# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

**February 2002**

BUDGET ACTIVITY
**6 - Management support**

PE NUMBER AND TITLE
**0605803A - Technical Information Activities**

| COST (In Thousands) | | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Program Element (PE) Cost | | 32521 | 38930 | 34040 | 35725 | 36380 | 38199 | 39059 | Continuing | Continuing |
| 720 | TECH INFO FUNC ACTV | 2811 | 3704 | 3838 | 4063 | 4247 | 4571 | 4788 | Continuing | Continuing |
| 727 | TECH INFO ACTIVITIES | 3327 | 5556 | 5856 | 6199 | 6380 | 6713 | 6932 | Continuing | Continuing |
| 729 | YOUTH SCIENCE ACTIV | 2008 | 2118 | 2171 | 2207 | 2245 | 2328 | 2405 | Continuing | Continuing |
| 730 | PERS & TRNG ANALYS ACT | 2049 | 2219 | 2332 | 2434 | 2500 | 2617 | 2691 | Continuing | Continuing |
| 731 | ARMY HIGH PERFORMANCE COMPUTING CENTERS (AHPCC) | 10230 | 17648 | 7113 | 7271 | 7410 | 7679 | 7845 | Continuing | Continuing |
| 733 | ACQUISITION TECH ACT | 8205 | 3662 | 9356 | 10085 | 10051 | 10627 | 10593 | Continuing | Continuing |
| 735 | NET ASSESSMENT DIRECTORATE | 735 | 759 | 0 | 0 | 0 | 0 | 0 | 0 | 3013 |
| C16 | FAST | 2398 | 2522 | 2618 | 2659 | 2702 | 2792 | 2848 | Continuing | Continuing |
| C18 | BAST | 758 | 742 | 756 | 807 | 845 | 872 | 957 | Continuing | Continuing |

**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 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 workforce 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 Commanders-in-Chief (CINCs) 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 peer-reviewed and 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. Effective July, 2001 Project 735, Net Assessment Directorate, transfers to the Office of the Secretary of Defense. 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 (TCP).

| **B. Program Change Summary** | FY 2001 | FY 2002 | FY 2003 |
|---|---|---|---|
| Previous President's Budget (FY2002 PB) | 30219 | 33749 | 34330 |
| Appropriated Value | 30499 | 39294 | 0 |
| Adjustments to Appropriated Value | 0 | 0 | 0 |
| a. Congressional General Reductions | 0 | 0 | 0 |
| b. SBIR / STTR | -870 | -364 | 0 |
| c. Omnibus or Other Above Threshold Reductions | 0 | 0 | 0 |
| d. Below Threshold Reprogramming | 3172 | 0 | 0 |
| e. Rescissions | -280 | 0 | 0 |
| Adjustments to Budget Years Since FY 2002 PB | 0 | 0 | -290 |
| Current Budget Submit (FY 2003 PB ) | 32521 | 38930 | 34040 |

Change Summary Explanation: Funding – FY 2002 Congressional Add: $10.5M for Army High Performance Computing Centers.

Projects with no R-2As: Project 735, Net Assessment Directorate – FY 2003 Army funding=$0 - Effective July, 2001 this program transfers from the National Defense University to the Office of the Secretary of Defense. The program will continue to develop and coordinate net assessments of the standing, trends and future prospects for U.S. military capabilities and military potential in comparison with those of other countries or groups of countries to identify emerging or future threats or opportunities for the U.S.

Project C18, Board on Army Science and Technology - FY03 funding=$756 This program will provide technical expert support for the forecasting of Army Science and Technology needs and to address significant Science and Technology issues.

