile upgrade, the Advanced Medium Air-to-Air Missile (AMRAAM), the Evolved Sea Sparrow Missile (ESSM), the Medium Extended Air Defense System (MEADS), the MLRS Guided Rocket, the Navy Area Tactical Ballistic Missile Defense System, the National Missile Defense (NMD) System, Navy Theater Wide missile defense, the Patriot Advanced Capability (PAC-3), the Rolling Airframe Missile (RAM) HAS, and Theater High Altitude Area Defense (THAAD).

Manage JLF Programs: Conduct tests of fielded systems not previously tested under Air, Land, or Sea JLF programs. Tests of foreign ground systems acquired for exploitation will continue. Additional U.S. munitions will be tested against the SCUD launcher. Testing of U.S. munitions against the remaining two classified targets should be completed. Plans for JLF tests to investigate the lethality of U.S. munitions against foreign air defense systems will be also finalized. JLF testing of the CH-47D rotor blades and drive train will be completed and lethality testing of U.S. weapons against the MiG-29, Hind, and additional air defense systems will be performed. An analysis of the C-130J mission abort parameters will be performed. Testing of MANPADS against aircraft will be performed, particularly on the C-130, as well as testing of the C-130 engine nacelle fire extinguishing system. Vulnerability testing of the H-60, specifically the tail rotor subsystem and engine nacelle fire suppression, will be performed. The effort to plan and execute a lethality test of a helicopter-launched Hellfire missile against a small-ship target will continue.

User Casualty Assessment: Complete the effort oriented towards investigating the training and operational factors which affect the incidence of G-LOC in aircrew.

Exploring New Technologies/Advanced Concepts and Survivability Initiative: Continue to promote and evaluate new technologies in support of safety and survivability of aircraft, focusing on fire and explosion effects and mitigation.

Physics Based Evaluations: Emphasis will continue in the area of physics based M&S and its close connection to realistic assessment and training. Continue development of consistent approaches to risk evaluation and T&E prioritization based on modeling.

LFT&T: Continue projects started in prior years and start new projects to the extent funding allows.

Radio Frequency (RF) Weapons Vulnerability Assessment: Conduct three RF vulnerability tests. Three foreign devices will be tested against both military systems and commercial infrastructure items under operationally relevant conditions. Complete and test a new prototype ultrawideband device built from readily available components.

Official Travel: Perform official travel to carry out oversight of LFT&E programs.

UNCLASSIFIED

FY 2003 Plans :

Review and Monitor Major T&E Programs: Complete LFT&E technical assessments for those systems approaching due dates for reporting to Congress. Oversight of continuing vulnerability efforts in the category of armored vehicles will include: the Advanced Amphibious Assault Vehicle, the M2/M3 Bradley FVS upgrade, the Crusader field artillery system, the family of Interim Armored Vehicles (IAV), and the M1A2 Abrams Tank. Under the category of ships and submarines, efforts will continue on the Advanced SEAL Delivery System (ASDS), the CVN(X) next generation aircraft carrier, the DDG-51 guided missile destroyer, the DD (X) Future Surface Combatant, the T-AKE Lewis and Clark Dry Cargo/Ammunition Ship, the replacement amphibious assault ship LHA(R), the LPD-17 San Antonio Amphibious Transport ship, the SSGN Land Attack/Special Ops/Arsenal Submarine, the Seawolf (SSN-21) submarine, and the Virginia Class (SSN-774) attack submarine. Under aircraft, vulnerability oversight will continue on the Airborne Laser (ABL) system, the B-1B Lancer Conventional Mission Upgrade Program (CMUP), the B-2 Spirit, the UH-60M Blackhawk, the C-130J Hercules, the CH-47F Chinook, the RAH-66 Comanche, the F-22 Raptor, the F-35 Joint Strike Fighter, the F/A-18E/F Super Hornet AESA Upgrade the KC-130J, the OH-58D Kiowa Warrior, the MH-60R Multi-mission Helicopter, the MH-60S Cargo Helicopter, the C-130 AMP, the AH-1Z Helicopter Upgrade, the UH-1Y Helicopter Upgrade, and the V-22 Osprey. Oversight of lethality efforts in the category of surface attack weapons will include the Airborne Mine Neutralization System (AMNS), the ATACMS Block II (Base BAT and P³I BAT), the EX-171 Extended Range Guided Munition, the AGM-158A Joint Air to Surface Stand-off Missile (JASSM), the Javelin Alternate Main Charge Warhead (AMCW) and Javelin Enhanced Tandem Integration (JETI) systems, the AGM-154B and AGM-154C Joint Standoff Weapons (JSOW), the Line-of-Sight Antitank Weapon, the M829E3 120mm APFSDS-T cartridge, the Objective Crew Served Weapon (OCSW), the Objective Individual Combat Weapon (OICW), the Rapid Airborne Mine Clearance System, the Sense and Destroy Armor Munition (SADARM), the Sensor Fuzed Weapon (SFW), the Tactical Tomahawk, the Multiple Launch Rocket System (MLRS) (Guided), the TOW Fire and Forget, the Wide Area Munition (WAM) PI, and the XM982 Excalibur extended range artillery projectile. Oversight of lethality of air and missile defense systems will include the AIM-9X Sidewinder missile upgrade, the Advanced Medium Air-to-Air Missile (AMRAAM), the Evolved Sea Sparrow Missile (ESSM), the Medium Extended Air Defense System (MEADS), the MLRS Guided Rocket, the Navy Area Tactical Ballistic Missile Defense System, the National Missile Defense (NMD) System, Navy Theater Wide missile defense, the Patriot Advanced Capability (PAC-3), the Rolling Airframe Missile (RAM) HAS, and Theater High Altitude Area Defense (THAAD).

Manage JLF Programs: Conduct tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs. Tests of foreign systems acquired for exploitation will continue. Additional U.S. munitions will be tested against the SCUD launcher. Testing of U.S. munitions against the remaining two classified targets should be completed and reports prepared. JLF tests to investigate the lethality of U.S. munitions against foreign air defense systems will be performed. JLF lethality testing of U.S. weapons against the MiG-29, Hind, and additional air defense systems will be performed. Additional aircraft vulnerability tests of the AH-64, F-117, AH-1S, CH-53E, and OH-58C/D are being planned. JLF will continue to acquire foreign targets and munitions, invest in development of technologies that increase test realism, and improve data base management tools.

User Casualty Assessment: Continue to promote and evaluate user casualty technologies and initiatives to the extent that funding allows.

UNCLASSIFIED

Emphasis will be on user/crew performance and survivability.

Exploring New Technologies/Advanced Concepts and Survivability Initiative: Continue to promote and evaluate new technologies in support of safety and survivability of aircraft, focusing on fire and explosion effects and mitigation.

Physics Based Evaluations: Emphasis will continue in the area of physics based M&S and its close connection to realistic assessment and training. Continue development of consistent approaches to risk evaluation and T&E prioritization based on modeling.

LFT&T: Continue projects started in prior years and start new projects to the extent funding allows.

