

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE						
6 - Management support	0605803A - Technical Information Activities						
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
Total Program Element (PE) Cost	51266	42715	42905	42663	43036	38817	39625
720 TECH INFO FUNC ACTV	7945	7752	8114	8194	8256	8441	8631
727 TECH INFO ACTIVITIES	8784	8884	9821	9495	10155	10335	10520
729 YOUTH SCIENCE ACTIV	3134	3030	3157	3204	3250	3304	3359
730 PERS & TRNG ANALYS ACT	1834	1941	2056	2083	2102	2148	2197
731 ARMY HIGH PERFORMANCE COMPUTING CENTERS (AHPCC)	6825	7159	7544	7627	7686	7857	8033
733 ACQUISITION TECH ACT	5593	7967	8453	8247	7732	2791	2855
737 KNOWLEDGE MANAGEMENT FUSION	3196	2385					
739 ARMY HIGH PERFORMANCE COMPUTING INITIATIVES	9442						
C16 FAST	3432	2459	2575	2603	2622	2681	2741
C18 BAST	1081	1138	1185	1210	1233	1260	1289

A. Mission Description and Budget Item Justification: This program supports upgrading the accuracy, timeliness, availability, and accessibility of scientific, technical, and management information at all levels of Army Research and Development (R&D). Management of this information is critical to achieve the goals established by the Army's Senior Leadership for the Current and Future Forces. Use of accurate and timely technical information is essential to successfully meeting the milestones required on the path to the Future Force, allowing Army Science and Technology (S&T) leadership to refine investment strategy and quickly react to emerging opportunities and issues. This program includes initiatives to improve information derivation, storage, access, display, validation, transmission, distribution, and interpretation. This program develops and enhances a single business model for Army science and technology knowledge management information technology. This program addresses the need to increase the competitiveness and availability of scientific, engineering, and technical skills in the DoD and National workforce through outreach programs aimed at high school students through college. By providing direct working experience for these students in Army laboratories, the programs expose these students to the working world of science and engineering. Work funded under this program includes analyses using behavioral science-based analytic tools to provide policy and decision makers with Soldier-oriented recommendations concerning manpower, personnel, and training issues. Funding is provided for Independent Review Team analysis of technology maturity as part of the Technology Area Readiness Assessment as required by DoDI 5000.2 dated May 12, 2003. This program funds studies by the Board on Army Science and Technology (BAST) and the Army Science Board. This program also supports combatant commanders and major Army commands by providing science advisors to address scientific and technical issues and by providing engineering teams to solve field Army technical problems. Coordination of this program with the other Services is achieved through inter-service working groups. The cited work is consistent with the Department of Defense Research and Engineering Strategic Plan, the Army Science and Technology Master Plan, the Army Modernization Strategy, and the Army Posture Statement.

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BUDGET ACTIVITY

PE NUMBER AND TITLE

6 - Management support

0605803A - Technical Information Activities

Work in this program element is performed by the Research, Development, and Engineering Command (RDECOM), the Army Research Institute for the Behavioral and Social Sciences, the Army Corps of Engineers' Engineer Research and Development Center (ERDC), Medical Research and Materiel Command (MRMC), Space and Missile Defense Command (SMDC), and the Information Management Office.

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<u>B. Program Change Summary</u>	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	47356	41607	43140
Current BES/President's Budget (FY 2009)	51266	42715	42905
Total Adjustments	3910	1108	-235
Congressional Program Reductions		-1292	
Congressional Rescissions			
Congressional Increases		2400	
Reprogrammings	5123		
SBIR/STTR Transfer	-1213		
Adjustments to Budget Years			-235

\$2.5M added in FY08 to FY09 due to development and modernization of Army Science and Technology Enterprise Management system.

One FY08 congressional adds totaling \$2400 were added to this PE.

