

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)						February 2003					
BUDGET ACTIVITY 6 - Management support				PE NUMBER AND TITLE 0605803A - Technical Information Activities							
COST (In Thousands)				FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
Total Program Element (PE) Cost				41695	45516	28520	28929	30155	31012	31984	32559
720	TECH INFO FUNC ACTV			2952	3633	2956	2968	3062	3105	3156	3208
727	TECH INFO ACTIVITIES			5414	5581	7107	7290	7816	8187	8407	8624
729	YOUTH SCIENCE ACTIV			2051	2076	2181	2207	2282	2356	2414	2468
730	PERS & TRNG ANALYS ACT			2167	2187	2345	2391	2502	2568	2623	2684
731	ARMY HIGH PERFORMANCE COMPUTING CENTERS (AHPCC)			17038	18940	7187	7284	7528	7687	7874	8054
733	ACQUISITION TECH ACT			7916	8944	3356	3347	3416	3427	3742	3667
735	NET ASSESSMENT DIRECTORATE			740	0	0	0	0	0	0	0
737	KNOWLEDGE MANAGEMENT FUSION			0	956	0	0	0	0	0	0
C16	FAST			2446	2476	2590	2611	2694	2745	2807	2871
C18	BAST			971	723	798	831	855	937	961	983
<p><u>A. Mission Description and Budget Item Justification:</u>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 Future Combat Systems and the Objective Force. Use of accurate and timely technical information is essential to successfully meeting the milestones required on the path to the Objective Force, allowing Army 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 addresses the need to increase the competitiveness and availability of scientific, engineering, and technical skills in the DoD and National workfo rce through outreach programs aimed at high school students. By providing direct working experience for these students in Army laboratories, the programs expose these students to the working world of science and engineering. Funding under this program enables the conducting of analyses, using behavioral science-based analytic tools, to provide policy and decision makers with soldier-oriented recommendations concerning manpower, personnel and training issues. 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 interservice working groups. The work in this program element is consistent with the Army Science and Technology Master Plan (ASTMP). These projects are managed by the Army Research Laboratory, the Army Materiel Command, the Army Research Office, the Army Research Institute, the Army Corps of Engineers and the Information Management Office. Project 735, Net Assessment Directorate, transfers to the Office of the Secretary of Defense starting in FY 2003. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance.</p>											

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The program element contains no duplication with any effort within the Military Departments. This program supports the Objective transition path of the Transformation Campaign Plan.

No Defense Emergency Response Funds have been provided to this program.

<u>B. Program Change Summary</u>	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	38930	34040	35725	36380
Current Budget (FY 2004/2005 PB)	41695	45516	28520	28929
Total Adjustments	2765	11476	-7205	-7451
Congressional program reductions				
Congressional rescissions		-690		
Congressional increases		13700		
Reprogrammings	3813	-261		
SBIR/STTR Transfer	-1048	-1273		
Adjustments to Budget Years			-7205	-7451

Change Summary Explanation: Funding - FY 2004/2005: Funds realigned to higher priority requirements.
Project 735 transferred to OSD in FY03.

FY03 Congressional Adds:

Knowledge Management Fusion, Project 737, (\$1000); Army High Performance Computing Research Center, Project 731, (\$12700)

Projects with no R-2A:

(\$961), Knowledge Management Fusion, Project 737. The objective of this one year Congressional Add is to support the technical management and operation of a Knowledge Fusion Center at the Army Research Laboratory and an adjunct Knowledge Management Center of Excellence at an Historically Black College or University (HBCU). No additional funding is required to complete this project.