Directed Energy Weapons: Initiate activities to identify methodologies, instrumentation, and analytical requirements to evaluate lethality of directed energy weapons (DEWs), including vulnerabilities of conventional weapon systems to threat DEW systems to the extent funding allows.

Hypersonic Testing Capability: Investigate technologies, methodologies, and instrumentation needed to develop a hypersonic testing capability of missile defense systems as funding permits.

Official Travel: Perform official travel to carry out oversight of LFT&E programs.

UNCLASSIFIED

B. (U) PROGRAM CHANGE SUMMARY

(\$ in Millions)	<u>FY 2001</u> <u>Appropriation</u>	<u>FY 2002</u> <u>Amended President's</u> <u>Budget Request</u>	<u>FY 2003</u> <u>Clinton Budget</u>
FY 2002 President's Budget	17.054	9.887	10.032
Live Fire Testing & Training Initiative		3.000	
Appropriated Value	17.054	12.887	
Adjustments to Program Value			
Congressional Reduction		(0.090)	
Inflation Adjustment			(0.080)
Program Adjustment			150
Current Budget Submit	17.054	12.797	10.102

C. (U) OTHER PROGRAM FUNDING

NA

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2)					February 2002				
OPERATIONAL TEST AND EVALUATION, DEFENSE (0460) BUDGET ACTIVITY SIX				DEVELOPMENT TEST AND EVALUATION (DT&E) PROGRAM ELEMENT (PE) 0605804D8Z					
\$'s in Millions	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	COST TO COMPLETE	TOTAL COST
PE 0605804D	52.786	60.525	62.941	64.798	66.269	67.860	69.486	Continuing	Continuing

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

This program element consists of two programs: Test and Evaluation (T&E) Programs and T&E Independent Activities.

T&E Programs consist of four activities: Threat Systems (TS); Center for Countermeasures (CCM) (formerly known as Precision Guided Weapons Countermeasures); Joint Technical Coordinating Groups on Aircraft Survivability (JTTCG/AS) and Munitions Effectiveness (JTTCG/ME). Program Decision Memorandum I increased the JTTCG/ME FY 2002 budget by \$5.1 to provide Joint Munitions Effectiveness Manual (JMEM) for the most critical CINC identified weapon systems and to reduce the JMEM distribution cycle.

The T&E programs are continuing efforts that provide management and oversight of Department of Defense (DoD) T&E functions and T&E expertise to the DoD. TS provides Office of the Secretary of Defense (OSD) policy and oversight to Service threat systems and target developments to ensure increased commonality, minimize duplications and provide consistent threat representation validation for T&E. TS funds the management and oversight functions for development of common use threat specifications for threat simulators, threat representative targets and digital threat models used for T&E; integration of T&E requirements for Foreign Material Acquisition (FMA); DoD validation of threat simulators, threat representative targets, and digital threat models; analysis of advanced threat technology applications for simulators and targets; and investigation of new approaches and methods for conducting operational testing of systems and their interoperability in a realistic threat environment. CCM, a Joint Service Countermeasure (CM) T&E Center, conducts analysis, T&E, and assessment of U.S. and Foreign Electro-Optical (EO), Infrared (IR), and Millimeterwave (MMW) precision guided weapons (PGW) and systems, countermeasures (CM), counter-countermeasures, and warning devices for the Services, T&E Agencies, and the Intelligence Community. CCMs staff and the CM knowledge base developed over 30 years provide the DoD acquisition community and Warfighting CINCs with the information and expertise necessary to ensure the survival of U.S. forces on the increasingly hostile modern battlefield. The JTTCG/AS was originally chartered by the Joint Logistics Commanders (JLC) in 1971 to serve as DoD's focal point for the joint service community to enhance the combat survivability of aircraft. This Tri-

UNCLASSIFIED

Service organization serves as the DoD focal point for aircraft survivability methodology and data. This Joint Aeronautical Commanders Group (JACG) chartered program also acts as the DoD focal point for aircraft vulnerability/survivability information, modeling, and simulation (M&S) methodology, as well as the Executive Agent for the Joint Live Fire Aircraft Program managed by the Live Fire Test office of the Director, Operational Test & Evaluation (DOT&E). The JTCG/AS also develops and standardizes methodologies for the evaluation of aircraft survivability (susceptibility and vulnerability) to threat weapons. The JTCG/ME was chartered by the Joint Logistics Commanders (JLC) over 30 years ago to serve as DoD's focal point for authenticated non-nuclear munitions effectiveness information (Joint Munitions Effectiveness Manuals (JMEMs)) on all US major non-nuclear weapons. The JTCG/ME, under the auspices of the JLCs, authenticates weapons effectiveness data for use in training, systems acquisition, weaponeering, procurement, and combat modeling. JMEMs are used by the Armed Forces of the United States, NATO and other allies to plan operational missions, support training and tactics development, and support force-level analyses. The JTCG/ME also develops and standardizes methodologies for evaluation of munitions effectiveness and maintains databases for target vulnerability, munitions lethality and weapon system accuracy. JTCG/AS and JTCG/ME co-chair the Survivability/Vulnerability Information Analysis Center (SURVIAC) Technical Coordinating Group (TCG). The Defense Test and Evaluation Professional Institute (DTEPI) provides computer-based training and on-line web-based training to the DoD T&E community in technical T&E subjects.

T&E Independent Activities is the only source of funding for the DOT&E for studies, analyses, management and technical support, on a continuing basis, in support of policy development, decision-making, management and oversight of the DoD T&E infrastructure, including stewardship of the Major Range and Test Facility Base (MRTFB). Studies and analyses examine the implications and consequences of current and proposed policy, plans, operations, strategies, and budgets and are essential for the oversight and management of DOT&E mission. Funds are used to perform official travel related to the activities within this program element. *Due to the volume of work in this category, examples of the accomplishments and plans are listed in Program Accomplishments and Plans.*

This Research Category 6.5 PE supports management activities for the DOT&E oversight responsibility for T&E and the MRTFB.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

FY 2001 Accomplishments:

T & E Programs

- Threat Systems:
 - Simulators
 - Provided oversight of Service activities in support of the DoD validation program for Service threat simulators and threat digital models.
 - Continued management oversight of Service threat simulators and threat digital models.
 - Continued threat support to T&E by investigations of current scientific and technical developments for insertion in Service threat representation modeling programs (e.g., Integration of RT SAM models w/DIADS, IR SAM Flyout Model Upgrade, Standard UV Plume Model, and Enhanced IADS Messaging in a Simulation/Stimulation Environment).

UNCLASSIFIED

- Continued cooperative technical research and test bed projects to facilitate threat representation (e.g., complete Advanced Threat Aircraft Model testing, Real-Time Digital Receiver Processing for Multiple Threat Systems, IR Countermeasures Evaluation System, and Mobile Broadband Tactical Laser Illuminator).
- Updated the Automated Joint Threat Systems Handbook to maintain inventory of threat representative assets available for the T&E community.
- Defined and planned a process to effectively utilize threat simulators as true distributed test resources in support of multi-service interoperability testing in a realistic threat environment.
- Managed a collaborative effort to provide support for interoperability testing in a realistic threat environment.

