

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)						DATE February 2004	
APPROPRIATION/BUDGET ACTIVITY 6 Research, Development, Test & Evaluation, Defense-wide				R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z			
COST (In Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total Program Element (PE) Cost	29.465	29.762	30.618	31.117	31.772	32.300	32.995
95 P421 Technical Studies, Support & Analysis	29.465	29.762	30.618	31.117	31.772	32.300	32.995

A. Mission Description and Budget Item Justification

This program element is classified in Budget Activity 6 (Management Support) because it is a primary source of funding for the Office of the Secretary of Defense and the Joint Staff for studies, analyses, management, and technical support efforts, to improve and support policy development, decision-making, management and administration of DoD programs and activities. Specific projects address a variety of complex issues and dynamic problems facing the Under Secretary of Defense for Acquisition, Technology & Logistics [USD (AT&L)], the Under Secretary of Defense for Policy [USD (P)], Under Secretary of Defense for Personnel and Readiness [USD (P&R)], Assistant Secretary of Defense for Networks & Information Integration [ASD(NII)], Director for Program Analysis and Evaluation (D,PA&E), the Joint Staff and Unified Command Commanders. Studies and analyses will examine the implications and consequences of current and alternative policies, plans, operations, strategies and budgets, and are essential for understanding and gaining insight into the complex multifaceted international, political, technological, economic, military, and acquisition environments in which defense decisions and opportunities take place. With our need to better understand and cope with the threats and uncertainties facing the Nation in the current security, threat, and economic environments, the need for objective analyses and forward-looking planning for the mid and long-range (at acceptable risk) becomes greater.

Details follow for each Under Secretary and Director or Chairman supported.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
Research, Development, Test & Evaluation, Defense-wide	Technical Studies, Support & Analysis PE 0605104D8Z	

General Support for USD (ACQUISITION, TECHNOLOGY & LOGISTICS) :

FY 2003 Accomplishments

- For SECDEF directly, further developed a capabilities-based Rapid Dominance strategy (Shock & Awe)
- Continued integration and display of Hard & Deeply Buried Target Defeat requirements and program options
- Continued long-range precision strike assessment from an integrated global perspective to provide a comprehensive, integrated and responsive long-range strike capability and quickly overcome projected anti-access and area denial scenarios.
- Single Integrated Space, Air , and Ground Pictures- Continued to build upon current developmental and legacy efforts to provide Full Spectrum Dominance in which we provide situational awareness for missile warnings, intelligence, surveillance, and reconnaissance., bringing together Services to leverage existing capabilities and data sharing technologies to enhance precision targeting and tracking and identification of friendly forces on the battlefield.
- Determined the common data base requirements for DoD Unmanned Aerial Vehicle (UAV) mission planning and proposed a single common mission planning architecture based on a module-based system and standard formats.
- Continued to evaluate technical, architectural, and programmatic issues in ballistic and cruise missile defense: space based sensors, radar systems, electro-optical systems, missile propulsion, missile guidance-and-control, software, lasers, algorithms, and systems engineering. In support of boost and mid-course intercept as well as terminal phase ballistic missile intercept, examine programmatic and technical issues associated with airborne and space based lasers systems and architectures.
- Supported activities for analyzing the interoperability dimensions of military requirements presented in new Operational Requirements Documents and assessing whether

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

the requirements as stated are adequate for producing a system that will achieve the needed interoperability.