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BUDGET ACTIVITY 6 - Management support			PE NUMBER AND TITLE 0605803A - Technical Information Activities				PROJECT 720			
COST (In Thousands)			FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
720	TECH INFO FUNC ACTV		2952	3633	2956	2968	3062	3105	3156	3208
<p><u>A. Mission Description and Budget Item Justification:</u> 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 S&T information is critical to doing things that have never been done before in achieving the goals established by Senior Army Leadership for the Future Combat Systems and the Objective Force. Specific activities supported include the Army support for Federal Laboratory Consortium (FLC) as required by Public Law; the Army Science Board; the Army Science Conference; 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 R&D programs and to increase competitiveness in the U.S. business community. In addition, this project provides funding for patent legal expenses and fees for all U.S. Army Materiel Command (AMC) subordinate commands and laboratories. The requirement to fund patent activities is a result of the Omnibus Budget Reconciliation Act requiring the U. S. Patent and Trademark Office to become a completely user-fee funded agency. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. Work is performed by the Army Research Laboratory. This program supports the Objective Force transition path of the Transformation Campaign Plan. No Defense Emergency Response Funds have been provided to this project.</p>										
<u>Accomplishments/Planned Program</u>							<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
- Provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.							156	177	186	187
- Provide administrative and contractual support for the Army Science Board.							1131	1136	1176	1181
- Provide administrative support for the Army's SBIR and STTR programs.							694	673	704	710
- Provide funding for patent fees and patent legal expenses for AMC commands and laboratories.							625	474	644	643
- Provides funding for S&T Strategic Planning and Support.							149	961	24	24
- Provides funding for the Army Science Conference.							197	212	222	223
Totals							2952	3633	2956	2968

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BUDGET ACTIVITY			PE NUMBER AND TITLE				PROJECT			
6 - Management support			0605803A - Technical Information Activities				727			
COST (In Thousands)			FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
727	TECH INFO ACTIVITIES		5414	5581	7107	7290	7816	8187	8407	8624
<p><u>A. Mission Description and Budget Item Justification:</u> 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); Department of the Army (DA), including support of the Army Science and Technology Master Plan; Corps of Engineers; Army Materiel Command (AMC); and Army Research Laboratory. 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 do things that have never been done before in achieving the goals established by Senior Army Leadership for the Future Combat Systems and the Objective Force. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. Work is performed by the Army Research Laboratory. This program supports the Objective Force transition path of the Transformation Campaign Plan.</p> <p>No Defense Emergency Response Funds have been provided to this project.</p>										
<u>Accomplishments/Planned Program</u>						<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
- Administer S&T database computer engineering support contract.						1036	992	1041	1042	
- Support Army S&T strategic planning, analysis, and prioritization.						3172	3426	4844	5029	
- Support AMC database and Defense Reliance management.						1206	1163	1222	1219	
Totals						5414	5581	7107	7290	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)						February 2003			
BUDGET ACTIVITY 6 - Management support		PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 729		
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
729	YOUTH SCIENCE ACTIV	2051	2076	2181	2207	2282	2356	2414	2468
<p><u>A. Mission Description and Budget Item Justification:</u> This project supports science activities to encourage over 100,000 high school youths to develop an interest and pursue higher education and employment in the scientific, engineering, and mathematics career fields. These activities are consolidated entirely within this program to "present the Army" to a large potential pool of technical talent to fill future Army S&T workforce needs. The joint Army/Navy Washington regional area Science and Engineering Apprenticeship Program (SEAP) is included in the overall effort. The SEAP provides an eight-week hands-on learning experience for high school students to work with bench level scientists in Army laboratories to encourage more students to pursue scientific/engineering careers. This program enhances the National Laboratory Science and Engineering pool, which in turn supports Defense industry and Army laboratory needs. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. Work is performed by the Army Research Laboratory (ARL). This program supports the Objective transition path of the Transformation Campaign Plan. No Defense Emergency Response Funds have been provided to this project.</p>									
<u>Accomplishments/Planned Program</u>						<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
- Foster high school student interest nationally in science, mathematics, engineering and computer science by sponsoring JSHS, ISEF, IMO, and REAP						1423	1431	1504	1521
- Sponsor joint Army/Navy Washington Regional Area SEAP and increase Army Laboratory/RDEC sponsorship of students						202	220	236	245
- Conduct the 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.						194	191	198	197
- Conduct West Point cadet research internship program to enhance cadet training through field experience within Army research labs and centers.						232	234	243	244
Totals						2051	2076	2181	2207

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)						February 2003				
BUDGET ACTIVITY 6 - Management support			PE NUMBER AND TITLE 0605803A - Technical Information Activities				PROJECT 730			
COST (In Thousands)			FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
730	PERS & TRNG ANALYS ACT		2167	2187	2345	2391	2502	2568	2623	2684
<p><u>A. Mission Description and Budget Item Justification:</u> This project provides for the application of behavioral science-based data and analytical technologies by the U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences to current and near-term training, leadership, and soldier-related issues. The program is focused on policy issues to enhance soldier performance, and provides the Army a unique capability for addressing such issues as the effects of training on individual and unit performance, the personnel costs of alternative programs and policies, and the effects of program changes on readiness and 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. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. This program supports the Objective Force transition path of the Transformation Campaign Plan. No Defense Emergency Response Funds have been provided to this project.</p>										