Targets

- Continued management oversight of Service threat representative targets.
 - Provided OSD seed funds to prototype solution to highest priority deficiencies in current target systems (e.g., Electronic Countermeasures Miniaturization, Air Superiority Target Study, and Aerial Target IR Enhancement).
 - Supported the development of new target modeling and simulation capabilities /tools that meet multi-Service T&E needs within common/DoD standard architectures (e.g., Radar Variations, Subscale Aerial Target Infrared Signature Augmentation, and Decoy Countermeasures System).
 - Provided oversight of the Service activities in support of the DoD validation program for Service threat representative targets.
 - Defined and planned a process to effectively utilize threat representative targets as true distributed test resources in support of multi-service interoperability testing in a realistic threat environment.
 - Managed a collaborative effort to provide support for interoperability testing in a realistic threat environment.
- CCM tested, analyzed, reported, and otherwise supported over 30 US and foreign Precision Guided Weapon (PGW) systems/components in a countermeasure environment, as well as CM and threat-warning systems and other programs, as listed below:

Air Force:

- P-LOCAAS, SFW P3I, ABL, Joint Air-to-Surface Stand-off Missile (JASSM), Enhanced Paveway, ADW, Red Team, ASTE, HH-60SPS, A-10/F-16 Force Development (FDE), and Small Diameter Bomb

Army:

- Army C SII, BAT P3I, SIIRCM/CMWS, Longbow P3I Missile, Unmanned Aerial Vehicle (UAV), XM-982, Tank Extended Range Munition-Kinetic Energy (TERM-KE), Live-Fire Basic HELLFIRE, Comanche, AN/VVR-1, and AN/AVR-2

Navy/Marines:

- EWAT, NRL-LWR, MV-22, TADIRCM, Extended Range Guided Munition (ERGM), Joint Stand Off Weapon (JSOW) Unitary Seeker, F/A-18 Night Attack System (NAS), Standoff Land Attack Missile-Automatic Target Acquisition (SLAM-ATA), AAR-47/LWR, Integrated Electronic Warfare System/Multi-Antiship Missile Tactical Electronic System (IEWS/MATES)

Foreign:

UNCLASSIFIED

- Foreign Rangefinder Exploitation Evaluation-G (FREE-G), Night Attack Vision Exploitation (NAVE-G), Foreign GPS, Foreign Laser Beamrider (FLBR) Phase I, Foreign Active Protection System (FAPS) Phase II, Foreign Integrated Night Sights (FINS), Foreign Laser Adjunct Program-BP (FLAP-B) (code names for classified projects)

M&S:

- MV-22 & CV-22 Tilt-rotor DT/OT, VTUAV, ATFLIR, IEWS/MATES, ERGM, DVO tests, JSOW

Other:

- TTCP, NATO Panels G-17 and SWG-4, NATO EMBOW Trials, CINC/Joint Training: JTFEX, Unified Endeavor, Roving Sands 2001 (RS01), NTC Rotation 01-1, and Marine Aviation and Weapons Tactics exercises
- Provided CM inputs for evolving programs, identified by the Service Acquisition PEOs/PMs
- Continued efforts promoting the CM Warfare Initiative, and direct plans for participation in operational warfighting exercises and simulations

- JTCG/AS:

- Completed revision of the second edition of the aircraft survivability textbook to be published in FY 2002 by AIAA.
- Completed the acquisition deskbook survivability project.
- Completed the advanced survivable Rotorcraft project.
- Completed the advanced ullage protection system project.
- Completed the dual mode seeker countermeasures project.
- Completed the Man Portable Air Defense System (MANPADS) Vulnerability of Thermo-plastic Tailboom project.
- Completed the Monobit Multisignal Instantaneous Frequency project.
- Completed the network-centric stand-in jammer project.
- Completed the survivable engine control algorithm project.
- Completed work on the advanced ullage protection project.
- Completed work on the advanced wideband mode 'former' technology project
- Completed work on the dual mode seeker countermeasures project.
- Completed work on the MANPADS penetration methodology project.
- Completed work on the mono-bit multi-signal IFM development project.
- Continued follow-on modeling requirements for AJEM
- Continued MANPADS Impact Point Assessment.
- Continued MANPADS Threat Characterization project
- Continued participation on the COVART/FASTGEN and air-to-air (BRAWLER) configuration control boards.
- Continued the engine Damage Detection project
- Continued the Improved Air-Countermeasure with Ultra-fine Aluminum
- Continued the Joint Service Surrogate seeker project.
- Continued the M&S support for acquisitions program project

UNCLASSIFIED

UNCLASSIFIED

- Continued the methodology to assess helicopter susceptibility to mines project.
- Continued the surface-to-Air missile credibility assessment project.
- Continued the very wideband accurate direction finding project.
- Continued the WINFIRE/ULLEX project.
- Continued to support the SURVIAC Model Manager and Model Accreditation.
- Continued work on the advanced survivable Rotorcraft project.
- Continued work on the weapons bay ablative characterization project.
- Initiated Advanced Joint Effectiveness Model (AJEM) Configuration Management Support.
- Initiated the Aerogels for retrofitted increases in aircraft survivability project.
- Initiated the Air Countermeasure with Ultra-fine Aluminum project.
- Initiated the bonded wing survivability project.
- Initiated the dynamic loading methodology project.
- Initiated the miniaturized countermeasures for Unmanned Aerial Vehicles (UAVs).
- Initiated the passive fire mitigation project.
- Initiated the proof of concept for weapons bay project.
- Initiated the surface to Air missile credibility assessment project.
- Initiated the survivability in higher level analyses and return on investment for aircraft survivability.
- Initiated the Tier II/III laser susceptibility project.
- JTCG/ME:
 - Converted and updated existing JMEMs to CD-ROM format (i.e., JMEM Air-to-Surface Weaponing System (JAWS) v2.2/v2.3, Joint Anti-air Combat Effectiveness – Air Defense (J-ACE: AD) v2.0, Joint Anti-air Combat Effectiveness - Air Superiority (J-ACE: AS) v2.0, JMEM/Surface-to-Surface Weaponing Effectiveness System (JWES) v2.0, and Target Vulnerability Manual v2.2 on JAWS).
 - Released JAWS 2.2 Attack version in support of counter-terrorism planning and operations (Operation Enduring Freedom).
 - Distributed products via the classified internet with the Joint Product and Information Access System (JPIAS) v2.0 (Books-on-line, Automated products, Models, Tri-Service Data, and Support service).
 - Expanded existing databases to incorporate effectiveness data for newly fielded weapons (i.e., Air-to-Surface Basic Manual – Revision, and Surface-to-Surface Direct/Indirect Fire).
 - Executed Target Vulnerability data generation (e.g., industrial targets, NCAA targets, small boats, building structures, SATCOMs and TBMs) and methodology improvements (e.g., counter proliferation, titanium fragment penetration/equation standardization, ORCA extension, and target model generation).
 - Continued expansion of existing databases to incorporate effectiveness data for newly fielded weapons (i.e., Air-to-Surface Basic Manual – Revision, and Surface-to-Surface Direct/Indirect Fire).