- Analyzed TACAIR weapon systems performance, cost, and schedule issues in support of acquisition milestone decisions and DoD planning, programming, and budgeting activities.
- Studied the effectiveness a SMART (Sports Medicine and Recondition Therapy) Center in a forward deployed operation or in a CONUS tactical unit in order to improve mission readiness of military operations through decreased medical attrition rates.
- Reviewed selected system-of-system concepts including Global Information Grid (GIG) to assess application of the Joint Technical Architecture and the extent of resulting interoperability.
- Implemented steps to review and document processes and technologies DoD-wide that serve as barriers or enablers to information, logistics, and business system interoperability.
- Estimated DoD laboratories' ability to biomonitor blood, and developed internal DoD capability to analyze blood for VOC (Volatile Organic Compounds)
- Assessed state of markets/firms -- Tactical Aircraft (retaining future design/manufacturing capability), Helicopters, Space, Missiles and Precision Guided Munitions (PGM), UAV, Shipbuilding, and Less Traditional Supplier Industry Studies
- Assessed Acquisition Program Plans, especially Nunn McCurdy breaches on various programs, and the Joint Strike Fighter
- Ensured continuing competition in Defense Industrial Base--performed Merger & Acquisition reviews (including Northrop Grumman/Newport News, TRW, Boeing/Hughes, L3-Communications/Raytheon, AIS and Perkins)
- Analyzed foreign Defense Industry Structure, esp. foreign supplier capabilities for JSF and other programs though building a database on thirty international companies
- Supported Defense Science Board task forces--Acquisition of National Security Space Programs, Enduring Freedom Lessons Learned, Unexploded Ordnance, Defense Against

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

Terrorist Use of Nuclear Weapons Against US, Exploiting Technology for Transformation, Down Vaccine Selection Process (Smallpox), Interference Capabilities, Sea Basing, Joint Experimentation, DoD Roles and Missions in Homeland Security, Enabling Joint Forces Capabilities, Managing Foreign Intelligence by Focusing on Ends Vice Means, Future Conventional & Nuclear Strategic Strike Capabilities, Special Operations employment and intelligence in the War on Terrorism, and B-52 Re-Engining

- Per Congressional direction, evaluated weapon systems requirements and acquisition issues, and submitted master planning documents for key defense mission areas: Conventional Munitions (data collection annually, report submitted every other year), Anti-armor Munitions, and Electronic Warfare.
- CAMIS--Finalized and implemented a web-based, on-line system to capture A-76 data savings, validate the data, and finalize DOD Cost Comparison Handbook
- Developed tools to measure the ability of DoD Fire and Emergency Services to respond to weapons of mass destruction events and recommend means to improve their effectiveness.
- Analyzed 70 newly completed military construction buildings to determine systemic design and construction deficiencies that should have been corrected in design estimate costs to abate the hazards during occupancy. Will write a report cooperatively with industry to fix the problems.
- Developed an inventory of operational ranges and munitions response properties; assessed the cost for remedial action to remove unexploded ordnance contamination from operational ranges; and provide an assessment of available technologies and outline a technology roadmap to lower overall program cost.
- Conducted ESOH (Environmental Safety, Operations, and Health) risk analysis on beryllium in rocket propellant to estimate the magnitude of worker exposure.
- Identified the impacts of alternative utilities on Facilities sustainment costs
- The Small Business Innovation Research (SBIR) Program Reauthorization Act of 2000 (PL 106-554) requires the Department of Defense to cooperatively support the National Academy of Sciences (NAS) comprehensive study of how the SBIR Program has stimulated

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

technological innovation and used small businesses to meet federal research and development needs.

FY 2004 Program:

- Project long term Operations & Support costs for the whole DoD
- Perform trade-off analyses of GMTI (Ground Moving Target Indicator) and Cruise Missile Defense Sensor Systems
- Assess the effectiveness and cost of Unmanned Air Vehicles
- Research on Sizing the Medical Readiness Capability and Managing Beneficiary Demand
- Cost Analysis of the Integrated Global 'Footprint'
- Analyze ways to transfer critical technologies from the military to civilian First Responders to emergencies
- Continue analysis of Joint Airborne Electronic System of Systems
- Analyze the UAV spectrum
- Refine the Nuclear Posture Review incorporating new TRIAD strike force requirements and acquisition approach/programming consistent with the Defense Planning Guidance and the President's direction for Global Strike.
- Continue the Combat Identification Architecture Study to improve the accuracy of the characterization of detected objects in the joint battlespace, minimize fratricide, and improve operational effectiveness
- Assess the potential combat effectiveness of alternative tactical aircraft forces
- Study development, implementation, and investment strategy of advanced electronic countermeasure capabilities
- Develop methods to improve Unmanned Aerial Vehicle survivability
- Identify and analyze the roles of Unmanned Aerial and Ground Vehicles and identified methods to integrate both types of systems.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
Research, Development, Test & Evaluation, Defense-wide	Technical Studies, Support & Analysis PE 0605104D8Z	