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

**February 2002**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **6 - Management support** | **0605803A - Technical Information Activities** | **720** |

| COST (In Thousands) | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| 720 TECH INFO FUNC ACTV | 2811 | 3704 | 3838 | 4063 | 4247 | 4571 | 4788 | Continuing | Continuing |

**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 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 Technology Seminar Game; Independent Review Teams; the Defense Technical Information Center (DTIC) Work Unit Information Summary (WUIS) database; the Federal Laboratory Consortium (FLC); the Army Science Board; 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". The SBIR/STTR costs are funded in this Program because the Act prohibits use of PE 0605502A funding for: administrative costs; studies and analyses to support the Acquisition Corps; acquisition and retention of scientists and engineers; and improvement of productivity of laboratories and centers. 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. This program supports the Objective Force transition path of the Transformation Campaign Plan (TCP).

**FY 2001 Accomplishments:**

- 2811 - Provided Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.
  - Provided administrative and contractual support for the Army Science Board.
  - Provided administrative support for the Army's SBIR and STTR programs.
  - Provided Army Science and Technology Reports.
  - Provided funding for patent fees and patent legal expenses for AMC commands and laboratories.
  - Provided funding for Independent Review Teams to assess technology status and recommend investment strategy.

Total 2811

**FY 2002 Planned Program**

- 3704 - Provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.
  - Provide administrative and contractual support for the Army Science Board.
  - Provide administrative support for the Army's SBIR and STTR programs.
  - Provide Army Science and Technology Reports.
  - Provide funding for patent fees and patent legal expenses for AMC commands and laboratories.
  - Provide funding for Independent Review Teams to assess technology status and recommend investment strategy.

Total 3704

**FY 2003 Planned Program**

- 3838 - Provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.
  - Provide administrative and contractual support for the Army Science Board.
  - Provide administrative support for the Army's SBIR and STTR programs.
  - Provide Army Science and Technology Reports.
  - Provide funding for patent fees and patent legal expenses for AMC commands and laboratories.
  - Provide funding for Technology Seminar Game
  - Provide funding for Independent Review Teams to assess technology status and recommend investment strategy.

Total 3838

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

**February 2002**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **6 - Management support** | **0605803A - Technical Information Activities** | **727** |

| COST (In Thousands) | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| 727 TECH INFO ACTIVITIES | 3327 | 5556 | 5856 | 6199 | 6380 | 6713 | 6932 | Continuing | Continuing |

**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); 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. This project includes support of the Acquisition Management Integration Subgroup (AMIS) dealing with acquisition management systems. 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. This program supports the Objective Force transition path of the Transformation Campaign Plan (TCP).

**FY 2001 Accomplishments:**

- 3327 - Administered S&T database computer engineering support contract.
  - Supported Army S&T strategic planning, analysis, and prioritization.
  - Supported AMC database and Defense Reliance management.

Total 3327

**FY 2002 Planned Program**

- 5556 - Administer S&T database computer engineering support contract.
  - Support Army S&T strategic planning, analysis, and prioritization.
  - Support AMC database and Defense Reliance management.

Total 5556

**FY 2003 Planned Program**

- 5856 - Administer S&T database computer engineering support contract.
  - Support Army S&T strategic planning, analysis, and prioritization.
  - Support AMC database and Defense Reliance management.

Total 5856

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

**February 2002**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **6 - Management support** | **0605803A - Technical Information Activities** | **729** |

| COST (In Thousands) | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| 729 YOUTH SCIENCE ACTIV | 2008 | 2118 | 2171 | 2207 | 2245 | 2328 | 2405 | Continuing | Continuing |

**A. Mission Description and Budget Item Justification:** 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. This program supports the Objective Force transition path of the Transformation Campaign Plan (TCP).

**FY 2001 Accomplishments:**

- 2008
  - Fostered high school student interest nationally in science, mathematics, engineering and computer science by sponsoring Junior Science and Humanities Symposium (JSHS), International Science and Engineering Fair (ISEF), International Mathematics Olympiad (IMO), and Research and Engineering Apprentice Program (REAP).
  - Sponsored joint Army/Navy Washington Regional Area SEAP and increased Army Laboratory/RDEC sponsorship of students.
  - Conducted the United 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.
  - Conducted West Point cadet research internship program to enhance cadet training through field experience within Army research labs and centers.