UNCLASSIFIED

- Continued execution and technical coordination efforts to address Target Vulnerability data generation (e.g., industrial targets, NCAA targets, small boats, building structures, SATCOMs and TBMs) and methodology improvements (e.g., counter proliferation, titanium fragment penetration/equation standardization, ORCA extension, and target model generation).
- Continued the development of standardized models and methodology for Air-to-Surface, Surface-to-Surface and Anitair effectiveness calculations (i.e., collateral damage module, hardened targets module, building analysis module, Joint Anti-Air Model (JAAM), JAWS target acquisition, Joint Smart Weapons Module (JSWM), GPS accuracy and multiple weapon types).
- Conducted Configuration Management/VV&A efforts on specific JTCG/ME models (i.e., JSEM, AJEM, MEVA-GF, MUVES-S2, BEAMS/ABEL, GENESIS-BAT, PENCURV, ORCA, MAE, and ASAP).
- Together with the JTCG/AS, released Advanced Joint Effectiveness Model (AJEM) v1.2 (COVART HEI Fireball, HEI Deterministic Method, and LINUX Capability), and Joint Component Vulnerability Archive v1.0.
- Developed consolidated CINC priority list and continued CINC data calls in support of FY02 program build requirements.
- Finalized development of National Disclosure Policy and classification review for the JAWS CD-ROM to address requirements for coalition operations.
- Initiated pilot programs for compliance with near-term acquisition programs to facilitate compliance with DOD 5000.2R (BAT/P3I, Patriot PAC III, TACTOM, Evolved Sea Sparrow, JSOW SFW/SFW P3I, JASSM, and AIM-9X).

T&E Independent Activities

- MRTFB Support:
 - Analyzed MRTFB institutional and customer data in support of policy decisions regarding the composition and management of the MRTFBs.
 - Monitored and evaluated the MRTFB to ensure adequacy to meet requirements and to prevent unnecessary duplication of capabilities.
 - Developed and issued a summary and database of MRTFB capabilities in coordination with the Military Departments for use in assessing future capability requirements.
 - Analyzed MRTFB data and proposed issues for the Annual MRTFB Review. Prepared a Summary Report and follow-up to ensure implementation of DOT&E solutions to issues.
 - Analyzed T&E PPBS information for identification and resolution of potential shortfalls during POM and budget reviews.
- Spectrum Support:
 - Submitted report key resolution approaches addressing spectrum augmentation at higher frequencies.
 - Assessed development associated with initiatives to reallocate spectrum from Federal allocations.
 - Continued support to Range Spectrum Requirements Working Group
- Telemetry Support:
 - Presented technical briefings to the International Consortium for Telemetry Secretary
 - Continued to support Real Time Telemetry Network (RTTN) initiatives.

UNCLASSIFIED

- Conducted study assessing the capability of MSTC System at different bands.
- Special Studies (Examples):
 - Evaluated and provided recommendations on the Navy's proposal to eliminate Atlantic Fleet Weapons Training Facility and add Pacific Missile Range Facility to the MRTFB.
 - Assessment of the Multi-Service Target Control System (MSTCS) in the 1350 to 1390 Mega Hertz band.
 - Drafted the new International Test and Evaluation Steering Committee Handbook.
 - Drafted the International Test Operations Procedures handbook.
 - Reviewed legislative proposal reciprocal international use of T&E facilities.
 - Evaluated and assessed the potential implementation of the Defense Science Board recommendations for improvement of T&E and the T&E infrastructure.
- Automated Test Planning System (ATPS):
 - Provided an automated Defense-Wide system to plan, produce and coordinate Test and Evaluation Master Plans (TEMPS) and test plans.
 - Managed and maintained the system to include incorporating MS Project program.
 - Completed conversion to open systems architecture using relational database driven expert system. Beta testing by 193 users.
 - Initiated and completed capability to extract data from documents and Internet.
 - Incorporated new operational test and evaluation policy in the database "rules".
 - Database has been finalized and the program is complete.
- Defense Test and Evaluation Professional Institute (DTEPI):
 - Develops and updates T&E course and training materials for the DoD T&E community to include computer based and WEB based training. Course and training projects included (examples):
 - Developed WEB-based Just-in-Time Information on:
 - Environmental Issues For Test and Evaluation
 - Modeling and Simulation
 - Central Test and Evaluation Investment Program (CTEIP)
- T&E M&S:
 - Provided technical and analytical expertise in support of the DOT&E M&S efforts.
 - Assessed the JMASS 5.0 Beta software.
 - Analyzed and made recommendations on the Accreditation Plan for the Joint Standoff Weapons (JSOW).
 - Supported DOT&E with M&S analyses for the following IPTs: Interoperability, Comanche; and ATIRCM/CMWS;
- Director, Operational Test and Evaluation Enterprise Knowledge Management System (DEKMS):
 - Continued the design and development of a Knowledge Management System (KMS), adding robust functionality to enable rapid decision-making on time critical events. The system was extended to the majority of the DOT&E enterprise and included T&E templates, guidelines and best practices for DoD personnel. This effort fully supported the Department's goal and vision.

UNCLASSIFIED

- Official Travel and Administrative Support:
 - Performed official travel in support of the DOT&E oversight of T&E infrastructure.
 - Procured administrative support to carry out oversight of DOT&E programs.
- Accounting and Financial Management Support:
 - Provided accounting and financial management support to the Office of the Director.

FY 2002 Plans:

T & E Programs:

- Threat Systems:
 - Simulators
 - Provide oversight of Service activities in support of the DoD validation program for Service threat simulators and threat digital models.
 - Continue management oversight of Service threat simulators and threat digital models.
 - Continue threat support to T&E by investigations of current scientific and technical developments for insertion in Service threat representation modeling programs (e.g., Standard UV Plume Model, Integration of Laser Beam Rider Simulator Integration, Advanced Threat Algorithm Analysis, Testing of EO/IR SAM HWITL Flyout Models, PC Based Infrared Scene Generator, and Tactical Training Range Threat Augmentation).
 - Continue cooperative technical research and test bed projects to facilitate threat representation (e.g., Seeker Aided Ground Guidance (SAGG) SAM ECM Operational Testing Capability, RT SAM Models w/DIADS, UV Calibration and Verification System Distribution Study, and 4 Dimensional Portable and Reconfigurable Holographic System Study).
 - Continue to provide the tools to exchange the latest scientific and technological information between test and evaluation and intelligence communities (e.g., Playback of WTR Data into TSAF, Distributed Threat Environment Operational Testing Capability Study).
 - Update the Automated Threat Systems Handbook to maintain inventory of threat representative assets available for the T&E community.
 - Develop initial test cases to implement the process to effectively utilize threat simulators as true distributed test resources in support of multi-Service interoperability testing in a realistic threat environment.
 - Develop initial tool set, methodologies, and operational standards for measures of effectiveness and interoperability testing of the initial test cases.
 - Continue to manage a collaborative effort to provide support for interoperability testing in a realistic threat environment.
 - Targets
 - Continue management oversight of Service threat representative targets.