- Analyze and identify appropriate air-worthiness and air safety standards for Unmanned Aerial Vehicles (UAVs)
- Study the effects of small and handheld UAVs on manned aircraft, and identify ways to better integrate the battlespace.
- Perform in-depth industrial analyses of the sub-tier supplier base for the tactical missile and precision guided munitions (PGM) industry including market analysis, evaluation of industrial health and capacity, and recommended DoD actions
- Examine the long-term DoD acquisition model for advanced semiconductor devices used in military and intelligence applications (recommended by FY03 Appropriations Conference Report)
- Continue to evaluate technical, architectural, and programmatic issues in ballistic and cruise missile defense: space based sensors, radar systems, electro-optical systems, missile propulsion, missile guidance-and-control, software, lasers, algorithms, and systems engineering.
- Conduct detailed engineering-level vulnerability analysis of Space-based and terrestrial WMD control systems; Long-range, space-based and air-breathing, ISR/Targeting and control systems; land-based OTH surveillance and targeting mechanisms; and dynamically targetable, long-range, cruise and ballistic missile weapons.
- Analyze TACAIR weapon systems performance, cost, and schedule issues in support of acquisition milestone decisions and DoD planning, programming, and budgeting activities.
- Respond to Congressional direction to evaluate weapon systems requirements and acquisition issues, and to submit master planning documents for key defense mission areas: Conventional Munitions Master Plan (data collection annually, report submitted every other year), Anti-armor Munitions Master Plan, DoD Electronic Warfare Plan

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Continue analytic effort to assess total joint warfighting requirements, define systems-of-systems architectures, set and implement policy for systems engineering, interoperability, and integration.
- Provide executive oversight of the multi-service Family of Interoperable Operational Pictures (FIOP) effort to further develop concepts for integrating Single Integrated Air, Ground, Maritime, Space, and Special Operations Pictures, Common Operational Picture and Common Tactical Picture to develop 80% solutions for the FIOP overarching initiative.
- Provide executive oversight of the Blue Force Tracking (BFT) initiative, ensuring multi-service participation and inclusion of technologies from the BFT Advanced Concepts and Technology Demonstration (ACTD).
- Continue support for US-UK Interoperability Commission with emphasis on weapons systems visibility, collaboration and "arrive on site first day integration" war fighting capabilities with emphasis on development of agreed network interfaces, data sharing arrangements, and tactical user operations conventions for military planning through strike functions
- Analyze economic and legal issues hindering privatization of DoD utility systems.
- Ongoing Technical and economic analysis to support Merger & Acquisition reviews
- Assess track record of divestitures used to remedy anti-competitive structures resulting from mergers between defense suppliers
- Continue to monitor footprint of foreign defense firms in the U.S.