(\$2400) Knowledge, Tech Sharing Program

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BUDGET ACTIVITY 6 - Management support	PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 720	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
720 TECH INFO FUNC ACTV	7945	7752	8114	8194	8256	8441	8631

A. Mission Description and Budget Item Justification: This project provides for technology transfer activities to support acquisition, storage, and utilization of technical information for both military and domestic applications. Effective exploitation of science and technology (S&T) information is critical to achieving the goals established by Senior Army Leadership. Activities include Army support for Federal Laboratory Consortium (FLC) as required by Public Law; the Army Science Board; the Army Science Conference; S&T database management efforts; and administration of the Army's Small Business Innovative Research (SBIR) and Small Business Technology Transfer Program (STTR) in accordance with the Small Business Research and Development Enhancement Act of 1992. Technology transfer activities make technical information available to both the public and private sectors to reduce duplication in Research and Development programs and to increase competitiveness in the US business community. Database management efforts support development of decision aids, databases, and automation support for the management and execution of the Army Research, Development, Test and Evaluation (RDTE) appropriation. In addition, this project provides funding for patent legal expenses and fees for all Research, Development, and Engineering Command (RDECOM) subordinate commands and laboratories, as required by the Omnibus Budget Reconciliation Act. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.

Work is performed by the Army Research Laboratory (ARL).

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.	215	209	224
Provide administrative and contractual support for the Army Science Board.	1563	1373	1446
Provide administrative support for the Army's SBIR and STTR programs.	1343	1200	1266
Provide funding for patent fees and patent legal expenses for AMC commands and laboratories.	977	1032	1213
Provide funding for S&T Strategic Planning and Support.	205	194	199
Provide funding for the Army Science Conference.	495	490	536
Administer S&T database computer engineering support contract and support RDECOM databases S&T management support.	3147	3050	3230
Small Business Innovative Research/Small Business Technology Transfer Programs		204	
Total	7945	7752	8114

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BUDGET ACTIVITY 6 - Management support	PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 727	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
727 TECH INFO ACTIVITIES	8784	8884	9821	9495	10155	10335	10520

A. Mission Description and Budget Item Justification: This project supports development of decision aids, databases, and automation support for the management and execution of the Army Research, Development, Test, and Evaluation (RDTE) Appropriation. It includes the hardware, software, and contractor support required to develop and implement a set of management decision aids, databases, and hardware/software tools to support technical and budgetary decisions at the Office of the Secretary of Defense (OSD) and Department of the Army (DA), including support of the Army Science and Technology Master Plan. Most of the efforts in this project are on-going activities to support Army Research, Development, and Acquisition programs. Effective exploitation of S&T information is critical to achieving the goals established by Senior Army Leadership for the Future Force. Funding in this program support Independent Review Team analysis of technology maturity as part of Technology Readiness Assessments as required by DoDI 5000.2 dated May 12, 2003. The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, the Defense Basic Research Plan (DBRP), and the Defense Technology Area Plan (DTAP).

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Conduct and support S&T program portfolio assessments and analysis.	2395	1909	2118
Support Army S&T strategic planning, analysis, and prioritization.	2025	3475	4102
Provide funding and support for Army Science and Technology Master Plan development and publication.	1710	955	1104
Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions.	2154	1796	1997
Provide Army support to Director, Defense Research and Engineering Executive Staff for DoD-wide Science and Technology oversight.	500	500	500
Small Business Innovative Research/Small Business Technology Transfer Programs		249	
Total	8784	8884	9821

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BUDGET ACTIVITY 6 - Management support	PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 729	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
729 YOUTH SCIENCE ACTIV	3134	3030	3157	3204	3250	3304	3359

A. Mission Description and Budget Item Justification: This project supports science activities that encourage over 154,000 middle/high school and college youths annually to develop an interest in and pursue higher education and employment in the science, math, and engineering fields. These activities are consolidated within the Army Educational Outreach Program (AEOP) that links and networks appropriate components to derive the best synergies to "present the Army" to a larger pool of technical talent and to provide students with Army unique practical experiences at Army laboratories, centers, and institutes to fill future Army Science and Technology workforce needs. AEOP increases interest and involvement of students and teachers across the nation in science, math, and engineering at all proficiency levels and backgrounds to include under-represented and economically disadvantaged groups by exposure to Army Sponsored research, education, competitions, internships, and practical experiences. The joint Army/Navy Washington regional area Science and Engineering Apprenticeship Program (SEAP) is included in the overall effort. This project enhances the national laboratory science and engineering personnel pool which in turn supports defense industry and Army laboratory needs. The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). Work is performed by the Research, Development, and Engineering Command (RDECOM), the Army Research Institute for the Behavioral and Social Sciences, the Army Corps of Engineers' Engineer Research and Development Center (ERDC), Medical Research and Materiel Command (MRMC), and Space and Missile Defense Command (SMDC).