UNCLASSIFIED

- Provide OSD seed funds to prototype solution to highest priority deficiencies in current target systems (e.g., Low Earth Orbit Satellite Command & Control System (LEOTCS), Urban Target Complex, RATO Technology, Smokey SAM Missile Warning Stimulator, and Reusable & Recoverable Submarine Target).
- Support the development of new target M&S capabilities /tools that meet multi-Service T&E needs within common/DoD standard architectures (e.g., Decoy Countermeasures System, Subscale IR Signature Augmentation, Advanced Off-Board Countermeasures, Decoy and Countermeasures II, ECM Miniaturization – Cooperative Countermeasures and Radar Variations)
- Provide oversight of the Service activities in support of the DoD validation program for Service threat representative targets.
- Develop initial test cases to implement the process to effectively utilize threat representative targets as true distributed test resources in support of multi-Service interoperability testing in a realistic threat environment.
- Develop initial tool set, methodologies, and operational standards for measures of effectiveness and interoperability testing of the initial test cases.
- Continue to manage a collaborative effort to provide support for interoperability testing in a realistic threat environment
- CCM will test, analyze, report, and otherwise support over 30 US and foreign PGW systems/components in a countermeasure environment, as well as CM and threat-warning systems and other activities and programs, as listed below:
 - Air Force:
 - JASSM, Enhanced Paveway, JDAM, C-17, Litening, Red Team, AGM-65 Maverick, HH-60G SPS, SFW-P3I, AATC Comet, ASTE, A-10/F-16 FDE, ADW, Small Diameter Bomb, CV-22
 - Army:
 - Comanche, Modernized HELLFIRE, Future Scout Vehicle, XM-982 Excalibur, TOW Fire & Forget, AN/AVR-2A ECP, AN/VVR-1, TERM-KE, Longbow Hellfire, Longbow Apache, SIIRCM, and Bat P3I
 - Navy/Marines:
 - Ship-Based Laser Acquisition System (SBLAS), ERGM, IEWS/MATES, JSOW, SLAM-ATA, ATFLIR, and VTUAV
 - Foreign:
 - Foreign Rangefinder Exploitation Evaluation-G (FREE-G), Night Attack Vision Exploitation (NAVE-G), Foreign GPS, Foreign Laser Adjunct Program-B (FLAP-B), Foreign Integrated Night Sights (FINS), and Foreign Active Protection System (FAPS) Phase II
 - M&S:
 - CV-22 Tiltrotor DT/OT, VTUAV, Broadband Infrared Device (BIRD), DVO tests, JSOW, FLBR
 - Other:
 - TTCP, NATO Panels G-17 and SWG-4, CINC Joint training (Ulchi Focus Lens), and Roving Sands 2001 (RS01)
 - Provide CM inputs for evolving programs, identified by the Service Acquisition PEOs/PMs
 - CM Warfare Initiative:

UNCLASSIFIED

Coordinate CM Warfare Initiative at the CINC and MAJCOM levels
Direct plans for participation in operational warfighting exercises and simulations
Brief efforts to establish capability for a Warfighter organization capable of deploying CM in conflict
Establish EO/IR CM training and equipment requirements and objectives for operational exercises and simulations
Continue efforts to promote software modifications to warfighting models and simulations to reflect EO/IR countermeasures scenarios at the Joint and Component Service level

- Provide technical and analytical expertise in support of DOT&E M&S efforts
- Initiate support of the Test Simulation Program, which will provide tools for better test planning and post test analysis
- Review and analyze technical M&S software for use in DOT&E testing environment

- JTCG/AS:

- Complete follow-on modeling requirements for AJEM.
- Complete the Improved Air Countermeasure with Ultra-fine Aluminum project.
- Complete the Improved Air-Countermeasure with Ultra-fine Aluminum
- Complete the M&S support for acquisition programs project.
- Complete the MANPADS Threat characterization project.
- Complete the methodology to assess helicopter susceptibility to mines project.
- Complete the passive fire mitigation project.
- Complete the surface to Air missile credibility assessment project.
- Complete the surface-to-Air missile credibility assessment project.
- Complete the very wideband accurate direction finding project.
- Complete the WINFIRE/ULLEX project.
- Complete work on the weapons bay ablative characterization project.
- Complete work on the advanced survivable Rotorcraft project.
- Continue MANPADS Impact Point assessment project.
- Continue the AJEM Configuration Management Support.
- Continue the Aerogels for retrofitted increases in aircraft survivability project.
- Continue the bonded wing survivability project.
- Continue the dynamic loading methodology project.
- Continue the engine Damage Detection project.
- Continue the Joint Service Surrogate seeker project.
- Continue the miniaturized countermeasures for UAVs.
- Continue the proof of concept for weapons bay process.
- Continue the survivability in higher level analyses and return on investment for aircraft survivability.
- Continue the Tier II/III laser susceptibility project.

UNCLASSIFIED

- Continue to support the SURVIAC Model Manager and Model Accreditation.
- Continued participation on the COVART/FASTGEN and air-to-air (BRAWLER) configuration control boards.
- Initiate and Complete the solid state laser pointer project.
- Initiate the advanced survivable Rotorcraft Validation project
- Initiate the AJEM test Cases project.
- Initiate the DBFM Ignition Phase Validation Data Assessment.
- Initiate the Imaging seeker Aim Point project.
- Initiate the Instant Firewalls project.
- Initiate the Ionomer Fuel Containment project.
- Initiate the JMASS Simulation Integration project.
- Initiate the RADGUNS Maintenance project.
- Initiate the TRACES Model Enhancement project.
- Initiate the UAV Active Acoustic Cancellation project.
- JTCG/ME:
 - Develop JMEM data for most critical CINC identified systems. Continue conversion/updates of existing JMEMs to CD-ROM format (i.e., JMEM Air-to-Surface Weaponeering System (JAWS) v2.3, Joint Anti-air Combat Effectiveness – Air Defense (J-ACE: AD) v2.0/3.0, Joint Anti-Air Combat Effectiveness - Air Superiority (J-ACE: AS) v3.0, JMEM/Surface-to-Surface Weaponeering Effectiveness System (JWES) v3.0, and Target Vulnerability Data Management System (TVDMS) v1.0. Work to reduce CD-ROM update cycles to a maximum of 14 months, and develop strategy for target-oriented JMEMs.
 - Distribute products via the classified internet with the Joint Product and Information Access System (JPIAS) v2.0 (Books-on-line, Automated products, Models, Tri-Service Data, and Support service).
 - Continue expansion of existing databases to incorporate data for newly fielded weapons (i.e., Air-to-Surface Basic Manual – Revision 4, and Surface-to-Surface Direct/Indirect Fire).
 - Continue execution and technical coordination efforts to address Target Vulnerability data generation (e.g., Special Operations) and methodology improvements (e.g., counter proliferation, fragment penetration, blast effects, personnel casualty/ORCA extension, and target model generation).
 - Reduce major methodology shortcomings. Develop target visualization tool. Continue the development of standardized models and methodology for Air-to-Surface, Surface-to-Surface and Anti-air effectiveness calculations (i.e., collateral damage, hardened targets, multiple weapon types, real time delivery accuracy/TLE, and dual stage warheads, helicopter-delivered munitions, and small boat weaponeering).
 - Conduct Configuration Management/VV&A efforts on specific JTCG/ME models (i.e., JSEM, AJEM, MEVA, MUVES, and ASAP).