FY 2005 Plans:

- Support high priority classified initiatives for the new DUSD (Intelligence)
- Support several Task Forces for the Defense Science Board
- Ongoing Technical and economic analysis to support Merger & Acquisition reviews
- Create database for transparency of all OSD special analyses

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Review allied/coalition partner system developments and acquisition programs to assess interoperability potential and impacts.
- Continue support for National and Allied Coalition efforts for interoperable tactical communications (JTRS/Bowman, ICOG Interoperable Tactical Communications Task Force, to include support for development of US direct interoperability with the UK Bowman radio)
- Conduct several 'cross-cutting analyses' in areas of common concern to several OSD entities, to increase synergy and information sharing within the SECDEF staff

Technical Support for the Director, Program Analysis & Evaluation

FY 2003 Accomplishments:

- Analyzed operational effectiveness of the Future Combat System (FCS) to inform Program Reviews for FY 04-09, and provide alternative, executable courses of action for the Army.
- Continued development of a critical management indicators, tools, and techniques for incorporation into the DPP materials used to provide DoD senior leadership with an overview of the long term trends, "health", and affordability of the defense program..
- Reviewed ongoing issues arising from integration of key technologies in RAH-66 Comanche helicopter and the Beyond Line-of-Sight (BLOS) missile.
- Examined survivability, lethality, and range of individual platforms identified as potential LRI aircraft in context of future threat scenarios to show how platform alternatives influence the effectiveness of the entire force.
- Reviewed army force and manpower issues that arise as part of Program Reviews.
- Reviewed radar technologies to meet future shipboard air defense needs.
- Developed tool for comparing performances of alternative systems, weapon configuration, and force levels.
- Developed mathematical/engineering tools needed to in TACAIR analyses and studies.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
Research, Development, Test & Evaluation, Defense-wide	Technical Studies, Support & Analysis PE 0605104D8Z	

- Assessed operational effectiveness of air-launched weapons performance from a Joint or DoD perspective to aid in future weapon systems decisions.
- Examined the effectiveness of MLRS forces and fire support alternatives.
- Assessed the effectiveness of alternative force mixes for long-range interdiction and air superiority missions.
- Developed a "should cost" model to establish an estimate of requirements for the defense health program and to illuminate decisions on a program that commands an increasing proportion and amount of the DoD topline.
- Estimated the cost of military manpower to make effective force shaping decisions.
- Improved cost estimating relationships for Ballistic Missile Defense systems in preparation for major milestone reviews.
- Provided research on new tools for estimating costs of new development programs in key product sectors.
- Analyzed current program and budget data structures and processes to identify opportunities to integrate and streamline programming and budging data requirements and collection mechanisms.
- Improved the quality, timeliness, and cost effectiveness of DoD software cost estimating with development of a parsimonious set of historical resources and cost-driver data, and data collection consistent with principles of acquisition streamlining.
- Developed approach and comprehensive process to estimate the life-cycle cost of the next generation unmanned air vehicles (UAVs) and uninhabited combat air vehicles
- Developed metrics to evaluate the effectiveness and efficiency of Defense Working Capital Funds (DWCF) activities.
- Provided different options for rapid precision global strike.
- Analyzed aerial refueling tanker requirements in support of air mobility operations.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Developed part of an analytic foundation for examining opportunities and challenges arising from operations with non-US military organization in future smaller scale contingencies (SSCs).
- Analyzed alternatives for structuring future airlift capabilities.
- Verified & Validated simulation model used to analyze strategic lift issues
- Continued development of tool for comparing performances of alternative systems, weapon configuration, and force levels.
- Provided ground forces movement model as basis for ISR in TACAIR air-to-ground campaign modeling.
- Assessed the performance of air-launched weapons from a Joint perspective
- Estimated the cost of military manpower to make effective force shaping decisions.
- Developed metrics that can be used to gauge the sufficiency of military service and major defense agency funding for O&M.
- Analyzed KC-767 pricing, in consideration of DoD lease and buy alternatives for recapitalizing the aerial refueling tanker fleet.