Total 2008

**FY 2002 Planned Program**

- 2118 - Foster high school student interest nationally in science, mathematics, engineering and computer science by sponsoring JSHS, ISEF, IMO, and REAP.

  - Sponsor joint Army/Navy Washington Regional Area SEAP and increase Army Laboratory/RDEC sponsorship of students.
  - 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.
  - Conduct West Point cadet research internship program to enhance cadet training through field experience within Army research labs and centers.

Total 2118

**FY 2003 Planned Program**

- 2171 - Foster high school student interest nationally in science, mathematics, engineering and computer science by sponsoring JSHS, ISEF, IMO, and REAP.

  - Sponsor joint Army/Navy Washington Regional Area SEAP and increase Army Laboratory/RDEC sponsorship of students.
  - 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.
  - Conduct West Point cadet research internship program to enhance cadet training through field experience within Army research labs and centers.

Total 2171

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

**February 2002**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **6 - Management support** | **0605803A - Technical Information Activities** | **730** |

| COST (In Thousands) | | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| 730 | PERS & TRNG ANALYS ACT | 2049 | 2219 | 2332 | 2434 | 2500 | 2617 | 2691 | Continuing | Continuing |

**A. Mission Description and Budget Item Justification:** This project provides for the application of behavioral science-based 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 (TLS) 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 readiness, the personnel costs of alternative force structures, and the effects of a smaller Army on readiness and retention of quality soldiers. Requirements for 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. Work is performed by the Army Research Institute. This program supports the Objective Force transition path of the Transformation Campaign Plan (TCP).

**FY 2001 Accomplishments:**

• 2049 - Produced a modifiable database of insights of commanders and key leaders on managing change in digital divisions.

- Identified factors related to Army linguist training attrition.
- Identified the Military Occupational Specialty (MOS) for which the need for soldiers with multiple skills will be of the highest operational significance, and the skill composition of those MOS.
- Identified needed changes in spiral development of Basic Officer Leader Course and prepared an evaluation plan for 2002 and 2003 addressing the common core Program of Instruction (POI) and advanced training.
- Derived updated information on Army College Fund and GI Bill usage rates and added to ARI database on these programs.
- Developed new operational Armed Services Vocational Aptitude Battery (ASVAB )aptitude composites for MOS assignments.
- Validated operational use of Assessment of Individual Motivation (AIM) against initial entry training attrition.
- Estimated MOS reenlistment responsiveness to variations in incentives.

Total 2049

**FY 2002 Planned Program**

- 2219 - Assess the Basic Officer Leadership Course to inform long-term decisions about the program.
  - Evaluate AIM as a selection tool for GED-PLUS enlistment program.
  - Complete the determination of MOS that require multi-skilled soldiers for the Objective Force.
  - Initiate non-intrusive field test evaluation of operational Enlisted Personnel Allocation System (EPAS).
  - Support implementation of new ASVAB composites.
  - Study lengthy Advanced Individual Training (AIT) courses to determine if any can be shortened without a decrement in training performance.
  - Compare military performance of soldiers who are Defense Language Institute (DLI) graduates versus soldiers who do not attend DLI but have pre-existing language skills.

Total 2219

**FY 2003 Planned Program**

- 2332 - Conduct studies and analyze training issues identified by the Training and Doctrine Command (TRADOC).
  - Conduct studies and analyze personnel issues identified by the Chief of Staff, Army (CSA), Assistant Secretary of the Army for Manpower and Reserve Affairs [ASA(M&RA)], Deputy Chief of Staff for Personnel (DCSPER), and Commander, U.S. Total Army Personnel Command (PERSCOM).

Total 2332

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

**February 2002**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **6 - Management support** | **0605803A - Technical Information Activities** | **731** |

| COST (In Thousands) | | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| 731 | ARMY HIGH PERFORMANCE COMPUTING CENTERS (AHPCC) | 10230 | 17648 | 7113 | 7271 | 7410 | 7679 | 7845 | Continuing | Continuing |

**A. Mission Description and Budget Item Justification:** 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. This program supports the Objective Force transition path of the Transformation Campaign Plan (TCP).