UNCLASSIFIED

- Together with the JTCG/AS, release Advanced Joint Effectiveness Model (AJEM) v2.0 (BRL-CAD 6.0, Updated GUI, Multiple Occurrences Improvements); v2.1 (New Encounter-V/L Interface, Improved MANPADS, and LINUX port), and Joint Component Vulnerability Archive.
- Continue CINC data calls in support of FY03 program build requirements.
- Continue to expand pilot programs for compliance with near-term acquisition programs to facilitate compliance with DOD 5000.2R (BAT/P3I, Patriot PAC III, TACTOM, Evolved Sea Sparrow, JSOW SFW/SFW P3I, JASSM, and AIM-9X).
- Establish intelligence requirements account (COLISEUM) for JTCG/ME through the Defense Intelligence Agency.
- Continue to work on red-on-blue effectiveness data and methodology with focus on STRATCOM requirements.
- Continue to develop/sanitize JMEM products for foreign customers and coalition operations.
- Develop JMEM strategy/plan in support of the DoD High Energy Laser (HEL) program and the Joint Technology Office (JTO).

T&E Independent Activities

- Major Range and Test Facility Base (MRTFB) Support:
 - Analyze MRTFB institutional and customer data in support of policy decisions regarding the composition and management of the MRTFBs.
 - Monitor and evaluate the MRTFB to ensure adequacy to meet requirements and to prevent unnecessary duplication of capabilities.
 - Develop and issue a summary and database of MRTFB capabilities in coordination with the Military Departments for use in assessing future capability requirements.
 - Analyze MRTFB data and propose issues for the Annual MRTFB Review. Prepare a Summary Report and follow-up to ensure implementation of DOT&E solutions to issues.
 - Analyze T&E PPBS information for identification and resolution of potential shortfalls during POM and budget reviews.
- Spectrum Support:
 - Analyze and report on alternative options for telemetry operations in higher frequency bands
 - Develop technical alternatives on issues affecting T&E infrastructure.
 - Provide technical support to Range Spectrum Requirements Working Group on spectrum issues.
- Telemetry Support:
 - Continue to support DOT&E participation in International Consortium for Telemetry Secretary
 - Develop technical approach for Real Time Telemetry Network (RTTN)
 - Perform and conduct special studies on MRTFB radio spectrum issues.
- Special Studies (Examples):
 - Assess the requirements for space range test capability.
 - Expand T&E Assets Identification and Monitoring Process data to include all DoD assets.
- DTEPI:

UNCLASSIFIED

- Develop and updates T&E course and training materials for the DoD T&E community to include computer based and WEB based training. Following are examples of projects:
 - Develop WEB-based Just-in-Time Information on:
 - Interoperability Test & Evaluation
 - Communication Theory Basics and Testing
 - Test and Evaluation
- T&E M&S:
 - Provide technical and analytical expertise in support of DOT&E M&S efforts.
 - Initiate support of the Test Simulation Program, which will provide tools for better test planning and post test analysis.
 - Review and analyze technical M&S software for use in DOT&E testing environment.
 - Provide M&S assessments on key programs such as: Joint Modeling and Simulation System (JMASS), Joint Analytical Model and Instrumentation Program (JAMIP), Joint Distribution & Engineering Plan (JDEP) and Joint Warfare System (JWARS).
 - Prepare final report on the study of military technology trends, and their impact on future M&S requirement, in support of T&E.
- Director, Operational Test and Evaluation Enterprise Knowledge Management System (DEKMS):
 - Completed and delivered the DEKMS. The system has been extended to the majority of the DOT&E enterprise and includes Test and Evaluation templates, guidelines and best practices for DoD personnel. This completes this effort.
- Official Travel and Administrative Support:
 - Perform official travel in support of the DOT&E oversight of T&E infrastructure.
 - Procure administrative support to carry out oversight of DOT&E programs.
- Accounting and Financial Management Support:
 - Provide accounting and financial management support to the Office of the Director.

FY 2003 Plans:

T & E Programs:

- Threat Systems:
 - Simulators
 - Continue to provide the tools to exchange the latest scientific and technological information between T&E and intelligence communities (e.g., Develop Threat Signals/Models for Double Digit SAM Communication Signals, SIMULINK Tools for Intelligence Production Centers and Chemical Source Term Determination).
 - Update the Automated Threat Systems Handbook to maintain inventory of threat representative assets available for the T&E community.
 - Provide oversight of Service activities in support of the DoD validation program for Service threat simulators and threat digital models.
 - Execute the DoD validation program for threat simulators and threat digital models.

UNCLASSIFIED

- Continue to develop initial test cases to implement the process to effectively utilize threat simulators as true distributed test resources in support of multi-Service interoperability testing in a realistic threat environment.
- Develop initial tool set, methodologies, and operational standards for measures of effectiveness and interoperability testing of the initial test cases.
- Continue to manage a collaborative effort to provide support for interoperability testing in a realistic threat environment.
- Continue management oversight of Service threat simulators and threat digital models.
- Continue threat support to T&E by investigations of current scientific and technical developments for insertion in Service threat representation modeling programs (e.g., XM11 Radar Signal Injection, RF Threat Simulator Verification Asset for ECM T&E, JIMM – EW/EA Modeling, Flyout Model Integration, Tactical Training Range Threat Augmentation, and JSF Intelligent Modeling).
- Continue the cooperative technical research and test bed projects to facilitate threat representation (e.g., UV Calibration and Verification System Distribution Study, Threat Engagement Visualization, Development of Threat Vulnerability Data for Military Helicopters, Missile Warning System Plume Model Study, and Enhanced Sensor Data Fusion).

Targets

- Continue management oversight of Service threat representative targets.
- Provide OSD seed funds to prototype solution to highest priority deficiencies in current target systems (e.g., High Energy Laser Study, Smokey SAM Missile Warning Stimulator, and Urban Target Complex).
- Support the development of new target modeling and simulation capabilities /tools that meet multi-Service T&E needs within common/DoD standard architectures (e.g., Reusable and Recoverable Submarine Target Study, Engine Enhancement Demonstration, Subscale IR Signature Augmentation, Decoy and Countermeasures II, and Radar Variations).
- Provide oversight of the Service activities in support of the DoD validation program for Service threat representative targets.
- Continue the development of initial test cases to implement the process to effectively utilize threat representative targets as true distributed test resources in support of multi-Service interoperability testing in a realistic threat environment.
- Continue the development of tool sets, methodologies, and operational standards for measures of effectiveness and interoperability testing of the initial test cases.
- Continue to manage a collaborative effort to provide support for interoperability testing in a realistic threat environment.
- CCM will test, analyze, report, and otherwise support over 30 US and foreign PGW systems/components in a countermeasure environment, as well as CM and threat-warning systems and other activities and programs, as listed below:

Air Force:

- JASSM, Enhanced Paveway, Litening, Red Team, AGM-65G and H Maverick, HH-60G SPS, SFW-P3I, AATC Comet, ASTE, A-10/F-16 FDE, ADW, Small Diameter Bomb, CV-22

Army:

UNCLASSIFIED

- Comanche, Modernized HELLFIRE, Future Scout Vehicle, XM-982 Excalibur, TOW Fire & Forget, AN/AVR-2A ECP, AN/VVR-1, TERM-KE, Longbow Hellfire, Longbow Apache, SIIRCM, and Bat P3I

Navy/Marines:

- Vertical Takeoff/Landing Tactical Unmanned Aerial Vehicle (VTUAV), AT FLIR, IEWS/MATES, ERGM, TADIRCM, and F/A-18 Kinematic Flare development

Foreign:

- Foreign Rangefinder Exploitation Evaluation-H (FREE-H), Night Attack Vision Exploitation (NAVE-H), Foreign Sensor Fuzed Weapon (FSFW), Foreign Laser Beamrider, Foreign Laser Guided Projectiles

M&S:

- CV-22 Tiltrotor, VTUAV and DVO tests. Incorporate multimode sensor guidance technology.