FY 2004 Program:

- Assess the operational effectiveness of the KC-767A aircraft in the aerial refueling role in comparison with the KC-135R.
- Identify the near-term and potential long-term missions that should be conducted by Unmanned Combat Air Vehicles.
- Identify intelligence collection needs and define a corresponding integrated air and space architecture for 2008-2018 time period.
- Analyze the impact of the projected level of global engagement on US force structure on PERSTEMPO and OPTEMPO.
- Analyze cost and force capability implications of current and future defense programs.
- Examine enhancements to force capability and survivability of space systems.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Analyze C4ISR persistence surveillance and rapid strike capabilities.
- Assess military forces capabilities to better exploit information technology.
- Provide mathematical and scientific support for selected TACAIR analyses and studies.
- Continue the development of enhanced cost estimating tools to support military aircraft development and production.
- Improve methodologies for estimating weapon system development costs by the use of simulation techniques.
- Analyze US forces capabilities to display and sustain forces in an access-denial environment.
- Develop a comprehensive process to estimate the life-cycle cost of the next generation unmanned aerial vehicle systems.
- Develop metrics for sufficiency of military service / major defense agency O&M funding
- Provide research on new tools for estimating costs of new development programs in key product sectors.
- Provide technical analysis of selected aviation and ground systems and platforms.
- Estimate the market value and DoD cost to vacate the 1710-1755MHz spectrum.
- Analyze tradeoffs among Ground Moving Target Indicator (GMTI) and cruise missile defense sensor systems.
- Examine the force structure of the Navy Expeditionary Strike Group (ESG).
- Evaluate the effectiveness, costs, operational risks, technological risks, and programmatic risks of alternative joint UCAV and Airborne Electronic Attack (AEA) platform options.
- Examine O&M execution data in support of the Planning, Programming, Budgeting, and Execution System (PPBES).
- Assess the effectiveness and cost of tactical Unmanned Air Vehicles (UAVs).

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Examine the potential impact of force transformation on logistics footprints (number of personnel, numbers and types of units), supply requirements, and deployment timelines and requirements.
- Develop methods for assessing the likely cost and schedule implications of capability needs as developed by the Joint Capabilities Integration and Development System (JCIDS) and as evaluated by the Enhanced Planning Process (EPP).
- Provide senior leaders with key analyses to aid in resource allocation decisions and will directly enhance defense planners' ability to make the most effective use of scarce collective defense resources.
- Assess the impact of various combinations of pre-positioned equipment and forward-based forces and their impact on both mobility requirements and modernization decisions for the C-5, C-17, KC-10, KC-135, C-130 and future airlift/tanker aircraft.
- Examine medical missions, capabilities, and forces in support of defending the homeland; deterring aggression and coercion forward in critical regions; swiftly defeating aggression in overlapping major conflicts while preserving the option to call for a decisive victory in one of the conflicts; and conducting a limited number of smaller-scale contingencies.
- Support the Secretary of Defense's Integrated Global Presence and Basing Strategy initiative by providing rough order of magnitude facilities cost estimates for Forward Operating Bases (FOBs) and Forward Operating Locations (FOLs).
- Examine critical air warfare problems: air-to-air campaigns; integration of intelligence, surveillance, and reconnaissance (ISR) into air campaigns; end game maneuver; the physics of target acquisition and track in air campaigns; modeling a responsive and adaptive adversary; and more.
- Improve the ability to evaluate program assumptions on costs and benefits of software development programs and strategies.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Improve databases and methods for estimating the costs to conduct defense systems remanufacturing, upgrades, modifications, service life extension programs and depot repair activities.
- Improve taxonomies for analyses of forces and missions and improve methods for estimating resource requirements for transformed military forces.
- Perform analyses to improve the Department's understanding of the complex relationship among resources allocated to Central Training, major characteristics of force structure, and the Department's investments in training and learning technologies.
- Develop a set of approaches and comprehensive processes to estimate the life cycle cost of next generation mission systems and avionics.
- Develop a comprehensive, global assessment of programmed operations and maintenance (O&M) funding.
- Analyze the tradeoffs between different operating concepts (CONOPs), platforms and systems in a challenging USW campaign.
- Develop alternative force/capability options for the QDR containing ambitious initiatives to mitigate future risks by transforming the force.