**FY 2001 Accomplishments:**

- 2355 - Sustained the high performance computing environment and infrastructure in support of Army Tank and Automotive Research, Development and Engineering Center (TARDEC) and application specialists.
- 3069 - Sustained the high performance computing environment and infrastructure in support of the Army Research Laboratory Major Shared Research Center (MSRC) and provided outreach to students and application specialists.
- 1147 - Sustained the high performance computing environment and infrastructure in support of the Army High Performance Computing Research Center's (AHPCRC) research and educational activities and provided outreach to students and application specialists.
- 3659 - Performed critical computational research by applying improved R-G ceramic models to lightweight armor structures in support of TARDEC requirements for the Objective Force.

  - Applied improved computational techniques for the design of anti-toxin compounds by Army Medical Research Institute of Infectious Diseases (AMRIID).

  - Applied computational methods in the development of new IR propagation models in combination with other emissions for predicting signatures of FCS.

Total 10230

**FY 2002 Planned Program**

- 2550 - Sustain the high performance computing environment and infrastructure in support of TARDEC.
- 3298 - Sustain the high performance computing environment and infrastructure in support of the MSRC.
- 1300 - Sustain the high performance computing environment and infrastructure in support of the AHPCRC's research and educational activities.

  - Conduct technology exchange with Army researchers in critical computational sciences research areas. Technology transfer activities include: applying improved computational models of the properties of new ceramic materials to be used in the support of the Objective Force; applying new computational techniques to drug/vaccine design; and applying new computational methods to the studies of atmospheric modeling; developing improved computational techniques for signature modeling.
- 10500 This one year congressional add supports the upgrade of Army high performance computing capabilities at the High Performance Computing Center. No additional funding is needed to complete this project.

Total 17648

**FY 2003 Planned Program**

- 2495 - Sustain the high performance computing environment and infrastructure in support of the TARDEC.
- 3333 - Sustain the high performance computing environment and infrastructure in support of the MSRC.
- 1285 - Sustain the high performance computing environment and infrastructure in support of the AHPCRC's research and educational activities.

  - Conduct technology exchange with Army researchers in critical computational sciences research areas. Technology transfer activities include: applying improved computational models of the properties of new ceramic materials to be used in the support of the Objective Force; applying new computational techniques to drug/vaccine design; and applying new computational methods to the studies of atmospheric modeling; developing improved computational techniques for signature modeling.

Total 7113

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

**February 2002**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **6 - Management support** | **0605803A - Technical Information Activities** | **733** |

| COST (In Thousands) | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| 733 ACQUISITION TECH ACT | 8205 | 3662 | 9356 | 10085 | 10051 | 10627 | 10593 | Continuing | Continuing |

**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-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. Funds Department of the Army civilians at the Army Materiel Systems Analysis Activity (AMSAA) to conduct critical analyses for Army leadership in support of Army Transformation. AMSAA is the Army center for weapon system performance and effectiveness analysis and certified data (e.g., weapon accuracy, target acquisition, rate of fire, probability of inflicting catastrophic damage) of conceptual, developmental, and existing systems. AMSAA conducts and supports various systems analyses, such as: analyses of alternatives (AoAs), system cost/performance tradeoffs, early technology tradeoffs, weapons mix analyses, and requirements analyses. 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 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 (TCP).

**FY 2001 Accomplishments:**

- 4396 - Validated simulation and logical modeling T&E environment to provide a prototype development tool in support of technology base initiatives.

  - Distributed and beta tested application programs and user interface utilities for executive level information systems that offer Standard Query Language (SQL) services to AAC corporate and global databases.

  - Analyzed acquisition program financial programming and budgeting requirements.

  - Continued development of Weapon Systems Handbook, Analytic/Technical Support for Army 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.