Other:

- TTCP, NATO Panels G-17 and SWG-4
- Provide CM inputs for evolving programs, identified by the Service Acquisition PEOs/PMs
- CM Warfare Initiative:
 - Coordinate CM Warfare Initiative at the CINC and MAJCOM levels
 - Direct plans for participation in operational warfighting exercises and simulations (Ulchi Focus Lens, Roving Sands 2003, and NTC Rotations)
 - Continue efforts establishing capability for a Warfighter organization capable of deploying CM in conflict
 - Establish EO/IR CM training and equipment requirements and objectives for operational exercises and simulations
 - Develop software modifications to warfighting models and simulations to reflect EO/IR countermeasures scenarios at the Joint and Component Service level (JCATS, JSIMS, and CASTFOREM)
- Provide technical and analytical expertise in support of DOT&E M&S efforts
- Initiate support of the Test Simulation Program, which will provide tools for better test planning and post test analysis
- Review and analyze technical M&S software for use in DOT&E testing environment

JTCG/AS:

- Complete the engine Damage Detection project.
- Complete the Aerogels for retrofitted increases in aircraft survivability project.
- Complete the bonded wing survivability project.
- Complete the dynamic loading methodology project.
- Complete the Joint Service Surrogate seeker project.
- Complete the MANPADS Impact Point Assessment.
- Complete the miniaturized countermeasures for UAVs.
- Complete the proof of concept for weapons bay process.
- Complete the survivability in higher-level analyses and return on investment for a/c survivability.

UNCLASSIFIED

- Complete the Tier II/III laser susceptibility project.
 - Continue the AJEM Configuration Management Support.
 - Continue the advanced survivable Rotorcraft Validation project
 - Continue the AJEM test Cases project.
 - Continue the DBFM Ignition Phase Validation Data Assessment.
 - Continue the Imaging seeker Aim Point project.
 - Continue the Instant Firewalls project.
 - Continue the Ionomer Fuel Containment project.
 - Continue the JMASS Simulation Integration project.
 - Continue the RADGUNS Maintenance project.
 - Continue the TRACES Model Enhancement project.
 - Continue the UAV Active Acoustic Cancellation project.
 - Continue to support the SURVIAC Model Manager and Model Accreditation.
 - Continue to participate on the COVART/FASTGEN and air-to-air (BRAWLER) CCBs.
 - Initiate projects to advance Aerospace survivability of spacecraft.
 - Initiate projects to counter advanced threats.
 - Initiate projects to develop survivability enhancements in fire & explosion protection.
 - Initiate projects to develop survivability enhancements in flight systems.
 - Initiate projects to develop survivability enhancements in platform & crew protection.
 - Initiate projects to develop survivability enhancements in propulsion systems.
 - Initiate projects to develop survivability enhancements in structural design.
 - Initiate projects to improve survivability analysis and design tools for Model management.
 - Initiate projects to improve survivability analysis and design tools for transitioning to joint models.
 - Initiate projects to improve survivability analysis and design tools for M&S credibility.
 - Initiate projects to reduce the MANPADS threat to aircraft.
- JTCG/ME:
- Develop JMEM data for most critical CINC identified systems. Continue conversion/updates of existing JMEMs to CD-ROM format (i.e., JMEM Air-to-Surface Weaponing System (JAWS) v3.0, Joint Anti-air Combat Effectiveness – Air Defense (J-ACE-AD) v3.0, Joint Anti-Air Combat Effectiveness - Air Superiority (J-ACE: AS) v3.0, JMEM/Surface-to-Surface Weaponing Effectiveness System (JWES) v3.0/4.0, and Target Vulnerability Data Management System (TVDMS) v2.0). CD-ROM update cycles will be reduced.
 - Distribute products via the classified internet with the Joint Product and Information Access System (JPIAS) (Books-on-line, Automated products, Models, Tri-Service Data, and Support service).

UNCLASSIFIED

UNCLASSIFIED

- Continue expansion of existing databases to incorporate data for newly fielded weapons (i.e., Air-to-Surface Basic Manual – Revision 4, and Surface-to-Surface Direct/Indirect Fire).
- Continue execution and technical coordination efforts to address Target Vulnerability data generation (e.g., Special Operations) and methodology improvements (e.g., counter proliferation, fragment penetration, ORCA extension, and target model generation).
- Reduce major methodology shortcomings. Continue the development of standardized models and methodology for Air-to-Surface, Surface-to-Surface and Anti-air effectiveness calculations (i.e., collateral damage, hardened targets, mean area of effectiveness (MAE) and dual stage warheads).
- Conduct Configuration Management/VV&A efforts on specific JTCG/ME models (i.e., JSEM, AJEM, MEVA, MUVES, and ASAP).
- Together with the JTCG/AS, release AJEM v2.x (Fire/Dry Bay Fire Module, TBM body-to-body, ullage explosion, Ground-mobile documentation, Supporting ASP documentation on CD, Fault Tree and Damage Assessment List, Common AJEM/MUVES GUI, ORCA Integration, Fire Prediction Model Integration, and BEAMS/ABEL Integration – Blast Load), and Joint Component Vulnerability Archive.
- Continue CINC data calls in support of FY04 program build requirements.
- Continue to expand pilot programs for compliance with near-term acquisition programs to facilitate compliance with DoD 5000.2R (BAT/P3I, Patriot PAC III, TACTOM, Evolved Sea Sparrow, JSOW SFW/SFW P3I, JASSM, and AIM-9X).
- Continue to develop/sanitize JMEM products for foreign customers and coalition operations.
- Develop tri-service vulnerability/lethality methodology for the HEL program.