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Foster high school student interest nationally in science, mathematics, engineering, and computer science by sponsoring the Junior Science and Humanities Symposium (JSHS), International Mathematics Olympiad (IMO), International Science and Engineering Fair (ISEF), and the Research and Engineering Apprenticeship Program (REAP).	1470	1407	1588
Sponsor joint Army/Navy Washington Regional Area SEAP and increase Army Laboratory/Research, Development, and Engineering Center (RDEC) sponsorship of students.	228	232	247
Conduct the Uninitiated Introduction to Engineering (UNITE) program to increase the numbers of Native Americans, African Americans, and Spanish-speaking Americans attending and completing engineering and/or science curricula at the university level.	201	195	204
Conduct West Point cadet research internship program to enhance cadet training through field experience within Army research labs and centers.	360	236	243
Support Army Educational Outreach Program (AEOP) to enhance Science, Mathematics, and Engineering education through student experiences in Army labs and academic partner institutions.	875	875	875
Small Business Innovative Research/Small Business Technology Transfer Programs		85	
Total	3134	3030	3157

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BUDGET ACTIVITY 6 - Management support	PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 730	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
730 PERS & TRNG ANALYS ACT	1834	1941	2056	2083	2102	2148	2197

A. Mission Description and Budget Item Justification: This project provides for the Army's behavioral and social science research-based studies and analyses to address current and near term Soldier, training, and leader development issues. The research provides a unique capability to address a number of issues that affect, directly, or indirectly, Soldier and unit performance and readiness, such as the effects of changes in training on individual and unit performance, the personnel costs of alternative programs and policies and the effects of program changes on retention of quality Soldiers. Requirements for research-based studies and analyses for critical personnel and training issues of immediate importance are solicited on an annual basis from the Training and Doctrine Command (TRADOC), the Assistant Secretary of the Army for Manpower and Reserve Affairs (ASA-M&RA), the Army Deputy Chief of Staff, G-1, and the Human Resources Command (HRC). The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). Work in this project is managed by the US Army Research Institute (ARI) for the Behavioral and Social Sciences.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Research-based analyses completed in FY07 include: assessing the initial implementation of the Basic Officer Leadership Course (BOLC) II at Forts Benning and Sill; completing an evaluation of the new Basic Combat Training (BCT) program of instruction in terms of how well it prepares Soldiers to arrive at their first unit with the combat skills they may need immediately; assessing the current incentives used by the Army and the effects on personnel retention. The FY08 program includes: analyzing variables that influence senior non-commissioned officers (NCO) motivation to retire or continue service at the 20-year mark; assessing the impact of adding an additional week to Basic Combat Training; examining training and testing procedures of the NCO education system. The FY09 program will be based on issues identified by TRADOC, ASA-M&RA, the Army Deputy Chief of Staff, G-1, and the HRC.	1834	1896	2056
Small Business Innovative Research/Small Business Technology Transfer Programs		45	
Total	1834	1941	2056

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BUDGET ACTIVITY 6 - Management support		PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 731	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	
731 ARMY HIGH PERFORMANCE COMPUTING CENTERS (AHPCC)	6825	7159	7544	7627	7686	7857	8033	

A. Mission Description and Budget Item Justification: This project directly supports Future Force requirements by providing high fidelity modeling, simulation, and analysis of materials, systems, and operational constructs to be employed within the Future Force. The project supports collaborative efforts to advance computational science and its application to critical Army technologies. The Centers work with researchers at Army laboratories to explore new algorithms in the computational sciences to address critical technology issues in numerous and diverse computational research areas. The Centers also sustain high performance computing environments and educational outreach as an integral part of their mission. The cited work is consistent with Army Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). Work is performed by the Army Research Laboratory (ARL).