- 824 Provided program support to develop a methodology that extracts cost data from existing operational, personnel, logistical and financial systems and analyzed this data to facilitate assessing a cost reduction programs effectiveness or an individual Total Ownership Cost initiatives progress over its life cycle

**FY 2001 Accomplishments: (Continued)**

- 2985 Supported science and technology program strategic planning and management.

Total 8205

**FY 2002 Planned Program**

- 3662 - 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. Funding will support DA civilians.

  - Conduct studies, analyses and evaluations to improve Army acquisition processes, support integrated management activities and evaluate information technologies. Analyze acquisition program financial programming and budgeting requirements.

Total 3662

**FY 2003 Planned Program**

- 9356 - Conduct studies, analyses and evaluations to improve Army acquisition processes, support integrated management activities and evaluate information technologies.

  - Analyze acquisition program financial programming and budgeting requirements.

  - Continue development of Weapon Systems Handbook, Analytic/Technical Support for Army 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.

  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: analysis of alternatives (AoA), system cost/performance tradeoffs, early technology tradeoffs, weapons mix analyses, requirements analyses, technology insertion, and technology base analyses. A few examples of planned programs/initiatives to be supported with critical analyses include: Future Combat System (FCS), Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS), Digitization Brigade and Below (DB2), reliability physics of failure analyses of various weapon systems, PATRIOT, and Tactical Unmanned Aerial Vehicle (TUAV). Funding will support DA civilians.

  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. Funding will support DA civilians.

Total 9356

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

**February 2002**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **6 - Management support** | **0605803A - Technical Information Activities** | **C16** |

| COST (In Thousands) | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| C16 FAST | 2398 | 2522 | 2618 | 2659 | 2702 | 2792 | 2848 | Continuing | Continuing |

**A. Mission Description and Budget Item Justification:** 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 CINCs 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 engineering centers to serve CINCs and major Army commanders worldwide and are 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. 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 (TCP).

**FY 2001 Accomplishments:**

- 2398 - Provided continuous activity on over 100 FAST projects. Defined, tested and recommended technological solutions to urgent materiel problems identified by CINCs worldwide and prepared operational needs statements and test results for the highest priority programs.

  - Deployed Science Advisors with U.S. Task Forces as requested by CINCs.

  - Provided professional growth opportunities for 20 Army senior science advisors and FAST Program tours for Army junior scientists and engineers.

  - Provided professional growth opportunities for civilian personnel through the Scientists and Engineers Field Experience with Soldiers (SEFEWS) program, which gives scientists and engineers the opportunity to participate in training events in the field.

Total 2398

**FY 2002 Planned Program**

| | | |
|---|---|---|
| • | 2522 | - Provide continuous activity on over 100 FAST projects. Define, test and recommend technological solutions to urgent materiel problems identified by CINCs worldwide and prepare operational needs statements and test results for the highest priority programs.<br>- Deploy Science Advisors with U.S. Task Forces as requested by CINCs.<br>- Provide professional growth opportunities for 17Army senior science advisors and FAST Program tours for Army junior scientists and engineers.<br>- Provide professional growth opportunities for civilian personnel through the Scientists and Engineers Field Experience with Soldiers (SEFEWS) program, which gives scientists and engineers the opportunity to participate in training events in the field. |
| Total | 2522 | |

**FY 2003 Planned Program**

| | | |
|---|---|---|
| • | 2618 | - Provide continuous activity on over 100 FAST projects. Define, test and recommend technological solutions to urgent materiel problems identified by CINCs worldwide and prepare operational needs statements and test results for the highest priority programs.<br>- Deploy Science Advisors with U.S. Task Forces as requested by CINCs.<br>- Provide professional growth opportunities for 17 Army senior science advisors and FAST Program tours for Army junior scientists and engineers.<br>- Provide professional growth opportunities for civilian personnel through the Scientists and Engineers Field Experience with Soldiers (SEFEWS) program, which gives scientists and engineers the opportunity to participate in training events in the field. |
| Total | 2618 | |