FY 2005 Plan:

- Provide senior leaders with key analyses to aid in resource allocation decisions and enhance defense planners ability to make the most effective use of scarce defense resources in support of transformation and capabilities-based planning.
- Establish a Cost Estimating Institute that will facilitate cooperative activities with industry and academia.
- Continue development of a critical management indicators, tools, and techniques for incorporation into the DPP materials used to provide DoD senior leadership with an overview of the long term trends, "health", and affordability of the defense program..
- Review army force and manpower issues that arise as part of the Program Review process.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Improve tools for comparing performance of alternative systems, weapon configurations, and force levels.
- Improved PA&E's ability to evaluate program assumptions in areas related to software.
- Provide analytical support to senior DoD leadership for development of the Quadrennial Defense Review (QDR).
- Analyze future airlift structures to help with the decision on whether to shut down the C-17 production line.
- Develop new tools to support Capabilities-Based Planning
- Build analytical baselines in support of the Analytical Agenda.
- Perform analyses to support issue teams in the Enhanced Planning Process.

Technical Support for the Under Secretary of Defense (POLICY)

FY 2003 Accomplishments:

- Smallpox Research Experts Group. The priorities established will be used to shape U.S. research plans
- Allied Defense Burdensharing and Capability Analysis report, a Congressionally-mandated report (w/PA&E)
- Completed developing scenarios for forecasting future insurgency threats
- Independent assessment of the needed structure and resources for USSOCOM to more effectively pursue the war on terrorism
- Evaluated Theater Security Cooperation Strategies
- Study to examine and estimate the prospective development of five Middle East economies under reformed economic and political institutions, including the issue of how U.S. policy might help foster improved institutions
- Analyzed the central issues attendant upon Korean unification, including both its economic and security-related consequences

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Studied Turkish Economic Institutions, International Aid, and the Turkish Role in NATO
- Studied the international oil market and the potential economic consequences of an oil embargo
- Launched a major effort to develop scenarios and planning tools for use in connection with the Defense Planning Guidance and capabilities-based planning and programming
- Developed a set of alternate strategic concepts to help develop a warfighting strategy that includes direction for our forces to be able to swiftly defeat the efforts of an adversary
- Identified and documented the key characteristic of current Defense and State Department defense security cooperation programs and how well those programs relate to the objectives and direction provided in the Security Cooperation Guidance (co-funded and co-sponsored with other OSD components)

FY 2004 Program:

- Research the Russian economy, including the status and prospects for Russian economic and institutional reform and the implications for Russian relations with North Korea, Iran, and Cuba
- Study manning the Special Operations Forces, focusing on some critical current and near-term manning issues.
- Develop force capability option packages to help assess ways to mitigate future risk by transforming the force in distinctive ways that can be used in the next QDR (co-funded/co-sponsored with other components)
- Continue analyzing the North Korean nuclear threat
- Initiate a study on Designing a Homeland Strategy for the 21st Century
- Conduct a study on the terrorist threat in Africa
- Develop a strategy for integrated oversight and management of various DoD international education programs

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Develop new Triad Master Plan, consistent with the Defense Planning Guidance and the Nuclear Posture Review guidance
- Continue the Allied Defense Burdensharing and Capability Analysis report, a Congressionally-mandated report
- Study how transformation efforts can be harnessed to maintain U.S. strategic superiority in an unpredictable world

FY 2005 Plan:

- Conduct various studies and research dealing with homeland defense
- Conduct studies and analyses dealing with deterring and responding to terrorism
- Conduct studies that support the goals and requirements of the Quadrennial Defense Review
- Continue research and studies on transforming the force
- Continue work on developing ways to counter the threat posed by weapons of mass destruction
- Conduct regionally-focused studies and other analyses on areas of interest to the new administration

Technical Support for the Under Secretary of Defense (Personnel & Readiness)

FY 2003 Accomplishments:

- Continued the development of a model of long-term operations and support costs, and identified major cost-drivers.
- Continued to evaluate the effect on military training of encroachments on training ranges in CONUS, and extend the analysis to OCONUS training ranges.
- Monitored and analyzed trends in performance metrics collected as part of the Human Resources Strategic Plan.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Estimated the costs of varying size and frequency of Reserve Component mobilizations, and analyzed alternate ways of managing variable periods of activation for reservists.
- Developed and evaluated more flexible tools for the management of the civilian workforce.
- Monitored and analyzed recruiting/retention programs of both military and civilian personnel, and their effectiveness in meeting the Department's need for quality people.
- Evaluated the cost-effectiveness and quality of care provided in the Military Health System (MHS) under the new Managed Care Support Contracts, the National Mail Order Pharmacy Contract, and other MHS initiatives.
- Monitored equal opportunity and sexual harassment policies and examined their effectiveness.
- Continued the assessment of child-care needs of military families.
- Assessed the need for proactive support of employment opportunities for spouses of military members.
- Developed policies to support easier movement among active and reserve components.
- Responded to congressional mandates and directives.

FY 2004 Program:

- Conclude the development of a model to forecast long-term operations and support costs based on major cost-drivers.
- Continue analysis of compensation issues.
- Analyze the implementation to date of TRICARE for Life benefit.
- Continue research support for the Department's recruiting and advertising programs.
- Evaluate the implementation of performance metrics in the P&R mission areas.
- Evaluate retention goals in view of changing personnel needs in the military.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Continue to explore the effects of more flexible career lengths and paths for military personnel.
- Conclude the assessment of child-care needs and preferences of military families, and the exploration of alternate ways the Department can provide child care.
- Analyze the impact of multiple and long-term deployments of reservists on reserve retention.
- Develop new approaches to using non-uniformed personnel in order to free military personnel for core military functions.
- Analyze approaches to eliminating domestic violence in the U.S. military.
- Develop total cost factors to support decisions concerning the conversion of military to civilian positions.
- Conclude the qualitative review of the Military Health System.
- Conclude the assessment of the military medical benefit.
- Develop approaches to managing and coordinating health care for dually-eligible beneficiaries of the Military Health Program.
- Respond to congressional mandates and directives.

FY 2005 Plans:

- Complete analysis of the alternate career path (Up or Stay Military officer) pilot project.
- Begin evaluating and providing "lessons learned" from the new National Security Personnel System (NSPS).
- Continue research to understand the most cost-effective ways to recruit and retain quality civilians.
- Analyze the full costs of family support, and Morale, Welfare, and Recreation activities, for deployed military personnel.
- Develop a strategic approach to joint personnel management.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Defense-wide	R-1 ITEM NOMENCLATURE Technical Studies, Support & Analysis PE 0605104D8Z	

- Re-examine the compensation package for active and reserve military, in view of the recruiting/retention needs of a refocused military.
- Develop a strategic overview of the skills and competencies needed in both civilian and military workforces in view of recent aggressive efforts to convert military to civilian positions wherever possible.
- Develop a robust analysis of the medical readiness needs of a global strategy of 1-4-2-1.
- Evaluate ways to support the employers of mobilized reservists.
- Analyze the extent to which diversity improves team performance in the military.
- Conclude the evaluation of original ways to compensate personnel for distance-learning and other just-in-time training programs.
- Respond to congressional mandates and directives.