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Sustain the high performance computing environment and infrastructure in support of the US Army Tank and Automotive Research Development and Engineering Center (TARDEC).	3428	2205	2290
Sustain the high performance computing environment and infrastructure in support of the Army High Performance Computing Research Center's (AHPARC) research, education, and outreach activities.	1215	1221	1296
Sustain the high performance computing environment and infrastructure in support of the US Army Research Laboratory's Major Shared Research Center (MSRC).	2182	3627	3958
Small Business Innovative Research/Small Business Technology Transfer Programs		106	
Total	6825	7159	7544

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BUDGET ACTIVITY 6 - Management support	PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 733	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
733 ACQUISITION TECH ACT	5593	7967	8453	8247	7732	2791	2855

A. Mission Description and Budget Item Justification: This project improves the Army's acquisition process by applying decision support and expert information systems, and by supporting analysis and evaluation of alternative acquisition strategies using techniques such as value-added analysis and analysis-of-alternatives. This project provides the environment for the analysis and evaluation of new information technologies, concepts, and applications for integrated management activities and support dynamic Army acquisition technology requirements. This program supports analysis efforts to conduct critical analyses for Army leadership in support of Army Transformation. These analyses are used by leadership in making acquisition, procurement, and logistics decisions in order to provide quality equipment and procedures to the Soldiers. The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). Work in this program element is performed by the Army Acquisition Support Center.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases. Analyze acquisition program financial programming and budgeting requirements. Continue development of Weapon Systems Handbook, long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.	4685	6830	7503
Conduct analysis and evaluation of new information technologies, concepts, and applications of integrated management activities to meet the dynamic Army acquisition technology requirements.	908	914	950
Small Business Innovative Research/Small Business Technology Transfer Programs		223	
Total	5593	7967	8453

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BUDGET ACTIVITY 6 - Management support		PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT C16	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	
C16 FAST	3432	2459	2575	2603	2622	2681	2741	

A. Mission Description and Budget Item Justification: The Field Assistance in Science and Technology (FAST) program focuses Army Materiel Command (AMC) resources to rapidly identify and solve Army field technical problems that enable the improvement of readiness, safety, training, and reduce operations and support (O&S) costs. FAST tours of duty provide significant professional growth opportunities for the Army's scientists and engineers. Science advisers are recruited from AMC headquarters and all AMC Major Subordinate Commands (MSCs) to serve combatant commands and major commands worldwide. The FAST activity is also supported by assigned Quick Reaction Coordinators (QRCs) within each engineering center. All costs associated with science advisor assignments are funded by AMC or the AMC MSCs that supply the science advisers for two to three year tours. The FAST program recoups many times its cost in O&S (cost) savings. FAST also provides emerging technology demonstration opportunities to the Research, Development, and Engineering Command's (RDECOM) engineering centers and DARPA and executes biannual Technology Applications Conferences (TAC) on a rotating basis between FORSCOM, USAREUR, and USFK/Eighth Army. FAST also maintains close coordination with the Navy Science Advisor Program (Naval Fleet Forces Technology Integration Office). The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). Work in this project is performed by the US Army Materiel Command.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Respond to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deploy science advisors with US Task Forces in support of combatant commanders; execute biannual Technology Applications Conference.	3432	2401	2575
Small Business Innovative Research/Small Business Technology Transfer Programs		58	
Total	3432	2459	2575

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BUDGET ACTIVITY 6 - Management support		PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT C18	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	
C18 BAST	1081	1138	1185	1210	1233	1260	1289	

A. Mission Description and Budget Item Justification: This project funds Army efforts by the National Research Council's (NRC) Board on Army Science and Technology (BAST). The BAST provides an independent, objective, and credible source of external advice to the Army. It serves as a convening authority for the discussion of science and technology issues of importance to the Army and oversees independent Army-related studies conducted by the National Academies. Working in close coordination with the Army, the BAST helps define problems, brings together experts to study these problems and provides recommendations. Committees are assembled in accordance with established NRC procedures and BAST studies often continue longer than 12 months. The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). Work in this project is performed extramurally by the Army Research Laboratory (ARL).

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Provide studies and conducts periodic meetings to help identify, assess, and recommend emerging opportunities in science and technology fields applicable to the US Army. Primary study topic for FY06 was the Network Sciences Study. Topics for FY07, FY08, and FY09 will be selected according to Army S&T strategy and senior leader initiatives.	1081	1107	1185
Small Business Innovative Research/Small Business Technology Transfer Programs		31	
Total	1081	1138	1185