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BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
6 - Management support		0605803A - Technical Information Activities			730	
Accomplishments/Planned Program			FY 2002	FY 2003	FY 2004	FY 2005
<p>- In FY02, this research-based studies and analysis program developed Training Strategy Templates to ease the development of unit training plans and resource planning; recommended techniques for reducing test compromise in web-based training; improved the efficacy of a screening tool to increase soldier retention; assessed effectiveness of innovative basic leader training program for newly commissioned officers; developed a web-based tool to facilitate the use of lessons learned from EXFOR Battalion Commanders as they transitioned to the digitized force; and collected interim data on the effectiveness of an intensive training process designed to reduce decay in linguistic skills and proficiency. Studies in FY03 include: determining the feasibility of applying Adaptive Thinking Training Methodology to distance learning; evaluating the effectiveness of alternative training technologies and instructional strategies for acquiring and sustaining aerial gunnery skills; examining the feasibility of reducing Advanced Individual Training (AIT) to less than 26 weeks; analyzing the trends in factors that influence attrition during Initial Entry Training (IET); conducting a comparative analysis of new aptitude area composites for MOS classification; refining a multi-skilled soldier concept; and evaluating different payment strategies for selective reenlistment bonuses.</p> <p>- Content of the FY04 and FY05 program will be based on issues identified by the Training and Doctrine Command (TRADOC), the Assistant Secretary of the Army for Manpower and Reserve Affairs, the Deputy Chief of Staff, G-1, and the U.S. Total Army Personnel Command.</p>			2167	2187	2345	2391
Totals			2167	2187	2345	2391

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)						February 2003				
BUDGET ACTIVITY 6 - Management support			PE NUMBER AND TITLE 0605803A - Technical Information Activities				PROJECT 731			
COST (In Thousands)			FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
731	ARMY HIGH PERFORMANCE COMPUTING CENTERS (AHPCC)		17038	18940	7187	7284	7528	7687	7874	8054
<p><u>A. Mission Description and Budget Item Justification:</u>The work in this project directly supports Objective Force requirements by providing high fidelity modeling, simulation, and analysis of materials, systems, and operational constructs to be employed within the Objective 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, 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 the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. Work is performed by the Army Research Laboratory (ARL). This program supports the Objective Force transition path of the Transformation Campaign Plan. No Defense Emergency Response Funds have been provided to this project.</p>										
<u>Accomplishments/Planned Program</u>						<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
- Sustain the high performance computing environment and infrastructure in support of the US Army Tank & Automotive Research Development & Engineering Center (TARDEC)						2421	2194	2471	2457	
- Sustain the high performance computing environment and infrastructure in support of the Army High Performance Computing Research Center's (AHPCRC) research and education activities.						3102	1065	1355	1485	
- Sustain the high performance computing environment and infrastructure in support of the US Army Research Laboratory's Major Shared Research Center (MSRC)						1015	2981	3361	3342	
- Army High Performance Computing Research Center: In FY02, this Congressional Add sustained high performance computing environment and infrastructure in support of the AHPCRC's activities. In FY03, the objective of this Congressional Add is to continue to sustain Army high performance computing research and education activities. No additional funding is required to complete this project.						10500	12700	0	0	
Totals						17038	18940	7187	7284	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)						February 2003			
BUDGET ACTIVITY 6 - Management support		PE NUMBER AND TITLE 0605803A - Technical Information Activities					PROJECT 733		
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
733	ACQUISITION TECH ACT	7916	8944	3356	3347	3416	3427	3742	3667
<p><u>A. Mission Description and Budget Item Justification:</u> 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-alternates. This project provides the environment for the analysis and evaluation of new information technologies, and concepts and applications in integrated management activities such as Horizontal Technology Integration, and support to meet the dynamic Army acquisition technology requirements. In FY02 and FY03, this program supports analysis efforts at the Army Materiel Systems Analysis Activity (AMSAA) 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. In FY04 and beyond, these efforts are supported in PE 0605706A, Project 541. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. This program supports the Objective transition path of the Transformation Campaign Plan.</p> <p>No Defense Emergency Response Funds have been provided to this project.</p>									
<p><u>Accomplishments/Planned Program</u></p> <p>- Analyze the performance and combat effectiveness of materiel systems and technology base programs in support of Army leadership. Included are conduct of and support to analyses of alternatives (AoA). The funding directly supports efforts for the Future Combat System and Joint Tactical Radio System AoAs. Develop, modify, and maintain weapon system level methodologies, models, and simulations to be used in the conduct of systems analysis. A few examples of planned efforts include: modeling of military operations in urban terrain (MOUT), several aviation modeling improvements, search and target acquisition methodology improvements, signature management, and physics of failure modeling improvements.</p>						FY 2002 1276	FY 2003 6157	FY 2004 0	FY 2005 0