Technical Support for the Assistant Secretary of Defense (Networks & Information Integration) [ASD (NII)]

FY 2003 Accomplishments:

- Conducted an independent assessment panel of the proposed USD(I).
- Initiated an investment strategy and integrated architecture for Combat Identification Systems (CID) to guide requirements generation in achieving integration of capabilities.
- Conducted a study to identify deficiencies in or changes in direction of ongoing Navigation Warfare activities across the DoD.
- Developed a migration strategy for DoD radar systems that will be adversely impacted by commercial communication systems.
- Supported informatin assurance collaboration activities.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
Research, Development, Test & Evaluation, Defense-wide	Technical Studies, Support & Analysis PE 0605104D8Z	

FY 2004 Program:

- Conduct a study to determine the feasibility and technology needs for JTRS operating at higher bandwidths.
- Develop a migration strategy for DoD RADAR systems that are expected to be adversely impacted by future commercial communication systems.
- Analyze the impact of technology on managing need-to-know in the 21st century and the consequences for the warfighter.
- Conduct a study to improve network-centricity in coalition operations.

FY 2005 Plans:

- Develop a communication programs roadmap for transition to a Net centric environment.
- Build a semantic architecture that enables the sharing of information among military domains to improve collaboration and interoperability.
- Examine the net centric command and control capability within the Unified Command Structure to identify improvements for the shared situational awareness models.

Technical Support for the Joint Staff

FY 2003 Accomplishments:

- Tanker Leasing--Reviewed the operational implications of leasing 767 aircraft.
- Analysis of Narrowband Terminal Efficiency--UHF SATCOM system is the principal path for vital command and control to U.S. forces. Analysis identified inefficiencies in the system, and future efficiencies through new technology.
- Demand Assigned Multiple Access (DAMA)-- The military's current UHF satellite constellation is experiencing excessive user demand, and is incapable of meeting the numerous requirements imposed by worldwide tactical communications missions. DAMA permits several users to share a single channel, and DoD has selected it to mitigate

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
Research, Development, Test & Evaluation, Defense-wide	Technical Studies, Support & Analysis PE 0605104D8Z	

this saturation. Study analyzing terminal fielding, training, and infrastructure set migration objectives.

- Special Operations Forces-- determined how SOF should evolve to meet future needs.
- Non Fixed-Wing-- A study of non fixed-wing aviation plans through 2020, examining new demands created by the changes in defense strategy, gaps in capability, ability to maintain a satisfactory average fleet age, and opportunities for additional commonality, interoperability, and technology insertion.
- Undersea Superiority--study to determine what investment strategy, including new technologies, is needed over the next decade to maintain U.S. undersea preeminence. This analysis provided decision opportunities to maintain this capability through 2015.

FY 2004 Program:

- Develop a plan for transitioning non-essential USSOCOM missions to other forces and agencies.
- "Quick-turnaround" assessments directed by Chairman of the Joint Chiefs of Staff
- GRIFFIN is a network initiative to exchange classified information among the SECRET High national networks of AUS, CA, NZ, UK, and US initially, and later Fr and GE. This study will look at chat- and web-enabling GRIFFIN.
- Global Force Management (GFM) Data--Increase the visibility and accessibility GFM data (e.g., unit, location and event assigned) to DoD planners enabling shorter decision cycles. This near term effort is needed to ensure data interoperability across DOD and shape implementation of DOD Net-Centric Data Strategy.

FY 2005 Plans:

- Mobility Capabilities Study--analysis on which to base C-17 long-lead-time production item decisions
- Operational Availability (OA) Study of joint military capabilities and force employment timelines required to accomplish emerging missions in the Contingency Planning

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2004
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
Research, Development, Test & Evaluation, Defense-wide	Technical Studies, Support & Analysis PE 0605104D8Z	

Guidance. Follow-on work to examine five interrelated sub-studies under the OA umbrella, integrating analysis efforts and findings to inform the FY 05-10 DPG.

B. <u>Program Change Summary</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>
Previous President's Budget	29.000	30.204	30.686	31.200
Current President's Budget	29.465	29.762	30.618	31.117
Total Adjustments	+ .465	- .442	- .068	- .083
Congressional program reductions		- .579		
Congressional rescissions				
Congressional increases				
Reprogrammings	+1.163	+ .500		
SBIR/STTR Transfer	- .698	- .550		
C. <u>Other Program Funding Summary</u>	N/A			