T&E Independent Activities

- Major Range and Test Facility Base (MRTFB) Support:
 - Analyze MRTFB institutional and customer data in support of policy decisions regarding the composition and management of the MRTFBs.
 - Monitor and evaluate the MRTFB to ensure adequacy to meet requirements and to prevent unnecessary duplication of capabilities.
 - Develop and issue a summary and database of MRTFB capabilities in coordination with the Military Departments for use in assessing future capability requirements.
 - Analyze MRTFB data and propose issues for the Annual MRTFB Review. Prepare a Summary Report and follow-up to ensure implementation of DOT&E solutions to issues.
 - Analyze T&E PPBS information for identification and resolution of potential shortfalls during POM and budget reviews.
- Spectrum Support:
 - Analyze and report on alternative options for telemetry operations in higher frequency bands
 - Develop technical alternatives on issues affecting T&E infrastructure.
 - Provide technical support to Range Spectrum Requirements Working Group on spectrum issues.
- Telemetry Support:

UNCLASSIFIED

- Continue to support DOT&E participation in International Consortium for Telemetry Secretary
- Develop technical approach for Real Time Telemetry Network (RTTN)
- Perform and conduct special studies on MRTFB radio spectrum issues.
- Special Studies (Examples):
 - Assess the requirements for space range test capability.
 - Expand T&E Assets Identification and Monitoring Process data to include all DoD assets.
- DTEPI:
 - Develops and updates T&E course and training materials for the DoD T&E community to include computer based and WEB based training. Following are examples of projects:
 - Develop computer based training course for the following topics:
 - A Guide to Targets and their Capabilities
 - Develop WEB-based Just-in-Time Information on:
 - Communication Theory Basics and Testing
 - Software Test and Evaluation
- T&E M&S:
 - Provide technical and analytical expertise in support of DOT&E M&S efforts.
 - Continue support of the Test Simulation Program, which will provide tools for better test planning and post test analysis.
 - Review and analyze technical M&S software for use in DOT&E testing environment.
 - Provide M&S assessments on key programs such as: Joint Modeling and Simulation System (JMASS), Joint Analytical Model and Instrumentation Program (JAMIP), Joint Distribution & Engineering Plan (JDEP) and Joint Warfare System (JWARS).
 - Prepare final report on the study of military technology trends, and their impact on future M&S requirement, in support of T&E.
- Official Travel and Administrative Support:
 - Perform official travel in support of the DOT&E oversight of T&E infrastructure.
 - Procure administrative support to carry out oversight of DOT&E programs.
- Accounting and Financial Management Support:
 - Provide accounting and financial management support to the Office of the Director.

UNCLASSIFIED

B. (U) PROGRAM CHANGE SUMMARY

(\$ in Millions)	<u>FY 2001 Appropriation</u>	<u>FY 2002 Amended President's Budget Request</u>	<u>FY 2003 Clinton Budget</u>
FY 2002 President's Budget	52.786	59.447	62.092
Target and Threat Systems Interoperability Testing		1.500	
Appropriated Value	52.786	60.947	
Adjustments to Program Value			
Congressional Reduction		(0.422)	
Inflation Adjustment			(0.080)
Program Adjustment			0.769
Current Budget Submit	52.786	60.525	62.941

C. (U) OTHER PROGRAM FUNDING SUMMARY: NA

UNCLASSIFIED

OFFICE OF THE SECRETARY OF DEFENSE

OPERATIONAL TEST AND EVALUATION, DEFENSE (0460)

SUMMARY OF FY 2003 BUDGET ESTIMATES
(In Thousands of Dollars)

Appropriation Account Title	Direct Budget Plan (TOA)			Budget Authority			Outlays		
	FY 2001 <u>Actual</u>	FY 2002 <u>Estimate</u>	FY 2003 <u>Estimate</u>	FY 2001 <u>Actual</u>	FY 2002 <u>Estimate</u>	FY 2003 <u>Estimate</u>	FY 2001 <u>Actual</u>	FY 2002 <u>Estimate</u>	FY 2003 <u>Estimate</u>
RDT&E (DoD): 0460	224,975	230,244	222,054	224,975	230,244	222,054	229,767	234,581	222,627

Operational Test and Evaluation, Defense

UNCLASSIFIED

OFFICE OF THE SECRETARY OF DEFENSE

OPERATIONAL TEST AND EVALUATION, DEFENSE (0460)

ADVISORY AND ASSISTANCE SERVICES

OPERATIONAL TEST AND EVALUATION, DEFENSE APPROPRIATION (0460)	<u>(Dollars In Thousands)</u>		
	FY 2001 <u>Actuals</u>	FY 2002 <u>Estimate</u>	FY 2003 <u>Estimate</u>
I. Management & Professional Support Services			
FFRDC Work	0	0	0
Non-FFRDC Work	487	1,830	1,921
Subtotal	487	1,830	1,921
II. Studies, Analysis & Evaluations			
FFRDC Work	4,890	5,715	5,616
Non-FFRDC Work	0	0	0
Subtotal	4,890	5,715	5,616
III. Engineering & Technical Services			
FFRDC Work	19,815	19,539	22,012
Non-FFRDC Work	7,783	7,041	7,102
Subtotal	27,598	26,580	27,234
TOTAL	32,975	34,125	36,651
FFRDC Work	24,705	25,254	27,628
Non-FFRDC Work	8,270	8,871	9,023

UNCLASSIFIED

OFFICE OF THE SECRETARY OF DEFENSE
 OPERATIONAL TEST AND EVALUATION, DEFENSE (0460)
 CONTRACT REPORTING BY APPROPRIATION
 (In Thousands of Dollars)

<u>Appn</u>	<u>FY 2001 Actual</u>			<u>FY 2002 Estimate</u>			<u>FY 2003 Estimate</u>		
	<u>Total</u> <u>Contracts</u>	<u>Other</u> <u>Services</u> <u>Contracts</u>	<u>% of</u> <u>Total</u> <u>Contracts</u>	<u>Total</u> <u>Contracts</u>	<u>Other</u> <u>Services</u> <u>Contracts</u>	<u>% of</u> <u>Total</u> <u>Contracts</u>	<u>Total</u> <u>Contracts</u>	<u>Other</u> <u>Services</u> <u>Contracts</u>	<u>% of</u> <u>Total</u> <u>Contracts</u>
0460 (D)	224,257	0	0.0%	228,601	0	0.0%	221,281	0	0.0%

UNCLASSIFIED

OFFICE OF THE SECRETARY OF DEFENSE
OPERATIONAL TEST AND EVALUATION, DEFENSE (0460)
COMPETITIVE AND STRATEGIC SOURCING

Negative Report

Exhibit PB-42, Competitive and Strategic Sourcing
(Exhibit PB-42, Page 1 of 1)

UNCLASSIFIED

UNCLASSIFIED

OFFICE OF THE SECRETARY OF DEFENSE
OPERATIONAL TEST AND EVALUATION, DEFENSE (0460)
INTERNATIONAL TRAVEL

Component: Director, Operational Test and Evaluation (DOT&E)
Point of Contact (Mary J. Wells/(703) 578-8222
Date: February 2002

	<u>Prior Year</u>
Total Obligations (\$ In Thousands)	10.458
Total Number of Individuals	4

UNCLASSIFIED

OFFICE OF THE SECRETARY OF DEFENSE

OPERATIONAL TEST AND EVALUATION, DEFENSE (0460)

Document Declassification
FY 2003 President's Budget
(Dollars in Thousands)

Appropriation	FY2001 Actual	FY 2002 Estimate	FY 2003 Estimate
0460	0	0	0
Total	0	0	0