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BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
6 - Management support		0605803A - Technical Information Activities			733	
<u>Accomplishments/Planned Program (continued)</u>			<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
- Validate simulation and logical modeling test and evaluation environment to provide a prototype development tool in support of tech base initiatives. Distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corp corporate and global databases. Analyze acquisition program financial programming and budgeting requirements. Continue development of Weapon Systems Handbook, analytic/technical support for Army Science and Technology programs, long-range planning and policy analysis, resource allocation analysis, cost tracking and analysis, cost-effectiveness and database management/financial analysis, special access required technology application concept research/analysis.			708	1829	2342	2335
- Provided force development and force management integration support to the Objective Force Task Force (OFTF), including concept development and analysis, budget analysis, organizational integrations, systems integration, and specialized staff support. Developed common operational architecture, standards, formats and protocols. Determined best technical approach and trade-off analysis, while providing system engineering and technical assistance to OFTF.			2433	0	0	0
- Addressed critical software engineering issues in Army Strategic Software Improvement Program/Software Engineering Institute			445	0	0	0
- Conduct analysis and evaluation of new information technologies, and concepts and applications in integrated management activities such as Horizontal Technology Integration, and support to meet the dynamic Army acquisition technology requirements.			3054	958	1014	1012
Totals			7916	8944	3356	3347

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2003				
BUDGET ACTIVITY 6 - Management support				PE NUMBER AND TITLE 0605803A - Technical Information Activities				PROJECT C16			
COST (In Thousands)				FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
C16	FAST			2446	2476	2590	2611	2694	2745	2807	2871
<p><u>A. Mission Description and Budget Item Justification:</u>This program focuses Army Materiel Command (AMC) resources to rapidly identify and solve Army field technical problems which enables the improvement of readiness, safety, training, and cut operations and support (O&S) costs. The Commanding General, AMC, institutionalized AMC Field Assistance in Science and Technology (FAST) in 1988 to plan for and allocate all AMC FAST program funding for projects to support Combatant and Army commanders and to operate the director's office. FAST tours of duty provide significant professional growth opportunities for the Army's scientists and engineers. Science advisers are recruited from AMC research, development and engineering centers to serve Combatant Commands and major commands worldwide. The AMC-FAST activity is also supported by assigned Quick Reaction Coordinators (QRCs) within each AMC engineering center. All costs associated with science advisor assignments are funded by the AMC subordinate commands that supply the science advisers for two to three year tours. FAST manages a level of effort type project with most projects recouping many times their cost in O&S cost savings. FAST also provides emerging technology demonstration opportunities to the AMC 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 Adviser Program. (Naval Fleet Forces Technology Integration Office). The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. This program supports the Objective Force transition path of the Transformation Campaign Plan. No Defense Emergency Response Funds have been provided to this project.</p>											

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BUDGET ACTIVITY 6 - Management support		PE NUMBER AND TITLE 0605803A - Technical Information Activities			PROJECT C16	
<u>Accomplishments/Planned Program</u>		FY 2002	FY 2003	FY 2004	FY 2005	
- In FY 2002, provided continuous activity on 84 FAST projects. Defined, tested and recommended technological solutions to urgent materiel problems identified by Combatant Commanders and Army commanders worldwide; served as Army POC to Defense Advanced Research Projects Agency (DARPA) Babylon program, which supplied language translation devices in support of Enduring Freedom and Task Force Falcon (TFF), and deployed science advisors and technical subject matter experts in support of Task Force Eagle and TFF. In FY 2003-2005, respond to Combatant Commanders worldwide for technological solutions to urgent materiel problems they identify, deploy science advisors with U.S. Task Forces in support of Combatant Commanders; execute Technology Applications Conference.		2446	2476	2590	2611	
Totals		2446	2476	2590	2611	